



**Land south of Chiswell Green Lane,  
St Albans, Hertfordshire**

**Ecological Impact Assessment**

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**LIABILITIES:**

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on a site at a later date.

The views and opinions contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

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## 1.0 Introduction

### Purpose of the Report

- 1.1 This Ecological Impact Assessment (EcIA) evaluates the effects of the development of Land south of Chiswell Green Lane, St Albans, Hertfordshire.
- 1.2 The results of The Ecology Partnership's surveys and desk study of the site and surrounding land are presented. These findings are assessed against the proposals for a housing development on the site to: identify and rank significant impacts, set out mitigation and compensation measures and the means to secure these, in essence the EcIA;
- Evaluates the baseline interest;
  - Identifies and rank significant impacts;
  - Sets out mitigation and compensation measures and the means to secure these;
  - Assess the significance of residual impacts;
  - Identifies enhancement measures; and
  - Sets out requirements for post-construction monitoring.

### Description of the Project

- 1.3 The demolition of existing structures and construction of up to 391 dwellings (Use Class C3), the provision of land for a new 2FE Primary School, open space provision and associated landscaping and new access arrangements.

### Supporting Ecology Reports

- 1.4 Supporting ecology documents submitted for the application are a Preliminary Ecological Appraisal (PEA: The Ecology Partnership 2021a), from the findings of which survey reports were produced for bats (The Ecology Partnership 2020b), and reptiles (The Ecology Partnership 2021c).

### Site Description

- 1.5 The site comprises four distinct areas of fields separated by mature treelines, with a collection of farm buildings in the north-eastern and north-western corners. Fields in the north of the site are intensively grazed by horses, whilst those in the south are currently

unmanaged rank grassland. The site is located to the south-west of Chiswell Green, in the St Albans District of Hertfordshire (TL131042). The site is approximately 14.02ha in size, and is bound by Chiswell Green Lane to the north, residential gardens and a small block of woodland to the east and south-east, and Miriam Lane and Butterfly World to the west. The wider surrounding area comprises residential areas to the east and, agricultural land to the west. The aerial photograph below (Figure 1) shows the site and its immediate surrounds with the approximate site boundary.



**Figure 1: Approximate location of the red line boundary**  
Satellite imagery captured from Google Earth Pro on 16/02/2022 © Google

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### **Planning policy and legislation**

- 1.6 The planning application may be constrained and guided by legislation and national and local planning policies that relate to biodiversity. The following paragraphs identify relevant legislation and policy and their relevance to the project.

#### ***Wildlife Legislation***

- 1.7 The following legislation has been considered in determining the scope of this EcIA:
- Wildlife and Countryside Act (1981 as amended);
  - The Protection of Badgers Act 1992;
  - The Hedgerow Regulations 1997;
  - The Natural Environment and Rural Communities (NERC) Act (2006);
  - Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019.

#### ***National and Local Planning Policy***

- 1.8 National policy guidance is provided by National Planning Policy Framework (NPPF 2021), which sets out the Government's planning policies for England and how they should be applied. Section 15 of the document is entitled 'Conserving and Enhancing the Natural Environment'.
- 1.9 The site falls under the jurisdiction of St Albans City and District Council. The application was assessed against policy guidance provided by the National Planning Policy Framework, as well as relevant planning policies from St Albans City and District Council. These policies included the following which are considered relevant to Ecology, Biodiversity and Nature Conservation: *Policy 106: Nature Conservation*.

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## 2.0 Methodology

### Scope of the Assessment

- 2.1 The zone of influence of the development is defined as:
- The project red line, for effects on habitats and species;
  - Adjacent habitat, considered by species, for mobile species with territories or foraging ranges that may overlap the site; and
  - Publicly accessible designated sites and undesignated priority (Section 41) habitats that may be sensitive receptors to increased recreational pressure.
- 2.2 The types of features considered in the assessment of effects, to meet legislative and policy requirements, are:
- Designated sites (European, national and local);
  - Protected species;
  - Habitats and species of principal importance (Section 41 list);
  - Hedgerows and woodland, where not of principal importance; and
  - Habitats, where not of principal importance, that may function as wildlife corridors or stepping stones.

### Desk Study

- 2.3 A desktop study search was completed using an internet-based mapping service ([www.magic.gov.uk](http://www.magic.gov.uk)) for statutory designated sites and an internet-based aerial mapping service ([maps.google.co.uk](http://maps.google.co.uk)) was used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands etc.) within the wider landscape. Records for the site and local area (up to 2km) were purchased from the Herts Environmental Records Centre (HERC).
- 2.4 Prior ecology reports consulted were those produced as in support of this outline planning application:
- Preliminary Ecological Appraisal (The Ecology Partnership 2021a);
  - Bat Surveys (The Ecology Partnership 2021b);
  - Reptile surveys (The Ecology Partnership 2021c).

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## Field Surveys

### *Phase 1 Habitat survey*

- 2.5 An extended Phase 1 Habitat survey was conducted on site by The Ecology Partnership in September 2021, in order to inform a Preliminary Ecological Appraisal (PEA) for the site (The Ecology Partnership 2021a). The surveyors identified the habitats present, following the standard 'Phase 1 habitat survey' auditing method developed by the Joint Nature Conservancy Council (JNCC). The Ecology Partnership surveyed the site on foot and the existing habitats and land uses were recorded on an appropriately scaled map. In addition, the dominant plant species in each habitat were recorded. The "extended Phase 1" comprised in addition a search for evidence of protected species, assessment of the potential for the site to support protected species, and identification of Section 41 habitats.

