

Ecological Update Report

Southside, Horam

October 2020

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09/10/2020

Chailey Homes

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Non-technical Summary

In 2017 Phlorum Ltd was commissioned by Chailey Homes to undertake a series of ecological reports for a proposed future development of Southside, Horebeech Lane in Horam, East Sussex. Chailey Homes are submitted a new planning application which require updated surveys and accompanying reports. Ben Rainbow, the Biodiversity and Arboricultural Officer for Wealden District Council has confirmed that an Ecological Update Report which confirms site conditions have not changed significantly since the 2017 will be suffice (Rainbow, 2020). Therefore, this report includes collective information of the survey reports from 2017 and 2020 to determine if there is a significant ecological difference.

The main findings from the updated report are as follows:

- The site is not subject to any statutory or non-statutory designations. The closest statutory site is High Weald AONB located approximately 560m to the north at its closest point and the survey area does not support any features that contribute to the designation of this site.
- Habitats within the proposed development area were assessed in 2017, and again in 2020 as being of value to wildlife with the local vicinity with potential to support great crested newts, reptiles, breeding birds and bats.
- Great crested newts were present in the on-site pond during 2017 surveys. As a result a European Protected Species Mitigation (EPSM) Licence will be required. However, as this data is currently over three years old update survey data will be required in 2021 for the licence.
- A single bat was observed emerging from an on-site willow tree *(Salix fragilis)* knot hole in 2017. No bats were observed emerging from the willow tree in 2020. If any trees are to be felled then they will need to be inspected for possible bat roosts before they are felled. If bat roost are present then a EPSM licence will be required before the tree(s) are felled.
- A good population of slow worms and a low population of common lizards and grass snakes were present on site in 2017. In 2020 only a low population of slow worm was found on site. Reptiles will still need to be translocated off site, concurrently with the great crested newt mitigation.
- In addition, a precautionary approach to vegetation clearance in respect to breeding birds is recommended to minimise any adverse impacts on this species group.
- Overall there was no significant ecological difference between the site in 2017 and the site conditions now in 2020.

1. Introduction

Background

1.1 Phlorum Ltd was commissioned by Chailey Homes to undertake a series of ecological reports for a proposed future development of Southside, Horebeech Lane in Horam, East Sussex (hereafter referred to as "the site").

1.2 The following reports were carried out:

- Preliminary Ecological Appraisal (Phlorum 2017);
- Great Crested Newt Survey (Phlorum 2017);
- Reptile Survey (Phlorum 2017);
- Bat Survey Report (Phlorum 2018); and
- Arboricultural Survey Report (Phlorum 2017).

1.3 The proposed development was turned down on appeal in 2020. As a result as, a new planning application is being submitted. However, the ecological reports are now over two years old (and over one years old for the bat report) and are therefore out of date and need updating.

Report Style

1.4 As the development was turned down on appeal a revised application is being submitted. Wealden District Council's Biodiversity and Arboricultural Officer, Ben Rainbow, requested that the site was resurveyed to check whether the ecological site conditions have changed since 2017. It was also stated that no new biological record data was required and that the results of any new protected species surveys, which were carried out within the time frame were added to this single update report (Rainbow 2020).

1.5 As a result, this report provides an ecological update, including a review of the 2017 reports with updated information provided related to any changes discovered in the 2020 surveys and site walkovers..

1.6 A separate, updated Arboricultural report 2020 has been produced by Phlorum.

1.7 It is understood that proposals are for a residential development.

Site Description

1.8 The site is located at Southside on Horebeech Lane within the south eastern extents of the village of Horam, East Sussex. The site is bound to the north by Horebeech Lane and to the south, east and west by grassland fields, a hedgerow and treelines associated with the adjacent properties. A disused railway line and broad-leaved woodland block runs along the south west boundary of the site and extends to the south. The site comprised a semi-improved grassland field, hedgerows, scattered trees, a pond and areas of scrub and ruderal vegetation.

1.9 Agricultural grassland fields together with a network of treelines, hedgerows, woodland blocks, ponds and streams dominate the wider landscape.

1.10 The National Grid Reference for the centre of the site is TQ58382 16798. The PEA and walkover survey area extends over approximately 2.5 hectares (ha).

2. Methodology

Desk Study 2017

2.1 The desktop study was carried out in 2017. This involved conducting database searches for statutory and non-statutory designated sites, legally protected species and features of interest within a 2km radius of the site. The data search was based on available information provided by the following sources:

- Sussex Biodiversity Records Centre (SxBRC, 2017);
- Multi-Agency Geographical Information for the Countryside (MAGIC, 2017);
- Ordnance Survey mapping; and
- Aerial photography.

Habitat Survey and Assessment 2017 and 2020

2.2 Phlorum Limited carried out a Preliminary Ecological Appraisal survey of the site on 28th April 2017. The survey was carried out by a suitably qualified ecologist, Tilly Fitzwebster who has over three years professional experience of undertaking ecological surveys. The weather conditions during the survey were dry and bright.

2.3 Phlorum Limited carried out an update site walk over survey of the site on 7th October 2020. The survey was carried out by a suitably qualified ecologist, Kim Roll - Baldwin who has over two years professional experience of undertaking ecological surveys. The weather conditions during the survey were sunny and cold.

2.4 The surveys comprised a walkover inspection of the land and habitats present. The survey followed standard Phase 1 survey methodology (JNCC, 2010) and covered all accessible parts of the site, including boundary features. Habitats were described and mapped (Figure 1: Appendix B). A list of plant species was compiled, together with an estimate of abundance made according to the DAFOR scale (Appendix D).

2.5 This assessment provides information on the habitats in the survey areas, both from 2017 and now in 2020, and identifies actual or potential presence of legally protected or otherwise notable species/habitats in or immediately adjacent to the site.

2.6 Photographs and target notes highlighting a particular feature of ecological interest are provided in Appendix A, with associated photographs.

2.7 Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species.

Protected Species Assessment 2017 and 2020

2.8 The potential for the site to provide habitat for protected species was assessed from field observations in conjunction with results of the desk study. The site was inspected for indications of the presence of protected species including:

- Habitat considered suitable to support widespread reptile species including areas with a scrub/grassland mosaic and potential hibernation sites;
- On-site ponds offering potential breeding opportunities for great crested newt (*Triturus cristatus*) and the presence of suitable terrestrial habitat including hedgerows and rough grassland;
- The presence of features in, and on trees, indicating potential for roosting bats Chiroptera, including knot and rot holes, loose bark. Secondary evidence of bats including staining, droppings and feeding remains were also looked for;
- The presence of nesting habitat for breeding birds, including mature trees, dense scrub and hedgerows and direct evidence of bird nesting including bird song, old nests etc.;
- Habitats considered suitable to support badger (*Meles meles*) setts, and evidence in the form of hair, pathways and latrines;
- Presence of woodland and or hedgerows providing suitable habitat to support hazel dormouse (*Muscardinus avellanarius*); and

2.9 The potential presence for protected species is categorised as Negligible, Low, Moderate, High or Present, based on the findings of the field survey and on the evaluation of existing data.

2.10 The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species or mitigation should be recommended.

Bats 2020

Personnel

2.11 The bat activity survey was led by Charlotte Scales an ecological consultant with over three years' survey experience. Charlotte has experience leading and assisting with a number of ecology surveys, in particular bats.

Dusk Emergence Surveys

2.12 Two dusk emergence surveys was carried out, initial survey on 29th August 2020 and second survey on 18th September 2020. Two surveyors were used each time to assess the site for roosting, foraging and commuting activity. Bat Box Duet heterodyne detectors and Anabat Express frequency division detectors were used for the survey.

2.13 During the surveys, one surveyor was positioned to the north west of the willow tree and one surveyor was positioned to south west of the tree to allow a full view of where a single bat was seen emerging from a knot hole in 2017.

2.14 The evening surveys commenced at least 15 minutes before sunset and lasted for at least two hours after sunset. Prior to sunset, bat detectors were tuned to below 30 kHz to listen for any potential pre-emergence social calls and noctules, which occasionally leave their roosts before sunset, tuning the detectors up to 45 kHz to pick up on general pipistrelle activity.

2.15 All surveys followed standard protocols and accepted standards (Mitchell-Jones and McLeish, 2004; Collins, 2016).

Roost Characterisation

2.16 Where a potential bat roosting feature or confirmed roost was identified, the surveyor assessed how these could be used by bats throughout the year, in accordance with Natural England (2015):

- day roost - where individual bats, or small groups of males, rest or shelter in the day, but rarely on summer nights;
- night roost - where bats rest or shelter at night, but rarely during the day;
- feeding roost - where bats rest at night between feeding sessions, but rarely during the day;
- hibernation roost - where bats are found during winter;
- transitional or occasional roost - where bats gather at a temporary site before and after hibernation;
- mating site - where males and females gather from late summer to early winter;
- maternity roost - where babies are born and raised until they're independent;
- satellite roost - where breeding females roost close to the main nursery colony in the breeding season; and
- swarming site - where bats gather in large numbers from late summer to autumn.

Reptiles 2020

Presence / Absence Survey

2.17 The survey protocol followed accepted standards for reptile surveys as set out in Froglife (1999), Hill et al (2005) and English Nature (2004).

2.18 The survey involved a combination of visually searching for reptiles (direct observation) and the use of artificial refugia.

2.19 On the 28th August 2020 artificial refugia were placed around the site throughout areas of suitable reptile habitat. Refugia comprised individual 0.5m^2 (approximately) sections of roofing felt. These were laid out at approximately 5m intervals around the site. Potentially suitable reptile habitat within the survey area consisted of a mosaic of semi-improved grassland, including rough grassland and areas of scrub and ruderal vegetation. A total of 50 refugia were used, equating to a density of 15 per ha.

2.20 A total of seven survey visits were undertaken throughout September and October 2020. Refugia were checked during appropriate weather conditions, that is, where temperatures ranged between 9°C and 20°C, with little rain or wind. Visits were carried out, where possible, between the hours of 08.30-11.00 or 16.00-18.30, which are the optimum times for recording reptiles, although the time of day varied slightly according to weather conditions.

Population Size Estimate

2.21 An assessment of the reptile population size is based on Froglife (1999) guidance which requires a minimum of 20 repeat survey visits. Population sizes are then assigned to one of three categories (Low, Good or Exceptional) based on the peak count of individuals for each species across all the visits.

