

LAND AT WARRENSIDE FARM, PRIORS DEAN

# PRELIMINARY ECOLOGICAL ASSESSMENT

*August 2021*

**Ecological Planning,  
Design and Management**  
18 Fisher Close,  
Banbury  
Oxfordshire  
OX16 3ZW

## CONTENTS

1.0	INTRODUCTION .....	2
1.1	Structure of Report.....	2
	Desk Study .....	3
	Extended Phase 1 Habitat Survey.....	3
	Notable and Legally Protected Wildlife Species .....	3
1.3	Biographical Note .....	4
2.0	ECOLOGICAL APPRAISAL.....	4
2.1	Overview and Nature Conservation Context .....	4
2.2	Wildlife Habitats and Vegetation .....	5
	Poor Semi-improved Grassland .....	5
	Tall Ruderal Vegetation .....	6
	Scrub .....	6
	Hedgerow .....	6
2.3	Notable and Legally Protected Wildlife Species.....	7
	Foraging and Commuting Bats.....	7
	Roosting Bats .....	8
	Nesting Birds.....	10
	Reptiles .....	10
	Invertebrates .....	11
	Badgers .....	11
2.4	Summary Nature Conservation Evaluation .....	11
	Wildlife Habitats and Vegetation.....	11
	Notable and Legally Protected Wildlife Species .....	12
3.0	ECOLOGICAL IMPACT ASSESSMENT .....	12
3.1	Outline of Proposed Development.....	12
3.2	Ecological Impact Review .....	13
4.0	ECOLOGICAL IMPACT MITIGATION AND RESIDUAL IMPACTS.....	14
4.1	Ecological Impact Avoidance .....	14
	Direct Ecological Impacts.....	14
	Indirect Ecological Impacts .....	15
4.2	Ecological Enhancements .....	15
4.3	Residual Ecological Impacts.....	17
4.4	Implications for Development Control Policies.....	17
	Policy SD9: Biodiversity and Geodiversity .....	17
	Policy SD11: Trees, Woodland and Hedgerows.....	20

## 1.0 INTRODUCTION

1.0.1 This report describes the findings of a preliminary ecological assessment carried out at Warrenside Farm, Priors Dean, Hampshire. The assessment has been undertaken to investigate the potential for domestic residential development proposals at Warrenside Farm to result in significant adverse impacts on features of nature conservation interest. The assessment also identifies the potential for the proposed development to deliver ecological enhancements.

1.0.2 The proposed development site comprises two barns and surrounding areas of rough grassland with patches of scrub vegetation. The barns and grassland are currently used as part of an equine enterprise at Warrenside Farm. The proposed development involves removal of the barns and construction of a new domestic residential dwelling with associated landscape design. The general arrangement of the proposed development site is shown in Figure One, and a visualisation of the proposed development is shown in Figure Two.

## 1.1 Structure of Report

1.1.1 This ecological assessment report comprises the following sections:

- **Introduction** – describing the purpose of the report, the ecological assessment methodologies used, and providing a biographical note for the assessment author;
- **Ecological appraisal** – providing a baseline description of wildlife habitats that comprise the proposed development site, and a review of their potential for use by notable and protected wildlife species. This section provides an ecological evaluation for the site, describing features of special nature conservation interest;
- **Ecological impact assessment** – describing the potential for the proposed development to result in significant adverse impacts on features of special nature conservation interest;
- **Ecological impact mitigation and residual impacts** – describing measures that would be undertaken through implementation of the proposed development that would avoid the risk of significant adverse ecological impacts. This section also outlines aspects of the proposed development that would enhance the nature conservation value of the development site. Residual impacts following implementation of impact mitigation measures are described, with a review of implications for local development plan policies.

## 1.2 Methodology

1.2.1 This assessment draws from information obtained from a review of archive information describing features of nature conservation in the locality of the proposed development site, and from an ecological assessment site survey. These information sources are described in the following sections of this report.

### ***Desk Study***

- 1.2.2 A desk study review of archive information on designated nature conservation sites and other features of biodiversity interest within the development site and the surrounding area has been undertaken.
- 1.2.3 Archive information has been obtained from the Hampshire Biodiversity Information Centre for an area extending to a two-kilometre radius from the development site. The information contains distribution maps for statutory and non-statutory nature conservation sites, broad habitats and priority habitats (as described within the UK Biodiversity Action Plan).
- 1.2.4 In addition, the desk study data includes a schedule of information for notable and protected species records and for invasive non-native species.

### ***Extended Phase 1 Habitat Survey***

- 1.2.5 An ecological assessment of the site was undertaken by completion of an Extended Phase 1 Habitat Survey during August 2021.
- 1.2.6 The Extended Phase 1 Habitat Survey protocol involves a walkover survey and visual assessment of the site to record principal habitat types against standard Phase 1 Habitat Survey habitat classification nomenclature. Brief descriptive notes are recorded for each habitat type present, observing characteristic plant species and vegetation assemblages, and noting any features that help to determine the intrinsic nature conservation value and importance of each habitat type.