### *Protected Species Surveys*

- 2.6 As part of the PEA, a desk study and protected species assessment was conducted of the site, to identify the need for any further protected species surveys to ascertain the use of the site by these species and recommend appropriate mitigation.
- 2.7 The site was determined to have potential to support the following protected species groups/species: bats, breeding birds, and reptiles. Further survey work was considered unnecessary for breeding birds, due to the low-impact nature of the proposals to habitats likely to support them, meaning a suitable mitigation strategy would ensure their protection during works, and appropriate habitat creation post-develop would enable them to persist on site. A summary of the survey work completed is set out in the table below. Detailed survey methodologies are provided in the appended, referenced reports:



**Table 1 Species surveys**

Faunal Group	Survey Methodology	Date of Surveys	Guidance
<b>Bats – building inspection</b>	During the PEA, buildings on site were assessed internally and externally for evidence of bats and features which could serve as potential roosts. Further surveys were conducted depending on their potential for roosting bats.	15/11/2021	Bat Conservation Trust (BCT) guidelines (Colins 2016)
<b>Bats – roost surveys</b>	Dusk emergence surveys commenced at least 15 minutes before sunset until 2 hours after sunset, during which time, bats were identified and recorded. These were undertaken during suitable weather conditions, when conditions are relatively dry and mild with little/no wind. Surveyors were positioned in such a way as to cover areas of interest and any activity around the buildings.	First dusk emergence survey on Buildings B2, B3, B4 & B5: <b>20/09/2021</b> First dusk emergence survey on Buildings B1 & B6: <b>27/09/2021</b> Dawn re-entry survey of B1-B6 and second dusk emergence survey of B5 scheduled for <b>May 2022</b>	Bat Conservation Trust (BCT) guidelines (Colins 2016)
<b>Badgers</b>	During the PEA, all habitats potentially suitable for badgers were systematically examined for evidence of badger activity.	15/11/2021	Methodology developed for the National Survey of Badgers (Creswell et al. 1990).
<b>Reptiles</b>	Approximately 50 mats were placed out and left to bed in for at least a week. These refugia were checked a total of seven times across the survey period within suitable weather for surveying reptiles. Any reptiles seen, were recorded including their species, sex and life-stage where possible.	<b>Setup:</b> 15/09/2021 <b>Surveys</b> 23/09/2021 27/09/2021 01/10/2021 04/10/2021 08/10/2021 11/10/2021 15/10/2021	Froglife (1999) Gent and Gibson (1998).

### Ecological Assessment Methodology

2.8 This assessment has been carried out with reference to the CIEEM *Guidelines for Ecological Impact Assessment (EcIA)* (CIEEM, 2018). The guidelines help in the determination of the baseline conditions, what features are important, what impacts significant and how to apply the mitigation hierarchy. The sequential application of the guidelines to this assessment are outlined in the following paragraphs.

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*Baseline condition*

- 2.9 The baseline condition of the site is the situation documented in this report (section 3) from data (field surveys and desk study) gathered during 2021, plus any relevant modifications within or outside the red line within the zones of influence subsequent to the completion of the 2021 assessment.

*Important ecological features*

- 2.10 Important ecological features are those for which the decision maker (LPA or other regulator) needs the EcIA, to help to make an assessment of the effects (negative, neutral or positive) and to guide the determination of the planning application. Important features are therefore generally defined by whether legislation or policy requires their consideration. For example, a European site within the zone of influence of the development is important and needs an assessment of effects. Similarly, at different levels, any legally protected species and any features such as wildlife corridors and section 41 species, with national or local policy support, are important features. Features that cannot be referenced to legislation and policy are generally not important and the next step of the EcIA, of impact assessment, is not necessary. There may occasionally be situations where professional judgement and local expertise is relevant in defining local rarity as important, regardless of a lack of current legislative and planning support.
- 2.11 CIEEM 2018 avoids rigid guidance on the levels of importance, which is often required within EIA, along with the level of magnitude of an effect, as one axis of an impact matrix. Sometimes a label of European, national or local importance may be obvious, for European sites, SSSIs and Local Wildlife Sites respectively. It is often less clear whether a small population of a section 41 priority species or small extent of a section 41 habitat should be of Local or greater or less importance, as this may depend on data that does not exist on the distribution and abundance of the feature. Legally protected species can be important solely because of the need to meet legislation, or because they are also a feature of a County Wildlife Site or target of a local Biodiversity Action Plan. In these cases, the same species could warrant different levels of importance, possibly with different implications for what is reasonable mitigation or compensation, beyond legislative compliance.

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2.12 This report follows CIEEM 2018 in not forcing features into a level of importance, but using ranked importance where possible. Sites are given three levels, corresponding to their legislative and planning support: European, National and Local. Habitats and species, where not a qualifying feature of the hierarchy of sites, are simply referenced to the planning policy or legislation that supports their importance and where possible assessed from the extent, range or population size within zone of influence in relation to the extent, range or population size in the relevant administrative unit, for example LPA boundary or BAP boundary.