2.22 It should be noted that only seven visits were carried out and that the population assessment for the proposed development site is only an estimate based on the current guidance (see Table 1). Population assessments are however typically based on a relatively low survey effort with a maximum of 10 refuge sheets per ha, in contrast to a density of 19 refuge sheets per ha as employed at the site, and therefore it is considered likely that the survey data is more robust and sufficient to enable a population estimate to be made.

Table 1: Population score (Froglife, 1999).

Species	Low Population	Good Population	Exceptional Population
Adder	<5	5-10	>10
Grass Snake	<5	5-10	>10
Common Lizard	<5	5-20	>20
Slow Worm	<5	5-20	>20

Caveat

Data Search Constraints 2017

2.23 It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

Survey Constraints 2017 and 2020

2.24 Ecological surveys are limited by factors that affect presence of plants and animals such as seasonality. Whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the environment.

2.25 The appraisal does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species. This survey provides a preliminary view of the likelihood of protected species occurring on the site based on the suitability of the habitat, known distribution of the species in the local area and any direct evidence on the site. It is therefore used as a tool to recommend further protected species surveys (or other species of significant nature conservation interest) if on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.

2.26 It is however considered that the survey was sufficiently rigorous to assess the ecological value of the site.

Bat Survey Constraints 2020

2.27 Bats are mobile animals which can move roost sites both within and between years. It is possible that surveys carried out in August and September may miss roosts occupied earlier in the year.

Reptile Survey Constraints 2020

2.28 Reptile surveys can be undertaken between March to October, in the active period for reptiles, in suitable weather conditions; however, the optimum months for survey are April, May and September (Froglife 1999).

2.29 The survey was however carried out within the recommended survey period in suitable weather conditions, and was considered sufficiently rigorous to determine the presence/likely absence and distribution of reptiles within the proposed development site at that time.

3. Baseline Conditions

Aerial Photography and OS Maps

3.1 Aerial photography indicates that agricultural grassland fields, together with a network of hedgerows and treelines dominate the wider landscape. OS mapping indicates that there are 10 ancient woodland blocks situated within 500m of the site.

3.2 Aerial photography indicates that there are 21 ponds located within 500m of the site boundary. The closest pond was situated approximately 10m east of the site boundary.

3.3 Other developments have occurred in the area since 2017. During the 2020 survey its was noted that the north side of Horebeech Lane is being developed by Bovis/Vistry group for residential development.

Statutory and Non-Statutory Designated Sites

Statutory Sites

3.4 The site is not subject to any statutory designations.

3.5 The closest statutory designated site is the High Weald Area of Outstanding Natural Beauty (AONB), situated approximately 560m north of the site at its closest point. The AONB is designated for its mosaic landscapes comprising species-rich hedgerows, copses, ancient woodland and gently undulating pasture. The site is not considered to provide any supporting habitat for this designation.

Non-statutory Sites

3.6 The site is not subject to any non-statutory designations.

3.7 There is one non-statutory site of nature conservation importance with a 2km radius of the site. This is the Cowden Wood Meadow Local Wildlife Site (LWS), situated approximately 1.4km south east of the site.

Habitats

Site Summary

3.8 In 2017, the site comprised semi-improved grassland, hedgerows, scattered trees, a pond and areas of scrub and ruderal vegetation. The main habitats recorded within the site are described below. Additional details are shown on the habitat survey plan in Appendix B, and the target notes are listed in Appendix A.

3.9 The 2020 walkover survey determined that there no major changes since the previous survey. The only notable difference being that the semi-improved grassland had encroached further onto the hardstanding.

Hardstanding

3.10 In 2017, a discrete area of hardstanding extended from the entrance to the site towards the area of grassland which had started to encroach into this area.

3.11 The 2020 walkover survey determined that the grassland had further encroached into the area.

Semi-Improved Grassland

3.12 In 2017, semi-improved grassland dominated the site, with the southernmost section comprising rough grassland. The grassland appeared to not have undergone any recent management and supported a long sward. Species included perennial rye grass (*Lolium perenne*), common bent (*Agrostis capillaris*), meadow foxtail (*Alopecurus pratensis*), daisy (*Bellis perennis*), cock's foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), common bird's-foot-trefoil (*Lotus corniculatus*), ribwort plantain (*Plantago lanceolata*), meadow buttercup (*Ranunculus acris*) and red clover (*Trifolium pratense*).

3.13 The 2020 walkover survey determined that there are no significant changes since the previous survey.

Native Hedgerow

3.14 In 2017, hawthorn (*Crataegus monogyna*) dominant hedgerow was present along the northern boundary of the site. Other species included field maple (*Acer campestre*), ivy (*Hedera helix*) and hornbeam (*Carpinus betulus*).

3.15 The 2020 walkover survey determined that there are no significant changes since the previous survey.

Scattered Trees

3.16 In 2017, a number of scattered trees were present around the on-site pond, as well as extending along the eastern and southern site boundaries. Species included willow (*Salix* sp.), oak (*Quercus robur*), wild cherry (*Prunus avium*), elder (*Sambucus nigra*) ash (*Fraxinus excelsior*), field maple, blackthorn (*Prunus spinosa*) and hawthorn.

3.17 The 2020 walkover survey determined that there no significant changes since the previous survey.

Short Ruderal

3.18 In 2017, areas of ruderal vegetation had developed along the eastern and southern boundaries of the site, adjacent to areas of scattered trees. Species included common nettle (*Urtica dioica*), hedge bindweed (*Calystegia sepium*), creeping thistle (*Cirsium arvense*), dog's mercury (*Mercurialis perennis*), fern (*Dryopteris* sp.), garlic mustard (*Alliaria petiolata*), cleavers (*Galium aparine*) and common knapweed (*Centaurea nigra*).

3.19 The 2020 walkover survey determined that there are no significant changes since the previous survey.

Scrub

3.20 In 2017, an area of scrub was present within the southern section of the site along the eastern boundary. Dominant species included bramble (*Rubus fruticosus* agg.) and hawthorn.

3.21 The 2020 walkover survey determined that there are no significant changes since the previous survey.

Pond

3.22 In 2017, a medium sized pond was located within the north east corner of the site. The pond supported shallow banks with a number of scattered trees surrounding the pond. The pond appeared to be of good water quality, supporting a number of aquatic invertebrates together with aquatic vegetation to include submerged water starwort (*Callitriche* sp.), water mint (*Mentha aquatica*) sedges (*Carex* sp.), rushes (*Juncus* sp.) and willow.

3.23 The 2020 walkover survey determined that there are no significant changes since the previous survey. However, there was vegetation growth around the edge of the pond.

Ditches

3.24 In 2017, a wet ditch ran along the eastern boundary of the site. This drained into an off-site pond situated to the south of the development footprint, adjacent to the disused railway line. A dry ditch was present within the central southern section of grassland, extending towards the centre of the site. The ditch contained cut vegetation at the time of survey.

3.25 The 2020 walkover survey determined that there are no significant changes since the previous survey.

Fencing

3.26 In 2017, a wire a wooden post fence ran along all boundaries of the site, with a wooden gate situated at the entrance to the site in the north west corner.

3.27 The 2020 walkover survey determined that there no changes since the previous survey.

Protected Species

3.28 Legislation relating to the protected species referred to in this section is included in Appendix C.

3.29 The following paragraphs detail the suitability of the on-site habitats to support protected species and include information from the data search for protected, rare and otherwise notable species returned within a 2km radius.

Reptiles

3.30 The data search returned recent (post 2004) records for slow worm (*Anguis fragilis*) and grass snake (*Natrix helvetica*) within 2km of the site. The closest record for slow worm was from 2006 and was located approximately 770m west of the site, whilst the closest record for grass snake was from 2011 and located approximately 700m north west of the site.

3.31 In 2017, the site provided a mosaic of habitats including rough grassland, scrub and tall ruderal vegetation, favoured by widespread reptiles (see Target Note 1 on the 2017 Habitat Map in Appendix B). These habitats provide suitable foraging, basking and sheltering opportunities for reptiles.

3.32 A reptile survey was carried out in 2017 and found a good population of slow worms, and a low population of common lizards *(Zootoca vivipara)* and grass snakes present on site.

3.33 The 2020 walkover survey determined that there are no significant changes since the previous survey.

3.34 Overall, reptiles were confirmed to be **present** on site in 2017, and likely to still be present in 2020.

3.35 The 2020 reptile surveys were undertaken on the site in September and October 2020. Detailed results of the survey can be found in Section 4.

Great Crested Newts

3.36 The data search returned a number of recent records for great crested newt (*Triturus cristatus*) within 2km of the site, including records from the on-site pond. The most recent on-site record was from 2014.

3.37 The closest off-site records for great crested newts were located approximately 18m east and 175m north of the site, both from 2014.

3.38 There was one on-site pond and aerial photography indicates that there are 21 ponds present within 500m of the site, with concentrations to the east and west. The closest pond was located approximately 10m east of the site and the next closest was approximately 120m to the east, both of which were connected to the site via suitable commuting habitat.

3.39 In 2017, the majority of the site was considered to provide optimal habitat for great crested newt during their terrestrial phase; with grassland, ruderal vegetation and scrub offering suitable commuting, sheltering and foraging habitat for great crested newts (refer to Target Note 2 on the 2017 Habitat Map in Appendix B). The on-site pond was considered to provide suitable breeding opportunities for this species and other amphibians with recent records of great crested newts within this pond.

3.40 Surveys in 2017 confirmed the presence of small breeding populations of great crested newts within the on-site pond. Great crested newts were also found to be breeding within an off-site pond, with this pond likely to support individuals from the same metapopulation.

3.41 The 2020 walkover survey determined that there no changes since the previous survey.

3.42 Overall, great crested newts were confirmed to be **present** on site in 2017, and likely to still be present in 2020.

Bats

3.43 The data search returned records (post 2004) for six different species of bat within 2km of the site, including unidentified bat (*Chiroptera* sp.), serotine (*Eptesicus serotinus*), natterer's bat (*Myotis nattereri*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), long-eared bat (*Plecotus* sp.) and brown long-eared bat (*Plecotus auritus*).

3.44 The closest records for bats were for unidentified bat located approximately 225m north from 2013 and common pipistrelle located approximately 320m west of the site from 2015.

3.45 In 2017, a number of trees within the site, particularly around the pond and along the eastern boundary, contained suitable roosting features for bats such as knot/rot holes and split limbs (refer to Target Note 3 on the 2017 Habitat Map in Appendix B). Habitats within the site provided suitable foraging and commuting habitat for bats with connectivity to further off-site habitat.

