Gladman Developments Ltd

Land off Fryatts Way,

Bexhill-on-Sea, East Sussex

Ecological Appraisal

June 2021

This report may contain sensitive ecological information, it is the responsibility of the Local Authority to determine if this should be made publicly available.

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CONTENTS

TABLES

PHOTOGRAPHS

FIGURES

APPENDICES

1.0 NON-TECHNICAL SUMMARY

1.1 The 11.29ha site located in the north-western side of the town of Bexhill-on-Sea, East Sussex, was dominated by poor semi-improved grassland, that had limited structure and diversity due to the intensity at which it was grazed. Boundary features included a number of ditches, hedgerows, fencing and tree lines, with pockets of scrub and ruderal with common and widespread species with limited ecological value.

1.2 There are twelve hedgerows, creating a network around and through the site, these included nine of moderate high to very high conservation value; three of moderate value, with hedgerow H5 identified as 'important' under REGs. All hedgerows contained over 80% native species and were therefore identified as Habitats of Principal Importance under Section 41 of the NERC Act (2006).

1.3 A large number of trees were assessed as having some degree of bat roosting opportunities, these fell within the hedgerow networks, which will be largely retained within the scheme. There were 24 trees identified as having moderate potential, that might need further assessment if they are to be affected by the development. The activity transects have identified typically common and widespread species, with numbers not exceeding 400 registrations per survey with common pipistrelle and soprano the most regularly recorded.

1.4 A low population of slow worms were identified to the east, with a peak of two adults. Surveys were restricted to certain parcels due to the landowners wishes due to grazing horses; however the habitats not surveys had little suitable habitat structure due to the grazing pressures.

1.5 No great crested newts were recorded within pond P1 within the site during eDNA surveys, and all other waterbodies were either dry or not suitable for supporting these species. Dormice surveys undertaken have recorded no evidence within the nest tubes.

1.6 The site lies within 2.1km of Pevensey Levels Ramsar Site/SAC; 10.5km of Hastings Cliffs SAC; and 1.8km of Dungeness, Romney Marsh, and Rye Bay SPA. The site falls with the hydrological catchment areas for Pevensey levels, and as a result the scheme will need to incorporate a robust drainage strategy, with at least a two-stage treatment process, to ensure the integrity of the site is not compromised. Recreational opportunities will be made available within the 4.39ha of GI, to deter regular visits to other designated sites, this will include a circular walk and potential for off-lead exercise for dogs.

1.7 Existing hedgerows will be enhanced with additional species planted, and habitats will be created that are poorly represented or are currently absent, this includes SUDs, shrubs, species rich and tussock grassland and species which provide a nectar source. Opportunities for consistent use of the site by protected/notable species will be promoted through buffering corridors of movement (hedgerow and trees), creation of refuge and foraging habitats.

1.8 Proportional mitigation measures to ensure no offences are committed will be undertaken, this will include appropriate timing of habitat removal, displacement or trapping techniques and creation of refuge within the built development and habitats such as bat/bird boxes and hibernaculum.

2.0 INTRODUCTION

2.1 The following Ecological Appraisal has been prepared by FPCR Environment and Design Ltd on behalf of Gladman Developments Ltd for land west of Fryatts Way, Bexhill-on-Sea, East Sussex (central OS Grid Reference TQ 723 088).

2.2 It provides the results of an Extended Phase 1 Habitat survey undertaken in May 2021 and subsequent protected species surveys.

Site Context

2.3 The site comprises approximately 11.29ha of poor semi-improved grazed grassland bordered by residential gardens, hedgerows, mature trees and drainage ditches. One pond, P1, was identified within the site boundary.

2.4 The site is situated on the north-western side of Bexhill. The Highwoods Golf Course borders the site to the north and west, with the residential gardens of Fryatts Way forming the eastern boundary, whilst pasture and parkland are located to the south of the site.

Development Proposals

2.5 The proposals are for a residential development of up to 210 units with associated infrastructure and landscaping. Access will be via Fryatts Way at an existing entrance into the site, so there will be minimal losses to hedgerows and trees for access purposes. The majority of mature trees and hedgerows within the site will be retained, within the provision of 4.39ha of green infrastructure.

3.0 METHODOLOGY

Desk Study

3.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Sussex Biodiversity Record Centre (SxBRC)

3.2 The Multi-Agency Government Information for the Countryside (MAGIC) website (www.magic.gov.uk) has been reviewed for the presence of any statutory designated sites of international (Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar Sites)), national (Site of Special Scientific Interest, (SSSI)) or local nature conservation importance (Local Nature Reserves (LNR)) within 15km, 2km and 1km of the study area, respectively.

3.3 Further inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

3.4 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

3.5 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- European Protected Sites - 15km search around the site for sites of International Importance (e.g. SACs, SPAs and Ramsar sites).
- Nationally Protected Sites - 2km search around the site for sites of National Importance (e.g. SSSIs which include National Nature Reserves (NNRs)). Sites of importance outside of the 2km range may also be highlighted if a potential impact is perceived.
- Local Protected Sites - 1km search around the site for locally protected sites (e.g. LNRs).
- Non-statutory Designated Sites - 1km search around the site.
- Legally Protected and Notable Species - 1km search around the Survey Area. Includes species protected under Part 1 of the Wildlife & Countryside Act 1981 (as amended)[1], the Conservation of Habitats and Species Regulations 2017 (as amended)[2], Protection of Badgers Act 1992[3] and other notable fauna such as Biodiversity Action Plan, Red Data Book (RDB) species, Birds of Conservation Concern (BoCC)[4] red & amber listed bird species and Species of Principal Importance Natural Environmental and Rural Communities (NERC) Act 2006[5].

3.6 Data sets have been restricted in the most part to the last ten years, this is to ensure that recent, most relevant, records of protected/notable species are reflected and prioritised. However, where a protected/notable species has been recorded over ten years ago, and there are no more recent records, then these have also been included in the summary of results.

1 Act of Parliament, (1981). The Wildlife and Countryside Act 1981 (as amended), London: HMSO

2 The Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit). [Online] https://www.legislation.gov.uk/uksi/2017/1012/contents/made

3 The Protection of Badgers Act 1992 (as amended). London: HMSO [Online]. Available from: http://www.legislation.gov.uk/ukpga/1992/51/contents

4 Birds of Conservation Concern 4 (2015). British Trust for Ornithology {Online}. Available from: http://www.bto.org/science/monitoring/psob

5 Ministry of Housing Communities & Local Government (February 2019). National Planning Policy Framework

Field Surveys

Habitats / Flora

3.7 The initial survey was undertaken in November 2019 and was updated in May 2021 based on the Handbook for Phase 1 Habitat Surveys (Joint Nature Conservation Committee)[6], to identify specific habitats and features of ecological interest. This comprised a systematic walkover of the site mapping and broadly describing the principal habitat types and identifying the dominant plant species / communities present within each habitat type..

3.8 The abundance of species was quantified using the DAFOR scale, ranging from Dominant (>75%) to Abundant (75-51%), through Frequent (50-26%) and Occasional (25-11%) to Rare (10-1%). Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.

3.9 Each habitat was described based on botanical merit and target notes used where appropriate to highlight features or habitats of particular interest. Features such as trees were considered with regard to their ecological value and potential to provide suitable habitats for protected species.

3.10 Consideration was given to the presence of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (WCA)1981 (as amended) and under the Weed Act 1959[8]. Any rare or notable flora including those listed as priorities in the Post 2010 UK Biodiversity Framework[9], species listed under the NERC Act, Local Biodiversity Action Plan (LBAP) Priority Species/Habitats, any IUCN Red listed[10], Red Data Book (RDB)[11] and any national, regional, county or vice – county rarities were duly noted.

Hedgerows

3.11 Hedgerows were surveyed individually using the Hedgerow Evaluation and Grading System (HEGS)[12]. This method of assessment includes noting down canopy species composition, associated ground flora and climbers, structure of the hedgerow including height, width and gaps, number and species of mature trees, and associated features such banks, ditches and grass verges.

3.12 Each hedgerow is given a grade using HEGS with the suffixes '+' and '-', representing the upper and lower limits of each grade respectively. These grades represent a continuum on a scale from 1+ (the highest score and denoting hedges of the greatest nature conservation priority) to 4- (representing the lowest score and hedges of the least nature conservation priority) as follows:

- Grade -1, 1, 1+ High to Very High Value
- Grade -2, 2, 2+ Moderately High to High Value
- Grade -3, 3, 3+ Moderate Value
- Grade -4, 4, 4+ Low Value

[6] JNCC. (2010). Handbook for Phase 1 Habitat Survey – a technique for environmental audit. Peterborough: JNCC
[8] Act of Parliament. (1959). The Weed Act 1959. London: HMSO
[9] JNCC and Defra (on behalf of the Four Countries' Biodiversity Group). 2012. *UK Post-2010 Biodiversity Framework*. July 2012
[10] International Union for Conservation of Nature (IUCN), Red List 2012
[11] The Vascular Plant Red Data List for Great Britain (2005), Cheffings, C. and Farrell, L. (Eds)
[12] Clements, D. & Toft, R. (1992). *Hedgerow Evaluation and Grading System (HEGS) – a methodology for the ecological survey, evaluation and grading of hedgerows.* Countryside Planning and Management

3.13 Hedgerows graded 1 or 2 are considered to be a priority for nature conservation.

3.14 The hedgerows were also assessed for their potential ecological value under the Hedgerow Regulations 1997 (Statutory Instrument No: 1160)[13] to determine whether they qualified as 'Important Hedgerows' under the Regulations. This broadly follows the above methodology, although an average number of canopy species per 30m is calculated, dependant on the length of hedgerow. Additional features which enhance hedgerows, when found in association with the hedge, such as mature trees, ditches, hedge banks and connections are also considered. This methodology is broadly consistent with that outlined in The Hedgerow Survey Handbook (DEFRA, 2007)[14].

3.15 Hedgerows were also assessed to determine if they met the habitat descriptions for Hedgerow Habitat of Principal Importance as listed within Section 41 of the NERC Act, (i.e. whether they consisted of 80% or more native species) or a Priority Habitat of the Sussex LBAP.

3.16 It should be noted that hedgerows may also qualify as important under the Archaeological criteria of this Act, which is beyond the scope of this assessment.

Fauna

3.17 During the surveys of the site, observations of, signs of, or suitable habitat for any species protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended) and the Protection of Badgers Act 1992 were noted with particular attention being given to the potential presence of bats, hazel dormouse *Muscardinus avellanarius,* great crested newt *Triturus cristatus*, water vole *Arvicola amphibius* and badger *Meles meles*. Throughout the survey consideration was also given to the existence and use of the site by other protected species or locally notable fauna such as Species of Principal Importance as listed on Section 41 of the NERC Act (2006), Birds of Conservation Concern (BoCC) red & amber listed bird species and any Local Biodiversity Action Plan (LBAP) or Red Data Book (RDB) species.

3.18 The standard survey methodology was extended to assess the potential presence of protected species within features such as buildings and trees or specific habitats considered for their ecological value and potential to provide suitable habitats for protected species.

Badgers

3.19 Due to the possibilities of persecution and ongoing debates concerning their protection, the details of these surveys are provided in a separate FPCR Badger Report (June 2021) which will not be released into the public domain.

Bats

<u>Tree Roost Assessments</u>

3.20 Tree assessments were undertaken from ground level, with the aid of a torch and binoculars (where appropriate). These surveys were undertaken in November 2019 by an experienced ecologist from

[13] *The Hedgerow Regulations 1997 – Statutory Instrument 1997 No. 1160*. [Online]. London: HMSO. Available at: http://www.legislation.gov.uk/uksi/1997/1160/contents/made

[14] DEFRA (2007). *Hedgerow Survey Handbook: A standard procedure for local surveys in the UK*

FPCR. During the survey Potential Roosting Features (PRF) for bats such as the following were sought (Based on p.16, British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015[19]):

- Natural holes (e.g. knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar;
- Man-made holes that have developed from flush cuts or cavities created by branches tearing out from parent stems;
- Woodpecker holes;
- Cracks/splits in stems or branches (horizontal and vertical);
- Partially detached or loose bark, or bark plates;
- Cankers (caused by localised bark death) in which cavities have developed;
- Other hollows or cavities, including butt rots;
- Compression of forks with occluded bark, forming potential cavities;
- Crossing stems or branches with suitable roosting space between;
- Ivy stems with diameters in excess of 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk);
- Bat or bird boxes; and
- Other suitable places of rest or shelter.

3.21 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value.

3.22 Trees were classified into general bat roost potential groups based upon the presence of these features. *Table 1* (below) broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in the Bat Conservation Trust (BCT) guidance.

3.23 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in BCT Guidelines) to allow more specific survey criteria to be applied, particularly with reference to the definition of a breeding site or resting place as described in the Habitat Regulations.

[19] Surveying for Bats in Trees and Woodland – Guide. British Standards Institution. BS8596:2015, UK.

Table 1: Classification and Survey Requirements for Bats in Trees

Classification of Tree / Building	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey Work / Actions
Confirmed Roost	Evidence of roosting bats in the form of live / dead bats, droppings, urine staining, mammalian fur oil staining, etc.	A Natural England derogation licence application will be required if the tree or roost site is affected by the development or proposed arboricultural works. This will require a combination of aerial assessment by roped access bat workers (where possible, health and safety constraints allowing) **and** nocturnal survey during appropriate periods (e.g. nocturnal survey - May to August) to inform on the licence. Works to tree undertaken under supervision in accordance with the approved good practice method statement provided within the licence. **However,** where confirmed roost site(s) are not affected by works, work under a precautionary good practice method statement may be possible.
High Potential	One or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat. Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc.	Aerial assessment by roped access bat workers (if appropriate) **and** / **or** nocturnal survey during appropriate period (May to August). Following additional assessments, tree/buildings may be upgraded or downgraded based on findings. If roost sites are confirmed and the roost is to be affected by proposals a licence from Natural England will be required. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate.
Moderate Potential	A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc.	A combination of aerial assessment by roped access bat workers (trees) **and / or** nocturnal survey during appropriate period (May to August). Following additional assessments, roost may be upgraded or downgraded based on findings. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate. If a roost site/s is confirmed a licence from Natural England will be required.
Low Potential	Contain Potential Roosting Features but with none seen from ground or features seen only very limited potential. Examples include (but are not limited to); loose/lifted bark/tiles, shallow splits exposed to elements or upward facing holes/cavities.	No further survey required but a precautionary working method statement may be appropriate.
Negligible / No potential	Negligible/no habitat features likely to be used by roosting bats	None.

** The Conservation of Habitats & Species Regulations 2017 (as amended) affords protection to "breeding sites" and "resting places" of bats. The EU Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC, February 2007 states that these are places "where there is a reasonably high probability that the species concerned will return"*

Manual Activity Survey

3.24 The primary objective of the activity surveys was to identify foraging areas, commuting routes and general species utilisation of the survey area.

