

Land South of Green Road, Wivelsfield Green

Taylor Wimpey Strategic Land

Ecological Assessment

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Contents

1.	Introduction.....	1
2.	Survey Methodology.....	2
3.	Ecological Features.....	9
4.	Wildlife Use of the Application Site.....	13
5.	Ecological Evaluation.....	24
6.	Planning Policy Context.....	37
7.	Summary and Conclusions	40

Plans

Plan ECO1	Application Site Location and Ecological Designations
Plan ECO2	Ecological Features
Plan ECO3	Protected Species
Plan ECO4	Pond Location Plan

Appendices

Appendix 1	Information obtained from SxBRC (Summary Report)
Appendix 2	Information obtained from MAGIC
Appendix 3	HSI Assessment for Waterbodies
Appendix 4	Development Framework Plan ref. 6467_104_F by CSA

1. Introduction

1.1. Application Site Background and Proposals

1.1.1. Ecology Solutions Limited was commissioned by Taylor Wimpey Strategic Land in April 2023 to undertake an Ecological Assessment of Land South of Green Road, Wivelsfield Green (see Plan ECO1), hereafter referred to as the application site.

1.1.2. The application description is as follows:

"Outline planning application for the erection of up to 150 dwellings, with associated works, parking, landscaping, publicly accessible open space, land for education or community use, with access from Green Road and Eastern Road".

1.2. Application Site Characteristics

1.2.1. The application site is located to the south of Green Road, Wivelsfield Green and is situated in Lewes District. The application site is approximately 21 hectares in size and primarily comprises arable land (to the east) and grassland fields (to the west).

1.2.2. There is a band of woodland along Green Lane intersecting the centre of the application site, extending north to south and connecting to an area of Ancient Woodland at the south which lies partially within and extends significantly further beyond the southern boundary of the application site. Other habitats present within the application site include hedgerows, which bisect fields, trees, scrub and linear watercourses.

1.3. Ecological Assessment

1.3.1. This document assesses the ecological interest of the application site as a whole. The importance of the habitats present is evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.

1.3.2. The report also sets out the existing baseline conditions for the application site, setting these in the correct planning policy and legal framework and assessing any potential impacts which may occur from the proposed development. Appropriate mitigation where necessary is identified such that it will offset negative impacts of the proposals, and where possible provide for the ecological enhancement of the application site, in accordance with relevant planning policy.

¹ CIEEM (2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.2 – Updated April 2022. Chartered Institute of Ecology and Environmental Management, Winchester.

2. Survey Methodology

- 2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

- 2.2.1. In order to compile background information on the site in addition to land in the local area, Ecology Solutions contacted Sussex Biodiversity Records Centre (SxBRC) in May 2023.
- 2.2.2. Information has been provided by SxBRC and is referenced within this report where appropriate. Due to publication conditions, the raw data received as part of the desk study exercise cannot be included as an appendix to this document, although a Summary Report is included at Appendix 1. However, pertinent information regarding non-statutory designated sites is illustrated on Plan ECO1.
- 2.2.3. Further information on designated sites from a wider search area (including Ancient Woodland) was also obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database. This information is included at Appendix 2 and illustrated where appropriate on Plan ECO1.

2.3. Habitat Survey

- 2.3.1. Habitat survey work was undertaken in July 2023, and updated in October 2024, to ascertain the general ecological value of the land contained within the boundaries of the application site to identify the main habitats and associated plant species, with notes on fauna utilising the application site.
- 2.3.2. The application site was surveyed based on the UK Habitat Classification (UKHab) methodology³, as recommended by Natural England and DEFRA, whereby the habitats present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey work. Any such areas identified can then be examined in more detail.
- 2.3.3. Using the above method, the application site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.
- 2.3.4. All of the species that occur in each habitat would not necessarily be detected during survey work carried out at any given time of the year, since different species are apparent at different seasons. However, given that the original survey work was undertaken at a suitable time of year (July 2023), with a further update undertaken in October 2024, and given the habitats present within the application site, it is

² <http://magic.defra.gov.uk>

³ UKHab Ltd (2023) *The UK Habitat Classification Version 2.0* at <http://www.ukhab.org/>

considered that an accurate and robust assessment of the ecological baseline has been made.

2.4. Faunal Survey

2.4.1. General faunal activity observed during the course of the survey was recorded, whether visually or by call (e.g bird song). Specific attention was paid to the potential presence of any protected, rare, notable or Priority species, and opportunities that the application site could provide for these species / groups.

2.4.2. In addition, specific surveys were undertaken with regards to bats, Badgers *Meles meles*, Hazel Dormice *Muscardinus avellanarius*, amphibians, and reptiles.

Bats

Ground-Level Roost Assessment

2.4.3. Initial bat surveys were undertaken in July 2023, and updated in October 2024, to assess the potential for roosting bats within any existing buildings, structures and trees present within and immediately adjacent to the application site. The work was undertaken by an experienced bat worker and aimed to establish the likelihood of presence / absence of roosting bats within or immediately adjacent to the application site.

2.4.4. Field surveys were undertaken with regard to best practice guidelines issued by Natural England (2023⁴), the Joint Nature Conservation Committee (2004⁵) and the Bat Conservation Trust (2023⁶).

2.4.5. Trees present within or immediately adjacent to the application site were assessed for their potential to support roosting bats in July 2023 and October 2024. For a tree to be classed as having some potential for roosting bats it must usually have one or more of the following characteristics:

- obvious holes, e.g., rot holes and old woodpecker holes;
- dark staining on the tree below a hole;
- tiny scratch marks around a hole from bats' claws;
- cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc.; and/or
- very dense covering of mature Ivy *Hedera helix* over trunk.

⁴ Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

⁵ Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). Bat Workers' Manual. 3rd edition. Joint Nature Conservation Committee, Peterborough.

⁶ Collins, J. (Eds.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust, London.

- 2.4.6. Consideration was also afforded to the habitats present within and adjacent to the application site in terms of the potential opportunities that they provide for foraging and commuting bats in the local area.

Bat Activity Surveys

- 2.4.7. Bat activity surveys were undertaken in order to establish whether any features of potential significance for foraging and commuting bats are present within or adjacent to the application site. Monthly activity surveys were completed between July and October 2023 inclusive.
- 2.4.8. For the walked transects, routes were identified to ensure comprehensive coverage of all habitats present within the application site. Surveyors utilised Echo Meter 2 (EMT2) bat detectors to aid identification of bats and record data. All bat activity observed or recorded on the detector was noted by the surveyor. Transect surveys were conducted from 15 minutes before sunset to approximately 2 hours after sunset. Walked transect survey work was completed during optimal conditions for bat surveys.
- 2.4.9. In addition, automated bat detectors (SM4 and SM Mini) were deployed each month from July to October 2023 inclusive for a minimum of five consecutive nights in strategic locations within the application site. All data recorded was subsequently analysed using bat sound analysis software, providing long-term data regarding the use of the application site by foraging and commuting bats. Detectors were set to record each night from 20 minutes prior to sunset until 20 minutes after sunrise.
- 2.4.10. All data recorded during the walked transects and static detector surveys were subsequently analysed using Kaleidoscope bat sound analysis software.

Badgers

- 2.4.11. Survey work to search for evidence of Badgers was also undertaken in July 2023, and updated in October 2024, which comprised two main elements. The first of these was a thorough search for evidence of Badger setts.
- 2.4.12. For any setts encountered each sett entrance would be recorded and plotted, even if the entrance appeared disused. The following information was recorded if appropriate:
- i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
 - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
 - iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

- 2.4.13. Secondly, Badger activity such as well-worn paths and run-throughs, snagged hair, footprints, latrines, and foraging signs were also searched for in order to build up a picture of the use of the application site by Badgers.

Hazel Dormice

- 2.4.14. To ascertain the presence or absence of Hazel Dormice within the application site, specific survey work was undertaken between July and November 2023 inclusive in the form of nest tube surveys.
- 2.4.15. The survey technique involved the erection of nest tubes within all areas of woodland, hedgerows and areas of dense scrub within the application site boundary. The nest tubes utilised were those approved as standard by the Mammal Society and Natural England. A total of 100 nest tubes were put up across the survey area in early July 2023.
- 2.4.16. Nest tubes were placed in accordance with the guidance provided by the Mammal Society and Natural England⁷. Typically, tubes were placed within hedgerows approximately every 10 to 15 metres where suitable locations can be identified. The nest tubes were attached with wire ties underneath suitably sturdy horizontal branches and positioned on average at approximately 1.5 metres above ground level.
- 2.4.17. The survey has been scored for effort according to the method developed from the Southwest Dormouse Project (Chanin and Woods, 2003). The system used provides an overall score that reflects the chances of Dormice being discovered if present, and thus provides an indicator of 'thoroughness' of a survey. This score is calculated based on the number of tubes used and the number of months the tubes were in place.
- 2.4.18. The months of the year are weighted according to the likelihood of recording Dormice as set out in **Table 2.1** below.
- 2.4.19. **Table 2.1:** Monthly Score Weighting (Chanin & Woods 2003)

Month	Weighting
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

⁷ Chanin P. & Woods M. (2003). Research Report 524, 'Surveying Dormice Using Nest Tubes – Results & Experiences from the South West Dormouse Project'. English Nature, Peterborough.

- 2.4.20. The index of effort is calculated based on the use of 50 nest tubes as a standard minimum, with less tubes used proportionately reducing the overall score and more tubes increasing the score (i.e., using 25 tubes halves the score and using 100 tubes doubles the score).
- 2.4.21. A score of 20 (or above) is deemed a thorough survey, and a score of 15 to 19 may be regarded as adequate where circumstances do not permit more time or more tubes, particularly if other survey methods have also proved negative.
- 2.4.22. The number of tubes used was 100 and they were checked on a monthly basis between July and November inclusive 2023, with August and September being the most optimal months for Dormouse surveys. This resulted in a survey effort score of 36, therefore meeting (and indeed exceeding) the requisite score. As such, the survey effort is considered appropriate to inform a robust assessment of the presence or absence of Dormice from the application site.

Amphibians

- 2.4.23. There are two ponds located within the application site boundary which were identified to have potential to support breeding amphibians, such as Great Crested Newts *Triturus cristatus*. In addition, analysis of OS mapping and aerial photography identified a number of additional off-site waterbodies in the local area of the application site.
- 2.4.24. The application site also supports superficially suitable terrestrial habitat for amphibian species in their terrestrial phase, in the form of grassland, hedgerows, woodland and scrub.
- 2.4.25. Survey work to provide information with regard to the presence or absence of Great Crested Newts was therefore undertaken in 2023, in the form of a Habitat Suitability Index (HSI) Assessment and eft netting survey. This work was undertaken on all waterbodies present within the application site in addition to off-site waterbodies where access was permitted from the relevant landowner (see Plan ECO4). However, it should be noted that access to undertake this assessment was not provided for all off-site waterbodies in the local area.

Habitat Suitability Index (HSI) Assessment

- 2.4.26. A Habitat Suitability Index (HSI) assessment⁸ of on-site and off-site waterbodies (where access permission was granted) was undertaken in August 2023. The HSI methodology involves a numerical index which identifies a score between 0 and 1, indicating the suitability of a waterbody for breeding Great Crested Newts. Each waterbody was subject to a visual assessment (where access was possible), with the feature 'scored' in relation to each of the criteria which comprise the HSI methodology. Other information used included consideration of OS mapping and aerial photography.