3.46 A bat survey in 2017 observed one common pipistrelle emerging from a knot hole in a willow tree adjacent to the pond on site. Two bat species, common pipistrelle and soprano pipistrelle, were recorded flying across the site.

3.47 The 2020 walkover survey determined that there no changes since the previous survey.

3.48 Overall, bats were confirmed to be **present** on site in 2017, and likely to still be present in 2020.

3.49 Two bat activity (emergence) surveys were carried out in 2020. Detailed results of the survey can be found in Section 4.

Birds

3.50 A number of records for Red or Amber listed Birds of Conservation Concern[1] (BoCC) and notable[2] bird species were returned by the data search and may utilise habitats within the site. Species recorded include hobby (*Falco Subbuteo*), lapwing (*Vanellus vanellus*), cuckoo (*Cuculus canorus*), lesser spotted woodpecker (*Dendrocopus minor*), fieldfare (*Turdus pilaris*), redwing (*Turdus iliacus*), linnet (*Linaria cannabina*) and yellowhammer (*Emberiza citrinella*).

[1] Birds of Conservation Concern status is prioritised into high concern (Red), medium concern (Amber) and low concern (Green) (Eaton et al, 2009). Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and have not shown a substantial recent recovery. Amber-list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations. Green-list species are those that fulfil none of the criteria.

[2] Notable Birds are based on a list of birds that are particularly scarce or vulnerable either at national or a regional level. The majority of these bird species are designated as Schedule 1 species, under the Wildlife and Countryside Act 1981 (as amended), or listed as red or amber-listed BoCC.

3.51 In 2017, areas of scrub and scattered trees within the site provide suitable habitat for breeding birds (refer to Target Note 4 on the 2017 Habitat Map in Appendix B).

3.52 The 2020 walkover survey determined that there no changes since the previous survey.

3.53 Overall, the site was considered to provide **high** potential for breeding birds in 2017, and this is still the case in 2020.

Hazel Dormouse

3.61 The data search returned one recent record for dormouse (*Muscardinus avellanarius*) within 2km of the site. The record was from 2007 and located approximately 530m north west of the site

3.62 In 2017, the on-site hawthorn dominant hedgerow was considered to provide sub-optimal habitat due to an absence of favourable plant species and general poor species diversity. Dormice favour habitat with a range of plant species which provide a food source throughout the year. Favoured species include an abundance of hazel and honeysuckle together with frequently occurring oak and bramble amongst other species. The hedgerow was also isolated from other suitable habitat such as woodland and more extensive hedgerows within the wider surrounds. The on-site hedgerow alone is unlikely to support a viable dormouse population, further reducing the likelihood that dormice would utilise the on-site hedgerow.

3.63 The 2020 walkover survey determined that there are no changes since the previous survey.

3.64 Overall the site was considered to have **negligible** potential to support hazel dormouse in 2017, and this is still the case in 2020.

Invasive Non-Native Species (INNS)

3.65 The data report returned records of INNS that are listed on Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended) that could utilise onsite habitats.

3.66 Species included Himalayan cotoneaster (*Cotoneaster simonsii*), montbretia (*Crocosmia pottssii x aurea*) and Japanese knotweed (*Fallopia japonica*).

3.67 No INNS were observed on site during any survey in 2017 or in 2020.

4. 2020 Protected Species Surveys

Bats

4.1 Due the time constraint only two bat activity (emergence) surveys were carried out. The main survey period for bat activity (emergence/re-entry) surveys is from May to August with September only suitable a single additional survey. All surveys should be at least two weeks apart.

4.2 A bat survey map is provided in Appendix G, and the bat survey data is provided in Appendix H.

Dusk Emergence Survey: 29th August 2020

4.3 Sunset was at 19:50 and the temperature at the start of the survey was 13°C, falling to 12°C at the end of the survey. The weather was cloudy with no rain.

4.4 During the survey, one surveyor was positioned to the north west of the willow tree and one surveyor was positioned to south west of the tree to allow a full view of where a single bat was seen emerging from a knot hole in 2017.

4.5 Analysis of the Anabat data showed that only the common pipistrelle species was recorded during the survey.

4.6 No bats were observed emerging from the willow tree.

4.7 The first bat pass was recorded at 20:08 which was heard by both surveyors.

4.8 A total of eight passes were recorded by the surveyors and the last pass was recorded at 21:15 which was heard but not seen.

Dusk Emergence Survey: 18th September 2020

4.9 Sunset was at 19:07 and the temperature at the start of the survey was 17°C, falling to 15°C at the end of the survey. The cloud cover was patchy with no rain.

4.10 During the survey, one surveyor was positioned to the north west of the willow tree and one surveyor was positioned to south west of the tree to allow a full view of where a single bat was seen emerging from a knot hole in 2017.

4.11 Analysis of the Anabat data showed that the species were common pipistrelle and soprano pipistrelle

4.12 No bats were observed emerging from the willow tree.

4.13 The first bat pass was recorded at 19:20 which was heard by both surveyors.

4.14 A total of eight passes were recorded by the surveyors and the last pass was recorded at 20:30 which was heard but not seen.

Survey Overview

4.15 The surveys concentrated on the willow tree where a single bat was observed from during a 2017 emergence survey.

4.16 During this surveys, no bats were observed emerging from the willow tree.

4.17 Overall, there was a **low** level of bat activity recorded at the site. Two bat species were recorded foraging and commuting at the site which were common pipistrelle and soprano pipistrelle.

Reptiles

Reptile Presence / Absence Survey

4.18 Two slow worms were observed in the seven surveys.

4.19 The distribution of artificial refugia within the site and location of reptiles is presented on the Reptile Survey Map in Appendix I and full survey results are presented in Appendix J. A summary of the results is displayed in the table below.

Table 2: Summary of reptile survey results (with peak counts in red).

Date	Slow Worm		Common Lizard		Grass Snake	
	Adult	Juvenile	Adult	Juvenile	Adult	Juvenile
15/09/2020	0	0	0	0	0	0
17/09/2020	0	0	0	0	0	0
21/09/2020	1	0	0	0	0	0
23/09/2020	0	0	0	0	0	0
25/09/2020	0	0	0	0	0	0
28/09/2020	1	0	0	0	0	0
07/10/2020	0	0	0	0	0	0

Population Size Assessment

4.20 In 2017 a **good** population of slow worms and a **low** population of grass snakes and common lizards were found on site. In total only one common lizard and two grass snakes were found in 2017.

4.21 Based on the 2020 survey the site now has a **low** population of slow worms on the site based on current guidance (Froglife, 1999).

5. Discussion and Recommendations

Discussion

5.1 The survey site is located at Southside on Horebeech Lane within the south eastern extents of the village of Horam, East Sussex. The survey area extended over approximately 2.5 hectares (ha). Habitats to be impacted by the development proposals include semi-improved grassland field, hedgerows, scattered trees, a pond and areas of scrub and ruderal vegetation.

5.2 The site is not subject to any statutory or non-statutory designations. The closest statutory site is High Weald AONB located approximately 560m to the north at its closest point and the survey area does not support any features that contribute to the designation of this site.

5.4 The habitats on the site have not significantly changes since 2017 and 2020. However, the area around the pond has been come more overgrown with vegetation.

5.5 In 2017 a single common pipistrelle bat was observed emerging from a roost in a willow tree on site. This was assessed as a day/night roost used by a small numbers of pipistrelle bats. Based on the results of the surveys carried out in 2017, it was considered likely that the roost was of low conservation importance. The tree was not considered to provide features suitable for a roost of high conservation importance, such as a maternity roost.

5.6 In 2020, due to timing only two bat emergence survey were carried out and no bat roost was observed. It is understood that the current development proposals will not impact, on the pond area or the willow tree. If the development plans change and the willow tree is impacted then additional surveys, potential including a climbing survey, may be required.

5.7 If any of the on-site trees are scheduled for removal then a ground-based tree inspection in relation to bats will be required. Following this, if any significant features are identified then a climbed inspection may be required.

5.8 A good population of slow worms and a low population of common lizards and grass snakes were observed on site in 2017. However, in 2020 only a low population of slow worms was recorded. This still shows that the site is suitable for reptiles and a combined reptile and great crested newt translocation should be carried out for the site.

5.10 In addition, a precautionary approach to vegetation clearance in respect to breeding birds is recommended to minimise any adverse impacts on this species group.

5.11 Details regarding further surveys and specific mitigation including precautionary working practices together with habitat enhancement measures are provided below.

Recommendations

Great Crested Newts

5.12 Great crested newts receive protection under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010 (as amended). Due to presence of great crested newts identified in the on-site pond in 2017, a great crested newt licence, or if available District Level Licence, will have to be obtained.

5.13 Under Natural England guidance for a conventional European Protected Species Mitigation (EPSM) licence for great crested newts, the survey data for a site with a breeding pond within 50m of the development needs to be a maximum of three years old. As a result, in 2021 further great crested newt surveys will be required in order to obtain a licence.

5.14 The next survey will be carried out between April and June 2021 to determine presence/ likely absence and if present, the survey will enable a population assessment to be made.

5.15 The on-site pond and, where possible, all ponds within 500m of the site, will be included in the survey. The survey protocol should follow that set out in the Great Crested Newt Mitigation Guidelines (English Nature, 2001). An initial four surveys are required to demonstrate presence or absence and these must be carried out between mid-March and mid-June with two of those visits taking place within the peak survey time between mid-April and mid-May.

5.16 If great crested newts are found to be present, an additional two survey visits will then be required to allow a population size class assessment to be made, with at least one of these visits being undertaken within the peak survey time between mid-April and mid-May.

5.17 The results of the survey will be used to inform mitigation proposals for this species.

5.18 As stated above a European Protected Species Mitigation Licence from Natural England may be required to remove aquatic or terrestrial habitat in order to facilitate the works. Once submitted, a licence application can take up to 30 days to be processed. Natural England will only grant a licence once planning permission has been received.

5.19 As part of the licence application, a Method Statement will need to be submitted to guide works in relation to this species. If individuals are found to be using the pond, suitable compensation measures to mitigate for losses to any aquatic habitat will be required in addition to undertaking a formal translocation to ensure individuals are not present within the development footprint. This process will involve fencing the development area and trapping and relocating newts over a number of weeks.

5.20 As stated above there is an alternative option in some areas of a District Level Licence. This approach enables a development to progress all year round, and results in the developer funding great crested newt projects in the district and county. Although this approach is usually quicker it can be more expensive than a conventional licence if there are ponds on site, or in the immediate vicinity.