*Impact assessment*

2.13 The only essential purpose of impact assessment in EcIA is (CIEEM 2018):

*“to assess and report significant residual effects that remain after mitigation measures have been taken into account. However, it is good practice for the EcIA to make clear both the potential significant effects without mitigation and the residual significant effects following mitigation”*

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

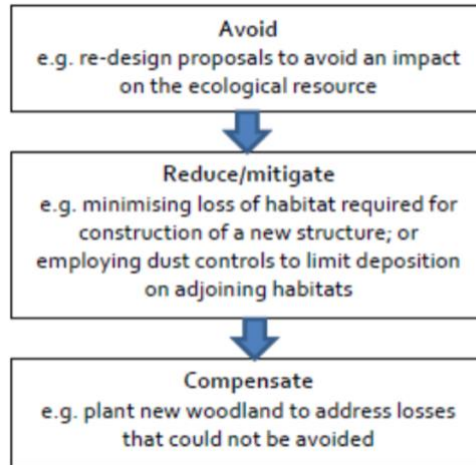
- Positive or negative - whether the impact leads to an adverse, beneficial or neutral effect;
- Extent – the spatial area over which the impact occurs;
- Magnitude – change in for example the amount of habitat or the size of population;
- Duration – both in relation to the life cycle of the ecological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

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- 2.15 As with the assessment of importance, CIEEM 2018 does not encourage a classification of the magnitude of impacts on a scale of severity. Rather, the significance of each impact should be assessed as the quantity of a feature of importance impacted; for example, residual loss of 5% of the extent of woodland within a Local Wildlife Site or gain of 10% in the extent of a section 41 habitat (hedgerows) on the site.

*Avoidance, mitigation, compensation and enhancement*

- 2.16 CIEEM 2018 recommends a mitigation hierarchy. Once important features and significant impacts are identified, the project design should be modified where possible to avoid significant impacts. If avoidance is not possible, mitigation then compensation should be sequentially considered. A residual impact is an impact that remains after mitigation but is documented here both before and after compensation, as mitigation, particularly if embedded in the design, is assumed to be delivered without input from the LPA or other regulator, whilst compensation may require planning conditions and have some uncertainty on which the regulator should deliberate. Enhancement is an activity that results in a net gain in biodiversity, generally for an important feature, “over and above” anything required for mitigation or compensation. The terms mitigation and compensation are not always clearly defined and there is difference of opinion on their definitions. This report follows the Information Paper on the subject developed in consultation with Natural England for HS2 (HS2 2017), from which this quote and illustration are taken:

*“A clear distinction is made between the use of the terms ‘mitigation’ and ‘compensation’ reflecting the habitual use in ecological impact assessment of ‘mitigation’ to mean ‘measures taken to avoid or reduce negative impacts’, as separate from ‘compensation’ meaning ‘measures taken to make up for the loss of, or permanent damage to, biological resources through the provision of replacement areas’”*



*Figure 2: The mitigation hierarchy (from HS2 2017)*

### **Limitations of the Assessment**

- 2.17 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. The site was visited over the period of several site visits, as such seasonal variations cannot be fully observed and potentially only a selection of all species that potentially occur within the site have been recorded. Therefore, the survey provides a general assessment of potential nature conservation value of the site and does not include a definitive plant species list. However, the survey area was visited on a number of occasions over the optimal period, ensuring that detailed habitat information could be gathered. It is therefore considered that the survey work has allowed a robust assessment of habitats and botanical interest across the site.
- 2.18 The specific protected species surveys were undertaken at the appropriate time of year and during suitable weather conditions to an appropriate level of survey effort. Any specific limitations are noted in the relevant sections above or discussed in the results section.

### 3.0 Baseline Ecological Conditions

#### Desktop Study

##### *Notable species*

3.1. As part of the PEA a 2km data search was requested from the Herts Environmental Records Centre (HERC). The records included a number of priority species relevant to the site, more details on each of these species can be found within the PEA, however a summarised version is included in Table 2 below:

*Table 2: Notable species records within 2km of the site in the last 10 years*

Species group	Notable species	Distance of closest record
Invertebrates	Stag beetle - <i>Lucanus cervus</i>	c. 780m NE
	Small Heath <i>Coenonympha pamphilus</i>	c. 200m W
	Cinnibar <i>Tyria jacobaeae</i>	c. 200m W
	27 other priority moth species	c. 1.7km S
Reptiles and amphibians	Slow worm <i>Anguis fragilis</i>	c. 1.9km SE
	Grass snake <i>Natrix natrix</i>	c. 1.8km E
Bats	Common pipistrelle <i>Pipistrellus pipistrellus</i>	c. 760m SE
	Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	c. 760m SE
	Daubenton's bat <i>Myotis daubentonii</i>	c. 1.85km NE
	Noctule <i>Nyctalus noctule</i>	c. 760m SE
Other mammals	Western European Hedgehog <i>Erinaceus europaeus</i>	c. 1.5km NE
	Badger - <i>Meles meles</i>	Within 2km

##### *Statutory Sites*

3.2. The site itself is not designated for its ecological importance or for its nature conservation value and there are no internationally designated statutory sites within 10km

3.3. A single nationally designated statutory sites is located within 2km:

- Bricket Wood Common Site of Special Scientific Interest (SSSI) 2km south of the site; designated for its lowland heath habitat