⁸ 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

- 2.4.27. The HSI scores for each waterbody surveyed were considered in light of the categories set out in Table 2.2 below, to ascertain the likelihood of these features supporting breeding Great Crested Newts. The findings of the HSI Assessment were subsequently used to inform the scope of further survey work.

Table 2.2: Habitat Suitability Index (HSI) Score Summary

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

Eft Netting Survey

- 2.4.28. In addition, an eft netting survey of each of the waterbodies subject to HSI assessment was undertaken in August 2023. This survey entailed the use of a sturdy dip-net with a 2-4mm mesh, which was used to carefully sweep the pond, searching for adult and juvenile amphibian species (including efts). The survey was undertaken by a suitably licensed and experienced ecologist in a careful and systematic manner to ensure minimal disturbance. Each waterbody surveyed was searched for a minimum of 15 minutes each.

Reptiles

- 2.4.29. The application site supports superficially suitable habitat for reptile species, in the form of grassland, scrub and woodland. As such, specific surveys to ascertain the presence or absence of common reptiles within the application site were undertaken between August and October 2023.
- 2.4.30. Survey work was undertaken with regard to the methodology outlined in the Herpetofauna Workers' Manual⁹ and involved the deployment of 219 artificial refugia or 'tins' (0.5m x 0.5m squares of roofing felt) distributed throughout all suitable reptile habitats across the application site. The tins were initially left in place for a suitable period of time to 'bed in'.
- 2.4.31. The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask and raise their body temperature which allows them to forage earlier and later in the day.
- 2.4.32. Subsequently, the artificial refugia (and any natural refugia such as logs or brash within the application site) were inspected during suitable weather conditions, with details recorded of any reptiles encountered. Any reptiles observed within the application site in general (e.g., whilst walking quietly and carefully between refugia)

⁹ Gent, T. & Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough.

were also noted. A total of seven check surveys were completed in suitable weather conditions between August and October 2023.

- 2.4.33. Suitable weather conditions for carrying out the surveys are when the air temperature is between 9 and 18°C. Heavy rain and windy conditions were avoided.

3. Ecological Features

- 3.1. The application site was subject to a habitat survey in July 2023 and updated in October 2024. The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.
- 3.2. The following main habitat / vegetation types were identified on the application site:
- Other Neutral Grassland;
 - Arable;
 - Broadleaved Woodland;
 - Mixed Scrub;
 - Waterbodies;
 - Bare Ground / Developed Land; and
 - Hedgerows and Trees
- 3.3. The location of these habitats is shown on Plan ECO2. Each habitat present is described below with an account of their representative plant species.

3.4. Other Neutral Grassland

- 3.4.1. The majority of the eastern part of the application site comprises grassland fields that are subject to management through hay-cutting. At the time of the surveys in July 2023 and October 2024 the majority of the fields had recently been mown, leaving some margin of long tussocky sward grassland. However, some areas of longer grassland were recorded, such as in the southern part of the application site.
- 3.4.2. The diversity of the grassland within the fields is similar across the application site, with limited variation in terms of species-richness and the complement of grass and herbaceous species. The sward was typically dominated by Yorkshire Fog *Holcus lanatus*, Creeping Bent *Agrostis stolonifera*, and Perennial Rye-grass *Lolium perenne*. Other species included Clovers *Trifolium spp.*, Broad-leaved Dock *Rumex obtusifolius*, Creeping Thistle *Cirsium arvense*, Spear Thistle *Cirsium vulgare*, Meadow Buttercup *Ranunculus acris*, Cocksfoot Grass *Dactylis glomerata*, Timothy Grass *Phleum pratense*, False Oat Grass *Arrhenatherum elatius*, Oxeye Daisy *Leucanthemum vulgare*, Sorrel *Rumex acetosa*, Creeping Buttercup *Ranunculus repens*, Bush Vetch *Vicia sepium*, and Meadow Foxtail *Alopecurus pratensis*.
- 3.4.3. A rough grassland field is also present in the south-east of the application site, on a steeper north-facing back (to the south of the arable field). This grassland supported a similar complement of species and diversity to other habitats within the western part of the site, albeit with some additional species including Sweet Vernal-grass *Anthoxanthum odoratum*, Agrimony *Agrimonia eupatoria*, Creeping Cinquefoil *Potentilla reptans*, Meadow Vetchling *Lathyrus pratensis* and Common Sorrel *Rumex acetosa*.
- 3.4.4. The grasslands present within the application site accord with the UKHab description of 'other neutral grassland'.

3.5. Arable

- 3.5.1. The eastern part of the application site comprises a large intensively managed arable field, recorded to support a Maize *Zea mays* crop in the initial survey in July 2023. With the exception of very narrow ruderal margins (around the periphery of the field and immediately underneath individual trees), there are no substantive grassy margins to the field.
- 3.5.2. A limited complement of common ruderal, grassland and recolonising species were recorded during the survey work, associated with field edges, with species present including Goosefoot *Chenopodium* sp., Thistles *Cirsium* sp., Redshank *Persicaria maculosa* and Common Nettle *Urtica dioica*.

3.6. Broadleaved Woodland

- 3.6.1. An area of mature Ancient Woodland is located within the southern part of the application site, extending to the south beyond the application site boundary (W1 on Plan ECO1). The woodland has a clearly defined southern edge, including a ditch / ridge feature.
- 3.6.2. The woodland primarily comprises a canopy of mature English Oak *Quercus robur* and Hornbeam *Carpinus betulus*. The woodland has limited understory vegetation due to lack of management and it appears to have become overgrown, with evidence of previous coppicing works. Small areas of understorey are present in areas. Species recorded in the canopy and understorey include Sycamore *Acer pseudoplatanus*, Hawthorn *Crataegus monogyna*, Silver Birch *Betula pendula*, Hazel *Corylus avellana*, Bramble *Rubus fruticosus* agg. and Elder *Sambucus nigra*. The vegetation cover in the ground layer was recorded to be limited, potentially due to the density of the canopy, but is anticipated to be more diverse and support Ancient Woodland Indicator species.
- 3.6.3. A band of mature broadleaved woodland also extends north to south across the application site (W2 on Plan ECO2), adjacent to the bridleway and approximately 30 metres in width although this varies along its length. This woodland bisects the site and separates the predominantly grassland fields to the west and the arable field to the east.
- 3.6.4. This woodland primarily comprises a canopy of mature English Oak, with an understorey supporting Cherry *Prunus* sp., Hazel, Field Maple *Acer campestre*, Hawthorn, Holly and Hornbeam. Species recorded in the ground layer include Ivy *Hedera helix*, Dog-rose *Rosa canina*, Wood Brome *Bromus pubescens* and Bluebells *Hyacinthoides non-scripta*. Sections of the woodland appear to be subject to lots of poaching due to use of the bridleway.
- 3.6.5. The woodlands present within the site accord with the UKHab description 'Lowland Mixed Deciduous Woodland'.

3.7. Mixed Scrub

- 3.7.1. Areas of mixed scrub with trees are present in the south-eastern part of the application site, in the form of English Oak trees with Blackthorn *Prunus spinosa* and Dog-Rose, and with a band of mixed scrub with trees adjacent to the south-eastern

boundary supporting Willows *Salix* sp., Sycamore, Ash *Fraxinus excelsior*, Hawthorn, Blackthorn and Holy *Ilex aquifolium*.

3.8. Waterbodies

- 3.8.1. There are two waterbodies to the south of the application site, located within the Ancient Woodland. The ponds were noted to be holding water at the time of the initial survey in July 2023 (and also during the updated survey in October 2024), however were subsequently recorded to be dry in August 2023. As such, it is evident that these features are seasonally wet. Both waterbodies lack any aquatic or marginal vegetation, recorded to contain only deadwood and brash, and are heavily shaded by the oversailing woodland canopy.
- 3.8.2. A number of very steep sided ditches are also present within the application site, associated with field boundaries. This includes an east-west ditch immediately associated with hedgerow H8, north/south ditches associated with H2, H5, H6 and J7 and a feature adjacent to the north-western boundary (beyond existing properties along Eastern Road).
- 3.8.3. At the time of the survey in July 2023, all ditches were recorded to be dry, in many cases being fully overgrown by the adjoining hedgerow and grassland. No marginal or aquatic species were recorded to be present within any of these features.

3.9. Bare Ground / Developed Land

- 3.9.1. There is a small area of bare compacted ground devoid of vegetation is located to the north-west of the application site, associated with regular use of an existing public right of way.
- 3.9.2. Additionally, there is a small section of existing hardstanding (part of Green Road) present in the northern part of the redline boundary.

3.10. Hedgerow and Trees

- 3.10.1. There are several hedgerows and individual trees located across the application site which delineate the field boundaries.
- 3.10.2. There are also a number of mature Oak trees located throughout the application site, primarily in the east, as illustrated on Plan ECO2
- 3.10.3. H1 represents an unmanaged hedgerow / treeline in the north-west of the application site adjacent to Eastern Road. This feature supports English Oak, Ash (suffering from Ash Dieback disease), Hazel, Hawthorn, Field Maple, Blackthorn, Bramble and Holly.
- 3.10.4. H2 represents a north/south hedgerow with trees associated with a dry ditch. This feature does not appear to be subject to regular management and supports mature Oak and Ash trees in addition to Holly, Hazel, Bramble, Blackthorn, Sallow *Salix cinerea* and Dog-rose.
- 3.10.5. H3 represents a more regularly managed hedgerow along part of the western boundary of the application site. Species present include Hawthorn, Blackthorn, Dog-rose, Bramble, Holly, Hazel, Field Maple and Ash.

- 3.10.6. H4 comprises an ornamental hedgerow associated with a property adjoining the application site to the west. This feature is a Garden Privet *Ligustrum ovalifolium* hedgerow associated with a wooden post and rail fence, with a dense Beech *Fagus sylvatica* hedgerow beyond.
- 3.10.7. H5 is located along the south-western boundary of the application site and comprises a hedgerow / treeline with English Oak, Hornbeam, Hazel, Blackthorn and Holly present.
- 3.10.8. H6 is a north/south hedgerow associated with a dry ditch, connecting with the woodland in the south of the application site. Species present include Hornbeam, Sallow, Hawthorn, Hazel, Oak, Field Maple and Dog-rose.
- 3.10.9. H7 is also a north/south hedgerow associated with a dry ditch, supporting Hawthorn, Hazel, Blackthorn, Dog-rose, Hornbeam, Oak, Sallow and Field Maple.
- 3.10.10. H8 is an east/west hedgerow with trees associated with a very steep sided ditch. Species associated with this feature include Oak, Ash, Hawthorn, Blackthorn, Dog-rose, Hornbeam, Holly and Hazel.
- 3.10.11. H9 is a hedgerow along part of the northern boundary of the application site. This feature is dominated by Hawthorn with other species present including Wild Privet *Ligustrum vulgare*, Hazel, Sallow, Blackthorn, Dog-rose and Elder.
- 3.10.12. H10 is an unmanaged hedgerow along the south-eastern boundary of the application site. This feature supports Sycamore, Field Maple, Sallow, Hawthorn and Wild Privet.
- 3.10.13. H11 is a section of regularly managed hedgerow along part of the north-eastern boundary. Species present include Hawthorn, Hazel, Elder and Field Maple.
- 3.10.14. H12 is located adjacent to Green Road in the north-east of the application site. Species present within this hedgerow include Sycamore, Elder, Ash, Sallow, Hazel, Wild Privet, Hawthorn, Dog-rose and Bramble.