Bats

5.21 Bats receive protection under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010 (as amended).

5.22 Two bat surveys were undertaken in August 2020 and no emerging bats were observed. However, due to timing issue we were unable to carry out additional surveys. As a result, as stated above if any trees, particularly the willow near the pond on site, need to be removed then further surveys, potentially including a tree climbing survey will be required, and if a bat roost is presence then a EPSM licence will need to be applied for before the tree(s) is felled.

5.23 Therefore, we believe bats do not pose an immediate constraint to works, however we propose that a sympathetic lighting scheme is implemented at the site with respect to bats due to the sites potential for foraging bats.

Bats and Lighting

5.24 Different species of bat have been found to react differently to night-time lighting however research has found that generally, all species of bats are sensitive to artificial lighting and that excessive lighting can delay bats from emerging, thus shortening the time available for foraging, as well as causing individuals to move away from suitable foraging grounds or roost sites, to alternative dark areas (Jones, 2000). Bats can also become isolated from their foraging grounds if the linear features they use for commuting are suddenly illuminated, creating a light barrier (Fure, 2006).

5.25 The development should serve to maintain the site's value for foraging bats and to minimise indirect impacts from lighting associated with the new building. This can be achieved by following accepted best practice (Institute of Ecology and Environmental Management 2006, Institute of Lighting Professionals 2018, Bat Conservation Trust, 2014):

- The level of artificial lighting including flood lighting should be kept to a minimum, particularly around the site boundaries;
- LED lights are a preferred option to low pressure sodium lights or high pressure sodium or mercury lamps, and lights should be directed low with minimal light spillage;
- Ideally the site boundaries should be kept dark, preferably at bat emergence (0-1 hour after sunset) and during peak bat activity periods (e.g. 1.5 hours after sunset and 1.5 hours before sunrise); and
- Artificial lighting should not directly illuminate any potential bat commuting areas such as boundary features. Similarly, any newly planted linear features or buffer areas around the site boundary should not be directly lit.

Reptiles

5.26 To facilitate works, a precautionary approach should be taken to reduce the risk of harm to any potential reptiles in accordance with current legislation.

5.27 Due to the distribution of reptiles throughout the site in 2017, and low population of slow worms found in 2020, appropriate mitigation measures are required in order to prevent reckless injury, in accordance with the Wildlife and Countryside Act 1981 (as amended).

5.28 The preferred mitigation strategy is to capture all reptiles that may be present within the footprint of the development and move individuals to a suitable receptor site.

5.29 The translocation process must be detailed in a formal mitigation strategy document and designed concurrently with the great crested newt mitigation.

5.30 All processes detailed below must be timed to occur concurrently with the great crested newt mitigation works.

Breeding Birds

5.31 The on-site scattered trees, hedgerow and scrub provide suitable nesting habitat for a range of bird species. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

5.32 In order to avoid any potential impact on breeding birds, the clearance of any vegetation, including trees, scrub and hedgerow, should be undertaken outside of the main bird nesting season which runs from March to August inclusive[3], with clearance works possible between September and February. Where this is not possible, an ecologist would need to check the vegetation for active nests and signs of bird breeding activity.

[3] It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

5.33 In the event that a nest is found, an exclusion zone around the nest would be established. Works would have to cease within this buffer area until the young birds have fledged.

Tree Protection

5.43 All retained trees, including all adjacent off-site trees should be protected in accordance with British Standards (BS 2012) 5837:2012 Trees in Relation to Design, Demolition and Construction. The root protection areas of any retained trees must be left free from excavation and disturbance, and protected during any proposed works. Protection should be in the form of fencing and signs installed for the duration of the works.

Habitat Retention

5.44 It is recommended that the pond and willow tree is retained and incorporated into the design proposals where possible. The overhanging trees could be cut back to reduce shading and improve the quality of the pond.

Habitat Enhancement

5.45 New development offers the opportunity for habitat enhancement in accordance with national and local planning policy and some recommendations are included below.

Bird and Bat Boxes and Bricks

5.46 Additional bird nesting and bat roosting provision could be incorporated into new design proposals. These could either be installed on trees or incorporated into the new building designs. Some recommendations are made below as a guide.

5.47 Bat roosting opportunities could be provided through the incorporation of bat bricks into new buildings such as the Ibstock Bat Box A, or external roosting through the installation of boxes on the outside of the walls. Alternatively tree mounted bat boxes could be installed. There are a range of bat boxes available and these can be selected to suit the development and bat species in the area. More specific bat mitigation should be devised following the activity surveys.

5.48 Bird boxes could be installed on the walls of the new buildings which could include the following Schwegler designs: 1MR for a range of common garden birds and 1SP sparrow terrace. Alternatively, tree mounted bird boxes such as the Schwegler 1B could be installed on mature trees at the site.

5.49 Further details of the bird and bat boxes are provided in Appendix F.

5.50 Bat boxes should be installed at appropriate locations ideally with south-east, south, or south-west facing aspects at least 3m from ground level. Ideally they need to be exposed to 6-8 hours of direct sunlight, but sheltered from strong winds. If installed on the building, these should ideally be positioned directly below the eaves.

5.51 Bird Boxes should be located out of prevailing wind, rain, and strong sunlight, ideally with a clear flight path to the entrance. Ideally they should be installed two to four metres from the ground facing north or north-east.

Hedgehog Pathways

5.52 Hedgehogs are a rapidly declining species. By providing pathways hedgehogs, and other wildlife, will be able to migrate across the site.

5.53 Hedgehogs need short grass areas to search for invertebrate prey. Log piles and decaying vegetation are used to forage and hibernate in. Areas of leaf litter can be collected and used in nests. Dense scrub areas are also useful to build hibernation nests during winter. Hedgerows and other wildlife corridors allow hedgehogs and wildlife to migrate across a site. This is helped by installing hedgehog holes in fences (at least 13cm by 13cm) at ground level.

Compensatory Planting

5.54 Additional tree and shrub planting could be incorporated into the landscape proposals to compensate for any removal to facilitate the works. Planting should include a high proportion of native species and be of local provenance where possible. These should be carefully selected to ensure they contain species suitable for the area. Some species of known wildlife value are listed in Appendix E.

6. Conclusions

6.1 The survey site is located at Southside on Horebeech Lane within the south eastern extents of the village of Horam, East Sussex. The survey area extended over approximately 2.5 hectares (ha). Habitats to be impacted by the development proposals include semi-improved grassland field, hedgerows, scattered trees, a pond and areas of scrub and ruderal vegetation.

6.2 The site is not subject to any statutory or non-statutory designations. The closest statutory site is High Weald AONB located approximately 560m to the north at its closest point and the survey area does not support any features that contribute to the designation of this site.

6.3 Habitats within the proposed development area were assessed in 2017 as being of value to wildlife with the local vicinity with potential to support great crested newts, reptiles, breeding birds and bats. This is still the case in 2020.

6.4 It is recommended that a EPSM Licence for great crested newt licence is obtained for the site. As the survey data is now over three years old, new surveys will be required in 2021 for the licence application. If any trees are felled due to the development then further surveys, including possible aerial inspection, should be carried out. If a bat roost is present then a EPSM licence will be required before these tree(s) are felled.

6.5 The recorded population of slow worms has reduced on site, but they will still need to be translocated off site, which can be carried out concurrently with the great crested newt mitigation.

6.7 In addition, a precautionary approach to vegetation clearance in respect to breeding birds is recommended to minimise any adverse impacts on this species group.

6.8 It is recommended to retain as much of the boundary habitat as possible and provide habitat enhancement through planting of native species, providing bird and bat boxes, and providing hedgehogs pathways (e.g. holes in fences).

7. References

- Bat Conservation Trust (2014). *Interim Guidance: Artificial lighting and wildlife - Recommendations to help minimise the impact of artificial lighting* [on line]. Available from http://www.bats.org.uk/publications_download.php/1330/BCT_Interim_Guidance_Artificial_Lighting_June_2014.pdf
- British Standards Institute (2013). 24040:2013. *Biodiversity-Code of Practice for Planning and Development*. Standards Policy & Strategy Committee. Milton Keynes: BSI.
- CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal Second Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. [on-line]. Available from http://www.bats.org.uk/pages/batsurveyguide.html
- Cresswell P, Harris S, & Jefferies D.J (1990). *The history, distribution, status and habitat requirements of the badger in Britain*. Nature Conservancy Council, Peterborough.
- Department for Communities and Local Government (2019) *National Planning Policy Framework (NPPF)* (on-line). Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf
- Emmorsgate (2013). *Emmorsgate Seeds* [On-line]. Available from http://wildseed.co.uk/mixtures/category/meadow-and-grassland
- English Nature (2001). *Great Crested Newt Mitigation Guidelines*. Peterborough: Natural England.
- English Nature (2004) Reptiles: Guidelines for Developers. Peterborough: Natural England.
- Froglife (1999). *Advice Sheet 10: Reptile Survey. An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation*. Froglife Advice Sheet 10. Halesworth: Froglife.
- Fure, A. (2006) *Bats and lighting*. The London Naturalist, No. 85.
- Herpetofauna Groups of Britain and Ireland (HGBI) (1998). *Evaluating Local Mitigation/ Translocation Programmes: Maintaining Best Practice and Lawful Standards*. HGBI Advisory Notes for Amphibian and Reptile Groups (ARGs). Halesworth: HGBI, c/o Froglife. Unpublished.