3.25 The BCT guidance states that surveys undertaken should be proportional to the predicted impacts of the proposed activities on bats. Factors that influence the type of survey and effort required include the likelihood of bats being present, type of proposed activity, scale of activity, size, nature and complexity of the site, species concerned and number of individuals.

3.26 The site was assessed to be of moderate value for bats (*Table 4.1, BCT Guidance 2016*). The appropriate survey effort was considered to be monthly (April to October) with a single monthly manual transect, with one dusk and pre-dawn completed in a 24 hour period on a single occasion at any point during the monthly surveys.

3.27 In line with the BCT guidance the transect route was predetermined prior to survey in order to comprehensively cover all areas of the survey area and included five-minute point count stops, during which time, all bat activity was recorded. The point counts were strategically located throughout the survey area to account for any habitat loss or potential impacts from the proposed development, and to ensure a comprehensive coverage of habitats.

3.28 The dusk transect commenced at sunset and continued for approximately 2-3 hours. Surveys were undertaken in conditions that were close to optimal as described within the BCT guidance (2016), where sunset temperatures were 10^{o}C or above with no rain or strong winds. Dawn surveys commenced 2 hours before sunrise and ended at sunrise or later if bat activity continues.

3.29 The surveys were undertaken by appropriately experienced/licenced ecologists from FPCR. The transect was walked at a steady pace using an Apple iPad mini with an Echo Meter Touch (Wildlife Acoustics Version 2.0.4). This software identifies and tags sound files that it suggests are bat passes; these surveys are also supplemented by written notes documenting bat activity present within the survey area and identifying any key foraging and commuting routes.

3.30 Post-survey, bat calls were analysed using Kaleidoscope Viewer (Version 5.1.9g), by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. Analysis was undertaken by experienced ecologists from FPCR. From this, the level of bat activity across the survey area was assessed taking into account the species assemblage and spatial variation in activity within different habitats.

Timings

1.1 Details of the nocturnal manual surveys completed to date are presented in *Table 2* below.

Table 2: Nocturnal Activity Survey Timings and Weather Conditions

Survey Ref/ Date	Survey Type	Start Time	Sunset /Sunrise Time	Finish Time	Weather Conditions (temp °C; cloud cover %; wind; and rain)
Transect 1 – 4th May 2021 (April survey)	Dusk Transect	20:23	20:23	22:23	10 - 8°C, 25% cloud, moderate breeze, no rain
Transect 2 – 26th May 2021	Dusk Transect	20:56	20:56	22:56	12 - 11°C, 100% cloud, light breeze, no rain

1.2 The weather conditions and timings of the surveys are considered suitable to provide data giving a representative sample of bat activity within the survey area.

Automated Activity Surveys

1.3 Static passive recording broadband detectors were deployed within the survey area during 2021 to supplement the activity transect surveys. These automated logging systems Wildlife Acoustics Inc. Song Meter SM4BAT FS detectors, herein referred to as SM4BAT detectors, save all recordings onto an internal storage device for analysis. These were positioned at locations where habitats would be impacted as a result of development, and at locations that were considered to be suitable as bat navigational / foraging routes.

1.4 Two devices were placed each month in locations around the survey area for a minimum of five nights of suitable and / or typical weather conditions. The detector was programmed to activate 30 minutes before dusk and recorded continuously until 30 minutes following sunrise. The output from this detector was subjected to analysis using Kaleidoscope Viewer (Version 5.1.9g)

1.5 The analysis of the SM4BAT files recorded can highlight the presence of more than one bat if they are recorded simultaneously on the same sound file. However, it is not possible to determine whether consecutive sound files have been recorded as the result of a single bat passing the detector as it commutes across the landscape or by one bat repeatedly triggering the detector as it forages in close proximately for an extended period. Therefore, each sound file is counted as a single bat registration. The number of bat registrations does however reflect the relative importance of the location of the detector by calculating the bat registration per hour.

1.6 The timings of the automated activity surveys completed, and the description of unit locations are detailed in *Table 3* below with the locations also shown in *Figures 3 – 4.*

Table 3: Static Detector Survey Dates

Position	Periods Recorded	Area Covered
A	4th May – 9th May 2021	Southern end of eastern boundary in dense scrub, adjacent to residential development.
B	4th May – 9th May 2021	The southern end of the centre of the site on hedgerow H9, separating field parcels.
C	26th May – 31st May 2021	At western end of southern boundary on hedgerow H5.
D	26th May – 31st May 2021	In western end of the centre of the site on hedgerow H3, separating field parcels.

Breeding Bird Survey Methodology

3.31 The survey methodology employed was broadly based on that of territory mapping (Bibby *et al*., 2000)[22], as used by the British Trust for Ornithology (BTO). Standard BTO species codes and symbols were used to denote bird species, activity, sex, and age wherever appropriate.

[22] Bibby, C.J., N.D. Burgess & D.A. Hill, 2000: Bird Census Techniques:2nd Edition. London: Academic Press

3.32 The criteria used in the assessment of breeding birds has been adapted from the standard criteria proposed by the European Ornithological Atlas Committee (EOAC)[23] and are grouped into four categories:

- *Non-breeder* e.g., flyover or observed in unsuitable habitat
- *Possible breeder* e.g., birds observed in suitable habitat or a singing male(s) recorded
- *Probable breeder* e.g., pair observed in suitable habitat, defended territory, agitated behaviour or nest building; and
- *Confirmed breeder* e.g., recently fledged young observed, or adult birds carrying food for young.

3.33 Surveys have been undertaken to date on the 5th and 27th May 2021, by a single ornithologist during the first few hours after dawn. A route was planned prior to the surveys being undertaken, paying attention to any linear features, such as hedgerows and tree lines, and natural features, including areas of scrub or scattered trees. Bird surveys are not undertaken in unfavourable conditions, such as heavy rain or strong wind, which may negatively affect the results. Weather conditions for each of the surveys completed are provided in *Table 4* below.

Table 4. Breeding Bird Survey Dates and Weather Conditions

Date	Sunrise	Cloud Cover (%)	Rain	Wind (Beaufort Scale)	Visibility
05.05.21	05:25	0	None	2-3	V. Good
27.05.21	04:54	0	None	0-1	Excellent

3.34 Breeding bird surveys are conducted to ascertain the application sites' potential to support important assemblages, and/or bird species with an assessed conservation status, including WCA Schedule I, NERC S41 and / or BoCC Red or Amber listed species. These are the species that are considered most likely to be at the greatest threat in relation to further decline and are commonly referred to as 'notable' species.

Assessment Methodology for Breeding Bird Surveys

3.35 The conservation value of bird populations has been measured using two separate approaches: nature conservation value and conservation status. The CIEEM guidance on ecological impact assessment evaluates nature conservation value within a geographical context[24]. To attain each level of importance, an ornithological resource, or one of the features (species population or assemblage of species), should meet the criteria set out in *Table 5* below. In some cases, professional judgement may be required to increase or decrease the allocation of a specific value, based upon local knowledge.

3.36 The most recent county annual bird report, The Sussex Bird Report 2019, as published by the Sussex Ornithological Society in 2020[25], was also consulted to provide additional county context to inform the assessment.

[23] EOAC (1979) Categories of Breeding Bird Evidence. European Ornithological Atlas Committee.
[24] CIEEM (2018) Guidelines for Ecological Impact Assessment 2006 in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
[25] Sussex Bird Report 2019 (2020) Sussex Ornithological Society

Table 5. Evaluation Criteria for Breeding Bird Conservation Value

Nature Conservation Value	Selection Criteria
International	A species which is part of the cited interest of an SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).
Regional	Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC Red List and which regularly occurs in regionally important numbers.
County	Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in county important numbers Species present in county important numbers (>1% of county population). Sustainable populations of species that are rare or scarce within a county or listed as priority species for nature conservation under S41 of the NERC Act. A site designated for its county important assemblage of birds (e.g., a SINC Site). Species on the BoCC Red List and which regularly occur in county important numbers.
Local	Other species of conservation interest (e.g., all other species on the BoCC Red and Amber List or listed as Priority Species under Schedule 41 of the NERC Act (2006) which are not covered above) regularly occurring in locally sustainable populations. Sustainable populations of species which are rare or scarce within the locality.
Site	Species that are common and widespread

Dormice

3.37 Sussex is considered to be a good county for the hazel dormouse[26] and they are therefore widespread within the suitable habitats this county provides. Although no dormouse records were returned from SxBRC within 2km from the site, it is well known that this species is under-recorded, and the boundaries along the site provide good habitat and foraging opportunities for this species therefore as a precautionary measure surveys were conducted.

3.38 Dormouse presence / likely absence surveys were undertaken in accordance with current good practice guidelines within The Dormouse Conservation Handbook[27]. Surveys involved placing standard dormouse nest tubes every 20m in suitable habitat, approximately 1.5m above ground level. 58 tubes were installed on the 4th May 2021. The survey results are used in conjunction with

[26] http://www.mammal.org.uk/sites/default/files/files/SE%20Mammal%20Atlas-1%20(Introduction%20section).pdf [Accessed on 7th December 2015]

[27] Bright, Morris & Mitchell-Jones (2006) The Dormouse Conservation Handbook. English Nature, Peterborough.

an index of probability, which indicates the likelihood of finding dormice during this period (see *Table 6*).

Table 6. Index of Probability for Recording Dormice in Nesting Tubes

Month	Index of Probability
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

1.7 The survey has been scored for effort according to the method developed from the South West Dormouse Project[28]. The scoring system provides an overall index of effort by multiplying the sum of the months the tubes were checked by the number of tubes used. A score of 20 (or above) is deemed a thorough survey.

1.8 The number of tubes used is based on 50 as a standard (i.e. 50 = 1), with fewer tubes reducing the overall score and more tubes increasing the score (i.e. 25 tubes halves the score to 0.5 and 100 tubes doubles the score to 2).

Great Crested Newts (GCN)

Habitat Suitability Index (HSI)

3.39 Where access was granted and where there were no barriers to dispersal, waterbodies within a 250m radius of the site were assessed, using the Habitat Suitability Index (HSI) for their potential suitability for GCN. The HSI provides a measure of the likely suitability that a waterbody will support newts[30]. In general, waterbodies with a higher score are more likely to support GCNs than those with a lower score and there is a positive correlation between HSI scores and waterbodies with newts recorded. Ten separate attributes are assessed for each waterbody:

- Geographic location;
- Pond area;
- Pond drying;
- Water quality;
- Shade;

[28] Chanin & Woods (2003) English Nature Report No. 524 on nest tube surveying. English Nature, Peterborough.

30 Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.

- Presence of water-fowl;
- Presence of fish;
- Number of linked ponds;
- Terrestrial habitat; and
- Macrophytic coverage.

3.40 A score is assigned according to the most appropriate criteria level set within each attribute and a total score calculated of between 0 and 1. Pond suitability is then determined according to the following scale:

Table 7. Habitat Suitability Index Scores and Pond Suitability

HSI Score	Pond Suitability
<0.5	Poor
0.5 - 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

eDNA Sampling and Analysis

1.9 eDNA sampling was undertaken on pond P1, in accordance with the protocol recommended by Natural England[31].

1.10 Sampling was undertaken on 4th May 2021 by an appropriately licenced and experienced ecologist who collected a water sample from pond P1. This comprised taking samples of agitated water from 20 locations around the pond and mixing thoroughly; 15 ml of this water was then placed into each of the 6 sterile sample tubes containing preservative, precipitates and a DNA sequence that was used for degradation control. This was then transported under suitable conditions to ADAS laboratory for analysis. Following analysis, results provided by the laboratory could have one of three outcomes which are described in *Table 8* below.

Table 8. Description of Possible Results of eDNA Analysis

Result	Description
Positive	A positive result means that eDNA from GCN was detected and they have been present within the water in the 20 days preceding sampling. An eDNA score would be provided indicating the number of positive replicates from a series of twelve.
Negative	DNA from GCN was not detected; in the case of negative samples the DNA extract is further tested for PCR inhibitors and degradation of the sample.
Indeterminate	Controls indicate degradation or inhibition of the sample, therefore the lack of detection of GCN DNA is not conclusive evidence for determining the absence of the species in the sample provided. Degradation can occur through poor storage of the samples or kits and inhibition can occur through unexpected chemicals in the sample.

[31] Biggs J, et. al, 2014. *Analytical and Methodological Development for Improved Surveillance of the Great Crested Newt. Appendix 5: Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*, Freshwater Habitats Trust, Oxford

Reptiles

1.11 A strategic reptile presence / likely absence survey was undertaken within the site at specific locations identified as offering potential habitat suitability for the species. The survey was undertaken based on methodology detailed in the Herpetofauna Workers Manual[32], the Froglife Surveying for Reptiles[33] and Reptiles: Guidance for Developers[34]. Methods involved a search for basking reptiles on/under naturally occurring and strategically positioned artificial refugia. These were placed in locations that offered the most suitable habitat for common reptiles, i.e. structurally diverse 'edge' habitats with areas of bare ground/short vegetation. Froglife recommends between five and ten refuges per hectare, the survey area measures approximately 11.29 hectares in size, however as the development footprint comprised of heavily grazed horse fields, suitable habitats were limited to the hedgerow and ditch margins. As a result, approximately 23 artificial refugia were spread throughout the site on 4th May 2021.

1.12 The surveys within the site were carried out using the guidance mentioned above, which recommend surveys undertaken:

- At temperatures of between 9ºC-20ºC;
- On sunny / cloudy days with little or no wind; and
- Between 8:30 & 11:00 and between 1600 & 18:30 hrs.

1.13 In addition, guidance also recommends:

- Using regularly spaced corrugated tin sheeting / similar (0.5m²) as artificial refugia with a black upper side;
- Approaching refugia from downwind, casting no shadow and with care so as to not disturb basking animals when checking;
- That lifting and replacing tins, to check for the presence of reptiles underneath in hot weather is undertaken with care, to avoid potential harm to any animals underneath; and
- That the location and number of tins are mapped to aid survey and avoid the possibility of leaving tins *in situ* after completion of the survey.

1.14 In some circumstances conditions may be more suitable, but fall outside of the guidelines mention above; for example, sunny periods after rainfall but after 11am. Such conditions would be more favourable to reptiles and likely increase the likelihood of positive encounters. Therefore, the guideline are only suggestive periods, surveyors experience and weather assessment can prove to be fruitful outside guidance periods, but only where conditions are suitable.

1.15 To confirm the presence / likely absence of reptiles within the site and inform the population assessment, five reptile surveys have been carried out in May and June 2021, with the remaining surveys to be completed later in 2021; these were conducted within the recommended survey period and during conditions optimal for reptile sightings. The dates of these surveys can be seen below:

[32] Gent, T & Gibson, S (2003) Herpetofauna Worker's Manual. JNCC, Peterborough.

[33] Surveying for Reptiles: Tips. Techniques and kills to help you survey for reptiles. Froglife (2016). https://www.froglife.org/wp-content/uploads/2013/06/Reptile-survey-booklet-3mm-bleed.pdf

[34] English Nature (2004) Reptiles: guidance for developers. English Nature, Peterborough.