### ***Notable and Legally Protected Wildlife Species***

- 1.2.7 The two barns within the proposed development site were assessed during the August 2021 site visit for their potential to provide roosting opportunities for bats. All British bat species benefit from enhanced statutory protection that recognises their nature conservation value at National and European levels. This protection extends to individual bats and their habitat. The Warrenside Farm assessment investigated the use of barns within the development site by roosting bats through a systematic external and internal inspection to record the following information:
- **External inspection** of the barns was undertaken to identify any features that could provide opportunities for bat roosting. These would include access to concealed roost spaces within roof and attic spaces, access to roost spaces within the interior of the buildings through windows or doors, access to roosting spaces within wall cavities;
  - **Internal inspection** of the barns comprised a thorough examination of interior spaces to identify and record any evidence of use by bats for roosting. Evidence recorded during this inspection would include scattered and accumulated bat droppings, feeding remains, urine staining on light surfaces, direct observation of live or dead bats.

- 1.2.8 With regard to use of the proposed development site by reptiles, this comprised a hand search of coarse grassland and tall ruderal vegetation patches and debris heaps found within the proposed development site that could provide habitats of interest to common reptiles.

### **1.3 Biographical Note**

- 1.3.1 All aspects of this assessment have been undertaken by David Broom, consultant ecologist. David has been working as a professional ecologist advising on development projects for over 30 years, including major developments in the mineral extraction, waste management, mining and petrochemical industries, infrastructure and utilities projects, and for commercial and residential developments. David has provided evidence at a substantial number of Planning Inquiries for major development projects and has held several academic appointments concerning ecological impact assessment and environmental impact assessment. David has also held term consultancy commissions providing advice on ecological impact assessment and environmental impact assessment to Government development departments.

## **2.0 ECOLOGICAL APPRAISAL**

- 2.0.1 This section provides a descriptive review of wildlife habitats and vegetation recorded within the proposed development site during the August 2021 site survey, and an appraisal of their intrinsic nature conservation value and importance. As required by the standard Extended Phase 1 Habitat Survey protocol, the appraisal also considers the potential for wildlife habitats to support populations of notable and protected fauna species.

- 2.0.2 In order to identify the potential for adverse ecological effects to arise from development of the site, this assessment provides a synopsis of the intrinsic and relative nature conservation value of key ecological features identified within the site through desk studies and site surveys. This applies a standard protocol for allocating a geographic level of relative importance to specific ecological receptors, using the following ordinal scale of intrinsic nature conservation interest:

- International;
- UK;
- National;
- Regional;
- County;
- District;
- Local or Parish;
- Within zone of influence only (typically the development site).

### **2.1 Overview and Nature Conservation Context**

- 2.1.1 The proposed development site is set within an area of countryside that is characterised by fields of improved agricultural grassland and arable cultivation. Extensive areas of broadleaved semi-natural woodland and densely wooded field boundary hedgerows are also distinctive elements of the landscape surrounding the proposed development site.

- 2.1.2 The wildlife habitat context to the proposed development site is shown in Figure Three and Figure Four. These indicate the distribution of Priority and Broad habitats<sup>1</sup> within two kilometres of Warrenside Farm. These show a substantial corridor of various broadleaved semi-natural woodland types to the south east and east of the proposed development site.
- 2.1.3 With regard to locations of special nature conservation interest in the vicinity of Warrenside Farm, these are shown in Figure Five and Figure Six. Figure Five indicates that the wooded corridor to the south east and east of Warrenside Farm is designated as the Wealden Edge Hangers Site of Special Scientific Interest (SSSI) and part of the East Hampshire Hangers Special Area of Conservation (SAC). These designations recognise the national and international importance of wildlife habitats within these areas.
- 2.1.4 In addition to these designations, the national nature conservation importance of woodland to the south east of Warrenside Farm is further reflected in its designation as the Ashford Hangers National Nature Reserve (NNR) and the Wealden Edge Hangers Local Nature Reserve (LNR).
- 2.1.5 Figure Six indicates that locations recognised as of national and international nature conservation value in the locality of Warrenside Farm contain woodland habitats classified as ancient semi-natural woodland. Figure Six also shows that locations to the east of the designated woodland corridor are designated as Sites of Importance for Nature Conservation (SINC), recognising their local nature conservation value.

## **2.2 Wildlife Habitats and Vegetation**

- 2.2.1 The proposed development site is largely characterised by an area of poor semi-improved grassland with patches of tall ruderal vegetation and scrub. A structurally varied hedgerow is also present along the western site boundary. The arrangement of these habitat types is shown in Figure One, with a review of their characteristics and likely nature conservation value provided below.

### ***Poor Semi-improved Grassland***

- 2.2.2 This habitat and vegetation type occupies the majority of the proposed development site. The general character of this vegetation type is shown in Plate One. This is a species poor grassland sward that has a uniform vegetation maintained by regular mowing. The grassland is characterised by a low diversity of competitive grass species that include Smooth Meadow-grass, Cock's-foot, Common Bent, False Oat-grass and Creeping Bent. The vegetation contains a small number of forb species, largely comprising Creeping Buttercup and White Clover.
- 2.2.3 The simple structure and composition of poor semi-improved grassland is maintained by mowing management, which suppresses the development of any substantive wildlife habitat interest. The vegetation is not referable to any distinctive semi-natural plant communities and makes no contribution to the conservation of notable grassland habitat or vegetation.