- Hill, D. Fasham, M. Tucker, G. Shewry, M. Shaw, P (2005). *Handbook of Biodiversity Methods – Survey, Evaluation and Monitoring*. Cambridge: Cambridge University Press.
- IEEM - Institute of Ecology and Environmental Management (2006). *Bats and Lighting*. Winchester: IEEM.
- ILP – Institute of Lighting Professionals (2018). Guidance Note 08/18 Bats and artificial lighting in the UK. Bats in the built environment series. ILP and the Bat Conservation Trust [on-line].
- Jones, J. (2000). *Impact of Lighting on Bats*. Bat Conservation Trust. [on-line]. Available from http://www.bats.org.uk/downloads/Helpline/lighting.pdf
- Joint Nature Conservation Committee (2003) *Herpetofauna Workers' Manual*. Peterborough: JNCC
- Joint Nature Conservation Committee (2010). *Handbook for Phase 1 habitat survey - A technique for Environmental Audit*. JNCC, Peterborough. [on-line]. Available from http://www.jncc.gov.uk/page-2468
- MAGIC - Multi-Agency Geographic Information for the Countryside (2017). *MAGIC* Natural England, Leeds. [on-line]. Available from: www.magic.gov.uk [Accessed on 10/05/2017].
- Mitchell-Jones, T. & McLeish, A.P (2004). The Bat Workers' Manual (3rd Ed). Joint Nature Conservation Committee, Peterborough, UK. [on-line]. Available from http://jncc.defra.gov.uk/page-2861
- Natural England (2015). *Standing advice for local planning authorities to assess impacts of development on bats: Survey and Mitigation for development projects*. [on line]. Available from https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects
- Phlorum (2018) bat survey. Southside, Horebeech lane, Horam. unpublished
- Phlorum (2017) arboricultural survey report. Southside, Horebeech lane, Horam. Unpublished.
- Phlorum (2017) great crested newt survey. Southside, Horebeech lane, Horam. unpublished
- Phlorum (2017) preliminary ecological appraisal. Southside, Horebeech lane, Horam. unpublished
- Phlorum (2017) reptile survey. Southside, Horebeech lane, Horam. Unpublished.
- Rainbow, B. (2020) personal correspondence with Ben Rainbow regarding the site at Horam 18th September 2020. Phone call with follow up email to confirm.
- Stace, C.A. (2010). New Flora of the British Isles (3rd Ed.). Cambridge University Press, Cambridge.
- Schwegler (2016). *Bird and Nature Conservation Products* [on-line]. Available from http://www.schwegler-natur.de/pdf/Katalog/CatalogueEN_HQ.pdf

- Sussex Biodiversity Records Centre (SxBRC) (2017). *Desktop Biodiversity Report for land at Southside, Horebeech Lane, Horam, East Sussex*. Unpublished report for Phlorum. Henfield, West Sussex: SxBRC.

8. Glossary of Terms

BAP	Biodiversity Action Plan
BRC	Biological Records Centre
CIEEM	Chartered Institute of Ecology and Environmental Management
Habitats Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographical Information for the Countryside
NNR	National Nature Reserve
Nomenclature	The system of devising of names for plants
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal- formerly referred to as a Phase 1 Habitat Survey
SAC	Special Area of Conservation
SNCI	Site of Nature Conservation Interest
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Appendix A

Photographs and Target Notes (2017 and 2020)

Photographs and Target Notes

Photo Number	Year, Target Note (TN), and Feature	Photograph of Feature
1	**2017 TN1:** View to the south of suitable reptile habitat.	
2	**2017 TN2:** View of the pond within the north east corner providing suitable habitat for great crested newt.	

3	**2017 TN3:** Suitable bat roosting features within trees surrounding the pond.	
4	**2017 TN4:** Suitable breeding bird habitat along the eastern boundary of the site.	

6	**2020:** general site photo showing still suitable terrestrial habitat for reptiles and amphibians.	
7	**2020**: Pond still present and surrounded by mature trees. There is more vegetation growth around the edge of the pond.	

8	**2020:** Suitable breeding bird habitat along the boundary of the site.	
10	**2020:** the wet ditch along the eastern boundary is still present.	

Appendix B

Habitat Map (the same for 2017 and 2020)

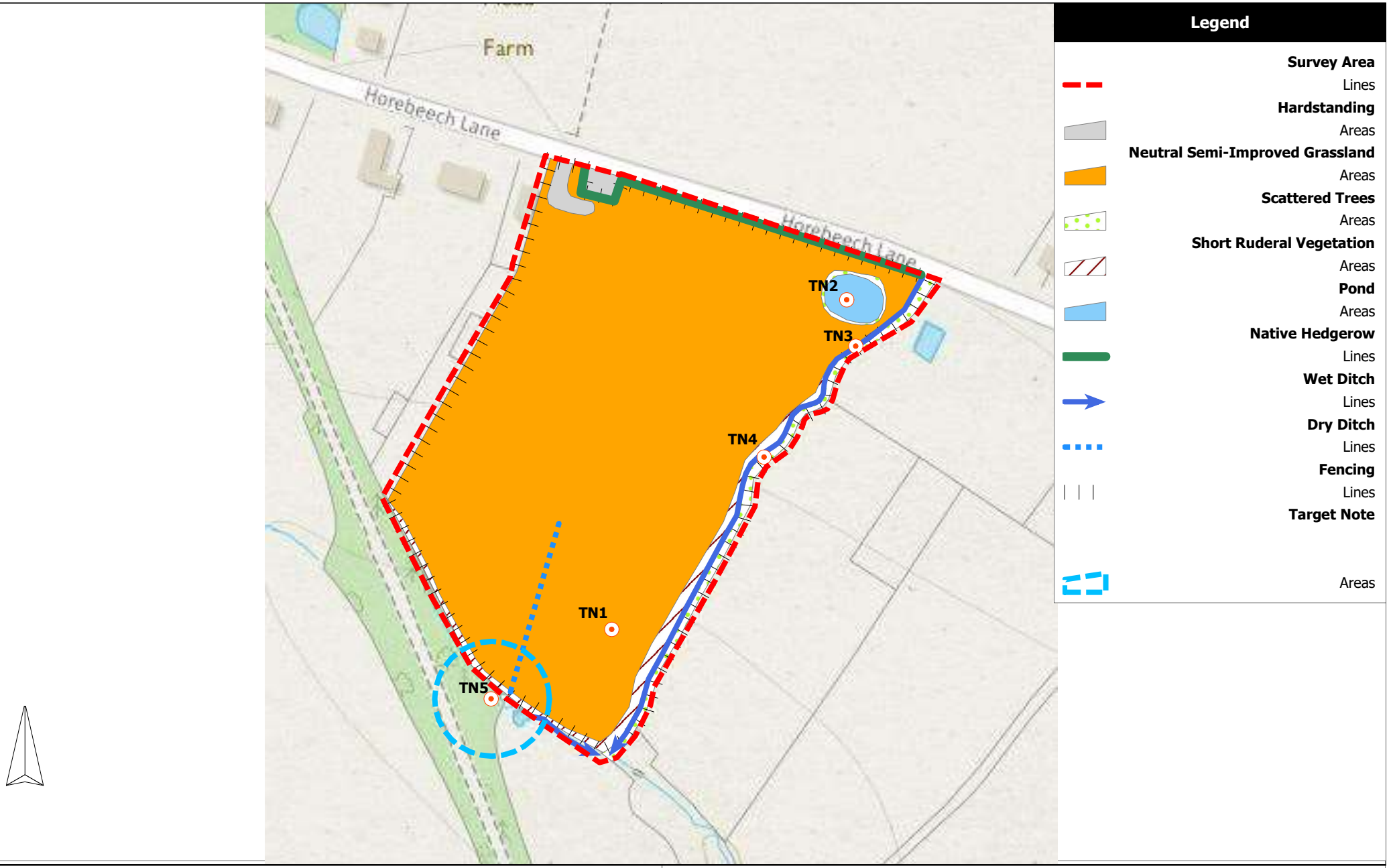


Figure 1: Southside Habitat Survey Map

Drawn by: TF
On the: 24/05/2017
Not to Scale
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Appendix C

Legislation

Legislation

This section contains information pertaining to the legislation and planning policy applicable in Britain. This information is not applicable to Northern Ireland, the Republic of Ireland the Isle of Man or the Channel Islands. Information contained in the following appendix is provided for guidance only.

Species

The objective of the EC Habitats Directive4 is to conserve plants and animals which are considered to be rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and also implements the obligations set out for species protection from the Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Various amendments have been made since the Wildlife & Countryside Act came into force in 1981. Further details pertaining to alterations of the Act can be found on the following website: www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000) and Nature Conservation (Scotland) Act 2004.

There are a number of other legislative Acts affording protection to species and habitats. These include:

- Countryside and Rights of Way (CRoW) Act 2000;
- Deer Act 1991;
- Natural Environment & Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to the previous Badger Acts of 1973 and 1991. Under this legislation it is an offence to:

- cruelly ill-treat a badger, including use of tongs and digging;
- intentionally or recklessly cause a dog to enter a badger sett;

[4] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

- intentionally or recklessly damage, destroy or obstruct access to a badger sett[5] or any part thereof;
- intentionally or recklessly disturb[6] a badger when it is occupying a badger sett;
- possess or control a dead badger or any part of a badger;
- sell or offers for sale, possesses or has under his control, a live badger; and
- wilfully kill, injure, take, or attempt to kill, injure or take a badger.

A Development Licence will be required from Natural England for any development works affecting an active badger sett, or to disturb badgers while individuals are occupying the sett. Depending on the nature of the works and the specifics of the sett, badgers could be disturbed by work near the sett even if there is no direct interference or damage to the sett itself. Natural England has issued guidelines on what constitutes a licensable activity. There is no provision in law for the capture of badgers for development purposes and therefore it is not possible to obtain a licence to translocate badgers from one area to another.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). This act protects individuals from:

- intentional or reckless disturbance (at any level);
- intentional or reckless obstruction of access to any place of shelter or protection; and
- selling, offering or exposing for sale, possession or transporting for purpose of sale.

In addition, all species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring or capturing of Schedule 2 species (all bats);
- deliberate disturbance of bat species as to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young; and

  (ii) to hibernate or migrate.
- deliberate disturbance of bat species as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

[5] A badger sett is defined in the legislation as "*any structure or place which displays signs indicating current use by a badger*". This includes seasonally used setts. Natural England (2009) have issued guidance on what is likely to constitute current use of a badger sett: www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

[6] For guidance on what constitutes disturbance and other licensing queries, see Natural England (2007) Badgers & Development: A Guide to Best Practice and Licensing. www.naturalengland.org.uk/Images/badgers-dev-guidance_tcm6-4057.pdf, Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf, Scottish Natural Heritage (2002) Badgers & Development. www.snh.org.uk/publications/online/wildlife/badgersanddevelopment/default.asp and Countryside Council for Wales (undated) Badgers: A Guide for Developers. www.ccw.gov.uk.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake activities listed above. A licence is required to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Breeding Birds

Under the Wildlife & Countryside Act, 1981 (as amended), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

Under the Wildlife & Countryside Act, 1981 (as amended), all birds, their nests and eggs are protected under Sections 1-8 of the Act and it is an offence, with certain exceptions, to:

- intentionally (or recklessly in Scotland) kill, injure or take any wild bird;
- intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act;
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act;
- use traps or similar items to kill, injure or take wild birds;
- have in one's possession or control any bird (dead or alive) unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations; and
- in Scotland only, intentionally or recklessly obstruct or prevent any wild bird from using its nest.