3.4. In terms of non-statutory designations, there are 21 Local Wildlife Sites (LoWS), within 2km of the site:

**Table 3: Non-statutory wildlife sites within 2km**

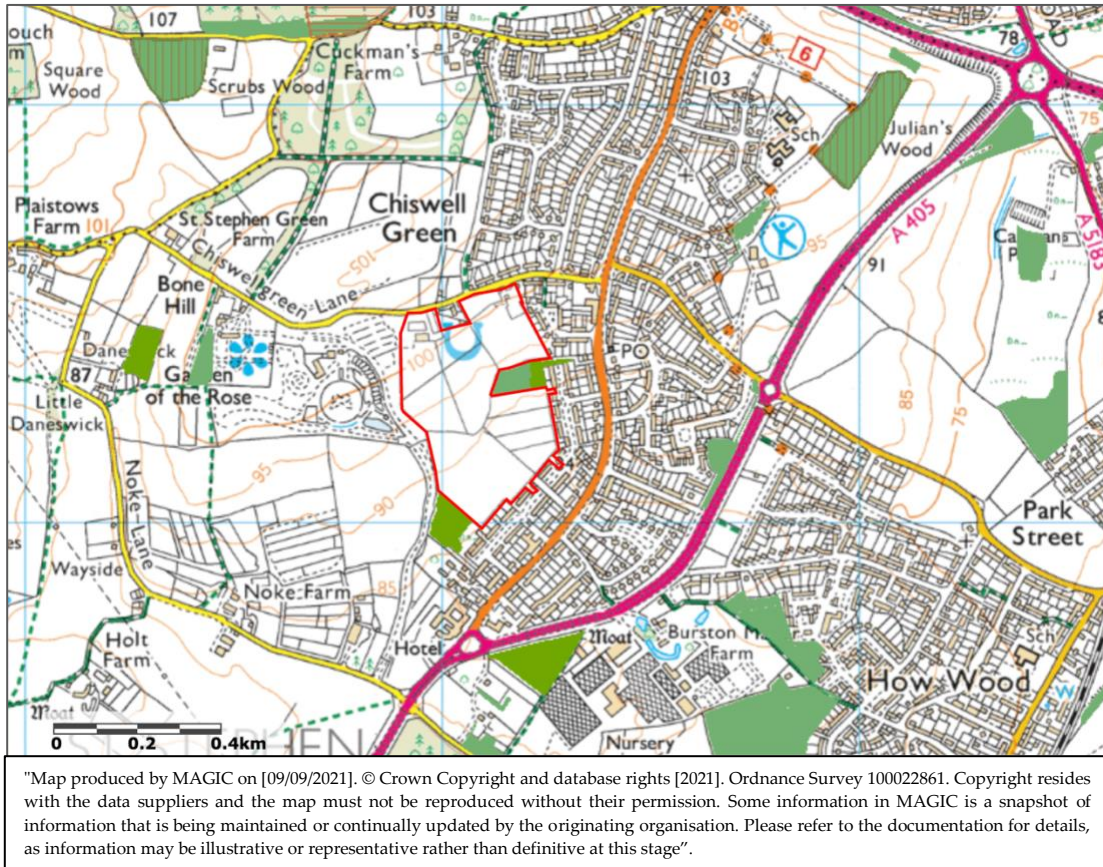
Site name	Distance and orientation	Selection criteria
How Wood LoWS	545m south-east	Ancient woodland & ponds
Park Wood LoWS	685m north	Ancient woodland
Birch Wood (near How Wood) LoWS	685m south	Ancient woodland
St Julien's Wood LoWS	730m north-west	Ancient woodland & remnant heath
Long Spring LoWS	910m north-west	Ancient woodland
Birch Wood (near Potters Crouch) LoWS	1,200m north-west	Ancient woodland
Holt Wood LoWS	1,240m south-west	Ancient woodland
Black-green Wood LoWS	1,230m south	Ancient woodland
Potters-crouch section LoWS	1,300m west	Ancient woodland
Moor Mill & Park Street Pits West Grassland LoWS	1,400m south-east	Grassland/scrub mosaic
Frogmore Gravel Pit LoWS	1,540m east	Open habitat mosaic, wet woodland, ponds, great crested newt
Featherbed Lane Copse by Serge Hill LoWS	1,680m west	Ancient Green Lane
Ashdale LoWS	1,700m south	Ancient woodland
Ver Valley Meadows LoWS	1,710m east	Lowland meadows, acid grassland & fen
Appsond Wood LoWS	1,730m north-west	Ancient woodland
Grassland at former Radlett Aerodrome LoWS	1,760m east	Unimproved acid/neutral grassland
Quarry at Former Radlett Aerodrome LoWS	1,780m east	Quarry lagoons, waterfowl & wetland species
Winch Hill Wood LoWS	1,870m south-west	Ancient woodland
Feather-bed Lane Copse by Serge Hill LoWS	1,880m west	Ancient lane
Wellfield Spring LoWS	1,910m west	Ancient woodland
Prae Wood LoWS	1,990m north-west	Ancient woodland

**Notable offsite habitats**

3.5. The site is surrounded by a number of priority habitats (Figure 3), including:

- Small parcels of **ancient woodland**, the closest being Julien's Wood 780 m north-east on the opposite side of the village, and, Scrub's Wood 740m to the north-west.
- An even greater number of priority **deciduous woodland** parcels, most notably a small 0.37ha area adjacent to the site boundary in the centre east of the site. .

- Four areas of traditional orchards priority habitat, the closest two being adjacent to the eastern and south-western site boundaries.



*Figure 3: Deciduous Woodland (dull green), ancient woodland (brown vertical hatching), traditional orchard (lime green), and ancient replanted woodland (horizontal brown hatches) in the vicinity of the site*

### Baseline habitats on the site

- 3.6. The site was subjected to an extended phase 1 habitat survey as part of a preliminary ecological appraisal undertaken on the 15<sup>th</sup> September 2021. The findings are summarised below and are described in full detail in the accompanying PEA (The Ecology Partnership 2021a).
- 3.7. The site was split into two main areas by a central band of scrub and mature trees, running from the western boundary to the small woodland to the east of the site. The northern fields comprised short-sward horse-grazed fields, with several stable buildings in the north-east and west corners. A derelict house and garden was also present in the north-



eastern corner of the site. The southern section of the site comprised rank grassland in the east, and hay/silage grassland in the west. Two lines of hybrid poplar in the south of the site bound a small triangle of scattered scrub, trees, grassland, and ruderals, along with several disused modular welfare units and containers.