3.11. Background Information

- 3.11.1. The desk study undertaken with SxBRC returned records within the same 1km grid square as the application site. Species records returned include Royal Fern *Osmunda regalis*, Wild Strawberry *Fragaria vesca*, Aggregate-headed Hawkweed *Hieracium aggregatum*, Autumn Hawkweed *Hieracium sabaudum*, Bluebell *Hyacinthoides non-scripta*, Bitter-vetch *Lathyrus linifolius*, Corn Mint *Mentha arvensis*, Fringed Water-lily *Nymphaeodes peltata*, Wood-sorrel *Oxalis acetosella*, Tormential *Potentilla erecta*, Lesser Spearwort *Ranunculus flammula*, Ragged-Robin *Silene flos-cuculi*, Goldenrod *Solidago virgaurea*, Corn Spurrey *Spergula arvensis*, Heath Speedwell *Veronica officinalis*.
- 3.11.2. With the exception of Bluebell, none of the notable species returned in the desk study were recorded within the site boundary during the survey work undertaken. However, it is possible that some Ancient Woodland Indicator Species (such as Wood-sorrel) could be present within or in close proximity to the application site, within the bands of mature woodland.

4. Wildlife Use of the Application Site

- 4.1. During the surveys that have been undertaken within the application site, general observations have been made of any faunal use, with specific attention paid to the potential presence of protected or notable species. Specific surveys were also undertaken for bats, Badgers, Hazel Dormice, amphibians, and reptiles.

4.2. Bats

Ground-level Roost Assessment

- 4.2.1. There are no buildings or structures present within or immediately adjacent to the application site which could provide potential opportunities for roosting bats.
- 4.2.2. Thirty individual trees located within the application site were identified to have potential to support roosting bats, with the approximate locations illustrated on Plan ECO3. This includes a total of four trees associated with hedgerow H8 in the western part of the site, one tree associated with hedgerow H10 adjacent to the south-eastern boundary, three trees present within the arable field in the south-east, and twenty one associated with the central woodland.
- 4.2.3. Of these trees, twelve were identified to support a number of potential roosting features, such that they would be categorised as PRF-M, whilst eighteen were recorded to support fewer / less suitable features, such that they would be categorised as PRF-L.
- 4.2.4. All of these trees will be retained under the emerging development proposals (see below) and as such no further survey work has been undertaken to date of these potential roosting features.

Bat Activity Surveys – Walked Transects

- 4.2.5. In accordance with the methodology outlined in Section 2 above, bat activity surveys were undertaken at the application site between July and October 2023 inclusive, to ascertain the value of the habitats for foraging and commuting bats in the local area.
- 4.2.6. It is noted that updated bat survey guidance refers to the requirement for seasonal transect surveys. However, as this was published following the completion of the 2023 surveys, and the survey effort employed exceeds the updated guidance, it is considered that the work undertaken represents a comprehensive evidence base to inform the existing baseline and potential effects arising due to the proposals
- 4.2.7. The dates and weather conditions of the walked transect surveys are outlined in **Table 4.1** below. The transect routes utilised during the survey are illustrated on Plan ECO3.

Table 4.1: Summary of dates and weather conditions of walked transect surveys (2023)

Month	Survey Type	Date	Weather Conditions
July	Dusk	31/07/2023	17°C, 30% cloud cover, 13mph wind, dry
August	Dusk	29/08/2023	15°C, 100% cloud cover, 8mph wind, dry
Early October	Dusk	02/10/2023	18°C, 100% cloud cover, 4mph wind, some rain
October	Dusk	31/10/2023	13°C, 90% cloud cover, 11mph wind, some rain

4.2.8. **Tables 4.2 – 4.5** below summarise the overall findings of the walked transect survey work completed at the application site, with the total number of registrations of each species identified during the course of each survey.

Table 4.2: Bat registrations during July 2023 dusk activity survey

July		
Species	Total Number of Registrations	
	Transect 1	Transect 2
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	57	110
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	15	6
Serotine <i>Eptesicus serotinus</i>	1	1
Myotis <i>Myotis sp</i>	0	2
Leisler's bat <i>Nyctalus leisleri</i>	1	1
Brown Long-eared <i>Plecotus auritus</i>	2	1

Table 4.3: Bat registrations during August 2023 dusk activity survey

August		
Species	Total Number of Registrations	
	Transect 1	Transect 2
Common Pipistrelle	54	39
Soprano Pipistrelle	2	21
Serotine	1	2
Myotis	4	0

Table 4.4: Bat registrations during early October 2023 dusk activity survey

Early October		
Species	Total Number of Registrations	
	Transect 1	Transect 2
Common Pipistrelle	80	28
Soprano Pipistrelle	17	5
Leisler's bat	0	2
Myotis	4	0

Table 4.5: Bat registrations during October 2023 dusk activity survey

October		
Species	Total Number of Registrations	
	Transect 1	Transect 2
Common Pipistrelle	8	3
Soprano Pipistrelle	1	13
Leisler's bat	3	0
Barbastelle <i>Barbastella barbastellus</i>	1	0

- 4.2.9. The walked transect surveys completed at the application site throughout 2023 identified that the application site is utilised by a range of bats for foraging and commuting.
- 4.2.10. The vast majority of activity pertains to Common Pipistrelle and Soprano Pipistrelle with these single species accounting for the vast majority of bat registrations recorded at the application site each month.
- 4.2.11. Occasional registrations of other species were recorded (no more than four per transect per survey), including *Myotis*, Noctule, Leisler's bat and Brown Long-eared albeit in far lower numbers. There was a single registration of a Barbastelle in October, with this species not recorded during any other month.
- 4.2.12. Bat activity was recorded throughout the application site. However, analysis of the data recorded identified that more activity was recorded in the central part of the application site, associated with the band of woodland.

Activity Surveys – Static Detectors

- 4.2.13. Static detector surveys were conducted on a monthly basis between July and October 2023. The dates of each survey period are outlined in **Table 4.6** below.

Table 4.6: Dates of static detector monitoring periods

Survey	Dates	Number of Static Monitoring Nights
July 2023	26/07/2023 – 31/07/2023	6
August / early September 2023	29/08/2023 – 10/09/2023	13
Early October 2023	02/10/2023 – 11/10/2023	10
October 2023	26/10/2023 – 01/11/2023	7

- 4.2.14. Detectors were deployed at three strategic locations within the application site each month (labelled A, B, C and D on Plan ECO3). The findings of each period of survey are summarised below in **Tables 4.7 – 4.10 inclusive**.
- 4.2.15. All data is illustrated as the average number of registrations per species per night across the survey period.

Table 4.7: Results of July 2023 static detector survey

July				
Species	Static Detector Locations			
	A	B	C	D
Common Pipistrelle	622.83	437.33	No Data Recorded ¹⁰	10.50
Soprano pipistrelle	196.00	3.17		1.00
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	1.50	-		-
Noctule	0.33	0.33		0.83
Serotine	4.00	5.17		0.33
Leisler's bat	1.00	0.83		*
Long-eared	5.17	2.00		*
<i>Myotis</i>	8.67	0.33		0.67

¹⁰ Due to a technical error with the static bat detector, data was not recorded from this detector over this survey period. However, given the findings of other static detectors across the site during the same period, plus the additional transect survey effort, it is not considered that this technical fault would fundamentally change the baseline information available upon which a robust assessment could be completed.

Table 4.8: Results of August / early September 2023 static detector survey

August				
Species	Static Detector Locations			
	A	B	C	D
Common Pipistrelle	516.38	24.85	No Data Recorded ¹⁰	26.85
Soprano pipistrelle	45.31	3.00		5.77
Nathusius' pipistrelle	0.92	-		0.62
Noctule	1.54	-		0.23
Serotine	1.54	0.15		0.31
Leisler's bat	3.08	-		-
Long-eared	3.23	0.15		0.23
Barbastelle	-	0.08		0.08
<i>Myotis</i>	8.92	0.31		3.46

Table 4.9: Results of early October 2023 static detector survey

Early October				
Species	Static Detector Locations			
	A	B	C	D
Common Pipistrelle	70.7	6.7	258.1	177.5
Soprano pipistrelle	7.6	8.9	123	63.9
Nathusius' pipistrelle	0.7	1.1	1.7	0.5
Noctule	0.2	0.8	0.2	0.4
Serotine	0.4	0.3	0.1	0.2
Leisler's bat	0.3		0.2	0.1
Long-eared	1.4	1.2	1.6	0.7
Barbastelle	0.2	0.1	0.2	0.2
<i>Myotis</i>	9	1.7	17	6.4

Table 4.10: Results of October 2023 static detector survey

October				
Species	Static Detector Locations			
	A	B	C	D
Common Pipistrelle	9.71	9.14	32.14	13.86
Soprano pipistrelle	11.14	1.29	17.00	22.71
Nathusius' pipistrelle	0.86	0.29	-	-
Noctule	1.00	1.14	12.43	0.43
Leisler's bat	0.71	0.43	0.57	-
Long-eared	0.14	-	-	-
Barbastelle	0.14	-	-	-
<i>Myotis</i>	2.43	4.14	0.57	0.71

- 4.2.16. Static detector survey work also confirms that the vast majority of activity recorded at the application site pertains to Common Pipistrelle and Soprano Pipistrelle.

- 4.2.17. Other species recorded include Nathusius' Pipistrelle, Noctule, Serotine, Leisler's, Long-eared, Barbastelle and Myotis, however it is noted that registrations of these species were recorded significantly less frequently.
- 4.2.18. The level of activity varied over the months across the application site, although similar to the findings of the walked transect surveys, the greatest level of activity was recorded along the woodland to the south and through the centre of the application site. Therefore, it is likely that these species are utilising these habitats for foraging and commuting across the application site.
- 4.2.19. With respect to more light sensitive bat species, including Barbastelle, *Myotis* species, and Long-eared bats, were noted to be present across the application site utilising the woodland edge habitats for foraging and commuting.

Background Records

- 4.2.20. The desk study undertaken with SxBRC did not record any records of bat species within the application site boundary. Species records returned from within the wider area includes Long-eared Bat species *Plecotus*, Brown Long-eared Bat, Soprano Pipistrelle, Noctule Bat.

4.3. **Badgers**

- 4.3.1. Survey work undertaken in July 2023 and October 2024 did not identify the presence of any Badger setts within or in close proximity to the application site. Furthermore, no other evidence indicating the presence of Badgers (such as latrines, footprints, hairs, or foraging signs) were recorded within the application site.
- 4.3.2. The habitats present within the application site provide superficially suitable foraging and sett-building habitats for Badgers, although in light of the lack of any evidence to indicate activity, it is considered unlikely that the application site is currently of any significant value for this species.

Background Records

- 4.3.3. The desk study undertaken with SxBRC did not return any records of Badgers from within the application site or the wider area.

4.4. **Hazel Dormice**

- 4.4.1. The hedgerows and woodland habitats present within the application site provide superficially suitable opportunities for Hazel Dormice and are also connected to suitable habitats within the wider local area (including areas of woodland to the south). As such, specific survey work to ascertain whether the application site supports this species were undertaken in 2023, in line with the methodology set out in Section 2 above.
- 4.4.2. No evidence of Hazel Dormice in the form of nests, foraging signs or individual animals was recorded during any of the surveys undertaken nests or feeding was noted during any of the surveys undertaken between July and November 2023.