Table 9. Reptile Survey Dates and Weather Conditions

Survey Occasion	Date & Time	Weather
1	20/05/2021 09:32	Light cloud, light breeze, cloud cover 90-100%, 11ºC
2	27/05/2021 08:56	Sunny conditions, light breeze, 0-10% cloud cover,12ºC
3	01/06/2021 09:43	Sunny conditions, moderate breeze, 0-10% cloud, 17ºC
4	07/06/2021 10:22	Sunny conditions, light breeze, no rain, 20-30% cloud cover, 14ºC
5	14/06/2021 07:20	Sunny conditions, light breeze, no rain, 0-10% cloud cover, 16ºC

1.16 Reptile populations were assessed in accordance with population level criteria as stated in the Key Reptile Site Register. This system classifies populations of individual reptile species into three population categories assessing the importance of the population (*Table 10*). These categories are based on the peak number of adult animals observed during individual survey occasions.

Table 10. Key Reptile Site Survey Assessment Categories (Froglife Advise Sheet 10)

Species	Low Population (Number of Individuals)	Good Population (Number of Individuals)	Exceptional Population (Number of Individuals)
Adder	<5	5-10	>10
Common lizard	<5	5-20	>20
Grass snake	<5	5-10	>10
Slow worm	<5	5-20	>20

Limitations

3.41 The species data collated for the desk study is derived from records submitted by members of the public and from specialist volunteer group surveys. It does not represent a definitive list of species that occur in the local area, and the absence of records does not necessarily imply absence of such species.

3.42 The quality of field data will be affected by the seasonality of the survey, with some plant species only being evident or identifiable in certain seasons. The site assessment was completed within the optimal survey period (April-September inclusive). Though the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types present and their relative ecological value.

1.17 Due to the variable properties of bat echolocation calls, it is not always possible to identify a series of echolocation calls down to species level. In the majority of cases, it was possible to identify to genus level which was suitable to allow potential affects to be assessed and appropriate mitigation designed. The lower amplitude of calls of species such as long-eared bat *Plecotus sp.* or barbastelle *Barbastella barbastellus* or the higher-pitched calls of species such as the horseshoe bats are more difficult to detect and calls may not have been received by the directional microphone at the time of recording. Therefore, it was possible that these species may have been under recorded.

1.18 The static (passive) recording units do not discern between individual bats or a single bat passing the microphone several times and therefore the data recorded can only provide an indication of bat activity as bat registrations per unit time.

1.19 Where calls could not be identified to species level, for example due to the lower quality of those recordings, or where there are similarities between species echolocation calls (particularly for *Myotis* and *Nyctalus* genus bats) that make definite identification difficult, a likely species identification is provided. This is based on the features displayed by the calls when analysed using the software package Kaleidoscope and taking in to account the geographical location of the survey area and the habitats present. It was therefore considered that:

- *Pipistrellus* species bats were either common *Pipistrellus pipistrellus*, soprano *Pipistrellus pygmaeus* or Nathusius' pipistrelle *Pipistrellus nathusii*;
- *Nyctalus* species bats were either noctule *Nyctalus noctula* or Leisler's *Nyctalus leisleri* bats;
- *Plecotus* species bats were likely brown long-eared;
- *Myotis* species bats were likely whiskered / Brandt's *Myotis mystacinus / brandti* or Daubenton's *Myotis daubentonii* bats.

1.20 It is considered that the overall dataset obtained were representative of the level of bat activity within the survey area during the survey period. Furthermore, it is unlikely that the above limitations have resulted in a significant detrimental impact upon the quality of the data and will have minimal effect on the subsequent conclusions and recommendations provided within the ecological assessment made here.

3.43 The 'April' bat transect survey was undertaken on the 4th May, rather than April, due to access not being granted to survey in April and the continued unsettled weather experienced in spring 2021. Owing to the fact it was only undertaken four days after April, and the fact the May transect was undertaken over three weeks later on the 26th May, it is still considered that the survey results are representative of the bat population present on site. Similarly, the first automated activity bat surveys were undertaken between the 4th – 9th May, rather than in April.

3.44 The first dormouse survey was undertaken three weeks and two days after deploying the dormouse tubes, rather than the recommended four weeks. Owing to the fact it was only five days short of the recommended 'bedding in' time for the dormouse tubes, it is considered the dormouse survey results will still provide reliable results.

3.45 Permission was only given to lay reptile refugia in fields where there was no horse grazing, due to the horses potentially disturbing the refugia or making them ill if the refugia were mistakenly consumed. This meant refugia was only deployed in suitable habitat in the field in the south-western corner of the site, and along the south of the eastern boundary. Owing to the fact that the horse grazed fields had limited suitable habitat for reptiles anyway and was associated only with the boundary features such as hedgerow bases, and the most suitable habitat for reptiles was in the ungrazed areas where refugia was deployed, it is expected that if there were reptiles on site, they would be recorded during the surveys. As a precaution however, when planning any mitigation for the site, reptile presence will be assumed in any suitable reptile habitat in the areas of the site which could not be surveyed.

4.0 RESULTS

Desk Study

Statutory Sites of International Conservation Value

4.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) website indicates that there are two internationally designated terrestrial sites within 15km of the application boundary, and one internationally designated marine site.

4.2 The marine extension of the Dungeness, Romney Marsh and Rye Bay SPA is located approximately 1.8km south of the site at its nearest point. This was designated in order to protect the marine fishing habitat of the common and sandwich tern *Sterna hirundo* and *S. albifrons* colonies for which the terrestrial SPA is designated.

4.3 Pevensey Levels is designated as a Ramsar Site and an SAC, and is located approximately 2.1km south-west from the site at its nearest point. The area comprises inland waterbodies and humid grassland. It is designated as an SAC due to the presence of Ramshorn snails *Anisus vorticulus;* an Annex II species. It is designated as a Ramsar Site as it supports an outstanding assemblage of wetland plants and invertebrates; it supports 68% of vascular plant species in Britain that can be described as aquatic; is one of the best sites in Britain for freshwater molluscs and aquatic beetles; and supports an outstanding assemblage of dragonflies *Odonata.*

4.4 Hastings Cliffs are situated approximately 10.5km east of the site and are designated as an SAC. They contain a variety of habitats including sand dunes, shingle, sea cliffs, bogs, marshes, heath, scrub, dry grassland, woodland, and inland rocks screes and sands. Its reason for designation is due to the presence of vegetated sea cliffs of the Atlantic and Baltic Coasts: An Annex I habitat.

Statutory Sites of National Conservation Value

4.5 There is one Site of Special Scientific Interest (SSSI) located within 2km of the site: High Woods SSSI is located approximately 790m north-west of the site and is designated for its sessile oak *Quercus petraea* coppice, its mosaic of woodland types, and other semi-natural habitats: ponds; streams; and an area of wet heath with acidic grassland.

Non-Statutory Designated Sites

4.6 Data received from SxBRC identified three non-statutory sites within 1km of the site boundary. Ashdown Bricks Local Geological Site which is important for its geological interest and is not considered further in this report. The remaining two are High Peartree, Smiths and High Woods LWS, located approximately 490m to the north-west of the site; and Little Common LWS, located approximately 730m to the south-west.

4.7 High Peartree, Smiths and High Woods LWS has been chosen as an LWS, as it is an example of ancient oak coppice woodland: a rare and unusual habitat in Sussex. It is also designated as an LWS due to its location within an urban area. It is accessible to the public, and has public paths running through it.

4.8 Little Common is a small area of unimproved grassland notable for its population of green-winged orchids *Orchis morio.* The Common is managed as a hay meadow with late summer or autumn

mowing. It is open to the general public and forms part of a nature trail, with a recreation ground to the north.

Protected / Notable Species Records

4.9 Several records of protected, notable or local BAP species are present within 1km of the site. These are detailed in *Table 11* below and *Figure 1*. Only records from 2009 onwards have been included.

Table 11. Protected and Notable Species Records

Species	Dates	Conservation Status	Approximate Location Relative to Site
Terrestrial Mammals			
Western Hedgehog *Erinaceus europaeus*	2012	NERC	Single record – c.530m south-east
Mammals (Bats)			
Unknown Bat, *Chiroptera* sp.	2011	WCA5, HRegs, NERC41.	Single record - c. 920m north-east
Serotine *Eptesicus serotinus*	2015	WCA5, HRegs.	Single record – c. 530m north-west
Common Pipistrelle *Pipistrellus pipistrellus*	2012 2013 2014 2015 2019	WCA5, HRegs.	Single record – c. 880m north-east Single record – c. 800m north-west Single record – c. 920m north-east Single record - c. 530m north-west Single record – c. 480m south-west
Soprano Pipistrelle *Pipistrellus pygmaeus*	2013 2015 2019	WCA5, Hregs, NERC41.	Two records – c. 410m north, and c. 800m north-west Single record - c. 530m north-west Single record – c. 370m south-west
Noctule *Nyctalus noctula*	2011 2013 2015	WCA5, Hregs, NERC41.	Two records – both c. 800m north-west Single record – c. 410m north Two records – both c. 530m north-west
Unknown long-eared species *Plecotus* sp.	2015 2016	WCA5, Hregs, NERC41.	Single record – c. 530m north-west Single record – c. 480m north-east
Brown long-eared *Plecotus auritus*	2012 2014 2015	WCA5, Hregs, NERC41.	Single record – c. 800m north-west Single record - c. 650m north-west Single record – c. 800m north-west
Unknown Myotis species *Myotis* sp. .	2015 2015	WCA5, HRegs, NERC41.	Single record – c. 800m north-west Single record – c. 530m north-west
Natterer's *Myotis nattereri*	2013	WCA5, HRegs, NERC41.	Single record – c. 800m north-west
Birds			
Common House Martin	2015	BOCC Amber	Single record – c. 575m north-east

Species	Dates	Conservation Status	Approximate Location Relative to Site
Delichon urbicum			
Reptiles			
Slow worm *Anguis fragilis*	2013	WCA5, NERC41	Single record – c. 810m west
Grass snake *Natrix helvetica*	2013	WCA5, NERC41	
Invertebrates			
Small heath butterfly *Coenonympha pamphilus*	2019	NERC 41	One record – c. 150m south-west
White admiral butterfly *Limenitis camilla*	2019	NERC 41	One record –c. 940m north-west
Plants			
Bluebell *Hyacinthoides non-scripta*	2019	WAC8	Two records – c. 400m south-west and 820m south-west
Glandular Eyebright *Euphrasia officinalis subsp. anglica*	2011	NERC 41	One record – c. 580m north
Invasive Non-Native			
Spanish Bluebell *Hyacinthoides hispanica*	2019	Sussex Invasive Non-Native	One record – c. 410m south-west
Three cornered garlic *Allium triquetrum*	2016	WAC9	One record - c. 580m north-west
Harlequin Ladybird *Harmonia axyridis*	2014 2019	Sussex Invasive Non-Native	Two records – c. 320m north and 650m west Two records – c. 95m south-west and 240m south-west

Key: **NERC41** – Section 41 of the Natural Environment and Rural Communities Act 2006; **HabsDirA**2 – Habitat Directive Annex II species**, HRegs** – The Conservation of Habitats and Species Regulations 2017; **WCA1/ WCA5** – species listed on Schedule 1 and Schedule 5 of the Wildlife and Countryside Act 1981 respectively; **BoCC** - Birds of Conservation Concern Red List

4.10 A large number bird records with four figure and two figure grid references (low resolution) that are adjacent to, or encompass the site were also provided. These include many common and widespread species, and also more rare species i.e. NERC S41 Species of Principal Importance or listed on Schedule 1 of the Wildlife and Countryside Act. These included: Cetti's warbler *Cettia cetti,* cuckoo *Cuculus canorus,* dunnock *Prunella modularis,* grasshopper warbler *Locustella naevia,* house sparrow *Passer domesticus,* hobby *Falco Subbuteo,* lesser spotted woodpecker *Dendrocopos minor,* linnet *Linaria cannabina,* marsh tit *Poecile palustris,* nightingale *Luscinia megarhynchos,* red kite *Milvus milvus,* reed bunting *Emberiza schoeniclus,* skylark *Alauda arvensis,* song thrush *Turdus philomelos,* starling *Sturnus vulgaris,* wood warbler *Phylloscopus sibilatrix* and yellowhammer *Emberiza citrinella*. Owing to the low resolution of these records it is not possible to give definitive distances of each from the site.

4.11 There were also a number of notable moth species records returned from the same location, within residential gardens approximately 710m to the west of site. These included knot grass *Agrochola lychnidis*, beaded chestnut *Agrochola lychnidis*, green-brindled crescent *Allophyes oxyacanthae*, mouse moth *Amphipyra tragopoginis, c*entre-barred sallow *Atethmia centrago*, minor shoulder-knot *Brachylomia viminalis*, latticed heath *Chiasmia clathrata clathrate, s*allow *Cirrhia icteritia, s*mall square-spot *Diarsia rubi,* figure of eight *Diloba caeruleocephala,* small phoenix *Ecliptopera silaceata*, dusky thorn *Ennomos fuscantaria*, spinach *Eulithis mellinata*, small emerald *Hemistola chrysoprasaria*, ghost moth *Hepialus humuli humuli,* rustic *Hoplodrina blanda*, rosy rustic *Hydraecia micacea,* Portland ribbon wave *Idaea degeneraria,* shoulder-striped wainscot , *Leucania comma,* brindled beauty *Lycia hirtaria*, dot moth *Melanchra persicariae,* pretty chalk carpet *Melanthia procellata,* white ermine *Spilosoma lubricipeda,* buff ermine *Spilosoma lutea*, feathered gothic *Tholera decimalis,* blood-vein *Timandra comae*, oak hook-tip *Watsonalla binaria,* dark-barred twin-spot carpet *Xanthorhoe ferrugata.* These are not included in *Figure 1* as there were too many species in the same location to be shown clearly on the plan.

Field Results- Habitats and Flora

4.12 Habitat descriptions of the site are provided below. Target Notes (TN) and the locations of the habitats described below can be found on *Figure 2 – Phase 1 Habitat Plan.*

Scrub

4.13 Bramble *Rubus fruticosus* agg. scrub was present in small stretches along the residential boundaries of the site in the south-eastern corner, and within the treeline in the south-western section of the site.

4.14 There was a patch of scrub at the western end of hedgerow H3 where blackthorn *Prunus spinosa* was suckering out from the hedgerow.

Trees

4.15 Trees within the site were mostly restricted to the hedgerows and field boundaries whcih included mature and semi-mature specimens including ash *Fraxinus excelsior,* pedunculate oak *Quercus robur,* sycamore *Acer pseudoplatanus,* and field maple *Acer campestre.*

4.16 Mature and immature trees lined the ditch that ran along ditch D4, along the southern boundary of the site. Species here included pedunculate oak, silver birch *Betula pendula,* sycamore, and hybrid black poplar *Populus* x *Canadensis.*

4.17 Mature and semi-mature trees, mostly pedunculate oaks, also lined the fences that separated field compartments in the centre of the site.

4.18 In damper areas alder *Alnus glutinosa* saplings and willow species *Salix* sp. were present in the hedgerows associated with the ditches at the boundaries. A stand of alder saplings was also present in a damper area along the western boundary (TN1).