3.8. The only habitat of note on site were the mature broad-leaved boundary treelines and underlying scrub present around the field boundaries and the defunct young hedgerow along the western boundary. Overall, the habitats on site were considered to be of **Local'** value.

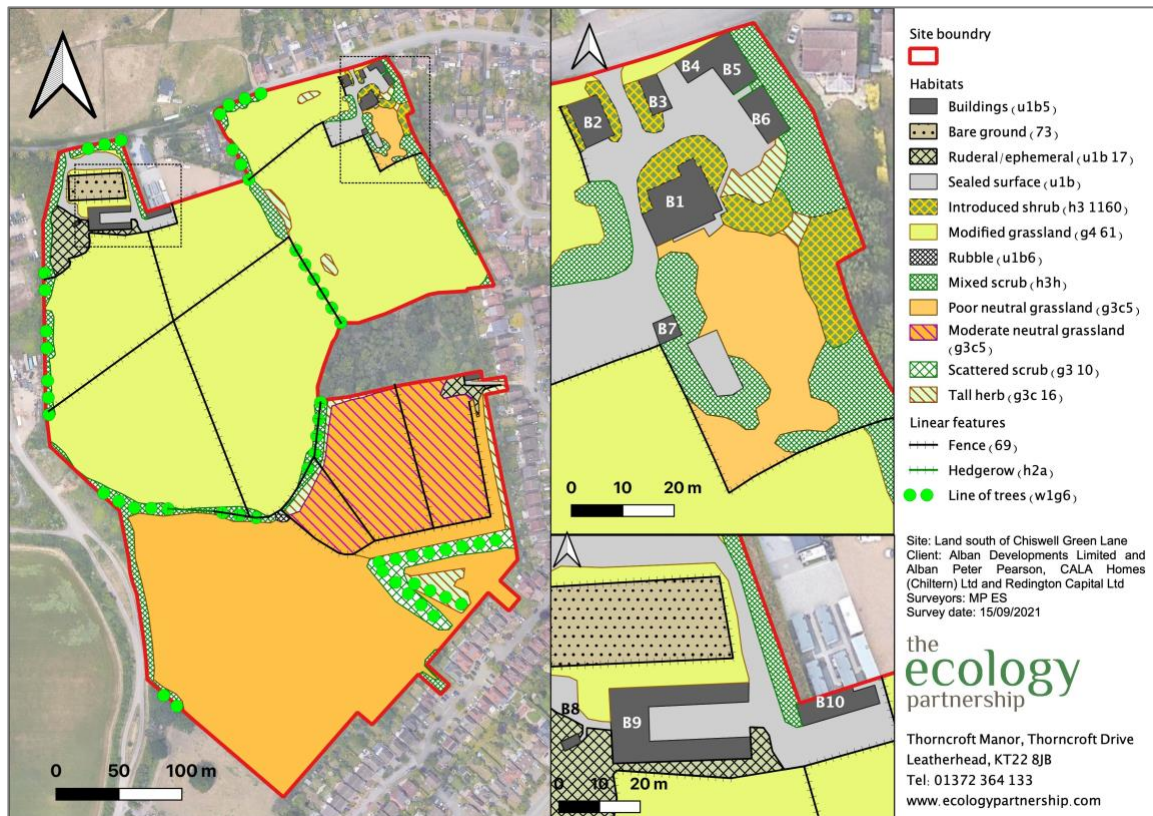


Figure 4. Phase 1 Habitat map for the site.

**Table 4: Summary table of habitat groups surveyed and present on the site and levels of importance**

Habitat	Description	Level of Importance
Buildings and hardstanding	0.47ha of buildings, hardstanding and other artificial areas, largely in the north-east and western corners of the site.	Site
Ruderal / ephemeral	0.46ha of nettles and thistles including a large manure heap in the north-west of the site.	Site
Modified grassland	6.67ha of heavily grazed and trampled grassland in the north of the site.	Site
Mixed scrub	0.93ha of largely linear scrub around the field boundaries	Site
Poor neutral grassland	3.99ha of poor condition species-poor neutral grassland in the south of the site.	Site
Moderate neutral grassland	1.47ha of moderate condition species-poor neutral grassland in the south-east of the site.	Site
Bramble scrub	0.09ha of bramble scrub along the western. Boundary of the southern field	Site
Introduced shrub	0.06ha of non-native shrubs around the farm buildings in the north-east of the site.	Site
Hedgerow	37m of hazel hedgerow in the centre of the site.	Site
Line of trees	666m of largely mature oak and ash tree lines around the field edges	Local

### Species and species groups on site

#### *Bats*

- 3.9. The PEA desk study resulted in records of four species of bat within 2km of the site within the past 10 years: common pipistrelle, soprano pipistrelle, Daubenton's, and noctule, including two Mitigation Licences from Natural England relating to roosts (The Ecology Partnership 2021a).
- 3.10. Following the building inspections, five were assessed as having moderate potential, and a single building with high potential to support roosting bats. The subsequent initial emergence/re-entry survey did not record any emergences and only recorded low numbers of common pipistrelle and brown long-eared bats. However, further surveys are required before the presence/likely absence of any roosts can be confirmed. (The Ecology Partnership, 2021c).

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- 3.11. All mature trees on site are being retained within the design and the smaller trees and shrubs to be lost did not have potential to support roosting bats.
- 3.12. The linear habitats on site provide suitable habitat for commuting/foraging bats. However, the fragmented nature of the hedgerows within the wider landscape may limit the abundance of bats utilising these habitats on site. As such, these habitats are considered to be of up to local value to foraging and commuting bats.