Certain rare species receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- intentional or reckless disturbance of dependent young of such a bird;
- in Scotland only, intentional or reckless disturbance whilst lekking; and
- in Scotland only, intentional or reckless harassment.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

- historical population decline during 1800-1995, but recovering: population has more than doubled over last 25 years;

- moderate (25-49%) decline in UK breeding population over last 25 years;
- moderate (25-49%) contraction of UK breeding range over last 25 years;
- moderate (25-49%) decline in UK non-breeding population over last 25 years;
- species with unfavourable conservation status in Europe (Species of conservation Concern);
- five year mean of breeding pairs in the UK;
- ≥50% of UK breeding population in 10 or fewer sites;
- ≥50% of UK non-breeding population in 10 or fewer sites;
- ≥20% of European breeding population in UK; and
- ≥20% of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non breeding populations in UK.

Hazel Dormice

The hazel dormouse (*Muscardinus avellanarius*) is fully protected under The Conservation of Habitats and Species Regulations 2017 through its inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring or capturing;
- deliberate disturbance as to impair its ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young; and

  (ii) to hibernate or migrate.
- deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part of this species.

The hazel dormouse is also currently protected under the Wildlife and Countryside Act 1981 (as amended) through its inclusion on Schedule 5. Under this Act, this species is additionally protected from:

- intentional or reckless disturbance;
- intentional or reckless obstruction of access to any place of shelter or protection; and
- selling, offering or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect dormouse breeding or resting places (N.B. this is usually taken to mean dormouse 'habitat') or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence will allow derogation from the relevant legislation but will also to enable appropriate mitigation measures to be put in place and monitored.

Herpetofauna (Reptiles and Amphibians)

The following species receive full protection under the Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

- sand lizard (*Lacerta agilis*);
- smooth snake (*Coronella austriaca*);
- natterjack toad (*Epidalea calamita*);
- great crested newt (*Triturus cristatus*); and
- pool frog (*Pelophylax lessonae*).

Under this legislation, Regulation 41 prohibits:

- deliberate killing, injuring or capturing of species listed on Schedule 2;
- deliberate disturbance of any Schedule 2 species as to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young; and

  (ii) to hibernate or migrate.
- deliberate disturbance of any Schedule 2 species as to affect significantly the local distribution or abundance of the species;
- deliberate taking or destroying of the eggs of a Schedule 2 species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part of a species.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act, they are additionally protected from:

- intentional or reckless disturbance (at any level);
- intentional or reckless obstruction of access to any place of shelter or protection; and
- selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). These species include:

- adder (*Vipera berus*);
- grass snake (*Natrix natrix*);
- common lizard (*Zootoca vivipara*); and
- slow-worm (*Anguis fragilis*).

Under this legislation, for these species it is prohibited under Section 9(1) & (5) to:

- intentionally (or recklessly in Scotland) kill or injure these species; or
- sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

The following species are listed in respect to Section 9(5) of Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) which only affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale:

- common frog (*Rana temporaria*);
- common toad (*Bufo bufo*);
- smooth newt (*Lissotriton vulgaris*); and
- palmate newt (*L. helveticus*).

Water Voles

The water vole (*Arvicola amphibius*) (=*terrestris*) is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- intentionally kill, injure or take (capture) this species;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection; and
- sell, offer or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead water vole or part of this species.

Where development works are liable to affect habitats known to support water voles, Natural England must be consulted. All alternative design options must have been explored and communicated to Natural England in order to demonstrate that works have tried to avoid contravening the legislation e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable etc. Conservation licences for the capture and translocation of water voles may be issued by Natural England for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population.

Otters

Otters (*Lutra lutra*) are fully protected under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring or capturing of otters;
- deliberate disturbance as to impair their ability:

  (i) to survive, breed, or reproduce, or to rear or nurture young; and

  (ii) to hibernate or migrate.
- deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part of this species.

Otters also receive protection under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- intentional or reckless disturbance (at any level);
- intentional or reckless obstruction of access to any place of shelter or protection; and
- selling, offering or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect breeding or resting places or for activities likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Wild Mammals

All wild mammals are protected against intentional acts of cruelty under the Wild Mammals (Protection) Act 1996. Under this legislation it is an offence to:

- mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention of this legislation, due care and attention should be taken when carrying out works that have the potential to impact any wild mammal as described above.

Plants

Wild plants are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Some rare plant species also receive full protection under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits:

- intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only); and
- selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or parts.

In addition to the legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017. Regulation 45 makes it an offence to:

- deliberately pick, collect or destroy a wild Schedule 5 species; and
- be in possession of, or control, transport, sell or exchange any wild live or dead Schedule 5 species or anything derived from it.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect species of plant listed under The Conservation of Habitat and Species Regulations 2017.

Invasive Plant Species

Certain plants are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Species include:

- Japanese knotweed (*Reynoutria japonica*);
- giant hogweed (*Heracleum mantegazzianum*);
- Himalayan balsam (*Impatiens glandulifera*);
- certain species of rhododendron (*Rhododendron* sp.); and
- certain species of cotoneaster (*Cotoneaster* sp.).

Species listed are non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to:

- plant or otherwise cause these species to grow in the wild.

This legislation makes it is an offence to cause species listed to grow in the wild. Therefore, if they are present on site and development activities have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this.

Habitats

International Statutory Designations

- Special Protection Areas (SPAs): Terrestrial SPA's are afforded protection by The Conservation (Natural Habitats, &c. Regulations 1994 (as amended) an offshore SPA's are afforded protection under The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). SPAs are designated under the EC Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds). SPAs are areas recognised as important habitat for rare and migratory birds within the European Union (rare birds as listed on Annex I of the Directive).
- Special Areas of Conservation (SACs): These areas are designated under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora), designated for the habitats and (non-bird) species listed on Annexes I and II to the Directive under the same regulations as detailed for SPA's.
- Ramsar sites: These areas are wetlands designated under the Convention on Wetlands of International Importance (1971). Wetlands can include areas of marsh, fen, water or peatland and may be natural or artificial, permanent or temporary. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000.

National Statutory Designations

- Sites of Special Scientific Interest (SSSIs): These sites are designated by the countryside agencies (for example Natural England) under the Wildlife & Countryside Act 1981 (as amended). Prior to 1981 these were designated under the National Parks and Access to the Countryside Act 1949. Improved mechanisms for the protection of SSSIs have also been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).
- National Nature Reserves: These sites are also designated by the countryside agencies under the Wildlife & Countryside Act 1981 (as amended).

Local Statutory Designations

- 1949 Local Nature Reserves (LNRs): These sites are designated by local authorities under the National Parks and Access to the Countryside Act 1949. These are sites recognised for their wildlife or geological interest at a local level and are managed for nature conservation.

Non-Statutory Designations

- Local Wildlife Sites: Areas of local conservation interest may be designated by local authorities. The terminology for these sites varies depending on the county. They can be called Sites of Nature Conservation Importance (SNCI's), Sites of Importance for Nature Conservation (SINCs), County Wildlife Sites (CWS), Listed Wildlife Sites (LWS), Local Nature Conservation Sites (LNCS), Sites of Biological Importance (SBIs). The designation criteria may vary between counties. Local Wildlife Sites are of material consideration when planning applications are being determined.
- The Hedgerow Regulations 1997: These have been compiled to protect 'important' countryside hedgerows from damage or removal. A hedgerow is considered important if (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Hedgerows covered by these regulations include those on or adjacent to common land, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys.

National Planning Policy

- The National Planning Policy Framework (NPPF) (2019) replaces the former NPPF 2018 and 2012, and the former PPS9 document and emphasises the need for sustainable development. The Framework specifies the need to protect and enhance biodiversity and geodiversity. Identify and safeguard components of local wildlife-rich habitats and wider ecological networks including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors; and stepping that connect them. Plus partnerships for habitat management, enhancement, restoration or creation. The Framework aims to promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; appropriate mitigation or compensation measures are in place where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

Local Planning Policy

The Wealden District Core Strategy Local Plan (2013) includes the following Nature Conservation Policies that are relevant to the site.

<u>Wealden District Core Strategy Local Plan (2013)</u>

- 'Policy WCS12: Biodiversity.
  - *In order to contribute to the biodiversity targets provided in the Sussex Biodiversity Action Plan the Council will prevent a net loss of biodiversity, ensure a comprehensive network of habitats, and work with partners to maximise opportunities to ensure habitats, biodiversity features and ecological networks are maintained, restored, enhanced and, where possible, created to achieve a net gain in biodiversity and sustain wildlife in both rural and urban areas.*
  - *This will be achieved through the development and implementation of an integrated green network strategy. In accordance with Planning Policy Statement 9, please see page 49 'Working with the South Downs National Park Authority' and the reference to publication of the NPPF and cancellation of a number of Planning Policy Statements and Guidance Notes, there may be exceptional circumstances when compensatory measures for a net loss of biodiversity is required.*
  - *Appropriate compensatory measures will be required to contribute to Wealden's overall biodiversity resource, and may include enhancement of Wealden's Biodiversity Opportunity Areas and other relevant Biodiversity Action Plan habitats, so that there is overall no net loss of biodiversity.*

- WCS13 Green Infrastructure
    - *The District's existing network of green infrastructure will be protected, improved and enhanced by the implementation of a Green Infrastructure Strategy, ensuring a multifunctional, accessible network which maintains and improves biodiversity and landscape character, increases opportunities for healthy living and contributes to healthy ecosystems and climate change objectives.*

    - *Development proposals will not be permitted which would result in the loss of existing open space or harm to Wealden's network of green spaces unless measures are incorporated within the development that will either mitigate the effects of development or alternative and suitable provision is made that is accessible, of good quality and value to its users, in an appropriate location, at an appropriate scale and nature and would positively contribute to the overall network of green space.*

    - *All new residential development will be required to contribute to the green infrastructure network and where appropriate to make provision for new or enhancement of existing open space. Where the scale of development would be too small to make on-site provision, the Council will seek developer contributions either towards the improvement of existing open spaces or towards the provision of open space elsewhere.'*

Appendix D

Plant Species List

Plant Species List

Scientific nomenclature follows Stace (2010) for vascular plant species and British Bryological Society (BBS) Special Volume No. 5 *English Names for British* Bryophytes for bryophyte species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk. The plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally

Key to qualifiers: G=garden origin, P=planted, Y = young, S=seedling or sucker, T=tree, H=hedge, W=water,? = identification uncertain.