---

<sup>1</sup> These are habitat characterisations described within the United Kingdom Biodiversity Action Plan.

#### 2.2.4 Summary nature conservation value: **Zone of Influence**

##### ***Tall Ruderal Vegetation***

- 2.2.5 Patches of unmanaged vegetation characterised by an abundance of tall ruderal plant species have developed at several locations within the proposed development site, as shown in Plate Two. These locations generally occur where ground conditions are disturbed by vehicle movements and where rubble heaps have been placed.
- 2.2.6 The vegetation that has developed at these locations is typified by tussock-forming grass species such as False Oat-grass and Cock's-foot, with dense stands of tall ruderal herb species. These include Common Nettle, Broadleaved Dock, Hogweed, Rosebay Willowherb and Bramble.
- 2.2.7 The tall ruderal habitat and vegetation that has developed within the proposed development site contains an assemblage of common plant species that have a widespread national and local distribution. The habitat and vegetation is also widespread in its distribution, typical of disturbed ground conditions. It is a vegetation type of no special botanical interest, but can provide a food source for a number of invertebrate and seed-eating bird species.
- 2.2.8 Summary nature conservation value: **Zone of Influence**

##### ***Scrub***

- 2.2.9 A small patch of scrub is present at one location within the proposed development site, as shown in Figure One. Woody plant species within this vegetation patch typically comprises Buddleia and Field Maple. Bramble underscrub is also present at this location. The scrub patch provides some habitat structural diversity at the proposed development site, and has the potential for use as nesting habitat by arboreal breeding bird species.
- 2.2.10 However, the scrub patch is isolated from complementary habitat such as broadleaved woodland and hedgerows. This limits the potential for scrub within the proposed development site to contribute towards the wider nature conservation interest of the locality.
- 2.2.11 Summary nature conservation value: **Zone of Influence**

##### ***Hedgerow***

- 2.2.12 The western site boundary is defined by a mature, structurally varied hedgerow. This contains a variety of hedgerow shrub species that include Hawthorn, Hazel Field Maple and Blackthorn, with scattered mature Pedunculate Oak standard trees. This hedgerow is contiguous with adjacent sections of structurally varied, roadside hedgerow, contributing to linear habitat networks in the locality.
- 2.2.13 Summary nature conservation value: **Local or Parish**

## 2.3 Notable and Legally Protected Wildlife Species

- 2.3.1 This section of the report considers the potential for use of the proposed development site as habitat by various wildlife species. In particular, this concerns habitat utilisation by bats for foraging, commuting and roosting, nesting birds, reptiles, invertebrates and badgers. As described in this section, the nature conservation value of these wildlife groups is reflected in varying levels of statutory protection. The potential for use of habitats within the proposed development site by notable and protected wildlife species is assessed by the application of an ordinal scale, as follows:

Habitat Potential for use by Notable and legally Protected Wildlife Species
Negligible
Low
Moderate
High
Confirmed

- 2.3.2 Section 3.0 of this report considers the potential for the Warrenside Farm development proposals to adversely impact any special nature conservation interest provided by the development site for legally protected wildlife species.

### ***Foraging and Commuting Bats***

- 2.3.3 All British bat species benefit from enhanced statutory protection that applies to individual bats and habitat features of importance to the maintenance of local bat populations. As a consequence, utilisation of the proposed development site by bats would be a material consideration in the determination of a planning application for the proposed development. The potential for use of the site by bats as foraging and commuting habitat is considered below.
- 2.3.4 The proposed development site contains few linear habitat features that would provide features of interest to commuting bats. In addition, habitat formations that could provide locations of potential interest to foraging bats are localised within the site. These are confined to the possibility of flying invertebrates associated with the scrub and tall ruderal vegetation patch at the eastern end of Barn Two providing some bat foraging interest.
- 2.3.5 The mature hedgerow that lines the western site boundary is likely to be a feature of greater importance to commuting and foraging bats. The hedgerow is contiguous with wooded locations in the vicinity of Warrenside Farm that are likely to provide locations of importance for roosting and foraging bats. As such, the hedgerow would provide a valuable linear habitat that would help to guide bat dispersal between important habitat patches.
- 2.3.6 The hedgerow is also likely to provide a feature of importance to foraging bats. The structurally varied scrub and tree canopy habitat components of the hedgerow would be expected to provide suitable foraging conditions for a number of bat species. As the site boundary hedgerow is contiguous with an extensive network of structurally varied hedgerows in the locality, it would form part of an extensive series of linear habitat corridors that would help to support the conservation of local bat populations.