#### *Badgers*

- 3.13. A badger survey was undertaken at the same time as the PEA (The Ecology Partnership 2021a) with the site walked to search for the signs of use by badgers. No evidence of badgers, such as setts, latrines, snuffle holes or footprints were identified within the site on the day of survey. However, habitat on site was suitable for foraging, it was considered possible that the site could be used occasionally by badgers for commuting and foraging. However, significant potential impacts are considered unlikely, and it is therefore considered that this species is not required to be assessed at EcIA level.

#### *Reptiles*

- 3.14. The grassland in the south of the site had suitability for reptiles, owing to its longer sward height. However, on completion of the reptile survey, it was confirmed that reptiles were likely absent from the site, and therefore are not assessed at EcIA level.

#### *Breeding birds*

- 3.15. Nesting birds are likely to be using the site for the scrub, trees and potentially buildings on site. However, due to the size of the site and a lack of high value habitats and features within the majority of the site, it is considered that the breeding bird assemblage on site is likely to be of importance at 'Site' level only.

#### *Hedgehog*

- 3.16. The scrub edge along the boundaries of the site was suitable to support hedgehog. This species are likely to be utilising the edge habitat on site for foraging. It is considered that

any population of hedgehog on site is likely to be of importance up to 'Site' level only, and it is therefore considered that this species is not required to be assessed at EcIA level.

#### *Invertebrates*

- 3.17. Due to the size of the site and low botanical diversity of the grassland, it is considered likely that the invertebrate assemblage on site is unlikely to exceed 'Site' value. As such, it is considered that invertebrates are not required to be assessed at EcIA level.

#### **Future baseline**

- 3.18. Future baseline conditions are conditions which would be likely to arise if present conditions continue and a change of land use through the planning system does not occur. As the northern side of the site is grazed by horse and the southern half is cut for silage, it is considered that the current baseline is unlikely to change, unless these practices cease.
- 3.19. Table 5 summarises the findings of these surveys and assesses the level of importance for each notable species/species group:

**Table 5 Summary table of faunal groups surveyed & present on the site & levels of importance**

<b>Faunal Group/Species</b>	<b>Description</b>	<b>Level of importance</b>
Bats – roosting in buildings	Buildings to be lost in the north-east of the site were determined to have moderate-high potential to support roosting bats. More survey work is required to determine the presence and value of any roosts on site.	<b>Undetermined</b> (legislative implications)
Bats – foraging and commuting	Strong linear features within the site may provide suitable commuting and foraging habitat for bats, however, the fragmented nature of linear habitats within the wider surrounding area reduces their value.	<b>Local</b>
Breeding Birds	Breeding birds are likely to be using the trees and scrub on site as well as the buildings for nesting purposes.	<b>Site</b> (legislative implications)
Hedgehog	Field margins and boundary scrub on site was considered suitable to support hedgehog.	<b>Site</b>
Invertebrates	The poor botanical diversity on site likely limits the overall value of this assemblage.	<b>Site</b>

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#### 4.0 Description of the Proposed Development

4.1 The planning application is for the demolition of existing structures and construction of up to 391 dwellings (Use Class C3), the provision of land for a new 2FE Primary School, open space provision and associated landscaping and new access arrangements.

4.2 Embedded **Avoidance/Mitigation** measures incorporated into the submitted site layout include:

- The retention and protection of the majority of mature broad-leaved treelines and underlying scrub around the edges of the site, to avoid impacts on birds, bats, and hedgehog in these areas.

#### 5.0 Assessment of Effects as well as Avoidance and Mitigation Measures

5.1 The impact assessment is for the development as described above, including the proposed site layout plan (See Appendix 1). The assessment does not separate construction and operation impacts, solely assessing effects on important features that would result from the final layout. Residual impacts are those after mitigation and before compensation, which is considered in this section.

5.2 Features within the red line that require an impact assessment are those determined as important in section 3, namely:

- Mature broad-leaved boundary treelines (wildlife corridor)
- Hedgerow (priority habitat)
- Bats (roosts and foraging and commuting habitat) and,
- Breeding birds.

5.3 Important features outside the redline boundary, but located in close proximity to the site or within the zone of influence of the potential for increased recreational pressure or other potential negative effects, therefore requiring impact assessment, are:

- Chilterns Beechwoods SAC
- Bricket Wood Common SSSI;
- 21 LWS's within 2km of the site;
- Adjacent priority deciduous woodland

- 
- Adjacent traditional orchard priority habitat

*Mature broad-leaved boundary treelines (wildlife corridor)*

- 5.4 None of the mature boundary trees will be lost as a result of the proposal. Three small 2-3m sections of linear scrub will be lost along the central vegetation band to facilitate pedestrian access between the northern and southern parts of the site. However, the mature trees along this boundary will be retained. As such, it is considered that the proposals will result in a **neutral effect** on the function of the boundary treelines as a wildlife corridor.

*Hedgerow (priority habitat)*

- 5.5 A short 35m section of hedgerow is present within the central band of scrub and trees within the centre of the site. This hedgerow will be retained within the development as such there is a **neutral effect**.

*Bats (foraging and commuting)*

- 5.6 The features of main interest for commuting and foraging bats are restricted to the mature boundary treelines, scrub and hedgerow. The mature trees will be retained, and loss of small sections of underlying scrub are unlikely to have any noticeable impact on the ability of bats to commute across the site.

- 5.7 A sensitive lighting scheme should be implemented to reduce the impact of any artificial lighting on bat commuting and foraging habitat as recommended within the PEA (The Ecology Partnership 2021a).

- 5.8 If a sensitive lighting strategy is enacted, it is considered that overall, owing to the retention of most existing commuting habitat, the development will result in **neutral effect** for foraging and commuting bats.