4.19 Some mature pedunculate oaks were located off-site in the residential gardens along the eastern boundary of the site (TN2), branches of which were hanging over the boundaries and protruding into the site.

Semi-improved Grassland

4.20 The site was broadly divided into three field compartments separated by hedgerows and fences. These compartments were divided further into horse paddocks separated by electric fences. All compartments consisted of poor semi-improved grassland *(Photographs 1 and 2)*, with differing sward heights and structure depending on the extent of horse grazing. All fields except the small field in the south-western corner were horse grazed on a rotational basis, meaning that a tall . mosaic grass structure cannot develop. Some sections of the southernmost compartments and a small section in the north were damper than the rest (TN3) but did not have a large enough coverage of rushes *Juncus* sp, sedges *Carex* sp. or meadowsweet *Filipendula ulmaria* to be classified as marshy grassland.

4.21 The grassland contained a range of species including creeping bent *Agrostis stolonifera*, red fescue *Festuca rubra*, cock's foot *Dactylis glomerata* and meadow foxtail *Alopecurus pratensis*. Forbs included ribwort plantain *Plantago lanceolata*, with occasional meadow buttercup *Ranunculus acris*, red clover *Trifolium pratense*, cats ear *Hypochaeris radicata*, parsley *Petroselinum crispum*, and dove's-foot crane's-bill *Geranium molle*. In the damper areas to the south of the site, creeping buttercup *Ranunculus repens* was the dominant forb, with small patches of compact rush *Juncus conglomeratus* growing in places.

Tall Ruderal Vegetation

4.22 Patches of tall ruderal vegetation were present within all the field compartments, which is potentially due to the enrichment from animals, with particular focus adjacent to the residential gardens along the southern boundary, and on a large manure pile at the south-western edge of the site (TN4). These areas were dominated by common nettle *Urtica dioica* with other species such as common hogweed *Heracleum sphondylium,* broad-leaved dock *Rumex obtusifolius*, and creeping thistle *Cirsium arvense* also present.

Standing Water

4.23 There was one pond on-site (P1) *(Photograph 1)*. This was a small, shallow waterbody measuring approximately 40m^2 in area. It appeared to be fed by water from a small plastic pipe which was located under the manure pile located at its eastern edge, and by water flowing from ditch D7. Its surface was almost completely covered by floating sweet-grass *Glyceria fluitans.* The waterbody appeared to be ephemeral owing to the fact it was small and very shallow, highly vegetated and there were no definitive banks or open water areas.

Photograph 1: Pond P1

4.24 A second pond was located off-site adjacent to the southern boundary when studying OS maps (TN5), however at the time of the walkover survey on the 4th May 2021, the ground was only damp, with no standing water present, and no definitive banks indicated that this waterbody was ephemeral, only appearing as a pond in periods of heavy rainfall.

4.25 There were seven ditches around the boundaries of the site and between field compartments, the majority of these contained running water, but two (D5 and D6) were mostly dry, only damp or holding shallow puddles of water in small sections along their length.

4.26 D5 ran along hedgerow H6 in the north-eastern corner of the site. The lack of any aquatic or marginal species indicated that the ditch only held water very occasionally.

4.27 D6 was a shallow ditch, with the banks approximately 30cm in width that ran along part of the base of hedgerow H7 on the southern boundary. It held one small damp area with a puddle of shallow water approximately 1-2cm in depth, but the lack of any aquatic or marginal plants indicated that the water in this ditch was ephemeral in nature.

Running Water

4.28 D1 was located along the north-western boundary and was approximately 2m wide, and 1m deep. The water was approximately 0.5m deep at the time of survey but got shallower towards the western edge, where leaf litter was beginning to fill the channel. Water flowed slowly through the ditch from east to west. It was heavily over-shaded by holly *Ilex aquifolium,* willow species, and bramble, but did contain some marginal vegetation including soft rush, water mint *Mentha aquatic,* and meadowsweet.

4.29 D2 was flowing slowly from north to south along the western boundary of the site. It was approximately 2-3m wide and 2m deep, with a water depth of approximately 1m. It was largely over-shaded by mature trees, and contained no aquatic or marginal vegetation with the banks mostly covered with ivy *Hedera helix*, with a few stands of pendulous sedge *Carex pendula* also present.

4.30 D3 was approximately 150m long and ran east to west along hedgerow H3, which was located in the centre of the eastern side of the site. The ditch was dry at its western end where it was choked with blackthorn scrub and leaf litter but was damp at its eastern end. It was approximately 2m wide and 1m in depth but the water, where present, was only in the form of small shallow puddles approximately 1-2cm deep. Aquatic and marginal vegetation present included soft rush *Juncus effusus,* pendulous sedge, willowherb species *Epilobium* sp., and fool's watercress *Helosciadium nodiflorum.*

4.31 D4 was located off-site within woodland adjacent to the southern boundary of the site. It measured approximately 0.5m in width, was 0.5m deep. It was heavily over-shaded for most of its length by mature trees and bramble scrub, and contained no marginal or aquatic vegetation.

4.32 D7 was a short length of ditch (approximately 25m long) that ran south to north along hedgerow H8, until it pooled into pond P1. It was very shallow, and contained no aquatic or marginal vegetation so was considered likely to be ephemeral in nature.

Hedgerows

4.33 Twelve mixed species hedgerows were present within or along the boundaries of the site. Hedgerow H5 was classified as 'Important' under the Hedgerow Regulations because it contained eight woody species along the 30m sections sampled.

4.34 Nine hedgerows (H1, H2, H4, H5, H6, H7, H9, H10 and H11) were found to provide moderately high to very high conservation value in accordance with HEGS, largely due to them supporting a large number of mature trees and forming intact structures with no gaps. Hedgerows H3, H8 and H12 were only classified as being of moderate value under HEGS; H3 was a newly planted hedgerow, although with H8 and H12 because they only contained three woody species. Species common to most of the hedgerows included pedunculate oak, holly, blackthorn, and rose species *Rosa* sp..

4.35 All hedgerows within the application site contained over 80% native species and were therefore identified as Habitats of Principal Importance under Section 41 of the NERC Act (2006).

4.36 *Table 12* provides a summary of hedgerow survey results.

Table 12: Summary of Hedgerow Survey Results

Ref	Canopy Sp.	Length (m)	Notes	HEGS Value and Score	Important Under REGS / Average Species per 30m
H1	*Sx, Ia*, *Ps, Rs, Bp, Qr*, *Ca, Qi, Cm, Rf,*	205	Tall hedgerow containing a number of mature trees, adjacent to the golf course on the north-western boundary. Eleven mature standards, three young trees, three connections, mixed composition, ditch present.	1 High value	Not important 4.3 sp/30m

Ref	Canopy Sp.	Length (m)	Notes	HEGS Value and Score	Important Under REGS / Average Species per 30m
H2	*Sx, Ca, Ps, Ap, , Ia, C, Rf, Rs, Sn, Ag*	60	Tall field boundary hedgerow adjacent to the ditch/stream along the western boundary. Three mature standards, one young tree, three connections, mixed composition, ditch present.	1 High value	Not important 5 sp/30m
H3	*Rs, Sx, Ps, Qr, Cm, Ia, Rf*	150	Tall recently planted hedgerow dividing field compartments at the western side of the site; one mature standard, no gaps, two connections, two dominant native species, ditch present.	3+ Moderate value	Not important 4 sp/30m
H4	*Sx, Sn, Ap, Fe, Ps, Cm, Ag, Qr, Rf, Rs, Vo*	80	Tall boundary hedgerow adjacent to the golf course in the south-western side of the site; eleven mature standards, four connections, mixed composition, ditch present.	-1 High value	Not important 4.5 sp/30m
H5	*Rs, Ps, Qr, Ia, Cm, Ps, Ac, Ra, Rf*	65	Field boundary hedgerow along D4 along the southern boundary of the site; four mature standards, twelve young standards, five connections, mixed composition, ditch present.	-1 High value	Important 8 sp/30m
H6	*Qr, Ia, Ps, Sx, Ue, Rf*	235	Tall hedgerow adjacent to the northern boundary; 26 mature standards, three young standards no gaps, two connections, mixed composition, ditch present.	-1 High value	Not important 4.3 sp/30m
H7	*Ac, Ia, Ap, Ps, Qr, Sn, Ca, Pc, Rf*	120	Tall hedgerow located along part of the southern boundary; seven mature standards, one young standard, two connections, mixed composition, hedge bank present.	2+ Moderately high to high value	Not important 3 sp/30m
H8	*Ia, Ca, Qr, Rf*	34	Small hedgerow partially dividing field compartments at the southern end of the site; one mature standard, no gaps, two connections, two dominant native species, ditch present.	3+ Moderate value	Not important 3 sp/30m

Ref	Canopy Sp.	Length (m)	Notes	HEGS Value and Score	Important Under REGS / Average Species per 30m
H9	*Ap, Cm, Ia, Rs, Ps, Qr, Rf*	54	Tall hedgerow partially dividing field compartments in the southern section of the site (possibly initially part of one long hedgerow of which H8 was also a part); three mature standards, no gaps, mixed composition.	-2 Moderately high to high value	Not important 5 sp/30m
10	*Rs, Ia, Cm, Qr, Ps, Rc, Rf*	84	Hedgerow along wooden post and rail fence separating field compartments at the eastern side of the site; five mature standards, no gaps, mixed composition, hedge bank present.	-2 Moderately high to high value	Not important 5 sp/30m
11	*Cm, Ia, Rf, Liv*	50	Hedgerow separating field compartment and offsite residential gardens at eastern end of the site; six mature standards; no gaps, two dominant native species.	2 Moderately high to high value	Not important 3 sp/30m
12	*Cm, Ia, Rf, Liv*	60	Hedgerow separating field compartments and offsite residential gardens at eastern end of the site; no mature standards; no gaps, two dominant native species.	3+ Moderate value	Not important 3 sp/30m

Key to hedgerow species: Ac *Acer campestre* Field maple, Ag *Alnus glutinosa* Alder, Ap *Acer pseudoplatanus* Sycamore, Bp *Betula pendula* Silver birch, Ca *Corylus avellana* Hazel, Cm *Crataegus monogyna* Hawthorn, Fe *Fraxinus excelsior* Ash, Ia *Ilex aquifolium* Holly, Liv *Ligustrum vulgare* Wild privet, Pc *Populus* x *canadensis* Hybrid black poplar, Ps *Prunus spinosa* Blackthorn, Qi *Quercus ilex* Holm oak, Qr *Quercus robur* Pedunculate oak, Ra *Ruscus aculeatus* Butchers broom, *Rf Rubus fruiticosus* agg. Bramble aggregate, Rs *Rosa* sp. Rose species, Sn *Sambucus nigra* Elder, Sx *Salix* sp. Willow species, Ue *Ulex europaeus,* Common gorse, Vo *Viburnum opulus* Guelder rose.

Fauna

Bats

4.37 There were no buildings to assess within the application site.

4.38 Fifty mature trees (mostly on-site, but some off-site with parts of the canopy overhanging the site boundary) were assessed for bat roost potential. Of these, 24 were considered to have moderate potential to support bat roosts, 14 were considered to have low potential, and the remainder were considered to have no/negligible potential. These are summarised in *Appendix B*. All mature trees were associated with field boundaries.

Manual Activity Surveys

4.39 The site comprises mature trees, flowing/standing water, hedgerows and treelines, which link to the wider landscape, including broad-leaved and ancient woodland, and therefore offer moderate suitability for commuting and foraging bats. To establish the significance of these habitats for bats in this area.

4.40 Over the course of manual activity surveys undertaken in May 2021, ten contacts were recorded in early May (April survey), with 17 contacts during the May survey. The average number of bats per transect was 13.5. The point counts ranged from seven – eight contacts.

4.41 Common pipistrelles were the most recorded bat species during the manual activity surveys, with 55.6% of the contacts, *Plecotus* sp. were the next with 22.2%. *Nyctalus* sp., noctule bats and soprano pipistrelle each comprised 7.4% of total bat contacts.

4.42 Activity was spread relatively evenly across the whole survey area associated with boundary features. See *Table 13* for a summary and *Figures 3 – 4.*

Table 13. Bat Transect Summary of Results 2021

Month	Total Contacts (Point Count Number in Bracket)	Species Recorded (in abundance order, most to least)	Activity Summary
May 2021 (Instead of April survey)	(7) 10	Transect 1 common pipistrelle, 1 *Plecotus* sp, 1 Soprano pipistrelle, Point Count 5 common pipistrelle, 2 *Plecotus* sp	Transect Activity was spread across the survey area and consisted of foraging and passes. Activity recorded included a soprano pipistrelle at the centre of the survey area, a common pipistrelle near the north-western boundary of the survey area and a brown long-eared bat foraging along the south-western boundary of the survey area. Point Count Activity was consistent with contacts recorded during the transect, occurring throughout the survey area; bats were recorded at point counts C - E and H - J. Most of the activity comprised of one or two passes made by common pipistrelles, with two passing *Plecotus* sp recorded at point counts E and H.
May 2021	(8) 17	Transect 4 common pipistrelle, 2 *Plecotus* sp., 1 soprano pipistrelle, 1 *Nyctalus* sp., 1 noctule Point Count 5 common pipistrelle, 1 *Plecotus* sp., 1 *Nyctalus* sp., 1 noctule	Transect The activity was spread out across the site and mainly consisted of pipistrelle passes: three common pipistrelles and one soprano pipistrelle. Two *Plecotus* sp. were also recorded passing along ditch D3 and in the centre of the southern field. Single *Nyctalus* sp and noctule passes were recorded in the south of the northern field parcel. Point Counts As with the activity recorded during the transect, most of the activity comprised passes by common pipistrelles, with one recorded foraging. Bats were recorded at point counts B, D, F, G and I, which were spread throughout the site. A single *Plecotus* sp pass and three *Nyctalus* sp. passes recorded at point count G. A single noctule pass was recorded at B to the south of the site.

Automated Activity Surveys

4.43 The term 'registration' refers to a unique sound file created over the course of several seconds. Based on this, numerous 'registrations' does not necessarily refer to multiple bats (unlike the manual activity survey section above, where the number of bats can often be visually identified), as one bat can create a number of registrations, for example a bat which is foraging in the area surrounding the microphone for a sustained period of time.

4.44 Please see *Figures 3 – 4* for static (passive) detector unit locations and *Table 14* for summarised results.

Overall Summary

4.45 During the automated surveys, where four successful units were installed in May 2021, a total of 697 registrations were recorded, with soprano pipistrelle (approximately 37.02% of total data), common pipistrelle (32.57%), Myotis sp (8.18%), *Plecotus* sp (7.60%), noctule (6.60%), *Pipistrellus* sp (3.78%), *Nyctalus* sp (2.01%), serotine (1.72%), Nathusius' pipistrelle (0.29%) and *Nyctalus* / *Eptesicus* sp. (0.14%).