- 2.3.7 Potential for use of proposed development site by commuting and foraging bats: **Low**
- 2.3.8 Potential for use of site boundary hedgerow by commuting and foraging bats: **High**

### ***Roosting Bats***

- 2.3.9 With regard to opportunities for bats to roost at the proposed development site, these are mainly associated with barns that are located within the site.
- 2.3.10 Buildings are of potential interest as bat roosting habitat when their construction includes enclosed cavity spaces associated with features such as attics, cellars and wall cavities. Internal spaces within buildings can also provide opportunities for roosting bats where the spaces are accessible to bats, and remain dark and undisturbed during daylight hours.
- 2.3.11 As described in Section 1.0 of this report, the proposed development site includes two barns. The location of these buildings is shown in Plate Three and Plate Four. Their potential for use by roosting bats is reviewed below:
- 2.3.12 **Barn One** is a single storey structure with a low-angled apex roof. The general external character of the building is shown in Plate One and Plate Two. This shows that the external walls of the barn are constructed to around one quarter height from composite masonry blocks, with the remaining wall elevations constructed from timber planking attached to the building frame.
- 2.3.13 The external roof face is constructed from corrugated sheets, with gable end verges sealed with facing panels. Roof panels include translucent sheets that help to illuminate the interior of the building during the daytime.
- 2.3.14 The gable ends of the building have large door openings, with doors to around half height. The remaining part of the door apertures are left open.
- 2.3.15 The internal character of Barn One is shown in Plate Five and Plate Six. This shows a building with a steel frame construction, lacking any concealed wall cavities. This also shows the internal face of the barn roof, revealing the underside of the corrugated roof sheets, with no cladding or other concealed roof spaces.
- 2.3.16 With regard to structural features with the potential for use by roosting bats, Barn One is of limited interest. The building lacks any concealed spaces within wall or roof construction, significantly reducing its potential for use by roosting bats. In addition, the interior of the building will be flooded with daylight, both through the large door openings and translucent roof panels, further reducing the potential suitability of the building for use by roosting bats.
- 2.3.17 A thorough search of the barn was carried out to identify any evidence suggesting use of the building by roosting bats. No evidence indication access to the building and its use by roosting bats was observed.
- 2.3.18 Potential for use by roosting bats: **Negligible**

- 2.3.19 **Barn Two** is a single storey structure with an apex roof. The location of this building is shown in Figure One, and its external character is shown in Plate Seven and Plate Eight. These show that the building is constructed from facing bricks on three walls, and part of the south elevation of the building, as shown in Plate Seven. This shows that the remainder of the south facing wall is open. Plate Seven also shows that part of the south facing wall is clad with timber weather boards.
- 2.3.20 A small brick annex building is also present, abutting the north facing wall, as shown in Plate Nine.
- 2.3.21 The external face of the roof on Barn Two is constructed from corrugated sheets, and cylindrical ridge tiles. The western gable of this building has a patch of dense Ivy growth.
- 2.3.22 The interior of Barn Two is shown in Plate Ten, indicating a roof construction that utilises steel roof trusses, and lacking any enclosed spaces against the underside of the roof sheets. The underside of the roof ridge line is not enclosed, as shown in Plate Eleven. The eaves of the roof rest against concrete beams, with roof sheet corrugations sealed, as shown in Plate Twelve. This would prevent entry to the building by bats.
- 2.3.23 The masonry wall sections are constructed from a single course of bricks, lacking any concealed wall cavity. The timber weatherboard treatment comprises well-sealed timber planks, enclosing no concealed spaces and providing no opportunities for bats to access the interior of the barn, as shown in Plate Thirteen.
- 2.3.24 The annex is a brick-built structure with a flat roof, as shown in Plate Fourteen. The structure has a small window and a doorway with no door. This structure has some potential for use by roosting bats, but this is reduced by the absence of wall or roof cavities that could provide concealed spaces for use by roosting bats.
- 2.3.25 The interior of Barn Two was inspected carefully to identify any evidence indicating likely use of the building by roosting bats. All surfaces and walls were closely inspected but no evidence indicating access by bats was observed.
- 2.3.26 With regard to the potential for use of Barn Two by roosting bats, this is reduced by the construction and general condition of the building. The building's construction generally lacks the inclusion of sheltered cavity spaces that could provide viable niches for use by roosting bats. As the southern elevation of the building is largely open, this would maintain bright, well-lit daytime conditions within the barn, affecting its suitability for use by roosting bats.
- 2.3.27 A low-level of bat roosting potential is provided by two features on the western gable wall of the barn. These comprise a patch of Ivy growth, and a small gap at the edge of a roofing sheet. These locations are shown in Plate Fifteen.
- 2.3.28 The dense Ivy growth could provide sufficient shelter for a temporary roost or resting place for a small number of bats. The gap at the edge of a roofing sheet on the western gable wall could create a small enclosed space that could be used as a temporary roost or resting place by individual bats.
- 2.3.29 Potential for use by roosting bats: **Low**

### ***Nesting Birds***

- 2.3.30 During the bird breeding season, all British non-domesticated bird species that are actively nesting are afforded enhanced statutory protection. This protection is extended to cover nesting locations when in use. As a consequence, the potential for use of any features within the proposed development site by nesting birds would represent a material consideration for local planning authority determination of a planning application for the site.
- 2.3.31 A number of features within the proposed development site have the potential for use by breeding birds as nesting locations. These are the patch of scrub vegetation, and the two barns. In particular the exposed roof trusses and internal frame structure of the two barns provide locations of potential value for use as bird nesting locations. The dense Ivy growth on Barn Two could also provide a nesting location.
- 2.3.32 The visual inspection carried out within the two barns for the bat roosting assessment described in a previous section of this report also provided an opportunity to record evidence indicating use of the buildings by nesting birds. No nest remains or other evidence indicating use by nesting birds was observed.
- 2.3.33 Potential for use of features within the development site by nesting birds: **Low to Moderate**
- 2.3.34 Potential for use of site boundary hedgerow by nesting birds: **High**