Scientific Name	Common Name	Abundance	Qualifier
Acer campestre	Field maple		
Achillea millefolium	Yarrow		
Agrostis capillaris	Common bent		
Ajuga reptans	Bugle		
Alliaria petiolata	Garlic mustard		
Alopecurus pratensis	Meadow foxtail		
Arum maculatum	Lords-and-Ladies		
Bellis perennis	Daisy		
Callitriche sp.	Water-starwort		
Calystegia sepium	Hedge bindweed		
Cardamine pratensis	Cuckooflower		
Centaurea nigra	Common knapweed		
Cirsium arvense	Creeping thistle		
Crataegus monogyna	Hawthorn		
Dactylis glomerata	Cock's-foot		
Dryopteris sp.	Fern		
Equisetum sp.	Horsetail		

Fraxinus excelsior	Ash		
Galium aparine	Cleavers		
Geranium robertianum	Herb-Robert		
Hedera helix	Ivy		
Heracleum sphondylium	Hogweed		
Holcus lanatus	Yorkshire-fog		
Hyacinthoides sp	Bluebell		
Hypochaeris radicata	Cat's-ear		
Ilex aquifolium	Holly		
Juncus effusus	Soft-rush		
Lolium perenne	Perennial rye-grass		
Lotus corniculatus	Common bird's-foot-trefoil		
Mercurialis perennis	Dog's mercury		
Narcissus sp.	Daffodil		
Plantago lanceolata	Ribwort plantain		
Primula vulgaris	Primrose		
Prunus avium	Wild cherry		
Prunus laurocerasus	Cherry laurel		
Prunus spinosa	Blackthorn		
Prunella vulgaris	Selfheal		
Ranunculus acris	Meadow buttercup		
Ranunculus bulbosus	Bulbous buttercup		
Ranunculus repens	Creeping buttercup		
Rubus fruticosus agg.	Bramble		
Rumex conglomeratus	Clustered dock		
Rumex crispus	Curled dock		

Rumex obtusifolius	Broad-leaved dock		
Salix sp.	Willow		
Senecio jacobaea	Common ragwort		
Stellaria graminea	Lesser stitchwort		
Taraxacum sp.	Dandelion		
Trifolium repens	White clover		
Trifolium pratense	Red clover		
Ulmus sp.	Elm		
Urtica dioica	Common nettle		
Veronica chamaedrys	Germander speedwell		
Vicia sativa	Common vetch		

Appendix E

Suggested Compensatory Planting

Suggested Compensatory Planting

This section provides a list of plants which are of proven value to wildlife. The list is not exhaustive and merely provides a guide for suggested planting for wildlife value. Planting should be tailored on a site by site basis. The list includes some native and ornamental species however the emphasis should always be on the use of predominantly native species.

N = Native, NN = Non-native.

This list includes species that may be harmful if handled or ingested. Schedule 9 (Part 2) of the Wildlife and Countryside Act, 1981 (as amended) includes a list of invasive plants, including aquatic species, that should always be avoided in planting schemes.

Large Shrubs

Hedge veronica/Hebe (*Veronica* spp.) NN

Hawthorn (*Crataegus monogyna*) N

Blackthorn (*Prunus spinosa*) N

Rose: dog rose (*Rosa canina*), field rose (*R. arvensis*), burnet rose (R. *pimpinellifolia*) N

California lilac (*Ceanothus* spp.), (*C. arborea*) NN

Wild privet (*Ligustrum vulgare*) N

Common holly (*Ilex aquifolium*) N

Barberry (*Berberis* spp.) (*B. darwinii*), (*B. thunbergii*), (*B. x stenophylla*) NN

Daisy Bush (*Olearia* spp.), (*O. x hastii*), (*O. macrodonta*) and (*O. traversii*) NN

Firethorn (*Pyracantha coccinea*) NN

Hazel (*Corylus avellana*) N (*C. maxima*) NN

Viburnum (*Viburnum* spp.), wayfaring tree (*V. lantana*) N, guelder rose (*V. opulus*) N, laurustinus (*V. tinus*) E Note: V. lantana can become invasive in more open habitats.

Dogwood (*Cornus sanguinea*) N

Broom (*Cytisus scoparius*) N

Escallonia (*Escallonia macrantha*) NN

Hardy fuchsia (*Fuchsia magellanica*) NN

Buckthorn (*Rhamnus cathartica*) N

Spindle (*Euonymus europaeus*) N

Tutsan (*Hypericum androsaemum*) N

Yew (*Taxus baccata*) N

Trees

Cherry (*Prunus* spp.), wild cherry (*P. avium*), bird cherry (*P. padus*), domestic plum (*P. domestica*) N or cherry plum (*P. cerasifera*) NN

Ash (*Fraxinus excelsior*) N

Apple (*Malus* spp.), edible apple (*M. domestica*), crab apple (*M. sylvestris*) N

Pear (*Pyrus* spp.), edible pear (*P. communis*) NN

Small-leaved lime (*Tilia cordata*) N

Silver birch (*Betula pendula*) N

Yew (*Taxus baccata*) N

Black poplar (*Populus nigra*) N

Foxglove tree (*Paulownia tomentosa*) NN

Beech (*Fagus sylvatica*) N

Climbers

Jasmine (*Jasminum* spp.), summer jasmine (*J. officinale*), winter jasmine (*J. nodiflorum*) NN

Ivy (*Hedera helix*) N

Climbing hydrangea (*Hydrangea anomala* ssp. *petiolaris*) NN

Honeysuckle (*Lonicera* spp.) (*L. periclymenum*) N

Clematis (*Clematis* spp.) NN

Hop (*Humulus lupulus*) N

Firethorn (*Pyracantha atalantioides*) NN

Bulbs

English bluebell (*Hyacinthoides non-scripta*) N

Squill species (*Scilla* spp.) N/NN

Snowdrop (*Galanthus nivalis*) N

Winter aconite (*Eranthis hyemalis*) E

Crocus species (*Crocus* spp.) NN

Wild Daffodil (*Narcissus pseudonarcissus*) N

Onion species (*Allium* spp.) N/NN. N.B. *Allium triquetrum* (three cornered leek) and *Allium paradoxum* (few-flowered leek) are Schedule 9 invasive plant species.

Wood anemone (*Anemone nemorosa*) N

Lesser celandine (*Ficaria verna*) N

Appendix F

Bird and Bat Box Designs

Bird and Bat Box Designs

Bird Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**Schwegler Nest Box 1B** Hole-fronted 26mm entrance hole	16 x 16 x 23	Multi-purpose, including: blue-, marsh-, coal and crested tit and possibly wren. All other species are prevented from using the nest box due to the smaller entrance hole.	Suitable walls or semi-mature/mature trees and shrubs; attached to a tree trunk or hung from branches. Ideal points include discrete areas away from predators, such as against walls, plant and metal supports.
	**Schwegler Bird House** 32mm entrance hole	15 x 21 x 33	Multi-purpose, including: great-, blue-, marsh- and coal tit, redstart, nuthatch, pied flycatcher and sparrows.	Fixed to a semi-mature/mature tree trunk, wall or fence using the hanging bracket on the back. Between 1.5 m and 3 m high, and should be sited higher if your area has a particularly high cat population.

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**Schwegler Sparrow Terrace 1SP**	20 x 43 x 24.5	House sparrow. It may also occasionally attract tits, redstarts and spotted flycatchers.	In an elevated position such as on post/platform within dense shrub/tree planting or on top of lighting columns. Alternatively, they could be attached to the side of a building. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided, or install directly into the wall Cleaning is not necessary. The front panel can be removed by turning the screw hook.

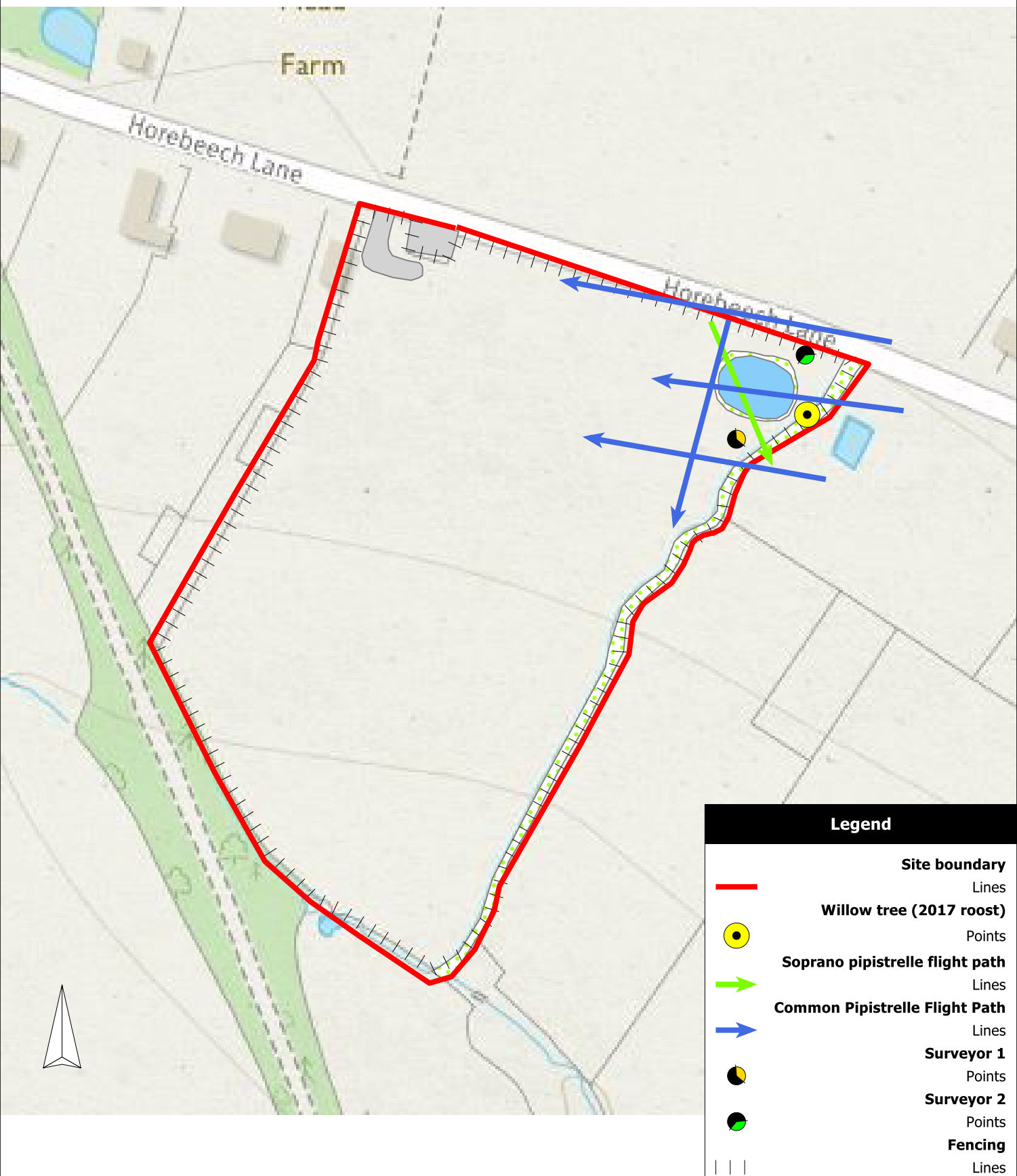
Bat Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**Ibstock Enclosed Bat Box 'B'** Red Blue Buff	**Small:** 10.5 x 21.5 x 21.5 **Large:** 10.5 x 21.5 x 29	Small crevice-dwelling bats e.g. pipistrelles.	In the brickwork of a wall, with the box flush with the face of the wall. Ideally at least 3 to 6m above the ground with an unobstructed access. A clear distance (drop) below the box is recommended (preferably 5m or more). **Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.**
	**Ibstock Enclosed Bat Box 'C'**	**Small:** 10.5 x 21.5 x 21.5 **Large:** 10.5 x 21.5 x 29	Small crevice-dwelling bats e.g. pipistrelles.	In the brickwork of a wall, with the box flush with the face of the wall. Ideally at least 3 to 6m above the ground with an unobstructed access. A clear distance (drop) below the box is recommended (preferably 5m or more).