4.46 *Table 14* summarises the activity levels recorded and the locations of the units. The survey results suggest that near hedgerow H3 and ditch D3, across the western side of the site, has a slightly higher numbers of registrations in comparison to the other unit locations. However, registrations did not exceed 400, at each located surveyed.

Table 14. Static Activity Summary of Results 2021

Survey Period	Unit Reference / Location	Total Registrations Over 5 nights	Species recorded (in order of abundance and total number of registrations)	Summary of Activity
4th – 9th May 2021	Unit A: Southern end of eastern boundary in dense scrub, adjacent to residential development.	51	Eight species: Common pipistrelle (35), *Myotis* sp (6), soprano pipistrelle (4), Nathusius' pipistrelle (2) *Pipistrellus* sp (1), *Nyctalus* sp (1), *Nyctalus* / *Eptesicus* sp (1), *Plecotus* sp. (1).	Common pipistrelle, making up 67.31% of registrations, was the most recorded species on all nights, apart from the second night where no bats were recorded at all. The most bat activity was recorded on the fifth night where 30 registrations of common pipistrelle. *Myotis* sp. was the third most recorded bat, making up 11.54% of registrations. A single *Plecotus* sp. was recorded on the fourth night and single registrations of a *Pipistrellus* sp., *Nyctalus* sp. and *Nyctalus* / *Eptesicus* sp. on the fifth night.
	Unit B: The southern end of the centre of the site on hedgerow H9 separating field parcels.	190	Five species: Common pipistrelle (104), soprano pipistrelle (56), *Myotis* sp., (26), noctule (2), serotine (2).	Common pipistrelle was the most recorded species on all nights, with a peak count of 40 registrations on the fifth night, with a low count of one registration on the second and fourth nights. Soprano pipistrelle was the second most recorded bat, making up 29.47% of registrations, with a peak count of 30 registrations on the first night and the lowest count occurring on the second night with no registrations. *Myotis* sp. was recorded on every night during the survey period, with a peak count of 10 registrations. Single registrations of noctule and serotine were recorded.
26th – 31st May 2021	Unit C: At western end of southern boundary on hedgerow H5.	107	Eight species: Common pipistrelle (37), noctule (21), *Plecotus* sp (17), *Myotis* sp. (14), *Nyctalus* sp (10), soprano pipistrelle (5), serotine (2), *Pipistrellus* sp (1).	Common pipistrelle was the most commonly recorded bat, making up 34.58% of registrations. Noctule was the second most recorded bat, making up 19.63% of registrations, closely followed by *Plecotus* sp. making up 15.89% and closely followed by *Myotis* sp. making up 13.08%. Soprano pipistrelle, *Nyctalus* sp., *Pipistrellus* sp. and serotine made up the remaining registrations and comprising no more than four passes each on any given night.

Survey Period	Unit Reference / Location	Total Registrations Over 5 nights	Species recorded (in order of abundance and total number of registrations)	Summary of Activity
	Unit D: In western end of the centre of the site on hedgerow H3, separating field parcels.	349	Eight species: Soprano pipistrelle (193), common pipistrelle (51), *Plecotus* sp. (35), *Pipistrellus* sp. (25), noctule (23), *Myotis* sp. (11), serotine (8), *Nyctalus* sp. (3)	Soprano pipistrelle made up 55.30% of registrations. A peak count of 71 registrations was recorded on the first night, with a lowest count of 10 registrations on the third night. *Plecotus* sp. Were recorded every night except the first night, with a peak count of 18 registrations. Unidentified *Pipistrelle* sp. and noctule made up 10.10% and 6.60% of registrations respectively, and were recorded every night with a peak count of 10 on the fifth night and nine on the third night respectively. *Myotis* sp., serotine and *Nyctalus* sp. bats made up less than 7% of bats in total.

Birds

4.47 A total of 30 bird species were recorded from within the application site during surveys; which comprised of four non-breeding species, 17 possible breeding species, two probable breeding species, and seven confirmed breeding species. A full table of results, including the breeding statuses of each species identified as occurring within the site boundaries is provided in *Appendix C.*

4.48 Of these 30 observed bird species, seven are assessed as of conservation importance as either NERC Section 41 and/or BoCC red or amber listed species. Of these seven 'notable' species, two species (starling and house sparrow) were recorded as confirmed breeding species, three species (stock dove, dunnock, and song thrush) as *possible* breeders, and the remaining two species (greylag goose and herring gull) recorded as *non-breeders*. These are listed in *Table 13* below, along with details pertaining to their breeding status on the application site, and within the county of Hampshire.

4.49 No WCA Schedule 1 species, or significant numbers of individual birds, or of breeding pairs, were recorded within the application boundaries during breeding bird surveys. Indicative locations of 'notable' bird species recorded on-site are illustrated in *Figure 5: Breeding Bird Survey Results*.

Table 15. NERC Section 41, and/or BoCC Red- or Amber-Listed Bird Species Recorded on land at Fyatt's Way, Bexhill during Breeding Bird Surveys conducted in 2021, and Their Recent Status in Sussex

Species	Conservation Status	Survey Area Breeding Status	Breeding Status in Sussex†
Greylag goose *Anser anser*	Amber list	*Non-breeder* Greylag goose were observed in small numbers in during the survey conducted on the 27th of May (four individuals), all of which consisted of birds crossing the site in flight.	Increasingly common introduced resident ad winter visitor; scarce passage migrant. Native UK population is an amber listed species of conservation concern
Herring gull *Larus argentatus*		*Non-breeder* Mallard were observed in similar numbers during both surveys conducted in May, with fourteen individuals recorded on the 5th and fifteen on the 27th, all of which consisted of birds crossing the site in flight.	Common resident and winter visitor. Amber listed species of conservation concern.
Stock Dove *Columba oenas*		**Possible breeder** A single stock dove was heard singing on-site in suitable habitat on both May surveys, one from the scrub on the southern boundary, and the other from mature trees to the west of hedgerow H10. In addition, flyovers from the species were also observed, with two and four individuals recorded on the 5th and 27th of May, respectively.	Common resident and possible winter visitor. Amber listed species of medium conservation concern.
Starling *Sturnus vulgaris*	Red list NERC	**Confirmed breeder** Starling were recorded on both May surveys. A single individual was recorded at the southern end of the site on the 5th. Six individuals (including one juvenile) were noted on-site, from the southern, eastern, and northern boundaries,	Common but declining resident and very common to abundant winter visitor. Red listed species of high conservation concern

Species	Conservation Status	Survey Area Breeding Status	Breeding Status in Sussex†
		in association with hedgerows and residential gardens, during the survey on the 27th. A further 16 were recorded as flyovers on the 27th passing across the site in various directions.	
Song thrush *Turdus philomelos*		**Possible breeder** Song thrushes were recorded on both surveys undertaken to date, with two recorded on the 5th and three on the 27th May. These were recorded in association with boundary habitats, including scrub and hedgerows.	Very common but decreasing resident and partial migrant; common passage migrant and winter visitor. Red listed species of high conservation concern.
Dunnock *Prunella modularis*	Amber list NERC	**Possible breeder** Dunnocks were recorded on both surveys undertaken to date, with three recorded on the 5th and two on the 27th May. These were recorded along hedgerow H2 on the northwest boundary and H10, an internal hedgerow that divides the field compartments to the east.	Very common resident. Amber listed species of medium conservation concern.
House sparrow *Passer domesticus*	Red list NERC	**Confirmed breeder** House sparrows were observed in small numbers on both surveys, with three individuals recorded each survey. These were all observed along the eastern boundary with the neighbouring residential gardens of Fryatt's Way. An active nest was observed, confirming breeding.	Very common but possibly declining resident. Red listed species of high conservation concern.

†The Sussex Bird Report 2019

Great Crested Newt (GCN)

4.50 Pond P1 was identified within the site as providing potential aquatic habitat for GCN, which was assessed using the HSI, and it was considered to be below average (see *Table 16*). One slight land depression, which is known to hold water in periods of heavy rainfall was identified within 250m of the site boundary (TN5), however no water was present at the time of the 4th May 2021 survey, therefore it was not considered to provide suitable habitat for GCN. Ditches were also identified within the site but these either contained running water or were ephemeral in nature so were considered unsuitable for GCN.

4.51 Terrestrial habitat for GCN was present within the site, in the form of the hedgerow bases, tussock forming grassland, and scrub.

Table 16. Summary of HSI Assessment

Pond	HSI Score	Predicted Presence	HSI Category
P1	0.52	20%	Below Average

4.52 An eDNA test was undertaken on P1, with the results coming back as negative for GCN, suggesting that no GCN were using P1 at the time of the survey.

Hazel Dormice

4.53 The structure, species, and connectivity of the hedgerows and scrub habitats on-site were identified as being suitable to potentially support hazel dormice.

4.54 A dormouse survey was undertaken in May, with no dormouse evidence being recorded. *Figure 6* illustrates the dormouse tube locations.

Reptiles

4.55 The grassland compartments at the southern end of the site, which had been left ungrazed, with a longer sward containing some tussock forming species were considered to provide suitable habitats for reptile species.

1.21 Five reptile surveys have been carried out between May and June 2021. *Table 17* below details the total number of reptiles recorded during the surveys.

Table 17: Reptiles Recorded During Each Survey

Survey Date	Slow Worm
20/05/21	1 x male adult 1 x unknown juvenile
27/05/21	None
01/06/21	2 x female adult
07/06/21	None
14/06/21	None

4.56 The identification of a peak adult count of two slow worms suggests that the survey area supports a 'low population' of the species, with a juvenile slow worm indicating that the population is successfully breeding. The reptiles were recorded close to each other on the eastern boundary, see *Figure 7* for locations.

Invasive Species

4.57 Two montbretia *Crocosmia* sp., plants were observed within hedgerow H5 on the south-western boundary of the site (Tn6). This plant is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 The following section provides an evaluation of the site and identifies the likely ecological constraints associated with the proposed development. Where appropriate, measures for the avoidance, mitigation and compensation of any likely potential impacts together with any enhancements are discussed.

Statutory and Non-Statutory Designated Sites

Statutory Sites

5.2 Guidance on the implications of the legislation covering international sites is provided by Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. In brief this states that the competent authority (the local planning authority) must establish if any proposals not directly connected to or necessary for the management of the international site, either alone or in combination, are likely to have a significant effect on the interest feature of the site. If, on a precautionary basis, there is a risk that there may be a significant effect upon the International site then a further Appropriate Assessment may be required.

5.3 There are three statutory sites of international importance for nature conservation within 15km of the site. These are Dungeness, Romney Marsh, and Rye Bay SPA (marine arm), Pevensey Levels Ramsar Site/SAC, and Hastings Cliffs SAC, located approximately 1.8km, 2.1km, and 10.5km from the site respectively.

5.4 A smaller development to the east of Fryatts Way, adjacent to this site, which is allocated within the Rother District Council's Development and Site Allocations Local Plan (December 2019)[36], has an outline planning application for 26 dwellings[37]. It was highlighted within the Rother District Council Habitat Regulation Assessment[38], that this outline application site falls within the Pevensey Levels Ramsar/SAC Hydrological Catchment area, and that without any mitigation measures there is Likely significant effect on the Pevensey Levels. The Rother's Sustainable Drainage policy, Policy DEN5, identifies that any development within the SAC catchment area should have SuDs designed with at least two stage of suitable treatment. With such measures implemented, it was concluded in the Rother HRA, that this smaller development would have no adverse effect on the integrity of the SAC/Ramsar.

5.5 This development, although is larger, it is thought that similar mitigation measures will be required to ensure that the integrity of the SAC/Ramsar is not compromised by this development and this will need to be addressed further by the drainage consultant.

5.6 The above outline application, Rother DC HRA had not raised any likely significant effects of the Dungeness, Romney Marsh, and Rye Bay SPA; which may be due to the small number of residential units being proposed.

[36] Development and Site Allocations Local Plan. Rother District Council Adopted 16th December 2019. https://www.rother.gov.uk/wp-content/uploads/2020/01/DaSA_Adopted_December_2019_Web.pdf
[37] Rother District Council Planning Portal, application ref RR/2020/565/P [online] http://planweb01.rother.gov.uk/OcellaWeb/planningDetails?reference=RR/2020/565/P
[38] Habitat Regulations Assessment: Rother District Council Likely Significant Effects and Appropriate Assessment September 2018 [online] http://www.rother.gov.uk/HRA

5.7 The Shepway DC and Rother District Council had set out their commitments to a 'sustainable access strategy' for the Dungeness and other Natura 2000 sites, with the Dungeness Complex: Sustainable Access and Recreation Management Strategy (SARMS)(October 2017)[39], this breaks down the different areas and reviews the potential effects on each, offering long term management measures to be implemented on these site by the two councils. It also draws on the importance of the planning system to control recreational visits, many of which rely on the LPA to provide recreational areas within the county. It also important that developments should ensure that their open space provisions can be used for recreational activities and reduce the need to travel to the SPA sites; it is particularly important that areas for dog exercises is taken into accounts and uncontrolled dogs are known to affect the many bird species for which SPA's a designated.

5.8 The current framework plan will incorporate 4.39ha of GI, which could incorporate a circular walk with opportunities for areas to be enclosed to allow for dogs to be let off their leads, thus avoiding the need to travel off site for such exercise. Further discussions are proposed with Natural England via their Discretionary Advice Service (DAS), however at the moment this service has been suspended due to workloads.

5.9 One SSSI is located within 2km of the site: High Woods SSSI, which is located approximately 790m north-west of the site. The proposed development site falls within the Impact Risk Zone for the SSSI. High Woods SSSI is open to the public and has a series of footpaths around it that direct the general public away from sensitive areas. Furthermore, the woods can only be indirectly accessed from the site via a series of roads and pedestrian pathways, and would consist of a walk of approximately 1.5km (one way), which would involve more than a 3km circular walk based on residents walking to and from the SSSI. The majority of this circular walk would take place either along Peartree Lane to the west of the site, in a built up residential area, or along Turkey Road to the north, which has no pavements or footpaths along it.

5.10 Given the above, it is considered unlikely that residents would use this walk on a daily basis based on distance and quality of walk, and that increased visitor pressure as a result of the development would be minimal as such areas will be provided within the site, it is concluded unlikely to adversely affect the wood.

Non-Statutory Sites

5.11 There are two non-statutory sites of local importance within 1km of the site: High Peartree, Smiths and High Woods LWS, located approximately 490m to the north-west of the site; and Little Common LWS, located approximately 730m to the south-west.

5.12 Parts of the High Peartree, Smiths and High Woods LWS have open access, with well used paths throughout, whilst the Little Common is open to the public and is part of a nature trail.

5.13 4.39ha of green infrastructure will provide large areas of open space within the site to the south and west of the proposed residential areas, but it is possible that residents may also visit the LWSs. However, although the development may lead to an increase in visitor numbers High Peartree, Smiths and High Woods LWS are designated for the woodland content which are unlikely to suffer from the possible increases in visitors. Little Common LWS's more sensitive areas of unimproved

[39] Dungeness Complex: Sustainable Access and Recreation Management Strategy. Prepared by Shepway DC and Rother DC. October 2017. https://www.rother.gov.uk/wp-content/uploads/2020/01/SARMS__MAIN_REPORT_REDUCED_Nov_2017_v2.pdf

grassland are separate from the recreational areas and as the site is managed, negative effect are not likely to result.