*Bats (roosts)*

- 5.9 The presence/likely absence of bat roost on site has not been confirmed. As such the impact of the development on roosting bats is currently **undetermined**.

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*Breeding birds*

- 5.10 The legislative protection afforded active nests, birds and their eggs and young will be met through the clearance of vegetation outside of the breeding season or after a nesting bird check by a suitably qualified ecologist. The development will result in a temporary loss of c.0.14ha suitable nesting habitat provided by scrub and introduced, shrub, primarily around the farm buildings in the north-east of the site. It is not considered that these habitats are likely to support large numbers of breeding birds or species of local significance. It is considered that there may be some increase in disturbance from new residents to nesting birds as part of the operational phase and there is also the potential for predation by domestic pets such as cats. It is considered that the temporary loss of nesting bird habitat and a potential increase in disturbance and predation will result in a **minor negative effect of site importance**, and further compensation is required.

*Chilterns Beechwoods*

- 5.11 This statutory designated area is designated for supporting Annex I habitat: Asperulo-Fagetum beech forest (primary reason), Semi-natural dry grasslands and scrubland facies on calcareous substrates (qualifying feature, but not primary reason); and, Annex II species stag beetle *Lucanus cervus* (qualifying feature, but not primary reason). Natural England have identified a Zone of Influence (ZOI) of 12.6km for recreational impact on this site. The proposed development is located 13.6km to the south-east of the SAC and as such fall outside the ZOI, and **no residual effect** on the SAC is anticipated.

*Bricket Wood Common SSSI*

- 5.12 This statutory designated area comprises an extensive area of woodland including areas of ancient woodland and pockets of heathland, supporting important flora. This designation at its closest point is 2km south of the site boundary. As such no direct negative impacts would be anticipated from construction or during operational phase. The shortest pedestrian route to the site is c.2.6km and involves walking alongside a main road for most of this route. As such, it is unlikely many residents from the new development would walk to the SSSI. In addition, there is no formal carparking for the SSSI, which

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would likely deter new residents from driving to the site. As such, it is anticipated that the development would result in **no residual effect** on the SSSI.

#### *Local Wildlife Sites*

- 5.13 Although 21 LWS are located within 2km of the site, most are private sites with no or limited public access. The closest are How Wood LWS 545m to the south-east and Park Wood LWS 685m to the north. The shortest walking route to each of these sites is 1km. As such, it is not considered that any increase in recreational use would be minor and unlikely to impact the ecological function of these LWS. It is considered that there is **no residual effect**.

### **6.0 Cumulative Impacts**

- 6.1 Only four significant future housing developments have been identified in the surrounding area. These are reviewed below.

#### *5/2022/0267– Land Between Caravan Site And Watling Street Park Street St Albans Hertfordshire – Under Consultation*

- 6.2 This proposal is for the erection of up to 95 dwellings, including 40% affordable dwellings and 5% self-build and custom build dwellings, public open space, landscaping and associated infrastructure. The Preliminary Ecological Appraisal concluded no significant effects on ecology as a result of proposals.

#### *5/2021/2730– Land Off Orchard Drive Park Street St Albans Hertfordshire - Approved*

- 6.3 This is an outline application (access only) for the construction of up to 30 dwellings with garages and associated parking, landscaping and access works. No significant residual effect on ecology were identified, and net-loss of grassland habitat is to be compensated for through a financial contribution to the LPA for off-site creation/enhancement.



5/2021/3194 – St Stephens Green Farm Chiswell Green Lane St Albans Hertfordshire- Under Consideration

- 6.4 This outline application (access sought) is for demolition of existing buildings, and the building of up to 330 discounted affordable homes for Key Workers, including military personnel, the creation of open space and the construction of new accesses.

5/2020/3022– Land To Rear Of Burston Garden Centre North Orbital Road Chiswell Green St Albans Hertfordshire – Appeal Allowed

- 6.5 This application is for demolition of all existing buildings, structures and hardstanding and redevelopment of the site to provide a new retirement community comprising 80 assisted living apartments with community facilities and 44 bungalows together with associated access.



**Figure 5: Location of relevant future housing development (Orchard Drive in yellow; St Stephens Green Farm in Orange, Watling Street in Purple, Burston Garden Centre in Green. Application site in red).**

Satellite imagery captured from Google Earth Pro on 15/03/2022

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6.6 Assuming that the nearby developments have mitigation in place to negate any potential negative effects such as increased surface water run-off and compensation for loss of habitats, protected species mitigation and impacts on designated sites such as recreational pressure, a cumulative impact from the developments would be insignificant.

## 7.0 Compensation

7.1 It is recommended that the compensation methods, outlined below, are included as part of planning conditions for the outline planning application. In this development, compensation covers the loss of nesting bird habitat, as a result of the loss of some mature trees, and scrub habitat. Dependent on the results of bat roost surveys, compensatory bat roosting opportunities may be required. Compensation addresses the loss of habitat, which could not be avoided through the development plans, which need to maximise units within the site to remain viable.

### *Breeding birds*

7.2 New planting and bird boxes included within the development will compensate for the minor loss of nesting and foraging habitat, result in a net gain of suitable breeding and foraging habitat for bird species post development. As such, there will be **no residual effect**.

### *Habitats*

7.3 In order to compensate for the overall loss of habitats within the site and achieve a biodiversity net-gain of at least 10%, enhancement/creation of off-site habitat will be required, in addition to the new habitats being created within the site itself.