### ***Reptiles***

- 2.3.35 The mosaic of habitats at the proposed development site has the potential for use as cover and foraging habitat by common reptile species. As British common reptile species benefit from statutory protection, their presence at the proposed development site would present a material consideration in local planning authority determination of a planning application for the proposed development.
- 2.3.36 Habitat features of potential interest for use by reptiles within the proposed development site could include cover habitat within dense herbaceous vegetation and within accumulations of debris, basking habitat within open areas and on the surface of rubble heaps, and feeding areas within dense vegetation.
- 2.3.37 No parts of the proposed development site that were hand searched provided observations of any reptiles or evidence of having been use by reptiles. As a substantial part of the site comprises poor semi-improved grassland that is mown regularly, this would maintain a short sward structure to the grassland vegetation that would significantly reduce its potential interest for use by reptiles.
- 2.3.38 Potential for use of use of habitats within the proposed development site by common reptile species: **Negligible**

### ***Invertebrates***

- 2.3.39 The unmanaged tall ruderal vegetation patches, debris heaps and scrub patches within the proposed development site can combine to provide features of interest as invertebrate wildlife habitat. This can comprise use of flowers and foliage as food for larval and adult invertebrate life cycle stages. Debris heaps have the potential for use as cover and deadwood decay microhabitat for feeding invertebrates.
- 2.3.40 The mosaic of habitat types and associated invertebrate habitat interest within the proposed development site would be expected to have some potential value as invertebrate habitat. However, as these habitat features occupy relatively limited areas within the proposed development site, it is unlikely that they would have substantial associated nature conservation value.
- 2.3.41 Potential for use of habitats within the proposed development site by notable invertebrates: **Low**.

### ***Badgers***

- 2.3.42 Badgers and landscape features used by badgers to construct setts, undertake foraging and to travel between setts and foraging areas are afforded statutory protection. The Extended Phase 1 Habitat Survey described in this report included an opportunity to inspect land within the proposed development site for evidence of these aspects of habitat utilisation by Badgers.
- 2.3.43 No form of Badger sett excavation, evidence of foraging activity or any other aspects of habitat utilisation by Badgers was observed within the proposed development site.
- 2.3.44 Potential for use of habitats within the proposed development site by Badgers: **Negligible**.

## **2.4 Summary Nature Conservation Evaluation**

- 2.4.1 This section provides a summary of the nature conservation evaluation levels identified for the various features considered through this ecological assessment of the proposed development site. This shows that for most of the interest features a level of nature conservation interest at or below that of the development site (Zone of Influence) is identified.

### ***Wildlife Habitats and Vegetation***

<b>Wildlife Habitat Feature</b>	<b>Summary Nature Conservation Value</b>
Tall Ruderal	Zone of Influence
Scrub	Zone of Influence
Poor semi-improved grassland	Zone of Influence
Hedgerow	Parish or local

### **Notable and Legally Protected Wildlife Species**

<b>Wildlife Species Feature</b>	<b>Summary Nature Conservation Value</b>
Bat foraging and commuting habitat: Hedgerow	Local or Parish level
Bat foraging and commuting habitat: Development site	Low
Bat Roosting potential: Barn One	Negligible
Bat Roosting potential: Barn Two	Low
Bird nesting potential – Barns	Low to moderate
Bird nesting potential – Scrub	Low to moderate
Bird nesting potential – Hedgerow	High
Reptile habitat potential – hard standing and debris	Negligible
Invertebrate habitat potential – tall ruderal and debris	Low
Badger habitat potential	Negligible

## **3.0 ECOLOGICAL IMPACT ASSESSMENT**

- 3.0.1 This section of the report considers the potential for development proposals at the proposed development site to have a significant adverse direct or indirect impact on features of nature conservation interest.
- 3.0.2 An overview of the proposed development is provided, identifying the nature of the development and the extent of land occupied within the proposed development site.
- 3.0.3 The summary nature conservation evaluation described in Section 2.4 of this report is used as the basis for a review of potential impacts on features of nature conservation interest within the proposed development site. Details of the nature conservation context to the site described in Section 2.1 of this report are used to consider the risk of adverse ecological impacts on features of nature conservation interest within the area surrounding the proposed development site.
- 3.0.4 Adverse direct ecological impacts concern disturbance to wildlife habitats and other nature conservation interest features within the development site. Adverse indirect ecological impacts concern disturbance of ecological interest features outside the boundaries of the development site. These could include disruption to wildlife species dispersal through adjacent habitats.
- 3.0.5 Where the potential for adverse ecological impacts is identified, proposals for impact mitigation are described within Section 4.0 of this report.

### **3.1 Outline of Proposed Development**

- 3.1.1 The layout of the proposed development is shown in Figure Two. This depicts a development scheme that will replace all of the existing structures at the proposed development site with new residential property.