- 4.4.3. As such, it is considered unlikely that the application site supports this species and no further consideration has therefore been afforded to Hazel Dormice within this Ecological Assessment.

Background Records

- 4.4.4. The desk study undertaken with SxBRC did not record any Hazel Dormice within the application. The closest record of Hazel Dormouse returned from a location within 0.1km of the south-east of the application site, to the south of an off-site road

4.5. **Amphibians**

- 4.5.1. As outlined above in Section 2, there are two ponds located within the application site boundary. In addition, as noted above, there are a number of dry ditches present within the application site. However, these were recorded to be dry during the July and August 2023 surveys and are devoid of marginal and aquatic vegetation. As such, they are not considered to provide suitable breeding opportunities for this group
- 4.5.2. Furthermore, a number of offsite waterbodies were identified in the local area from OS mapping and aerial photography. Although it is known that Great Crested Newts can disperse up to 500 metres through suitable terrestrial habitat from their breeding pond, it is widely accepted based on studies¹¹ that they tend to utilise suitable terrestrial habitat within a much closer distance. Activity is usually concentrated within 100 metres of breeding ponds, with key habitat is located within 50 metres (typically described by Natural England as 'core habitat').
- 4.5.3. In light of the distances involved and barriers to movement in the form of existing development and roads, ponds within 250m of the application site were identified.
- 4.5.4. The location of waterbodies within the application site and local area, as identified from survey work, OS mapping and aerial photography, is provided at Plan ECO4.
- 4.5.5. **Table 4.11** below notes the distance of these features from the application site, together with clarification regarding whether access was granted by the relevant landowner and whether the waterbodies were found to be holding water at the time of the survey in August 2023.

¹¹ Cresswell, W. & Whitworth, R. (2004). *An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*. English Nature Research Report Number 576.

Table 4.11: Location of on site and off-site waterbodies and access

Pond Reference	Location relative to application site	Access and Survey
P1	On Site	Dry at time of survey
P2	On Site	Dry at time of survey
P3	c. 14 meters south	Dry at time of survey
P4	c. 8 meters east	No access given
P5	c. 113 meters east	No access given
P6	c. 241 meters south-east	No access given
P7	c. 188 meters north-west	No access given
P8	c. 148 meters north	Surveyed
P9	c. 127 meters north	Surveyed
P10	c. 27 meters north	No access given
P11	c. 197 meters north-east	Surveyed

HSI Assessment

- 4.5.6. The HSI assessments were undertaken of all accessible waterbodies in August 2023. The results of this assessment for all waterbodies surveyed are summarised in **Table 4.12** below, with further detail provided at Appendix 3.

Table 4.12: Summary of HSI Assessment

Pond	HSI Score	Pond Suitability
P1	0.29	Poor
P2	0.27	Poor
P3	0.29	Poor
P8	0.71	Good
P9	0.55	Below Average
P11	0.26	Poor

- 4.5.7. At the time of survey in August 2023, P1, P2 and P3 were recorded to be dry. Furthermore, these waterbodies are located within an area of woodland, are devoid of marginal and aquatic vegetation and are subject to significant overshadowing by the woodland canopy. Therefore, it is concluded that these features have 'poor' suitability and are therefore highly unlikely to support Great Crested Newts.
- 4.5.8. Other off-site waterbodies were identified to have higher potential to support Great Crested Newts on the basis of the HSI assessment, although in each case there are barriers to the movement of newts in the local area in the form of existing roads (including Green Road to the north) and existing residential development.

Eft Survey

- 4.5.9. Ponds P8, P10 and P12 were subject to an eft netting survey in August 2023, in line with the methodology set out in Section 2.
- 4.5.10. No evidence of the presence of Great Crested Newts (either in terms of adults or efts) were noted for any of the ponds.

Background Records

- 4.5.11. The desk study undertaken with SxBRC did not record any amphibians within the application site boundary. The closest record pertains to Common Toad *Bufo bufo* located approximately 45 meters east of the application site.
- 4.5.12. The closest record of Great Crested Newts was returned from a location approximately 0.6km to the north-west of the application site. Other species noted within the local area included Palmate Newt *Lissotriton helveticus*, Smooth Newt *Lissotriton vulgaris*, Common Frog *Rana temporaria*.

4.6. Reptiles

- 4.6.1. The habitats at the application site provide superficially suitable opportunities for common reptile species, although these opportunities are limited by the current management regime in place, limiting the extent of rough and tussocky 'optimal' habitat.
- 4.6.2. As outlined in Section 2 above, specific surveys were undertaken in 2023 to ascertain the presence or absence of common reptiles within the application site. The dates, weather conditions and results of these surveys are summarised in **Table 4.13** below.

Table 4.13: Results of reptile survey

Date	Survey Number	Weather Conditions	Reptiles Recorded
30/08/2023	1	14°C, 50% cloud cover	None
02/10/2023	2	18°C, 50% cloud cover	None
10/10/2023	3	16°C, 80% cloud cover	None
20/10/2023	4	17°C, 20% cloud cover	None
24/10/2023	5	16°C, 60% cloud cover	None
26/10/2023	6	13°C, 70% cloud cover	None
31/10/2023	7	14°C, 20% cloud cover	None

- 4.6.3. No reptiles were encountered within the application site during the course of the surveys undertaken in 2023. The updated walkover survey undertaken in 2024 did not identify any material changes in the habitats present onsite.
- 4.6.4. It is therefore considered that the application site does not support reptile species and as such no further consideration has been afforded to this group within this Ecological Assessment.

Background Records

- 4.6.5. The desk study undertaken with SxBRC did not record any reptiles within the application site. The closest record pertains to Slow-worm *Anguis fragilis*, and Grass Snake *Natrix helvetica* located approximately 0.3km north-west of the application site. Other species within the local area included Adder *Vipera berus*, and Common Lizard *Zootoca vivipara*.

4.7. Birds

- 4.7.1. The woodland, hedgerows, treelines and scrub habitats within the application site provide potential opportunities for nesting birds. However, there is no evidence to suggest that any particularly rare, protected, or notable bird species or assemblage are likely to be reliant upon the application site.

Background Records

- 4.7.2. The desk study undertaken with SxBRC returned a single record within the application site pertaining to Nightingale *Luscinia megarhynchos*. It is unclear where within the application site this record pertains to, although it is anticipated that this is likely to be associated with scrub and woodland habitats based on the habitat preferences of this species.
- 4.7.3. Other species returned within the local area included Red Kite *Milvus milvus*, Mallard *Anas platyrhynchos*, Tufted Duck *Aythya fuligula*, Mute Swan *Cygnus olor*, Swift *Apus apus*, Nightjar *Caprimulgus europaeus*, Lapwing *Vanellus vanellus*, Common Gull *Larus canus*, Snipe *Gallinago gallinago*, Woodcock *Scolopax rusticola*, Stock Dove *Columba oenas*, Turtle Dove *Streptopelia turtur*, Cuckoo *Cuculus canorus*, Hobby *Falco subbuteo*, Kestrel *Falco tinnunculus*, Skylark *Alauda arvensis*, Yellowhammer *Emberiza citrinella*, Hawfinch *Coccothraustes coccothraustes*, Linnet *Linaria cannabina*, Bullfinch *Pyrrhula pyrrhula*, House Martin *Delichon urbicum*, Swallow *Hirundo rustica*, Grey Wagtail *Motacilla cinerea*, Nightingale *Luscinia megarhynchos*, Spotted Flycatcher *Muscicapa striata*, Black Redstart *Phoenicurus ochruros*, Marsh Tit *Poecile palustris*, House Sparrow *Passer domesticus*, Tree Sparrow *Passer montanus*, Wood Warbler *Phylloscopus sibilatrix*, Willow Warbler *Phylloscopus trochilus*, Dunnock *Prunella modularis*, Starling *Sturnus vulgaris*, Mute Swan *Cygnus olor*, Nightjar *Caprimulgus europaeus*, Turtle Dove *Streptopelia turtur*, House Martin *Delichon urbicum*, Nightingale *Luscinia megarhynchos*, Black Redstart *Phoenicurus ochruros*, Marsh Tit *Poecile palustris*, Tree Sparrow *Passer montanus*, Wood Warbler *Phylloscopus sibilatrix*, Willow Warbler *Phylloscopus trochilus*, Dunnock *Prunella modularis*, and Starling *Sturnus vulgaris*.

4.8. **Water Voles and Otters**

- 4.8.1. The application site does not support any suitable habitat that would provide opportunities for Water Vole *Arvicola amphibious* or Otter *Lutra lutra*. Whilst there are watercourses within the application suite, they were recorded to be dry and devoid of aquatic and marginal vegetation, such that they do not provide suitable habitat for these species.
- 4.8.2. As such, it is considered highly unlikely that water vole or otters are present within the application site and no further consideration has been afforded to these species within this Ecological Assessment.

Background Records

- 4.8.3. The desk study undertaken with SxBRC did not record any records of Water Vole or Otter within the application site. Furthermore, no records of Otter were returned from within the wider area. The closest record of Water Vole returned was from a location approximately 1.5km south-west of the application site.

4.9. **Hedgehogs**

- 4.9.1. The habitats within the application site provides superficially suitable opportunities for Hedgehog *Erinaceus europaeus* foraging, dispersal and sheltering.
- 4.9.2. No field signs of Hedgehog were recorded during other ecological survey work undertaken at the application site, although it is expected that this species may utilise the application site on occasion, if present in the local area.

Background Records

- 4.9.3. The desk study undertaken with SxBRC did not record any Hedgehogs within the application. The closest record was returned from a location approximately 0.2km east of the application site.

5. Ecological Evaluation

5.1. The Principles of Site Evaluation

- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe¹². These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current Site of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity, and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history, and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g., a woodland type with comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP).
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated Sites

- 5.2.1. **Statutory sites.** There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the application site boundary.
- 5.2.2. The nearest statutory designated site is Ditchling Common Site of Special Scientific Interest (SSSI), located approximately 0.7km to the west of the application site at its closest point (straight line distance; see Plan ECO1).