Habitats/Flora

5.14 The degree to which habitats receive consideration within the planning system relies on a number of mechanisms, including:

- Inclusion within specific policy (e.g. veteran trees, ancient woodland and linear habitats in NPPF, or non-statutory site designation),
- Identification as a habitat of principal importance for biodiversity under Natural Environment and Rural Communities Act (NERC) 2006 and consequently identification as a Priority Habitat within England and the local area.

5.15 Under NPPF development should seek to contribute a net gain in biodiversity with an emphasis on improving ecological networks and linkages where possible. It is recommended that hedgerows and treelines, where possible, are to be retained, buffered and enhanced to ensure the site's connectivity into the wider area is maintained.

Poor Semi-improved Grassland

5.16 The semi-improved grassland habitats, which comprise the majority of the site, were found to be of low intrinsic and conservation importance, with no rare or notable species recorded. Where grassland is being retained throughout the GI, which largely follows the site boundaries and internal hedgerows and tree lines, this should be enhanced through the planting of species-rich and tussock-forming species throughout the proposed development, specifically around water features (attenuation facilities and ditches) and GI within the western and southern extent of the site.

Scrub

5.17 The small parcels of dense scrub, mainly consisted of bramble, and did not have much structural diversity. However, they do provide ecological value for sheltering and foraging wildlife and should be retained where possible. The current proposals indicate that the majority of this habitat type will be retained, with only the small parcels in the east being removed for vehicular access.

5.18 The GI within the site should contain some areas of scrub planting to increase the overall ecological value of this habitat type and connectivity across the site, providing additional good quality foraging and nesting habitat for a range of wildlife.

Tall Ruderal Vegetation

5.19 Patches of tall ruderal vegetation were present throughout the site. All patches were dominated by common nettle which are of low ecological value. The removal of these habitats is not an ecological constraint to the development. Any areas within the GI areas should be enhanced within the planting scheme through the planting of species rich wildflower or tussock grassland, and structural planting including shrubs, scrub and trees.

Hedgerows and Trees

5.20 Twelve hedgerows were recorded within the site associated with field boundaries, hedgerow H5 was assessed as important hedgerows under the Hedgerow Regulations, and is located along the

southern boundary of the site, which will be buffered from development. However, in the unlikely event that the proposed works will cause loss or damage to the hedgerow, then permission for removal will be required from the Local Planning Authority.

5.21 All hedgerows present have a moderate (H3, H8, H12), moderately high to high (H7, H9, H10 and H11) or high conservation (H1, H2, H4, H5, and H6) value when considered against the criteria of the HEGS and all are classed as Habitats of Principal Importance under the NERC Act (2006) due to the dominance of native species, and therefore require consideration under the NPPF. All hedgerows are important in their functions as corridors and foraging and nesting habitats for wildlife and as such are identified as priority habitats. In addition, hedgerows are listed as Sussex BAP Habitats and current targets aim to retain and increase the number of hedgerows and hedgerow trees within Sussex.

5.22 The network of hedgerows within the application site provides connectivity between habitats both within the application site and within the wider landscape. Under the current proposals the majority of hedgerows are to be retained and buffered. Where small sections of hedgerows are to be removed for pedestrian and vehicular access, other areas should be enhanced with additional planting and buffered ensuring that the small amount of hedgerow loss resulting from proposals is compensated for.

5.23 All of the mature trees present within the site provide potential habitats for invertebrates, nesting birds and other wildlife which will be retained where possible. These will be protected from damage and from soil compaction during works by erecting and maintaining fenced Root Protection Areas (RPAs). Further native tree and scrub planting is to be incorporated throughout the GI, along boundaries and within the main body of the site.

5.24 Preference should be given within the planting scheme to use locally native woody species, with an emphasis on species bearing nectar, berries, fruit and nuts, as these enhance the foraging opportunities for local wild fauna including birds and invertebrates. Suitable small tree species for inclusion in hedgerow and garden planting schemes include field maple, silver birch, wild cherry *Prunus avium*, bird cherry *P. padus*, holly, crab apple *Malus sylvestris* and rowan *Sorbus aucuparia*. Other shrub species suitable for inclusion within the soft landscaping design include hawthorn, hazel, blackthorn, dog rose *Rosa canina*, honeysuckle *Lonicera periclymenum* and wild privet *Ligustrum vulgare*.

5.25 Where possible planting within the site will seek to provide additional habitat for urban and suburban wildlife. While native species are often of value to biodiversity generally, it is now clear that many cultivated varieties and exotic plants are also good for wildlife provided that their flowers are not too complex or that hybrid varieties, which may produce little or no pollen or nectar and so are not of interest to bees, butterflies or other pollinating insects, are not used. The planting strategy, both within private and public areas, should therefore combine a range of native species and where appropriate, such as in gardens and more formal areas, a range of ornamental species with an accepted value for biodiversity. A variety of small shrubs, low growing woody species, grasses and perennials, would provide a range of forms, sizes and finer scale variation to enhance the future structural and three-dimensional complexity of the site.

5.26 Linear planting beds will be incorporated into the scheme where possible, for example along roads, to increase connectivity across the site for pollinators.

Attenuation Features

5.27 Attenuation basins are proposed within the western section of the site, with a swale network proposed in the northern, western and southern peripheries and through the main body of the site. These should be designed to maximise biodiversity value with the basins having wide shallow draw down zones, scalloped edges and deep central areas. The waterbodies should be planted with locally native marginal and aquatic vegetation including species such as soft-rush and purple loosestrife *Lythrum salicaria* planted around the edges, and tall emergent plants and floating-leaved plants such as yellow water-lily *Nuphar lutea* within the deeper areas of water. The ponds can be made more visually attractive through the planting of selected species including marsh marigold *Caltha palustris*, water dock *Rumex hydrolapathum* and common water plantain *Alisma plantago-aquatica.* A denser and taller area of vegetation should be planted around the peripheries of the pond to provide additional habitats for invertebrates, and terrestrial habitats for amphibians.

Invasive Species

5.28 Two montbretia *Crocosmia* sp., plants were observed within hedgerow H5 on the south-western boundary of the site (Tn6). This plant is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), which means it is an offence to purposely plant or cause the spread of this species in the wild.

5.29 It is recommended that specialist invasive species removal contractors are used to remove these plants, to avoid prevent accidental spread.

Fauna

5.30 Principal pieces of legislation protecting wild species are Part 1 of the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2017 (as amended). The impact that this legislation has on the planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their impact within the Planning System.

5.31 This guidance states that as the presence of protected species is a material consideration in any planning decision, it is essential that the presence or otherwise of protected species, and the extent to which they are affected by proposals is established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions for example.

5.32 In addition to protected species, there are those that are otherwise of conservation merit, such as species of principal importance for the purpose of conserving biodiversity under the Natural Environment and Rural Communities (NERC) Act 2006. These are recognised in the NPPF which advises that when determining planning applications, LPA's should aim to conserve and enhance biodiversity by applying a set of principles including:

- *If significant harm resulting from a development cannot be avoided……., adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *Development whose primary objective is to conserve or enhance biodiversity should be encouraged; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged*

5.33 The implications that various identified species or those that are thought reasonably likely to occur may have on developmental design and programming considerations are outlined below.

Bats

Potential Roost Assessment

5.34 Thirty eight trees located both on-site or just off-site were considered to have low or moderate roosting potential for bats. The majority of the mature trees are to be retained within the current outline development proposals, but if any of the trees are likely to be lost or isolated through further reiterations of the plan at Reserve Matters, then further surveys might be necessary. This could include aerial roped access surveys, if the trees are deemed safe to climb, or nocturnal surveys to be undertaken between the months of May – August (inclusive) to confirm the presence or likely absence of a bat roost within them. This methodology takes into account BCT guidelines introduced in 2016.

Manual Activity and Automated Surveys

5.35 The habitats within the site including the grassland, treelines, and ditches, along with nearby residential gardens connect to larger offsite woodland blocks to the south and north-east of the site, provide potential for use by bats. The surveys have shown that a low population of bats utilise the habitats on site, almost entirely associated with boundary features. The population mainly comprises widespread species which are common to the local area such as common pipistrelle, soprano pipistrelle and noctule.

5.36 Open spaces will include ecological enhancements such as attenuation basins, species-rich grassland and substantial new tree and scrub planting, will be created using native species, and will provide new opportunities for invertebrate species and in turn increase the foraging potential for bat species. Early flowering native shrubs should be planted such as hawthorn, blackthorn, hazel, honeysuckle, and ivy.

5.37 The development should provide refuge opportunities for the local bat populations by the installation of bat boxes on mature trees, and possible incorporation of tubes and/or bricks into the built fabric of residential dwellings. Bat boxes and bricks should be arranged around the development in different locations so that a number of different aspects are covered to provide a variety of alternative roost sites.

5.38 To minimise impacts on bats, proposals will adopt a sensitive external lighting scheme which will be designed to minimise light spill on retained and proposed habitats of value to commuting and foraging bats. The lighting scheme would be designed with regard to current guidance provided by the Bat Conservation Trust[40] and the Institution of Lighting Professionals[41] and adopt the following principles:

- The avoidance of direct lighting of existing trees, hedgerows, scrub, woodland, or proposed areas of habitat creation/landscape planting;
- Buffer zones and GI are not to be illuminated;

[40] Bat Conservation Trust (2011) *Statement of the impact and design of artificial light on bats*
[41] Institution of Lighting Professionals (2011) *Guidance Notes for Reduction of Obtrusive Light*

- During the construction period, no lighting should be used in proximity to boundary features, if needed lights will be directionally focused/shrouded, such measures would be detailed within a Construction and Environmental Management Plan (CEMP);
- Lighting that is incorporated into the development design should comprise low pressure sodium lights, as they emit at one wavelength so attract less insects or LED lighting;
- Directional lighting and avoidance of upward lighting and/or light spillage;
- Lighting columns to be as short as possible, although in some locations taller columns would allow reduced horizontal spill; and
- Security lighting on properties backing on to sensitive hedgerows and woodland will be low wattage LED, which will be installed on properties at the construction stage to forestall a future homeowner installing unsuitable lighting which could impact on bats.

5.39 Roads and buildings in close proximity to the new GI and existing boundary habitats will have lighting sensitively positioned, so as to avoid illumination of canopies, which can disrupt flight patterns of bats.

Birds

5.40 The overall breeding bird assemblage recorded within the application site was typical of edge-of-settlement farmland, with common and widespread, generalist, woodland, and garden species present. The site provides suitable nesting and foraging habitat for a range of bird species, in the form of hedgerows, scrub, and cultivated land, with the majority of species recorded in association with these features.

5.41 Consultation with SxBRC returned records for many notable bird species present within 1km of the application site, including hawfinch. While the grassland and woodland habitats identified within and around the site boundaries are conducive to support several of the notable species identified, few have been observed during surveys to date, with only starling and house sparrow recorded as confirmed breeders.

5.42 Given the absence of coastal wetland habitats, including grazing marsh, shingle beach, mudflats, or reed beds, the site is not considered to provide any potential supporting habitat for species (common and sandwich tern) for which the nearby Dungeness, Romney Marsh and Rye Bay SPA is designated.

5.43 Following breeding bird surveys undertaken in May 2021, the site was found to support various protected, or otherwise notable, species that were assessed as likely to be breeding within the site's boundaries. Of these, two species, starling, and house sparrow (both BoCC Red listed/NERC41) were assessed as *confirmed* breeding species, and three species, song thrush (BoCC Red listed/NERC41), stock dove and dunnock (both BoCC Amber listed) were each assessed as *possible* breeders, as all three were recorded singing from within suitable breeding habitat.

5.44 The remaining two notable species identified within the application site comprised one BoCC Amber listed species (greylag goose) and one further BoCC Red listed and NERC S41 species, herring gull. Observations of these species were of individuals, or small groups crossing the site in flight, with no individuals of either of these species observed foraging or roosting within the site

boundaries. As these observations were comprised entirely of flyovers, these were assessed as *non-breeding* species.

5.45 The species observed within the application boundaries are largely common and widespread, both nationally and within Sussex. As such, their occurrence during the surveys is considered typical, and would be expected on a site of this nature. The species recorded on the application site that are arguably the most vulnerable to impacts resulting from the proposed development are the confined and possible breeding 'notable' species, which in this case were limited to starling, house sparrow, dunnock, song thrush, and stock dove. The 'notable' non-breeding species, recorded as flyovers only, are considered unlikely to be negatively impacted by the proposals.

5.46 Two 'notable' species assessed as confirmed breeders were identified on-site, starling and house sparrow. Both species are strongly associated with human habitation and will readily nest in buildings, trees in open countryside, and farms. While both species have declined in recent years nationwide, they remain widespread and adaptable to urbanised landscapes, so are likely to benefit from new buildings, gardens, and hedgerows. Given the relatively small numbers of house sparrows and starlings recorded on-site, and the implementation of appropriate mitigation/enhancement (see below), the species is unlikely to be significantly affected by the development, with the overall impact considered to be *negligible* to *minor positive* at a local level.

5.47 Dunnock, evaluated as a *possible* breeder, is a species typically found in association with hedgerows and gardens. Similarly, song thrush, which was assessed as a *possible* breeding species, typically favours thick hedgerows, dense scrub, and broadleaved woodland habitats, as well as residential gardens. As expected, both species were recorded in association with these features, wherever they occurred on-site, most of which are likely to be retained. These species will also benefit from supplementary planting of native species, which will strengthen most of the existing site boundaries, and contribute to maintaining connectivity into the wider landscape.

5.48 Further supplementary planting will be included within the development footprint by virtue of a network of residential gardens that will be situated amongst the planned housing. Given The relatively common and widespread occurrence of these notable species in Sussex, the comparatively small populations of each species recorded on the application site are assessed as of no more than local conservation value. The proposed elements of habitat creation and enhancement will create further breeding and foraging resources for all these species, resulting in a minor positive, long term impact.

Mitigation and Enhancement

5.49 The most likely negative effects from a residential development of this type on the assemblage recorded would be as a result of:

- Direct loss / change of breeding habitat; and
- Disturbance during construction and / or operation.

5.50 Short term loss of possible breeding habitat will affect house sparrows, dunnocks, and song thrush, while starlings are likely to be negatively affected in the longer-term by a loss of potential foraging habitat due to the change in land use.

5.51 The retention and enhancement of the majority of features present within the site that are suitable for breeding birds, particularly retained, existing hedgerows and woodland edges, will ensure continued use of the site by local bird populations. Hedgerow enhancements through

supplementary native tree planting, to strengthen and bolster the existing boundaries, will increase foraging and nesting resources available for local bird populations, while appropriate management (see below) will help protect nesting birds from predation.