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	**2F Schwegler Bat Box (General Purpose) with or without Double Front Panel**	16 x 16 x 33	Without panel: Particularly successful with brown long-eared bat. Also used by noctule. With panel: Ideal for crevice-dwelling species: pipistrelles, Myotis species (particularly Daubenton's), Leisler's and serotine.	On trees or buildings and at a height of 3 to 6m. In open sunny positions and in groups of 3 to 5 facing different directions. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.
	**Chavenage Bat Box**	10 x 18 x 38	Small crevice-dwelling bats e.g. pipistrelles.	On trees in gardens or woodland and also on house walls. 2.5 - 5m high on a building, mature tree or vegetation line (trees/tall hedge) or on a feeding/flight route in partial daytime sun. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.

Appendix G

Bat Survey Map 2020



Southside Bat Survey Map 2020

Drawn by: S
On the: 08/10/2020
Not to Scale
Ref: 7257

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Appendix H

Bat Survey Data 2020

Survey 1: Dusk Emergence Survey on 29th August 2020

Number of Surveyors	Site and Job no:	Start Time	Sunset Time	Finish Time	Temperature (°C) at start	Temperature (°C) at end	Cloud Cover (Oktas 1-8)	Windspeed (Beauforts 1-12)	Rain
2	Southside, Horam 7257	19:35	19:50	21:50	13	12	8	3	0

Surveyor 1: CS			Bat Detector Used: A3
Time	Activity observed	Number of passes	Comments/Notes
20:08	Community (C)	1	H (Heard).
20:10	Foraging (F)	3	SH (Seen & Heard).
21:11	C	1	H.
20:15	C	1	H.

Surveyor 2: Andy			Bat Detector Used: BD3
Time	**Activity observed**	**Number of passes**	**Comments/Notes**
20:08	Community (C)	1	Heard (H)
20:10	C	1	H.
20:13	C	1	SH (Seen & Heard).
20:40	C	1	S (Seen).

Survey 2: Dusk Emergence Survey on 18th September 2020

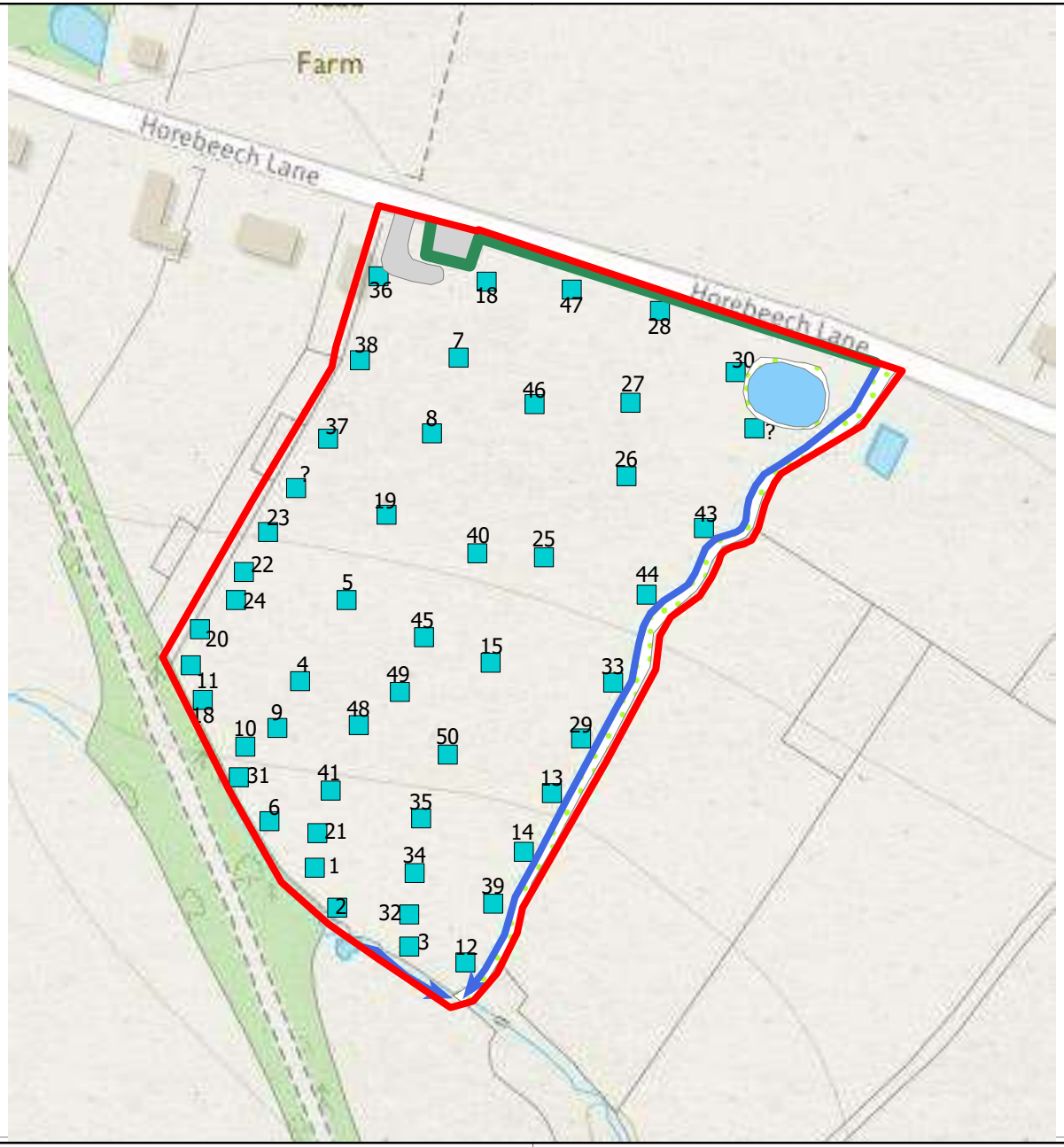
Number of Surveyors	Site and Job no:	Start Time	Sunset Time	Finish Time	Temperature (°C) at start	Temperature (°C) at end	Cloud Cover (Oktas 1-8)	Windspeed (Beauforts 1-12)	Rain
2	**Southside, Horam 7257**	**18:50**	**19:07**	**21:07**	**17**	**15**	**3**	**2**	**0**

Surveyor 1: CS			Bat Detector Used: A3
Time	**Activity observed**	**Number of passes**	**Comments/Notes**
19:20	Community (C)	1	H (Heard).
19:30	Foraging (F)	2	SH (Seen & Heard).
20:10	C	1	H.
20:18	C	1	H.

Surveyor 2: Andy			Bat Detector Used: BD3
Time	**Activity observed**	**Number of passes**	**Comments/Notes**
19:20	Community (C)	1	H.
19:30	Foraging (F)	1	SH (Seen & Heard).
19:56	C	1	SH (Seen & Heard).
20:30	C	1	H

Appendix I

Reptile Survey Map 2020



Legend

- **Survey Area** Lines
- **Hardstanding** Areas
- **Pond** Areas
- **Native Hedgerow** Lines
- **Wet Ditch** Lines
- **Reptile Mat** Points

Reptile Mat Locations 7257

Drawn by: EB
On the: 10/09/2020
Not to Scale
Ref: 7257

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Appendix J

Reptile Survey Data 2020

Reptile Survey Recording Form																															
								AD=Adult JUV=Juvenile UNID=Unidentified																								
Job no: 7257								Client: Chailey Homes								Project: Southside, Horam														
Survey No.	**Date**	**Time**	**Surveyor**	**Sky/ cloud (Octares 0-8)**	**Temp: (°C)**	**Wind (Beaufort scale 0-12)**	**Rain**	**Common lizard**					**Slow worm**					**Grass snake**					**Adder**				
								Ad			**Juv**	**Total**	**Ad**			**Juv**	**Total**	**Ad**			**Juv**	**Total**	**Ad**			**Juv**	**Total**
								M	**F**	**Unid**			**M**	**F**	**Unid**			**M**	**F**	**Unid**			**M**	**F**	**Unid**		
1	15/09/ 2020	08:30	CS	1	14	1	0	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
2	17/09/ 2020	08:30	KR	1	14	2	0	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
3	21/09/ 2020	08:30	KR	1	15	0	3	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**
4	23/09/ 2020	08:30	KR	1	15	0	0	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
5	25/09/ 2020	08:30	AR	1	15	0	0	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
6	28/09/ 2020	16:30	AB	1	15	0	0	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**
7	07/10/ 2020	09:00	KR	1	15	0	0	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**
							Total	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**



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