¹² Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

- 5.2.3. Ditchling Common SSSI is designated on account of its acid grassland habitats and the flora and butterfly and moth fauna it supports.
- 5.2.4. There are no Habitats sites (including Special Protection Areas [SPAs], Special Areas of Conservation [SACs] or Ramsar sites) located within 10km of the application site.
- 5.2.5. The application site is separated from all statutory designated sites within the local area by areas of existing development, agricultural land, public open space, and infrastructure (including roads). As such, the development proposals will not result in any direct impacts upon statutory designated sites.
- 5.2.6. As such, it is considered that the development proposals at the application site would not result in adverse effects upon any statutory designated sites, either when the proposals are considered alone or in combination with other plans or projects.
- 5.2.7. **Non-statutory sites.** There are no non-statutory designated sites of nature conservation interest located within or immediately adjacent to the application site boundary.
- 5.2.8. The nearest non-statutory designated site is Purchase Wood Local Wildlife Site (LWS), which is located approximately 0.1km to the south-west of the application site boundary at its closest point (straight line distance; see Plan ECO1). The LWS is designated on account of the Ancient Woodland habitat that it supports.
- 5.2.9. St George's Retreat LWS is also located in close proximity to the application site, approximately 0.8km to the south-west at its closest point. There are a limited number of other LWS situated in the wider area as illustrated on Plan ECO1.
- 5.2.10. The application site is separated from all non-statutory designated sites by areas of existing development and infrastructure and open space. This includes the Ancient Woodland present within and extending beyond the application site boundary to the south and south-west.
- 5.2.11. Standard engineering measures and best practice shall be employed throughout the construction phase in order to minimise any potential for adverse effects to occur to off-site habitats, including those present within the LWS, via pathways such as dust deposition, noise, and contaminated run-off. Subject to the adoption of avoidance and mitigation measures, such as sensitive storage of materials, temporary protective fencing and the use of dust suppression methods as required, adverse effects can be avoided. It is considered that the detail of mitigation measures that are required throughout the construction phase and is set out in the Framework Construction Management and Logistics Plan (CMLP), secured via a suitably worded planning condition.
- 5.2.12. With the implementation of standard engineering protocols and best practice throughout the construction period, it is considered that any potential effects which could arise, such as contaminated run-off, dust deposition and noise disturbance, would be fully avoided.
- 5.2.13. The development proposals will include the provision of extensive areas of on-site open space, which will be designed to provide ideal opportunities for informal recreation. Moreover, a network of pathways and routes will be provided, which will connect with the existing Public Rights of Way (PRoW) crossing the site and will offer

both new residents and those present in the local area with new and indeed improved opportunities for walks on-the-doorstep. These measures, which can be supported and supplemented by other more formal recreational features such as play equipment, benches and information boards, will ensure that the development proposals do not lead to an increase in recreational pressure on nearby sensitive sites, including LWS.

- 5.2.14. As such, it is considered that the development proposals at the application site would not result in adverse effects upon any non-statutory designated sites, either during the construction or operational phases of the development.
- 5.2.15. **Ancient Woodland.** As outlined above, the application site incorporates an area of Ancient Woodland habitat in the south, which extends further to the south beyond the application site boundary. Additional areas of Ancient Woodland are also present in the local area, as illustrated on Plan ECO1.
- 5.2.16. At present, there are a number of public rights of way and informal pedestrian routes crossing the site (including permissive footpaths). These routes provide multiple points of access for existing residents leading into the woodland, including both public rights of way and additional informal access points. A series of informal tracks are also noted within the woodland itself. The boundary of the woodland is relatively tightly defined by a strong vegetated edge. It is noted that the area of Ancient Woodland in the southern part of the site is located at the top of moderately sloping ground, which falls towards the north.
- 5.2.17. In light of the emerging development proposals for the site, careful consideration has been afforded to the interaction between the new proposed development and the Ancient Woodland. Consideration has been afforded to potential pathways for an effect to ensure that adverse effects are avoided and moreover to seek to deliver enhancements compared to the existing situation. Moreover, regard has been afforded both to potential direct effects, such as damage and destruction to trees and their roots, understorey and associated soil, increasing levels of air and light pollution, noise and vibration, and changing drainage or the water table, as well as potential indirect effects, such as those associated with damage and disturbance from recreational pressure and detrimental effects to working connections between woodlands.
- 5.2.18. As illustrated on the Development Framework Plan produced by CSa Environmental, the emerging development proposals entail the provision of a buffer of at least 30 metres in width between any areas of proposed built form to the boundary of the Ancient Woodland. Moreover, the scale of the buffer zone is significantly wider in some areas. Mindful that Standing Advice issued by Natural England refers to the provision of a buffer zone of a minimum of 15 metres in width, the proposals therefore entail the provision of a zone at least double this size. The provision of a zone of this scale will also ensure that no harm arises to the individual trees associated with the woodland (in terms of root protection zones, for instance).
- 5.2.19. Moreover, as indicated on the Development Framework Plan, a broad band of new woodland, tree, thicket and scrub planting is proposed to be delivered immediately adjacent to the Ancient Woodland boundary. In effect, this would deliver an enhanced woodland edge habitat which has improved structure and diversity compared to the existing situation, providing benefits both to the existing woodland

(mitigating for adverse effects) and also providing improved opportunities for faunal species which utilise such habitats (see below). It is anticipated that these areas would be subject to planting with a range of native species of local provenance, including a considerable proportion of thorny species such as Hawthorn, Blackthorn and Rose.

- 5.2.20. Beyond this, the balance of the buffer zone to the north would comprise complementary natural and semi-natural habitats, such as wildflower grassland, scrub and trees. The intention would be to provide a broad 'ecotone' to the Ancient Woodland, grading from woodland through new native trees, thicket and scrub planting into grassland. Through the use of suitable wildflower grassland mixtures and the adoption of appropriate long-term management, it is considered that this would further assist in terms of providing greater resilience and reducing the potential for adverse effects to arise to the existing woodland from new development.
- 5.2.21. Noting that the Ancient Woodland is located at the top of a slope, there is no potential for hydrological links leading from new residential development into or towards the woodland which could otherwise represent a potential pathway for adverse effects (as there would be no potential for surface water or runoff to drain towards the woodland). Moreover, under the emerging proposals, there are no Sustainable Urban Drainage Systems (SuDS) or other proposed habitats situated within the buffer zone.
- 5.2.22. In order to mitigate for adverse effects arising from an increase in recreational pressure, the provision of a broad band of native tree, thicket and scrub planting in the southern part of the buffer zone (adjacent to the existing woodland edge), including a significant proportion of thorny species, in addition to appropriate fencing will serve to discourage informal access into the woodland via uncontrolled points of access.
- 5.2.23. As outlined on the Development Framework Plan, the emerging proposals would provide extensive new areas of open space within the site, including open grassland, scrub and trees. The eastern part of the site, which currently comprises arable land with no permissive footpaths or informal access, would be subject to extensive new provision of accessible habitat, resulting in significant new opportunities for informal recreation, both for new and indeed existing residents within Wivelsfield and Wivelsfield Green. This area will be connected to a series of circular routes passing across and through the western part of the site, providing local residents with continued and indeed improved opportunities for informal recreation which are 'on the doorstep' of new dwellings.
- 5.2.24. It would be possible for new (and existing) residents to undertake a range of walks through green infrastructure corridors within the site, which incorporate existing habitats such as hedgerows, treelines and watercourses, and which are linked to existing formal and permissive routes. A wide range of opportunities would therefore be available, from short circular routes (used for regular dog walking, for instance), to longer circular routes (used more occasionally).
- 5.2.25. The provision of the two elements above – specifically, measures to discourage access into the Ancient Woodland via informal pathways and routes other than existing Public Rights of Way, and the provision of extensive, attractive and

connected open spaces within the development – would serve to mitigate for any net increase in recreational pressure on the Ancient Woodland (and in the same manner non-statutory designated sites in the local area).

- 5.2.26. Further measures will also be provided as required, such as the provision of interpretation boards within open spaces (showing the circular routes and open space available) and the delivery of waymarked trails. Whilst the detail of any such element would come forward at the detailed Reserved Matters stage (and can be confirmed via suitably worded planning conditions), this would serve to provide further reassurance that the proposed development would not be likely to result in any significant effects.
- 5.2.27. It is therefore considered that the proposed development would avoid harm to Ancient Woodland habitats and moreover support and safeguard the value of this valuable ecological resource in the future.

Habitats

- 5.2.28. As illustrated on Plan ECO2 and described above, the application site primarily comprises grassland fields of other neutral grassland in the west, and intensively managed arable land in the east.
- 5.2.29. The grassland fields support a limited complement of botanical species, all of which are common and widespread in both a national and local context. As a result, the ecological value of this habitat is considered to be low, both in terms of its inherent diversity and also the opportunities that it provides for protected and notable faunal species. The arable field to the north-east is subject to intensive agricultural management and is not therefore of any ecological value at the present time.
- 5.2.30. The habitats of relatively greater ecological value in the context of the application site include areas of woodland (notably the Ancient Woodland in the south), in addition to individual trees, existing hedgerows and scrub. These habitats comprise a range of native species and also provide potential opportunities for faunal groups such as bats and birds.
- 5.2.31. As illustrated on the Development Framework Plan (see Appendix 4), the vast majority of woodland and hedgerow habitats will be fully retained under the proposed development, including all areas of Ancient Woodland in the south (see above). Measures will be undertaken to protect retained woodland and hedgerow habitats throughout the construction phase, including the use of temporary protective fencing (Heras or equivalent), sensitive storage of materials away from retained habitats and measures to mitigate for potential damage from dust and surface water run-off.
- 5.2.32. Only minor losses are proposed to facilitate access, in the form of a narrow break in Woodland W2 to facilitate the road connection and minor losses to hedgerows to facilitate access. Detailed consideration has been afforded to the locations of these breaks, to ensure that losses to trees are minimised and that impacts to ecological, arboricultural and landscape features are kept to a minimum.
- 5.2.33. Detailed assessment will be undertaken in due course to inform the design and location of losses to woodland and hedgerows to facilitate access at the Reserved Matters stage. It is envisaged that measures such as narrowing of roads and sensitive

construction methodology will be required to avoid and minimise for potential harm to habitats and associated faunal species.

- 5.2.34. However, in light of the wider proposals – which include the provision of extensive areas of new species-rich native woodland, thicket, scrub and hedgerow planting across the application site, it is evident that there is scope for the delivery of significant enhancements compared to the existing situation, both in terms of the quantum of habitats present within the application site and the diversity that they support. The instigation of long-term management with a focus on maximising biodiversity, secured by a suitably worded planning condition, will further ensure that benefits are achieved in the future.
- 5.2.35. Whilst areas of existing grassland in the central and western parts of the application site will be lost, new extensive areas of species-rich wildflower grassland will be created within areas of open space to the east, replacing what is currently arable land which is of limited ecological value. With ideal management it is considered that this will result in benefits both in terms of this habitat as well as the opportunities that it provides for faunal species.
- 5.2.36. The existing ponds associated with the woodland in the south of the application site will be fully retained and buffered from areas of built form. Furthermore, the provision of the new SuDS features throughout the new development would provide new wetland habitats. Whilst the design and function of these area will necessarily need to be focused upon their primary function (for drainage), through the use of an appropriate seed mixtures, design and planting, it is considered that new opportunities for faunal species and groups such as invertebrates, birds, bats, reptiles and amphibians may be provided.
- 5.2.37. As noted above, it is envisaged that further detail in terms of the enhancement of retained habitats, the creation of new habitats and the long-term management of all retained and created habitats, with key objectives and targets and management prescriptions which will be delivered to meet these objectives, will be outlined within a Habitat Management and Monitoring Plan (HMMP), which may be condition under a Section 106 agreement.
- 5.2.38. Through the use of native seed mixtures and native / wildlife-beneficial species as part of the planting proposals, together with the implementation of an appropriate management regime which seeks to maximise the ecological value of retained and new habitats, it is considered that biodiversity benefits will be achieved compared to the existing situation.
- 5.2.39. In conclusion, whilst the development proposals will necessarily result in losses to some of the existing habitats, it is considered that the retention and enhancement of the existing hedgerows, treelines and woodland, and the provision of new species-rich habitats within the application site will mitigate for habitat losses and deliver enhancements compared to the existing situation at the application site.
- 5.2.40. In line with local planning policy and guidance, an initial assessment in relation to Biodiversity Net Gain (BNG) has been undertaken. The findings of the habitat survey work were used to inform the BNG assessment exercise (for the baseline calculations), both in terms of the habitat types present and also their existing condition, together with an appraisal of the post-development situation in light of the

Illustrative Landscape Masterplan, which reasonable assumptions made with regard to the delivery and ongoing management of habitats.