5.52 In addition, 4.39ha of green infrastructure within the development proposals, which will include creation of new hedgerows, structural planting, attenuation features, residential gardens, and greenspace, to buffer the northern, western and southern boundaries from the development footprint, and will provide habitat for a wide range of bird species, including those notable species already identified on-site (house sparrow, starling, dunnock, stock dove), which readily utilise parkland, hedgerows and gardens.

5.53 Provision of a range of nest boxes within appropriate locations across the site will also provide further enhancements for birds, further adding to available nesting sites. A mixture of nest box types can be sited on any suitable trees within retained habitats, or designed into the built environment, and may include:

5.54 A mixture of small entrance (26mm, 32mm & 42mm diameter) boxes placed throughout the site on suitable trees and buildings to provide nesting opportunities for tit species, starlings, sparrows, robin *Erithacus rubecula*, blackbird *Turdus merula.*

5.55 Hedgerows should be managed to maximise their nature conservation potential. This would involve trimming on a three-year rotational basis once established, with any existing gaps planted up with native flowering & berry bearing tree and shrub species. Where feasible, hedgerows will benefit from the creation of wide headlands to ensure natural environments are buffered from the development and to allow for a more diverse tussock-forming grassland habitat to establish, which would further increase the value of the hedgerows as wildlife corridors.

5.56 Appropriate enhancement and management of hedgerows across the application site will create thick structures, with dense bases to help protect nesting birds from predation and provide optimal breeding opportunities for other birds, not currently recorded on-site, which favour scrub, such as yellowhammer and linnet. Structural diversity of hedgerows will be encouraged through the planting of standard trees and the implementation of a suitable management regime (hedge laying or cutting; see below), to increase the diversity of nesting birds.

5.57 Removal of any vegetation suitable to support nesting birds will take place outside of the bird breeding season (March to August inclusive) to protect nesting birds and prevent an offence under the Wildlife and Countryside Act 1981.

5.58 If vegetation is proposed for removal during the bird breeding season (March to August inclusive), it should first be inspected by a suitably qualified ecologist to ensure an offence under the WCA is not committed. If an active nest is discovered, the vegetation containing the nest will remain *in situ* and an appropriate buffer adopted, as stipulated by the attending ecologist, until the young have fledged.

5.59 The retained hedgerows and other woody nesting habitat should be buffered and protected with Heras fencing during construction, to protect it from accidental damage or disturbance.

5.60 The proposed scheme will lead to a negligible short-term effect on the breeding bird assemblage with an overall minor positive effect in the medium to long-term, as the new habitat provision matures.

Dormice

5.61 No hazel dormouse records have been provided by SxBRC within 1km of the application boundary, however dormice are known to be present within Sussex. No dormice evidence has been recorded during the current survey.

5.62 It is considered that the retention and enhancement of the majority of treelines and hedgerows will be of benefit to dormice, if they are present.. Additional native hedgerow and scrub planting within the GI will provide additional foraging and nesting habitat for the species, as well as increasing connectivity to the wider area.

Great Crested Newts

5.63 No records of GCN were returned from SxBRC during the data search. The eDNA survey undertaken on pond P1 found them to be absent. The ditches around the site did not hold enough water consistently provide breeding opportunities, or the water was too fast flowing.

5.64 Enhancements within the GI will include the creation of waterbodies and areas of informal tussock forming grassland and scrub. This will enhance breeding, commuting and foraging habitat for amphibians in general.

Reptiles

5.65 Individual records of slow worm and grass snake within 1km of the survey area were returned from the SxBRC, both recorded in a field to the south of High Peartree Wood.

5.66 The reptile presence / absence surveys have identified a low population of slow worms, that are using the boundary features in the east of the site. This area will be the location of the potential road access into the site, meaning the habitats are likely to be lost, therefore it is suggested that measures are taken to avoid an offence under the Wildlife & Countryside Act; this will take the form of either passive displacement or trapping and translocation, techniques which will be confirmed once surveys have been concluded.

5.67 As extensive grazing is taking place within other field compartments, the suitability of habitats for reptile species is reduced, although it is possible some remnant individuals might be present; however as more suitable habitats have only resulted in a low population the significance of these suboptimal habitats are unlikely to change the population predictions for the site. The boundary habitats are to be retained with a buffer, therefore if species are present they are likely to be incorporated in the GI. So areas of passive displacement might be required as a precautionary measure when hedgerow losses result from access routes, and where possible pockets of retained habitats will remain that will be protected from construction by the erection of heras fencing or similar. Such details will become evident at Reserve Matters, whereby a Construction Environmental Management Plan (CEMP) will be produced, to ensure habitats and fauna are protected at the construction phase.

5.68 Enhancements within the GI will include the creation and maintenance of strips of informal tussock forming grassland through the scheme, this will enhance commuting and foraging activity for reptiles.

5.69 The creation of dead wood piles and hibernacula situated in strategic locations would provide further opportunities for shelter and basking and would also provide potential habitat for amphibians and invertebrates in general.

Other Species

West European Hedgehog

5.70 The West European Hedgehog is partially protected under Schedule 6 of the Wildlife and Countryside Act (1981) and the Wild Mammals Protection Act (1996), and is listed as a 'Species of Principal Importance' under the Natural Environment and Rural Communities Act (2006). Together taken this makes it an offence to:

- deliberately or intentionally kill a hedgehog without a licence; or
- trap a hedgehog without a licence.

5.71 During the desk study, one hedgehog record was returned. Hedgehogs are a generalist species and require large areas of contiguous habitat. Threats to hedgehog include loss of habitat, reduced habitat quality, and habitat fragmentation. Hedgerows can provide food, shelter from predators and can be important for nesting sites during hibernation. They are also vital corridors facilitating movement[42]

5.72 It is considered that the proposed development will have a negligible impact on hedgehogs as the matrix of gardens and green spaces in towns and cities can support the highest densities of hedgehogs[43]. Residential garden fences should have small holes cut at the bottom (approximately 13cm x 13cm[44]) in order to keep connectivity and enable free movement for this species. Hedgerow highway signs can be purchased from the People's Trust for Endangered Species which will help inform residents and encourage them to keep the holes open.

5.73 The majority of hedgerows within the site are to be retained, enhanced and buffered providing high quality habitat for hedgehogs to utilise. The area of GI within the southern and western extent of the site should contain suitable hibernaculum for this species, including log piles and patches of brush, which will allow hedgehogs to safely hibernate over winter as well as providing important habitat for insects during the warmer months which hedgehogs can feed on.

[42] Henry Johnson, (2015*)* Conservation Strategy for West-European Hedgehog (Erinaceus europaeus) in the United Kingdom (2015-2025) People's Trust for Endangered Species (PTES)

[43] Hubert, P., Julliard, R., Biagianti, S. & Marie-Lazarine, P. (2011) Ecological factors driving the higher hedgehog *(Erinaceus europaeus)* density in an urban area compared to the adjacent rural area. Landscape and Urban Planning, 103, 34-43

[44] Hedgehog Street [ONLINE] Available at http://www.hedgehogstreet.org/pages/link-your-garden.html

Key

- Site Boundary
- 1km Buffer
- 2km Buffer
- 15km Buffer

Designated sites

- RAMSAR
- Special Protection Area - Marine (SPA)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Local Wildlife Site (LWS)

Protected/Notable Species

- Bat sp.
- Brown Long-eared Bat
- Common Pipistrelle
- Long-eared Bat species
- Myotis Bat
- Natterer's Bat
- Noctule Bat
- Serotine
- Soprano Pipistrelle
- West European Hedgehog
- Grass Snake
- Slow-worm
- Common House Martin
- Bluebell
- Glandular Eyebright
- White Admiral
- Small Heath
- Harlequin Ladybird
- Spanish Bluebell
- Three-cornered Garlic

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Land off Fryatts Way,
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CONSULTATION PLAN

scale 1:21000 | drawn HG | issue 15/6/2021

drawing / figure number **Figure 1** | rev **9309-E-01**

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Legend

- Site Boundary
- Pond with ref
- Scrub - dense/continuous
- Other tall herb and fern - ruderal
- SI Poor semi-improved grassland
- Fence
- Ditch with standing water with ref
- Running water with ref
- Fence
- Hedgerow with ref
- Line of trees
- Target note with ref
- Broadleaved tree with ref

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PHASE 1 HABITAT PLAN

scale 1:1800 | drawn LV | issue 21/6/2021

drawing / figure number **Figure 2** | rev **9309-E-01**

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Key

Protected and Notable Species

BoCC Red Listed Species

HS House Sparrow

ST Song Thrush

SG Starling

BoCC Amber Listed Species

D Dunnock

SD Stock Dove

Site Boundary

Fly Over Only

NERC Species of Principle Importance

Confirmed Breeder

Possible Breeder

Non-breeder

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Fryatts Way,
Bexhill, East Sussex

BREEDING BIRD SURVEY RESULTS - LOCATIONS OF NOTABLE SPECIES

scale 1:1751 | drawn RM | issue 21/6/2021

drawing / figure number **Figure 5**

rev **9309-E-01**

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Path
- Static detectors (REF)

Bat Species (contacts)

- Common Pipistrelle
- Soprano Pipistrelle
- Plecotus Species

Plan Reference	Time	Species	Passes	Behaviour
Start	20:23			
PCA	20:26- 20:31	NO BATS		
PCB	20:36- 20:41	NO BATS		
PCC	20:47- 20:52	REF 1		
1	20:47	Common pipistrelle	1	Passing
2	20:54	Common pipistrelle	2	Foraging
PCD	20:58- 21:03	REF 3		
3	21:01	Common pipistrelle	1	Passing
PCE	21:18- 21:23	REF 4		
4	21:23	Plecotus sp.	1	Passing
PCF	21:27- 21:32	NO BATS		
5	21:34	Plecotus sp.	Cont.	Forgaing
PCG	21:39- 21:44	NO BATS		
PCH	21:48- 21:53	REF 6-7		
6	21:50	Common pipistrelle	2	Passing
7	21:50	Plecotus sp.	1	Passing
8	21:54	Soprano pipistrelle	1	Passing
PCI	21:57- 22:02	REF 9		
9	22:02	Common pipistrelle	2	Passing
PCJ	22:10- 22:15	REF 10		
10	22:11	Common pipistrelle	1	Passing
Finish	22:23			

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BAT TRANSECT AND STATIC LOCATION PLAN (04.05.21)

scale @ A3: 1:1900 | drawn: EM / LV | issue: 21/6/2021

drawing / figure number: **Figure 3** | rev: **9309-E-01**

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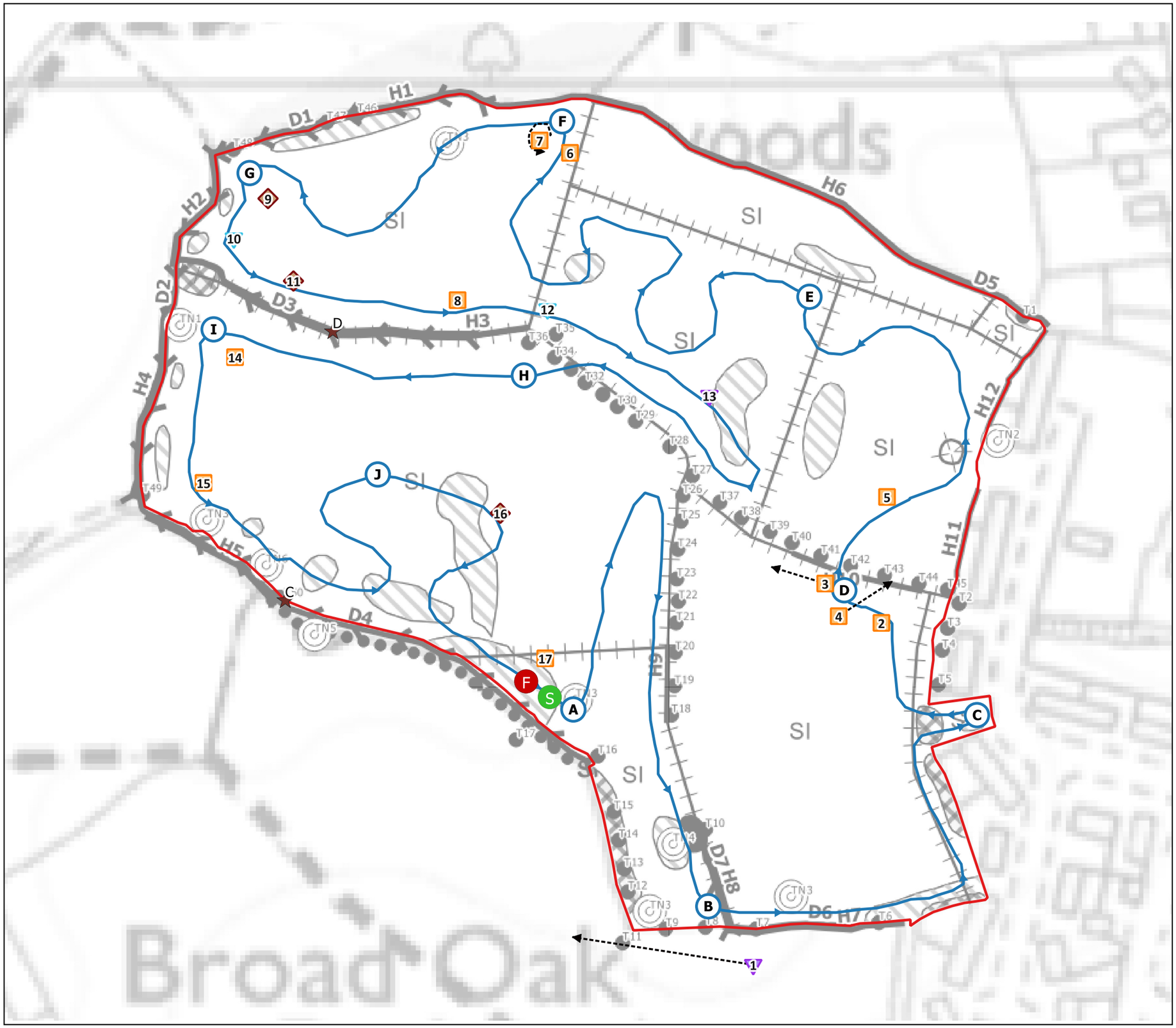

Key:

- Site Boundary
- Start point
- Finish point
- Point Count (with ref.)
- Transect Route
- Flight Arrow
- Static detectors (REF)

Bat Species (contacts)