### 3.2 Ecological Impact Review

3.2.1 Implementation of the proposed development will have the following direct adverse impacts on habitat features within the development site:

Wildlife Habitat Feature	Summary Nature Conservation Value	Nature of Adverse Impact
Tall Ruderal	Zone of Influence	All areas of this habitat type would be removed with direct adverse ecological impacts at the level of Zone of Influence (development site).
Scrub	Zone of Influence	The existing patch of this habitat type would be removed with direct adverse ecological impacts at the level of Zone of Influence (development site).
Poor semi-improved grassland	Zone of Influence	All areas of this habitat type would be removed with direct adverse ecological impacts at the level of Zone of Influence (development site).
Hedgerow	Parish or local	The feature would remain unaffected by direct effects of the proposed development.

3.2.2 Implementation of the proposed development will have the potential for the following direct adverse impacts on notable and protected wildlife species within the development site:

Wildlife Species Feature	Habitat Utilisation Potential	Nature of Adverse Impact
Bat Roosting potential: Barn One	Negligible	The proposed development will have no potential for adverse impacts on roosting bats at this location.
Bat Roosting potential: Barn Two	Low	Removal of possible roosting locations, with the potential for low level direct adverse ecological impacts.
Bird nesting potential – Buildings	Low to Moderate	Removal of possible bird nesting habitat, potential for direct adverse ecological impacts at the level of Zone of Influence (development site).
Bird nesting potential – Scrub	Low to Moderate	Removal of possible bird nesting habitat, potential for direct adverse ecological impacts at the level of Zone of Influence (development site).
Bird nesting potential – Hedgerow	High	Removal of possible bird nesting habitat, potential for direct adverse ecological impacts at the level of Zone of Influence (development site).
Reptile habitat potential – debris	Negligible	The proposed development will have no potential for adverse impacts on reptiles or their habitat features.
Invertebrate habitat potential – tall ruderal and debris	Low	Removal of possible invertebrate foraging habitat.
Badger habitat potential	Negligible	The proposed development will have no potential for adverse impacts on Badgers or their habitat features.

- 3.2.3 Implementation of the proposed development could have the potential for the following indirect adverse impacts on habitats, notable and protected wildlife species in the vicinity of the development site:

Ecological Interest Feature	Summary Nature Conservation Value	Nature of Adverse Impact
East Hampshire Hangers Special Area of Conservation	International	The proposed development is remote from these designated nature conservation sites and would have no potential for direct or indirect adverse impacts on their qualifying designation features and nature conservation objectives.
Wealden Edge Hangers Site of Special Scientific Interest	National	
Ashford Hangers National Nature Reserve	National	
Wealden Edge Hangers Local Nature Reserve	National	

#### 4.0 ECOLOGICAL IMPACT MITIGATION AND RESIDUAL IMPACTS

- 4.0.1 This section describes a variety of measures that would be undertaken through implementation of the proposed development to help avoid the risk of significant adverse ecological impacts. This section also outlines aspects of the proposed development that would help to enhance the nature conservation value of the proposed development site.
- 4.0.2 Planning submissions made in support of the proposed development would be determined against local development plan policy. To help inform this process, implications of the proposed development for local development plan policies concerning ecology and nature conservation are reviewed in this section of the report.

#### 4.1 Ecological Impact Avoidance

- 4.1.1 A number of measures are to be adopted through implementation of the proposed development to avoid the risk of significant direct and indirect adverse ecological impacts described within Section 3.0 of this report. These impact avoidance measures are described in the following sections of this report.

##### ***Direct Ecological Impacts***

- 4.1.2 Section 2.2 of this report describes wildlife habitats within the proposed development site as comprising features of no special nature conservation interest. As such, wildlife habitats within the proposed development site are not vulnerable to potentially significant adverse direct impacts on features of intrinsic ecological interest. As a consequence, no impact mitigation measures are required to address the effects of site clearance on wildlife habitat.
- 4.1.3 The avoidance of disturbance to nesting birds that might be present within buildings or the scrub patch would be achieved by ensuring that site clearance and demolition work is undertaken outside the bird nesting season that extends from March to approximately July/August.

- 4.1.4 Where this is not possible, a pre-clearance and demolition site assessment by an ecologist would be required to investigate possible use of the site by nesting birds. Observations made during the pre-clearance site assessment would inform recommendations for impact mitigation measures as necessary to avoid disturbance to nesting birds.
- 4.1.5 Section 2.3 of this report describes the potential for low level roosting by individual bats within features on the western gable wall of Barn Two. These comprise a patch of Ivy and a small gap beneath the edge of a roofing sheet. To ensure that the risk of disturbance to bats that might be using this location as a roosting site is avoided, one dusk and one dawn bat activity survey of the western gable wall of Barn Two would be undertaken prior to demolition of the building. This will help to identify the likelihood that bats might be present, helping to inform appropriate measures to avoid disturbance of bats.

### ***Indirect Ecological Impacts***

- 4.1.6 This report identifies the western site boundary hedgerow as a feature of local nature conservation interest. In particular, this concerns its potential for use by nesting birds, and by commuting and foraging bats. The hedgerow will be retained as part of the proposed development, and a protective buffer zone would be established between the hedgerow and the development site to ensure that demolition and construction activities avoid indirect disturbance to the wildlife habitat value of the hedgerow.
- 4.1.7 In particular, the protective buffer would be used to protect the wildlife habitat value of the hedgerow from adverse effects of noise, lighting or fugitive dust emissions from the development site.
- 4.1.8 Section 3.2 of this report describes the lack of potential for disturbance of designated sites in the vicinity of the proposed development site. As a consequence, no specific measures would be required to avoid the risk of adverse indirect impacts of the proposed development on the East Hampshire Hangers Special Area of Conservation, the Wealden Edge Hangers Site of Special Scientific Interest, the Ashford Hangers National Nature Reserve or the Wealden Edge Hangers Local Nature Reserve.