- 5.2.41. Full detail in relation to these calculations is included in the submitted Biodiversity Net Gain Report.

5.3. Faunal Evaluation

Bats

- 5.3.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"), as amended. These include provisions making it an offence:
- To deliberately to kill, injure or take (capture) bats;
 - To deliberately to disturb bats in such a way as to:
 - be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by bats; or
 - To intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.
- 5.3.2. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.3. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.4. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.5. Licences can usually only be granted if the development is in receipt of full planning permission, and it is considered that:
- The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
 - There is no satisfactory alternative; and
 - The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 5.3.6. **Application Site Evaluation.** Preliminary ground-level assessment identified a number of trees within the application site with potential to support roosting bats, including PRF-I and PRF-M trees.

- 5.3.7. Bat activity survey work undertaken at the application site identified that a range of bats currently utilise the habitats present for foraging and commuting. Whilst the majority of activity recorded pertains to Pipistrelle species, a range of more notable and light sensitive species were also recorded, including Barbastelle, *Myotis* species, and Long-eared bats.
- 5.3.8. **Avoidance, Mitigation and Enhancements.** Under the development proposals, all trees identified to have potential to support roosting bats will be retained within areas of open space and green infrastructure, with none anticipated to be lost to facilitate the development. As such, the existing opportunities that they provide for roosting bats will continue post-development.
- 5.3.9. However, consideration has been afforded to works that could be required in the future, should arboricultural management of these features be required (e.g. during long-term management).
- 5.3.10. If any future management works are required in due course to trees identified to have PRF-I bat roosting potential, these works can be undertaken in line with a suitable soft-fell methodology, which would involve felling the tree / removal of limbs in a careful manner (i.e., lowering the trunk / limb to the ground in a controlled manner, rather than allowing it to fall naturally). In the unlikely event that bats are encountered during the exercise, all works shall cease, and advice sought from a suitably qualified ecologist, as a licence would be required from Natural England.
- 5.3.11. With regard to trees identified as having PRF-M bat roosting potential, further survey work in the form of aerial inspection or emergence surveys would be required if future management works are necessary, undertaken by a suitably qualified ecologist with regard to best practice guidance.
- 5.3.12. As outlined on the Development Framework plan (Appendix 4), the proposals will retain the vast majority of existing woodlands, hedgerows, treelines and other habitats associated with the boundaries of fields which have been identified to be utilised by foraging and commuting bats. This includes the retention and additional planting to the south of the application site of a minimum 30-meter buffer from the woodland edge where the majority of activity was recorded. Whilst the proposals entail losses to existing grassland, this habitat provides limited opportunities for this group.
- 5.3.13. The provision of new species-rich habitats within the application site, including wildflower grassland, hedgerows, wetland habitats, woodland, thickets, native scrub, and trees within green infrastructure corridors will provide an enhancement in the diversity of habitats present within the application site compared to the existing situation, both in terms of structure and botanical diversity. This will improve invertebrate prey density and abundance, and in turn deliver better foraging habitats than currently present within the application site.
- 5.3.14. Given that survey work has identified that light-sensitive bat species utilise the application site for foraging and commuting, a sensitive lighting strategy will be required to ensure that dark corridors are maintained. Whilst the detail of this strategy can be secured via a suitably worded planning condition, it is considered that this can be readily delivered at this site along the green corridors across the application site.

- 5.3.15. It is recommended that a detailed lighting strategy is developed prior to commencement of development by a suitably qualified and experienced lighting engineer, in conjunction with an ecologist. Wherever possible, this strategy should adopt the following principles, particularly where lighting is required in close proximity to any new or retained semi-natural habitats and green corridors:
- Minimising the installation of new lighting to ensure that it only pertains to areas where it is required, and that dark corridors are identified and maintained;
 - The use of LED luminaires, which have a sharp cut-off, lower intensity, good colour rendition and dimming capability, mounted on the horizontal to avoid any upward tilt; and
 - Restricting lighting columns to the lowest acceptable height and the use of measures such as hoods, cowls, and louvres, to minimise light spill and to direct lighting only to where it is required, and limiting the number of lighting columns to the minimum required to achieve the requisite safe lighting level.
- 5.3.16. Particular consideration is likely to be required for locations where the proposals will result in breaks to existing linear features such as woodland and hedgerows, to minimise the potential for light spill into adjoining habitats.
- 5.3.17. Subject to the adoption of measures such as those noted above, it is considered that existing dark corridors and key navigational routes for foraging and commuting bats at the application site can be retained post-development.
- 5.3.18. As an enhancement for roosting bats in the local area, new bat boxes will be provided on suitably mature retained trees at the application site. It is recommended that Schwegler 1FF or 3FF (or similar equivalent) boxes are provided on the basis of their suitability for the species recorded during survey work and that they do not require regular maintenance.
- 5.3.19. Boxes should be installed at a suitable height (at least 4 metres above ground where safe installation is possible) to prevent potential disturbance from cats and vandals, and in locations away from any artificial light sources.

Badgers

- 5.3.20. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the south-west.
- 5.3.21. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage, or obstruction of a Badger sett an offence. A sett is defined as "any structure or place which displays signs indicating current use by a Badger". 'Current use' is usually defined as any use within the preceding 12 months, although there is a degree of professional judgement.
- 5.3.22. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting 'cruel ill treatment' of a Badger.

- 5.3.23. Previous guidelines issued by Natural England on the types of activity that it considers should be licensed within certain distances of sett entrances. They stated that works that may require a licence include using heavy machinery within 30m of any entrance to an active sett, using lighter machinery within 20m, and light work such as hand digging within 10m. However, interim guidance issued in September 2007 specifically states that:
- 5.3.24. "It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no Badger is disturbed and the sett is not damaged or obstructed."
- 5.3.25. More recent guidance produced in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts. However, the guidance continues by stating that any activity that will, or is likely to, cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.
- 5.3.26. In addition, this latest guidance no longer refers to any 30m/20m/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m, so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires / chemicals within 20m of a sett should specifically be avoided.
- 5.3.27. This guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment, it may be somewhat redundant to have a 30m-exclusion zone to the north.
- 5.3.28. **Application Site Evaluation, Avoidance, Mitigation and Enhancements.** As outlined above, no evidence of Badger activity was recorded during the survey work undertaken in July 2023 or October 2024. However, the habitats present within the site offer some suitable sett-building and foraging opportunities for this species.
- 5.3.29. Given the dynamic nature of this species, an updated check survey in respect of Badgers prior to commencement of any works at the application site, in order to confirm that there has been no material change to the existing baseline. In the unlikely event that a sett is encountered, advice will be sought from a suitably qualified and experienced ecologist with regard to mitigation and whether a licence would be required from Natural England.
- 5.3.30. In any event, the development proposals will retain significant areas of suitable foraging and sett-building habitat for this species and are anticipated to deliver benefits in terms of new habitats suitable for sett building. Furthermore, the enhancement of existing habitats and provision of new native planting which utilised fruiting and berry-bearing species as part of the planting mixture will provide enhanced foraging opportunities for Badgers within the application site post-development, should they be present in the local area.

Amphibians

- 5.3.31. **Legislation.** Great Crested Newts (GCN) are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as Amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"), as amended. These include provisions making it an offence:
- Deliberately to kill, injure or take (capture) GCN;
 - Deliberately to disturb GCN in such a way as to:-
 - be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by GCN;
 - Intentionally or recklessly to obstruct access to any place used by GCN for shelter or protection.
- 5.3.32. European Protected Species licenses are available from Natural England in certain circumstances, and permit activities which would otherwise be considered an offence.
- 5.3.33. **Application Site Evaluation.** As outlined in Section 4, HSI assessments of ponds P1 – P3 found that these waterbodies have 'poor' suitability to support Great Crested Newts, with these features recorded to be dry in Summer 2023. As a result, these waterbodies are considered unlikely to provide any viable breeding opportunities for Great Crested Newts.
- 5.3.34. Furthermore, no evidence of presence was recorded during the eft netting surveys of either on-site ponds or off-site ponds where access was granted in August 2023.
- 5.3.35. The habitats present within the application site boundary provide suitable habitat for Great Crested Newts in their terrestrial phase, although the intensively managed arable land in the eastern part of the application site provides negligible opportunities. Moreover, the management of grassland in the western part of the site results in sub-optimal habitat for this species.
- 5.3.36. The application site is also separated from off-site ponds to the north by Green Road and existing residential development, including rear gardens. These pose a partial barrier to the movement of newts in the local area, serving to reduce the likelihood of Great Crested Newts utilising the application site during their terrestrial phase even if they were breeding in off-site ponds.
- 5.3.37. **Avoidance, Mitigation and Enhancement.** Both on-site waterbodies (P1 and P2) are to be retained under the development proposals and are significantly buffered from areas of built form by the Ancient Woodland buffer extending towards the North (as noted above). As such, notwithstanding the findings of the HSI assessment, any existing (sub-optimal) opportunities that they provide for amphibians will remain unaffected by the proposed development.
- 5.3.38. The proposed development will not result in any losses to off-site ponds in the local area. As such, notwithstanding that there was no evidence obtained to confirm presence of Great Crested Newts (where access was permitted), it is axiomatic that

the proposed development will not lead to any losses to aquatic habitats which could be used by this species for breeding.

- 5.3.39. Off-site ponds P7, P8 and P9 are separated from the application site by Green Road and existing development. Moreover, it appears from aerial imagery that there are suitable terrestrial habitats for this species to the north. As such, even in the event that they support breeding Great Crested Newts, it is considered highly unlikely that they would utilise habitats within the application site boundary during their terrestrial phase.
- 5.3.40. Off-site pond P10 and P4 are separated from the application site by Green Road and Hundred Acre Lane respectively but are situated closer to the application site. However, as illustrated on the Development Framework Plan (Appendix 4), the proposals for the eastern part of the application site entail the delivery of extensive areas of species-rich habitats, such as wildflower grassland and scrub, in an area that currently comprises intensively managed arable land. As such, if Great Crested Newts were to be breeding within these off-site waterbodies, the proposals would be likely to deliver improved terrestrial opportunities compared to the existing situation.
- 5.3.41. The development proposals also include the provision of new wetland habitats in the form of SuDS features. These will provide new opportunities for faunal species, including amphibians should they be present in the local areas. In conjunction with the implementation of suitable long-term management, opportunities for faunal species will be significantly enhanced in the long-term.
- 5.3.42. On this basis, it is considered very unlikely that Great Crested Newts or their habitats (including both aquatic and terrestrial) would be adversely affected by the proposed development. As such, there would be no requirement for a licence to facilitate the proposed development.