- Common Pipistrelle
- Brown Long-eared
- Nyctalus Species
- Noctule

Plan Reference	Time	Species	Passes	Behaviour
Start	20:56			
PCA	20:56- 21:01	NO BATS		
PCB	21:06- 21:11	REF 1		
1	21:08	Noctule	1	Passing
PCC	21:18- 21:23	NO BATS		
2	21:26	Common pipistrelle	3	Passing
PCD	21:27- 21:32	REF 3-4		
3	21:29	Common pipistrelle	3	Passing
4	21:32	Common pipistrelle	1	Passing
5	21:34	Common pipistrelle	1	Passing
PCE	21:40- 21:45	NO BATS		
6	21:46	Common pipistrelle	1	Passing
PCF	21:51- 21:56	REF 7-8		
7	21:55	Common pipistrelle	1	Passing
8	21:56	Common pipistrelle	Cont.	Foraging
PCG	22:01- 22:06	REF 9-10		
9	22:01	Plecotus sp.	1	Passing
10	22:06	Nylactus sp.	3	Passing
11	22:07	Plecotus sp.	1	Passing
12	22:10	Nylactus sp.	1	Passing
13	22:11	Noctule	1	Passing
PCH	22:13- 22:18	NO BATS		
PCI	22:25- 22:30	REF 14		
14	22:29	Common pipistrelle	2	Passing
15	22:32	Common pipistrelle	2	Passing
PCJ	22:35- 22:40	NO BATS		
16	22:44	Plecotus sp.	1	Passing
17	22:46	Soprano pipistrelle	1	Passing
Finish	22:56			

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BAT TRANSECT PLAN AND STATIC LOCATION PLAN (26.05.21)

scale @ A3: 1:1900 | drawn: EM / LV | issue: 21/6/2021

drawing / figure number: **Figure 4** | rev: **9309-E-01**

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Key:

- Site Boundary
- Indicative Tube Locations

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DORMOUSE SURVEY PLAN

scale @ A3	drawn	issue
1:1800	LV	21/6/2021

drawing / figure number
Figure 6

rev
9309-E-01

Key

- Site Boundary
- Indicative Refugia Locations

Reptile Species Records

- Slow-worm

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REPTLE SURVEY PLAN

scale	drawn	issue
1:1800	LV	21/6/2021

drawing / figure number **Figure 7**

rev **9309-E-01**

Appendix A: Botanical Species List

Scientific Name	Common Name	Poor Semi-Improved Grassland	Tall Ruderal Vegetation	Ditches
Poa annua	Annual meadow grass	✓LO		
Potentilla sterilis	Barren strawberry	✓LO		
Pteridium aquilimum	Bracken			✓O
Rubus fruticosa	Bramble			✓LA
Rumex obtusifolius	Broad leaved dock	✓R	✓O	
Ranunculus bulbosus	Bulbous buttercup	✓O		
Hypochoeris radicata	Cats ear	✓O		
Galium aparine	Cleavers	✓LO		
Dactylis glomerata	Cocks foot	✓O		
Agrostis capillaris	Common bent	✓F		
Lotus corniculatus	Common birds foot trefoil	✓O		✓R
Centaurium erythraea	Common centaury	✓LO		
Scrophularia nodosa	Common figwort		✓R	
Pulicaria dysenterica	Common fleabane	✓LO		
Heracleum sphondylium	Common hogweed		✓O	
Cerastium fontanum	Common mouseear	✓O		
Urtica dioica	Common nettle	✓LF	✓F	
Senecio jacobaea	Common ragwort	✓R		
Rumex acetosa	Common sorrel	✓LF		
Agrostis stolonifera	Creeping bent	✓LA		
Ranunculus repens	Creeping buttercup	✓LF		
Cirsium arvense	Creeping thistle	✓LF	✓A	
Cynosurus cristatus	Crested dog's tail	✓F		
Bellis perennis	Daisy	✓LO		
Taraxacum officinale	Dandelion	✓R		
Geranium molle	Doves foot cranesbill	✓O		
Apium nodiflorum	Fools watercress			✓R
Digitalis purpurea	Foxglove			✓LO
Lotus pendunculatus	Greater birds foot trefoil			✓R
Pentaglottis sempervirens	Green alkanet	✓LF		
Glechoma hederacea	Ground ivy	✓R		✓LF
Carex hirta	Hairy sedge	✓R		✓R
Phyllitis scolopendrium	Harts tongue			✓R
Stachys sylvatica	Hedge woundwort		✓LO	✓O
Eupatorium cannabinum	Hemp agrimony			✓LR
Hedera helix	Ivy			✓LA
Stellaria graminea	Lesser stitchwort	✓R		
Dryopteris felix-mas	Male fern			✓O
Ranunculus acaris	Meadow buttercup	✓LF		
Lathyrus pratensis	Meadow vetchling	✓R		

Filipendula ulmaria	Meadowsweet			✓R
Crocosmia sp.	Montbretia sp.	✓R		
Bryophyta sp.	Moss sp.	✓F		
Leucanthemum vulgare	Oxeye daisy	✓LF		
Apiaceae sp.	Parsley	✓LO		
Carex pendula	Pendulous sedge			✓F
Lolium perenne	Perennial rye grass	✓LA		
Hypericum perforatum	Perforate St Johns wort	✓O		✓LF
Silene dioica	Red campion		✓O	
Trifolium pratense	Red clover	✓LO		
Festuca rubra	Red fescue	✓LO		
Carex remota	Remote sedge			✓R
Plantago lanceolata	Ribwort plantain	✓LO		
Poa trivialis	Rough meadowgrass	✓LF		
Prunella vulgaris	Selfheal	✓LO		✓R
Juncus effusus	Soft rush	✓O		✓LF
Iris foetidissima	Stinking iris			✓R
Vicia cracca	Tufted vetch			✓R
Voila sp.	Violet sp.	✓R		
Mentha aquatica	Water mint			✓R
Cardamine flexuosa	Wavy bittercress			✓R
Trifolium repens	White clover	✓O		
Epilobium sp.	Willowherb sp.			✓R
Geum urbanum	Wood avens	✓R		
Rumex sanguineus	Wood dock			✓R
Teucrium scorodonia	Wood sage			✓O
Holcus lanatus	Yorkshire fog	✓F		✓LF

Appendix B: Results of Ground Level Tree Assessments for Potential Bat Roosts

Tree reference	Species	Category (See Table 1)	Comments
1	Pedunculate oak *Quercus robur*	Low	Fissures, cracked bark, knot holes
2*	Pedunculate oak *Quercus robur*	Low	Fissures & cracks in bark
3*	Pedunculate oak *Quercus robur*	Moderate	Small fissures in bark, knot holes, bird box
4*	Pedunculate oak *Quercus robur*	Moderate	Small fissures in bark, knot holes, bird box, cracks due to failed limb
5	Pedunculate oak *Quercus robur*	Moderate	Small knot holes and crevices in stem, bird box
6	Field maple *Acer campestre*	Low	Shallow looking knot holes in main stem
7	Hybrid black poplar *Populus* x *canadensis*	Low	Fissures in bark, cracked bark
8	Sycamore *Acer pseudoplatanus*	Moderate	Large cavity at base of trunk, fissures due to failed limb
9	Pedunculate oak *Quercus robur*	Moderate	Knot holes, fissures in bark
10	Pedunculate oak *Quercus robur*	Negligible	Some epicormics growth but no obvious defects
11*	Pedunculate oak *Quercus robur*	Moderate	Cavities in main stem, split bark
12	Hybrid black poplar *Populus* x *canadensis*	Moderate	Downward facing holes on branch
13	Hybrid black poplar *Populus* x *canadensis*	Low	Ivy round stem, no obvious defects
14	Hybrid black poplar *Populus* x *canadensis*	Moderate	Large fissure in stem, fissures due to failed limb (although most are upward facing)

Tree reference	Species	Category (See Table 1)	Comments
15	Hybrid black poplar *Populus* x *canadensis*	Moderate	Woodpecker holes
16	Pedunculate oak *Quercus robur*	Negligible	Ivy around stem, no obvious defects
17*	Pedunculate oak *Quercus robur*	Moderate	Large cavity in stem, ivy covered
18	Pedunculate oak *Quercus robur*	Negligible	No obvious defects
19	Pedunculate oak *Quercus robur*	Low	Small fissures due to branch failures
20	Pedunculate oak *Quercus robur*	Moderate	Holes in failed limb
21	Pedunculate oak *Quercus robur*	Low	Upward facing holes due to failed limbs
22	Pedunculate oak *Quercus robur*	Low	Small holes due to failed limb
23	Pedunculate oak *Quercus robur*	Moderate	Cavity due to failed limb
24	Pedunculate oak *Quercus robur*	Negligible	No obvious defects
25	Pedunculate oak *Quercus robur*	Negligible	No obvious defects
26	Pedunculate oak *Quercus robur*	Negligible	No obvious defects
27	Pedunculate oak *Quercus robur*	Low	Upwards facing knot holes, cracked bark.
28	Pedunculate oak *Quercus robur*	Low	Small cracks and fissures in bark
29	Pedunculate oak *Quercus robur*	Negligible	No obvious defects

Tree reference	Species	Category (See Table 1)	Comments
30	Pedunculate oak *Quercus robur*	Moderate	Cracks and fissures in bark, small hole in failed branch
31	Pedunculate oak *Quercus robur*	Negligible	No obvious defects
32	Pedunculate oak *Quercus robur*	Low	Small fissures and knot holes (looked shallow)
33	Pedunculate oak *Quercus robur*	Negligible	Fissures at failed limbs but upwards facing
34	Pedunculate oak *Quercus robur*	Moderate	Cavity in main stem
35	Pedunculate oak *Quercus robur*	Moderate	Fissure in underside of branch
36	Pedunculate oak *Quercus robur*	Low	Knot hole (looks shallow)
37	Pedunculate oak *Quercus robur*	Moderate	Hole in failed limb, woodpecker holes in main stem and branches
38	Pedunculate oak *Quercus robur*	Moderate	Cracked bark, fissures
39	Pedunculate oak *Quercus robur*	Negligible	No obvious defects
40	Pedunculate oak *Quercus robur*	Moderate	Fissure due to failed branch
41	Pedunculate oak *Quercus robur*	Moderate	Fissures in bark, knot hole
42	Pedunculate oak *Quercus robur*	Moderate	Hole formed due to branch failure
43	Pedunculate oak *Quercus robur*	Negligible	Small, shallow fissures, some ivy around stem
44	Pedunculate oak *Quercus robur*	Negligible	No obvious defects

Tree reference	Species	Category (See Table 1)	Comments
45	Pedunculate oak *Quercus robur*	Moderate	Dense ivy around stem, fissure due to branch failure
46	Pedunculate oak *Quercus robur*	Low	Small cavity due to branch failure
47	Pedunculate oak *Quercus robur*	Moderate	Fissure and possible cavity due to branch failure, cracked bark
48	Pedunculate oak *Quercus robur*	Moderate	Knot hole, fissure and cavities due to limb failures
49	Pedunculate oak *Quercus robur*	Moderate	Cracks and fissures in stem and branches, ivy cover around stem
50	Pedunculate oak *Quercus robur*	Low	Thick ivy stems around trunk but very cluttered

** denotes tree is off-site but overhangs site boundary*

Appendix C: Fryatt's Way 2021 Breeding Bird Survey Results & EOAC Criteria for Categorisation of Breeding Status

Survey	Surveyor	Date	Cloud (%)	Rain	Wind	Visibility
1	LC	05.05.21	0	0	3	Very Good
2	LC	27.05.21	0	0	0	Excellent

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status[1]
Greylag goose	*Anser anser*	-	4 fly overs		Amber list	Non-breeder - F
Pheasant	*Phasianus colchicus*	-	1		Not listed	Possible - H
Cormorant	*Phalacrocorax carbo*	-	1 fly over		Green list	Non-breeder - F
Sparrowhawk	*Accipiter nisus*	-	1		Green list	Possible - H
Herring gull	*Larus argentatus*	14 fly overs	15 fly overs		Red list	Non-breeder - F
Stock dove	*Columba oenas*	1 + 2 fly overs	1 + 4 fly overs		Amber list	Possible - S
Woodpigeon	*Columba palumbus*	16 + 11 fly overs	11 + 2 fly overs		Green list	Possible - S
Great spotted woodpecker	*Dendrocopos major*	-	1		Green list	Possible - H
Magpie	*Pica pica*	7	12 + 5 fly overs		Green list	Confirmed - FL
Jackdaw	*Corvus monedula*	31 + 21 fly overs	14 + 19 fly overs + 1 Juvenile		Green list	Confirmed - FL
Carrion crow	*Corvus corone*	2 + 13 fly overs	1 + 1 fly over		Green list	Possible - H
Goldcrest	*Regulus regulus*	1	-		Green list	Possible - S
Blue tit	*Cyanistes caeruleus*	16	14		Green list	Confirmed - NY
Great tit	*Parus major*	4	4		Green list	Possible - S
Coal tit	*Periparus ater*	3	1		Green list	Possible - S
Swallow	*Hirundo rustica*	5 fly overs	8 fly overs		Green list	Non-breeder - F

[1]European Ornithological Atlas Committee, 1979. *Categories of Breeding Bird Evidence*. European Ornithological Atlas Committee.

Species: British Common Name	Species: Latin name	Survey 1	Survey 2	Survey 3	Conservation Status & Protection	Breeding status[1]
Long-tailed tit	*Aegithalos caudatus*	-	2		Green list	Confirmed - FL
Chiffchaff	*Phylloscopus collybita*	4	2		Green list	Possible - S
Blackcap	*Sylvia atricapilla*	2	2		Green list	Possible - S
Treecreeper	*Certhia familiaris*	-	1		Green list	Possible - H
Wren	*Troglodytes troglodytes*	7	7		Green list	Probable breeder - T
Starling	*Sturnus vulgaris*	1	5 + 16 fly overs + 1 juvenile		Red list NERC S.41	Confirmed - FL
Blackbird	*Turdus merula*	4	7 + 1 juvenile		Green list	Confirmed - FL
Song thrush	*Turdus philomelos*	2	3		Red list NERC S.41	Possible - S
Robin	*Erithacus rubecula*	8	6		Green list	Probable - T
Dunnock	*Prunella modularis*	3	2		Amber list NERC S.41	Possible - S
House sparrow	*Passer domesticus*	3	3		Red list NERC S.41	Confirmed - NY
Chaffinch	*Fringilla coelebs*	-	1		Green list	Possible - S
Greenfinch	*Carduelis chloris*	2 + 1 fly over	-		Green list	Possible - S
Goldfinch	*Carduelis carduelis*	3 fly overs	1 + 5 fly overs		Green list	Possible - S
Total No. Species		22	29			

Breeding Status evidence can be broken down into four sections, each with their own codes, as defined by the European Ornithological Atlas Committee:

Confirmed breeder
DD – distraction display or injury feigning
UN – used nest or eggshells found from this season
FL – recently fledged young or downy young
ON – adults entering or leaving nest-site in circumstances indicating occupied nest
FF – adult carrying faecal sac or food for young
NE – nest containing eggs
NY – nest with young seen or heard

Probable breeder - Evidence accumulated during the survey indicates that the bird species is breeding on site.
P – pair in suitable nesting habitat
T – permanent territory (defended over at least 2 survey occasions)
D – courtship and display
N – visiting probable nest site
A – agitated behaviour

I – brood patch of incubating bird (from bird in hand)
B – nest building or excavating nest-hole

Possible breeder - Evidence accumulated during the survey indicates that the bird species could be breeding on site, but the evidence is less conclusive than that obtained for probable breeders.
H – observed in suitable nesting habitat
S – singing male

Non-breeder
F – flying over
M – migrant
U – summering non-breeder
UH – observed in unsuitable nesting habitat