## 8.0 Enhancement

8.1 Biodiversity gain, to meet NPPF, is proposed and will be secured under conditions and the landscape and ecology strategy. Enhancements for the site are as follows:

- Provision of bat boxes on trees and buildings;
- Landscaping strategy includes additional SUDS basins which will be designed for wildlife, creating new wetland habitat, not previously on site.

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- Creation of new traditional orchard priority habitat.

## 9.0 Monitoring

- 9.1 Ecological clerk of works tasks will be required during construction, to ensure implementation of the conditions and to check that there is no change in the baseline that may alter the implementation of the development. All details of monitoring and mitigation measures during site preparation and construction would be detailed within a Construction Environmental Management Plan (CEMP).
- 9.2 Other than private gardens, all habitats and ecological features on site will be monitored, maintained, and managed for biodiversity in the long-term, including those within the receptor site. Full details of monitoring, maintenance, and management measures would be detailed within a Landscape Ecological Management Plan (LEMP).

## 10.0 Summary and conclusions

- 10.1 The proposed development at land south of Chiswell Green Lane, results in a change of land use of c14.66ha of land, through its replacement with housing and peripheral green infrastructure. Table 5 (below) summarises the effects on important features and how mitigation and compensation have been applied.

### *Baseline ecology and effects*

- 10.2 The baseline features evaluated as important (through site designation, legislative protection or priority status on NERC Act 2006 Section 41 lists), so needing an assessment of effects, are as follows.

#### On site:

- Mature treelines;
- Hedgerows;
- Bats (roosts and foraging and commuting habitat); and,
- Breeding birds.

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Off site:

- Chilterns Beechwood SAC
- Bricket Wood Common SSSI
- Local Wildlife Sites
- Traditional orchard priority habitat
- Broadleaved woodland priority habitat

*Mitigation, compensation and enhancement*

10.3 Embedded mitigation includes the following:

- The layout protects and maintains majority of the existing hedgerows, mature broad-leaved treelines, and underlying scrub on site;

10.4 Non-embedded mitigation which should be secured as part of any planning permission and are as follows:

- Sensitive lighting scheme for bats.
- Recommended working practices and timings of works will also provide mitigation for potential protected species on site;

10.5 Residual impacts are removed through compensation, which should be secured as part of any planning permission and are as follows.

- Planting of new hedgerow, scrub, and native trees, to ensure that replacement habitat is provided which in turn will provide habitat for foraging and commuting bats, and breeding birds.
- Potentially compensatory roost provision if roosting bats if found during remaining surveys.

10.6 Enhancements should be secured by condition including:

- Landscaping strategy designed to achieve a measurable biodiversity net-gain, and enhance the site for commuting and foraging bats, and nesting birds
- Long-term management of retained wildlife areas outside of residential curtilage to benefit wildlife and biodiversity.
- Provision of bird, and bat boxes to provide additional safe nesting/roosting opportunities.

- 10.7 Monitoring will include an ecological clerk of works at construction phase and monitoring to ensure implementation of the conditions and to check that there is no change in the baseline that may alter the implementation of the development. All newly created habitats will be monitored and maintained in the long-term to ensure their biodiversity value, to be detailed within a LEMP document and secured through Section 106 agreement.

**Table 7: Effects of the development**

Feature	Effect type and magnitude	Mitigation and residual effect	Compensation	Residual effect	Enhancement/ biodiversity gain
<b>Designated sites</b>					
Chilterns Beechwoods SAC	<b>Neutral</b> Site falls outside ZOI	None	None	<b>Neutral</b>	None
Bricket Wood Common SSSI;	<b>Neutral</b> Not within walking distance of site and no car park	None	None	<b>Neutral</b>	None
21 LWS's within 2km of the site	<b>Neutral</b> Not within short walking distance of site	None	None	<b>Neutral</b>	None
<b>Priority/important habitats</b>					
Traditional Orchards (Offsite)	<b>Neutral</b> No public access to adjacent orchard habitat on private land	None	None	<b>Neutral</b>	Creation of c.730m <sup>2</sup> of new priority Traditional Orchard habitat
Woodland (Offsite)	<b>Neutral</b> No public access to adjacent woodland habitat on private land	None	None	<b>Neutral</b>	None
Mature broad-leaved treelines	<b>Neutral</b> Mature boundary trees retained and protected throughout construction	Protection and retention of remaining treelines throughout construction <b>Neutral</b>	None	<b>Neutral</b>	None
Hedgerow	<b>Neutral</b> Hedgerow retained and protected throughout construction	None	None	<b>Neutral</b>	Creation of c.280m of new priority hedgerow habitat around the boundary of the school.
Other habitats	<b>Negative (minor)</b> , loss of most grassland across the site and small areas of shrubs/scrub in the north-east of the site	Retention and enhancement of edge habitats <b>Negative (minor)</b> ,	Creation of new scrub and species-rich grassland both within the site and offsite.	<b>Neutral</b>	10% biodiversity net-gain through offsite enhancement/ habitat creation.

<b>Priority and protected species</b>					
<i>Bats (roosts)</i>	<i>Undetermined</i>	<i>Undetermined</i>	<i>Undetermined</i>	<i>Undetermined</i>	<i>Undetermined</i>
Bats (foraging)	<b>Negative (minor)</b> , potential damage through artificial light	Sensitive lighting scheme <b>Neutral</b>	None	<b>Neutral</b>	None
Breeding birds (active nests, all species)	<b>Negative (minor)</b> , damage to active nests and loss of habitat  Potential predation from domestic cats from new residents	Construction works timing outside of breeding bird season or under ecological supervision. <b>Negative (minor)</b>	Planting of replacement habitat Use of bird boxes	<b>Neutral</b>	None

## 11.0 References

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