Birds

- 5.3.43. **Legislation.** Section 1 of the Wildlife and Countryside Act 1981 is concerned with the protection of wild birds, whilst Schedule 1 lists species which are protected by special penalties.
- 5.3.44. **Application Site Evaluation.** The application site offers some opportunities for nesting and foraging birds in form of woodland, scrub, hedgerows and trees. Under the development proposals, the majority of these habitats are to be retained, although some minor losses would be required to facilitate access.
- 5.3.45. **Avoidance, Mitigation and Enhancements.** As all species of birds receive general protection whilst nesting, it is recommended that the clearance of any suitable nesting habitats should be undertaken outside of the main bird breeding season (typically considered to March to August inclusive).
- 5.3.46. Should this not be possible, potential nesting habitat should be subject to a nesting bird check by an experienced ecologist, immediately prior to its removal. Should any nesting birds be identified, then the nest should be fully safeguarded in situ and subject to an appropriate disturbance buffer (as advised by the ecologist), and only removed once it has been confirmed all fledglings have left the nest and it is no longer active.

- 5.3.47. It is recommended that new planting within the application site utilises seed and berry-bearing species wherever possible, in order to provide enhanced foraging opportunities for birds (once established). The provision of extensive areas of new species-rich habitats will deliver enhanced opportunities for both foraging and nesting birds compared with the existing situation.
- 5.3.48. In order to additional nesting opportunities, new bird nesting boxes will be provided within the application site. A range of box types shall be installed, including hole-fronted and open-fronted boxes, which will serve to provide opportunities for a range of species. All nest boxes should be situated out of direct sunlight and out of reach of predators, particularly cats.

Hedgehogs

- 5.3.49. **Legislation.** Hedgehog is listed as a Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006. The NERC Act places responsibility upon public bodies to have regard for the conservation of biodiversity in England.
- 5.3.50. **Application Site Evaluation.** As outlined above, habitats present within the application site provide opportunities for this species, notably woodland, scrub and hedgerows. The majority of these habitats are to be retained with some minor losses.
- 5.3.51. **Avoidance, Mitigation and Enhancement.** During construction, any trenches or deep pits associated with construction that are to be left open overnight will be provided with a means of escape in case a Hedgehog (or indeed other small mammal) enters.
- 5.3.52. The provision of new species-rich grassland habitats, tree, hedgerow, and native scrub planting within the proposed development, in addition to the enhancement of retained woodland and hedgerows through the implementation of suitable long-term management will provide further opportunities and enhancements for these species.
- 5.3.53. Furthermore, the garden fences of the new properties will be provided with a 'Hedgehog Gateway,' a 13cm x13cm section of fence cut out at the base, to facilitate dispersal for Hedgehogs and other small animals. This will enhance the permeability of the new development for wildlife.

6. Planning Policy Context

- 6.1. The planning policy framework that relates to nature conservation in Wivelsfield Green issued at two main administrative levels: nationally through the National Planning Policy framework (NPPF); and locally through the policies of the Lewes District Local Plan and other relevant documents. The proposed development will be judged in relation to the policies contained within these documents.

6.2. National Policy

National Planning Policy Framework

- 6.2.1. The National Planning Policy Framework (NPPF) sets out the Government's requirements for the planning system and was adopted on 27th March 2012 and subsequently revised on the 24 July 2018, 19 February 2019, 20 July 2021, 5 September 2023, 19 December 2023, 12 December 2024.
- 6.2.2. The key element of the NPPF is that there should be "a presumption in favour of sustainable development" (paragraphs 10 to 11).
- 6.2.3. The revised NPPF is comparable to previous versions (which it replaces), including reference to minimising impacts on biodiversity and provision of net gains to biodiversity where possible and ensuring that Local Authorities place appropriate weight to statutory and non-statutory nature conservation designations, protected species, and biodiversity.
- 6.2.4. The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of Green Infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.2.5. The NPPF also sets out a number of principles which Local Authorities should apply, including:
- encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or, as a last resort, compensated for; and
 - the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.
- 6.2.6. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist, and benefits can, in certain circumstances, be obtained.

6.3. Local Policy

Lewes District Local Plan

- 6.3.1. The Lewes District Local Plan was adopted in May 2016 and provides the planning framework guiding local planning decisions up until 2030. The local plan is a joint

strategy with South Downs National Park Authority and is split into two parts; the joint core strategy 2010 – 2030, and Site Allocations and Development Management Policies.

- 6.3.2. The following policies within the Lewes District Local Plan 2030 relate to ecology and nature conservation.
- 6.3.3. **Core Policy 8 – Green Infrastructure.** This policy states that the local planning authority will promote a connected network of multifunctional green infrastructure by protecting and enhancing the quantity, quality and accessibility of open spaces throughout the district.
- 6.3.4. **Core Policy 10 – Natural Environment and Landscape Character.** This policy states that the natural environment of the district, including landscape assets, biodiversity, geodiversity, priority habitats and species and statutory and locally designated sites, will be conserved and enhanced, with the highest priority given to the first purpose of the South Downs National Park. The policy also notes that any development with one or more dwellings within 7km of Ashdown Forest (SAC and SPA) will need to provide SANGs and SAMMS.
- 6.3.5. **Policy DM24 – Protection of Biodiversity and Geodiversity.** This policy states that developments which would likely adversely affect designated sites and or important habitats will only be permitted where adverse likely significant effects can be avoided and or mitigated against. The policy also notes that a net gain in biodiversity will be achieved.

Wivelsfield Parish Neighbourhood Plan (2015-2030)

- 6.3.6. The Wivelsfield Parish Neighbourhood Plan outlines local policies that focus on the preservation of the rural character of the parish, enhancement of green spaces, and ensuring that any new developments are sustainable and ecologically sensitive. The following policies relate to ecology and nature conservation.
- 6.3.7. **Policy 6: Green Infrastructure & Biodiversity.** Where appropriate, development proposals must contribute to and enhance the natural environment by ensuring the protection of local assets and the provision of additional habitat resources for wildlife and green spaces for the community. This should include enhancing ecological networks and linking habitats where possible.

Ditchling, Streat and Westmeston Neighbourhood development Plan (2017-2032)

- 6.3.8. **CONS 2 Set standards for design of new development.** natural and local landscape features are protected and sensitively incorporated. Planting schemes should incorporate appropriate native species avoiding invasive non-native planting.
- 6.3.9. **CONS 9: Protect and enhance habitats and biodiversity.** Habitats and biodiversity will be protected and where possible enhanced, in particular regard is given to the core elements of local ecological networks. They should be designed to retain ancient trees or trees of arboricultural and amenity value.

6.4. Discussion

- 6.4.1. Recommendations have been put forward in this report that would fully safeguard the existing ecological interest of the application site, and wherever possible, measures to enhance ecological and biodiversity value have been set out. Based on surveys undertaken and assessment, the presence and potential presence of protected species has been given due regard and measures to enhance the application site for such species have been put forward.
- 6.4.2. In conclusion, implementation of the measures set out in this report enable emerging development proposals to fully accord with planning policy for ecology and nature conservation at all administrative levels.

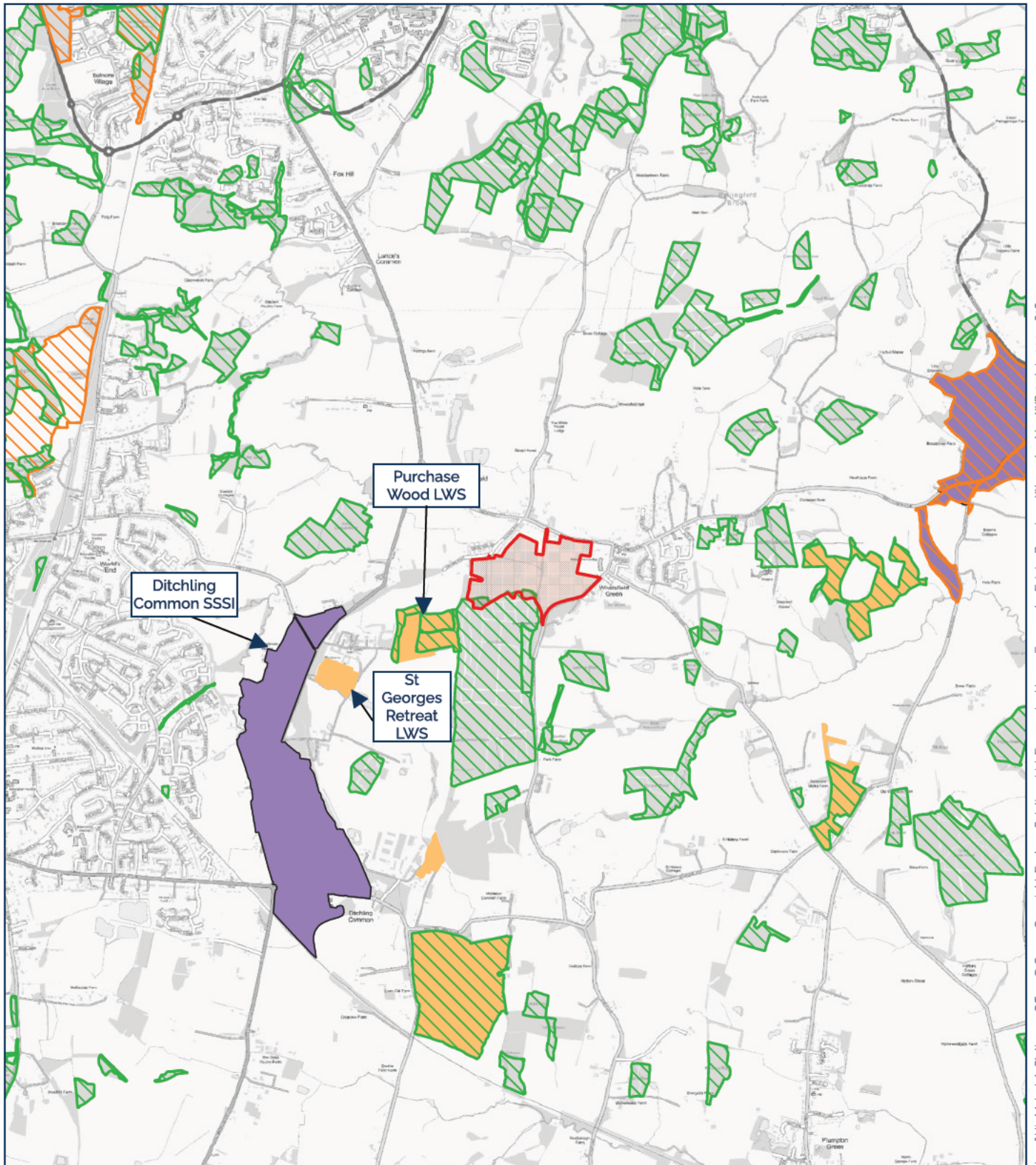
7. Summary and Conclusions

- 7.1. Ecology Solutions Limited was commissioned by Taylor Wimpey Strategic Land in April 2023 to undertake an ecological assessment of Land South of Green Road, Wivelsfield Green. The proposals are for new residential development with associated infrastructure and open space.
- 7.2. There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the application site. Given the separation of the application site from any statutory designated sites, it is considered that the proposed development is unlikely to have any significant impacts upon statutory designated sites, during either the construction or operation phase.
- 7.3. Moreover, there are no non-statutory designated sites of nature conservation interest located within or immediately adjacent to the application site. Subject to the implementation of standard engineering protocols and best practice throughout the construction period, it is considered that the proposed development is unlikely to have any significant impacts on any designated sites within the local area, during either the construction or operational phase. Measures are also embedded into the proposals to ensure that Ancient Woodland is protected from potential harm, both during the construction and operational phases of the development, with the implementation of a significant buffer zone from the woodland edge.
- 7.4. The application site primarily supports grassland fields in the west and intensively managed arable land in the east, which are bounded by hedgerows and treelines. Where losses are required to habitats which are of relatively greater interest, such as small areas of woodland, hedgerows and trees, these will be offset through the provision of extensive areas of new species-rich habitats and planting within areas of open space and provide an opportunity to deliver enhancements compared to the existing situation.
- 7.5. A number of protected species surveys have been undertaken, including surveys in respect of bats, Badgers, reptiles, Hazel Dormice and Great Crested Newts. Appropriate mitigation measures have been proposed, including measures to safeguard and deliver enhancements for bats, nesting birds, Badgers and Hedgehogs. Subject to the implementation of avoidance, mitigation and enhancement measures as outlined in this report, adverse effects to protected species will be avoided and opportunities for key faunal groups will be retained and moreover enhanced post-development.
- 7.6. In conclusion, the nature and design of the proposed development and the incorporation of the recommendations put forward in this report will ensure that there will be no adverse effects to designated sites, habitats of ecological significance or protected species. Furthermore, the proposals will deliver enhancements in biodiversity compared to the existing baseline situation.