## **4.2 Ecological Enhancements**

- 4.2.1 Figure Seven provides an outline of ecological enhancement measures that would be included within the proposed development scheme. These describe a programme of habitat creation and habitat management initiatives to be applied to land surrounding the proposed development site. The ecological enhancement scheme comprises the following main elements:
- **Reinforcement of existing hedgerows** – this will involve tree and shrub planting along existing hedgerows to increase their width, diversify their species composition and increase their structural variety. This will consolidate their current value as linear habitats and ecological corridors that should increase their role in facilitating the dispersal of wildlife species through the local landscape;



- **Creation of new hedgerows** – this will involve tree and shrub planting to increase the frequency of species rich, structurally varied hedgerow habitat corridors in the local landscape. This will increase the frequency of these valuable linear habitats, increasing the density of wildlife species dispersal corridors;
- **Creation of new broadleaved woodland habitat** – this will involve tree and shrub planting to increase the extent of broadleaved woodland with a distinctive semi-natural character in the locality. This will replicate the highly designated broadleaved woodland habitats within The Warren and adjacent areas of woodland. This will help to increase the extent of valuable semi-natural broadleaved woodland habitat in the locality, increasing the capacity of the area to support populations of notable and legally protected woodland wildlife species;
- **Creation of species rich wildflower meadow habitat** – this will involve cultivation and reseeded of land currently under agricultural management to create an extensive area of species rich grassland that would be managed as a traditional tall herb wildflower meadow.

- 4.2.2 In addition to the above habitat creation and enhancement interventions, the proposed development would include the installation of artificial bird nesting boxes and bat roosting boxes within the proposed development site. These would help to maintain the potential for bird nesting and bat roosting provided by features within the site that would be removed to accommodate the proposed development. As this would provide the opportunity to introduce a variety of bird and bat box styles, this would be expected to increase the value of the Warrenside Farm locations for nesting birds and roosting bats.
- 4.2.3 As described in Section 2.1 of this report, the proposed development site is set within a landscape that includes extensive areas of highly designated ancient semi-natural broadleaved woodland habitats. Implementation of the proposed hedgerow and woodland planting to ensure that trees and shrubs used in the new plantings are procured from an acceptable local provenance, confirmed through consultation and agreement with Natural England.
- 4.2.4 Where possible, planting stock would be procured from hardwood cuttings taken from trees and shrubs that form part of existing vegetation within The Warren and surrounding woodland.
- 4.2.5 With regard to hay meadow establishment, opportunities would be explored to establish species rich grassland from seed or green hay harvested from existing sites of grassland nature conservation interest.
- 4.2.6 The ecological enhancement scheme shown in Figure Seven would help to support the objectives of several existing biodiversity conservation initiatives. In particular, these concern the consolidation of Hampshire Ecological Networks, and Hampshire Biodiversity Opportunity Areas. Figure Eight shows the arrangement of Hampshire Ecological Networks in the vicinity of the proposed development site, and Figure Nine shows the location of the proposed development site relatively to Hampshire Biodiversity Opportunity Area 08: The East Hampshire Hangers.

4.2.7 Figure Eight shows that the location of the proposed development is adjacent to a core strategic ecological network that comprises the corridor of highly designated ancient semi-natural woodland sites associated with The Warren. The ecological enhancement measures included within the proposed development would consolidate the core strategic ecological network by increasing the frequency and density of wildlife habitats that would complement those within the ecological network.

4.2.8 Figure Nine shown that the proposed development site abuts the western boundary of Biodiversity Opportunity Area 08: The East Hampshire Hangers. Biodiversity conservation targets and opportunities for this area cited within the Hampshire Biodiversity Opportunity Areas Statements for the East Hampshire Hangers comprise the conservation of Lowland Calcareous Grassland, Lowland Mixed Deciduous Woodland and Lowland Meadow. The ecological enhancement measures included within the proposed development would support these Biodiversity Opportunity Area conservation targets and opportunities.

### 4.3 Residual Ecological Impacts

4.3.1 Implementation of ecological impact avoidance measures described in Section 4.1 of this report would combine with ecological enhancement opportunities described in Section 4.2 to ensure that the proposed development achieves beneficial residual ecological impacts. In particular, this concerns the potential for ecological enhancement proposals to include a range of wildlife habitat management and creation opportunities that will benefit the conservation of locally valuable wildlife habitat types and notable wildlife species.

### 4.4 Implications for Development Control Policies

4.4.1 As described earlier in this report, determination of submissions for the proposed development will investigate the scope for compliance with or contravention of development control policies for biodiversity conservation contained within the South Downs National Park Local Plan 2014-2033 Strategic Policy. Key policies are Policy SD9: Biodiversity and Geodiversity and Policy SD11: Trees, Woodland and Hedgerows.