Plans

PLAN ECO1

Application Site Location and Ecological
Designations



Key:

- APPLICATION SITE LOCATION
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- LOCAL NATURE RESERVE (LNR)
- ANCIENT WOODLAND
- LOCAL WILDLIFE SITE (LWS)



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11375: Land South of Green Road, Wivelsfield
Green

Plan ECO1: Application Site Location
and Ecological Designations

Rev: A
OCT 2024

PLAN ECO₂

Ecological Features



KEY:

- Application Site Boundary
- Arable
- Broadleaved Woodland
- Other Neutral Grassland
- Mixed Scrub
- Bare Ground
- Developed Land
- Pond
- Hedgerow
- Hedgerow with Trees Associated with Ditch
- Hedgerow with Trees
- Ornamental Hedgerow
- Individual Trees
- Ancient Woodland



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**11375: Land South of Green Road,
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Plan ECO2: Ecological Features

Rev: A
OCT 24

PLAN ECO₃

Protected Species



KEY:

-  Application Site Boundary
-  Trees with PRF-I Bat Roost Potential
-  Trees with PRF-M Bat Roost Potential
-  Bat Activity - Transect 1
-  Bat Activity - Transect 2
-  Bat Static Detectors Location



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**11375: Land South of Green Road,
Wivelsfield Green**

Plan ECO3: Protected Species

Rev: A
OCT 24

PLAN ECO4

Pond Location Plan



KEY:

-  Application Site Boundary
-  Pond



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**11375: Land South of Green Road,
Wivelsfield Green**

Plan ECO4: Pond Location Plan

Rev: A
OCT 24

Appendices

APPENDIX 1

Information obtained from SxBRC
(Summary Report)

Ecological Data Search SxBRC/23/077 - Summary Report

An ecological data search was carried out for land at Wivelsfield Green on behalf of Caroline Folwell (Ecological Solutions) on 11/05/2023.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	2km
Protected, designated and invasive species	Yes	2km

Summary of results

Sites and habitats

Statutory sites	1 SSSI / 1 Country Park
Non-statutory sites	5 LWS / 1 Designated Road Verge
Section 41 habitats	2 habitats
Ancient and/or ghyll woodland	Present

Protected and designated species

International designations	23 species	197 records
National designations	107 species	3,929 records
Other designations	249 species	8,293 records
Total	264 species	8,520 records
Invasive non-native	29 species	330 records

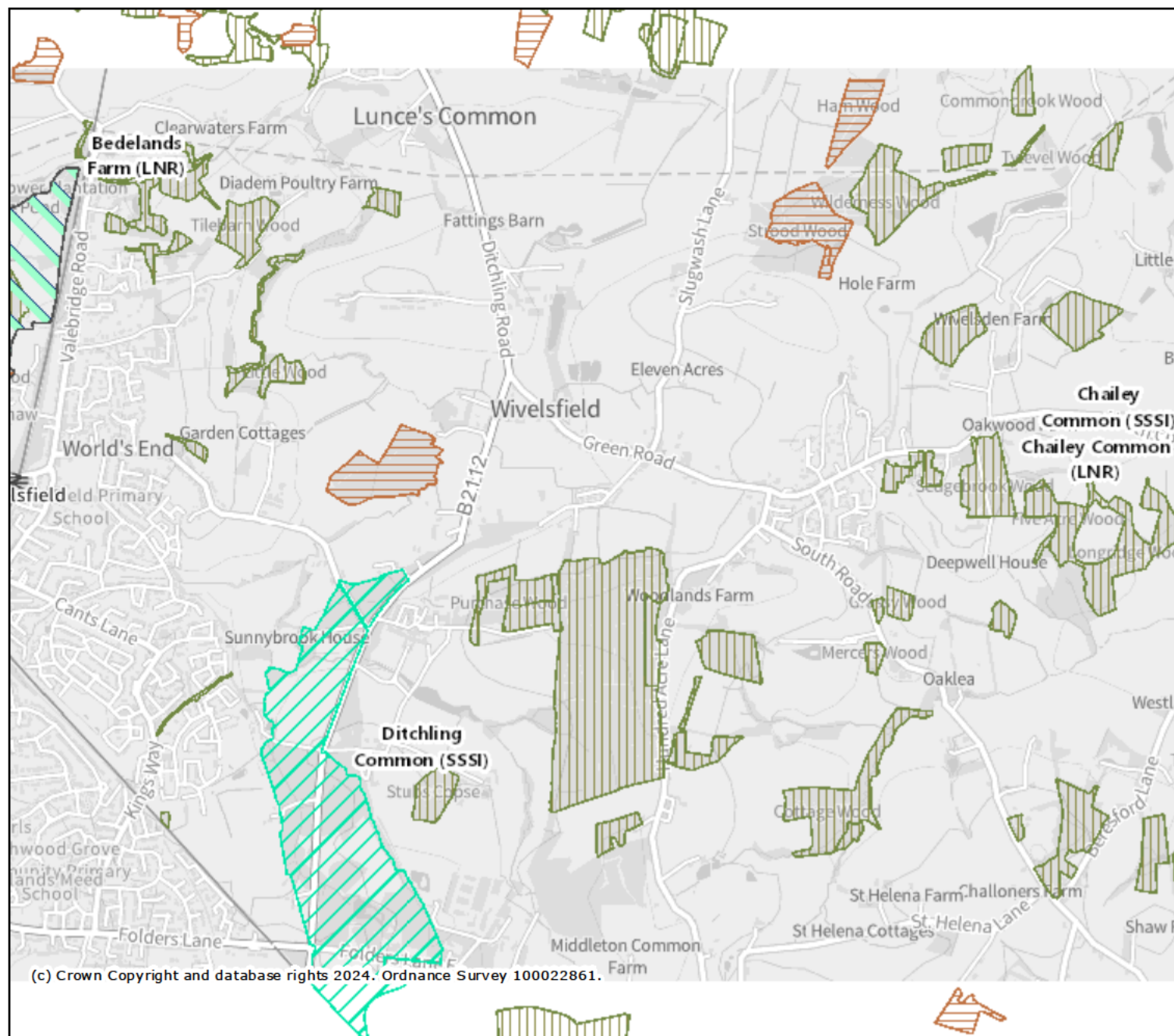
The report is compiled using data held by Sussex Biodiversity Record Centre (SxBRC) at the time of the request. SxBRC does not hold comprehensive species data for all areas. Even where data are held, a lack of records for a species in a defined geographical area does not necessarily mean that the species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

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

The data search report is valid until 11/05/2024 for the site named above.

APPENDIX 2

Information obtained from MAGIC



Legend

-  Local Nature Reserves (England)
-  National Nature Reserves (England)
-  Ramsar Sites (England)
-  Proposed Ramsar Sites (England)
-  Sites of Special Scientific Interest (England)
-  Special Areas of Conservation (England)
-  Possible Special Areas of Conservation (England)
-  Special Protection Areas (England)
-  Potential Special Protection Areas (England)

Ancient Woodland (England)

-  Ancient and Semi-Natural Woodland
-  Ancient Replanted Woodland

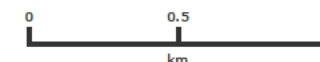
Projection = OSGB36

xmin = 530300

ymin = 117900

xmax = 538800

ymax = 121800



Map produced by MAGIC on 23 January, 2024.
Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

APPENDIX 3

HSI Assessment for Waterbodies

ARGUK GCN HSI Calculator

Pond Name Grid Ref		P1 DRY	P2 DRY	P3 DRY	P8	P9	P11
SI No	SI Description	SI Value	SI Value	SI Value	SI Value	SI Value	SI Value
1	Geographic location	1	1	1	1	1	1
2	Pond area	0.2	0.1	0.2	0.8	0.1	0.1
3	Pond permanence	0.1	0.1	0.1	0.9	0.9	0.9
4	Water quality	0.01	0.01	0.01	0.67	0.67	0.67
5	Shade	0.2	0.2	0.2	1	0.3	1
6	Water fowl effect	1	1	1	0.67	0.67	0.01
7	Fish presence	1	1	1	1	1	0.67
8	Pond Density	1	1	1	1	1	1
9	Terrestrial habitat	0.33	0.33	0.33	0.33	0.67	0.01
10	Macrophyte cover	0.3	0.3	0.3	0.3	0.3	0.3
HSI Score		0.29	0.27	0.29	0.71	0.55	0.26
Pond suitability (see below)							

Categorisation of HSI Score by Lee Brady

HSI Score	Pond Suitability
< 0.50	Poor
0.50 - 0.59	Below average
0.60 - 0.69	Average
0.70 - 0.79	Good
> 0.80	Excellent

Based on ARGUK advice note 5 - Great Crested Newt Habitat Suitability Index

APPENDIX 4

Development Framework Plan
ref.6467_104_Fby CSA




0 50 100 metres

Site Boundary: 20.89ha

Proposed housing area: 4.06ha
Approx. 150 homes @ 37dph

Additional land for Wivelsfield primary school or for community open space: 0.5ha

Proposed vehicular access point

Indicative tree-lined primary street alignment

Indicative secondary streets

Listed Buildings

Existing bus route and bus stops

Existing public footpath

Existing bridleway

Existing permissive footpath

Ancient Woodland

30m buffer from Ancient Woodland

15m buffer from Ancient Woodland

Existing vegetation

Proposed formal and informal recreation areas and amenity spaces (to include new landscaping and tree planting)

Proposed community orchard

Potential pedestrian and cycle paths

Potential pedestrian paths

Potential mown paths

Proposed pedestrian/cycle access point

Proposed pedestrian/cycle link

Proposed children's play area

Proposed Sustainable Drainage (SuDS) features

Proposed ecological ponds

War memorial (to be excluded from the red line)

Existing watercourse

F	11.12.24	KP	Updated to reflect the latest Illustrative Landscape Masterplan
E	06.12.24	KP	Updated to reflect Proving Layout and Illustrative Landscape Masterplan
Rev	Date	By	Description


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Project

Land south of Green Road, Wivelsfield Green

Title

Development Framework Plan

Client

Taylor Wimpey UK Ltd

Scale

1:2500 @ A2

Drawn

KP

Date

October 2024

Checked

RR

Drawing No.

CSA/6467/104

Rev

F



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