4.4.2 A review of implications of the proposed development for specific clauses cited within these policies is provided in the following sections of this report.

#### ***Policy SD9: Biodiversity and Geodiversity***

Policy SD9 Clause	Comments on Proposed Development
1 Development proposals will be permitted where they conserve and enhance biodiversity and geodiversity, giving particular regard to ecological networks and areas with high potential for priority habitat restoration or creation. Prior to determination, up-to-date ecological information should be provided which demonstrates that development proposals:	<ul style="list-style-type: none"> <li>The proposed development will have a positive residual ecological impact through the delivery of an ecological enhancement scheme that will enhance existing ecological networks and areas of high nature conservation importance.</li> </ul>

Policy SD9 Clause	Comments on Proposed Development
a) Retain, protect and enhance features of biodiversity and geological interest (including supporting habitat and commuting routes through the site and taking due account of any use by migratory species) and ensure appropriate and long-term management of those features;	<ul style="list-style-type: none"> <li>Existing features of nature conservation importance in the locality will remain unaffected by any aspect of the proposed development.</li> </ul>
b) Identify and incorporate opportunities for net gains in biodiversity;	<ul style="list-style-type: none"> <li>The proposed development includes a scheme of ecological enhancements. These include the enhancement of existing hedgerow habitat, and the introduction of new hedgerow, semi-natural woodland and conservation grassland habitats.</li> </ul>
c) Contribute to the restoration and enhancement of existing habitats, the creation of wildlife habitats and the creation of linkages between sites to create and enhance local and regional ecological networks;	
d) Protect and support recovery of rare, notable and priority species;	<ul style="list-style-type: none"> <li>Measures are incorporated into the proposed development to ensure that significant adverse impacts on notable and legally protected wildlife species are avoided, and that their conservation status in the locality benefits from ecological enhancement measures.</li> </ul>
f) Contribute to the protection, management and enhancement of biodiversity and geodiversity, for example by supporting the delivery of GI and Biodiversity Action Plan targets and enhance Biodiversity Opportunity Areas (BOA);	<ul style="list-style-type: none"> <li>Ecological enhancement measures included within the proposed development will support Biodiversity Opportunity Areas conservation objectives, and augment adjacent core statutory Ecological Networks.</li> </ul>
g) Comply with the mitigation hierarchy as set out in national policy.	<ul style="list-style-type: none"> <li>National policy and procedure for ecological impact mitigation associated with development projects are supported by the proposed development.</li> </ul>
2. The following hierarchy of site designation will apply in the consideration of development proposals:	
a) <b>Internationally Protected Sites...</b> (SPAs, SACs and Ramsar Sites...):	
i. Development proposals with the potential to impact on one or more international sites(s) will be subject to a HRA to determine the potential for likely significant effects. Where likely significant effects may occur, development proposals will be subject to Appropriate Assessment	<ul style="list-style-type: none"> <li>No adverse ecological impacts on any international nature conservation site will result from the proposed development.</li> </ul>
ii. Development proposals that will result in any adverse effect on the integrity of any international site will be refused unless it can be demonstrated that: there are no alternatives to the proposal; there are imperative reasons of overriding public interest why the proposal should nonetheless proceed; and adequate compensatory provision is secured	

Policy SD9 Clause	Comments on Proposed Development
b) <b>Nationally Protected Sites</b> SSSI, NNRs...:	
i. Development proposals considered likely to have a significant effect on nationally protected sites will be required to assess the impact by means of an EIA	<ul style="list-style-type: none"> <li>No adverse ecological impacts on any national nature conservation site will result from the proposed development.</li> </ul>
ii. Development proposals should avoid impacts on these nationally protected sites. Development proposals where any adverse effect on the site's notified special interest features is likely and which cannot be either avoided or adequately mitigated will be refused, unless the benefits of the development, at this site clearly outweigh the likely impact to the notified features of the site and any broader impacts on the network of nationally protected sites	
c) <b>Irreplaceable Habitats</b> (including ancient woodland ..., and veteran trees): Development proposals which result in the loss or deterioration of irreplaceable habitats, including ancient woodland and veteran trees will be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists	<ul style="list-style-type: none"> <li>No adverse ecological impacts on any irreplaceable habitats will result from the proposed development.</li> </ul>
d) <b>Locally Protected Sites</b> (Sites of Nature Conservation Importance (SNCI)/Local Wildlife Sites (LWS)/Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR and Local Geodiversity Sites (LGS))...:	
i. Development proposals considered likely to have a significant effect on local sites will be required to assess the impact by means of an Ecological Impact Assessment (EclA)	<ul style="list-style-type: none"> <li>No adverse ecological impacts on any locally designated nature conservation site will result from the proposed development.</li> </ul>
ii. Development proposals that will result in any adverse effect on the integrity of any local site which cannot be either avoided or adequately mitigated will be refused, unless exceptional circumstances outweighing the adverse effects are clearly demonstrated	
e) <b>Outside of designated sites</b>	
i. Development proposals should identify and incorporate opportunities to conserve, restore and recreate priority habitats and ecological networks. Development proposals should take opportunities to contribute and deliver on the aims and objectives of the relevant biodiversity strategies where possible.	<ul style="list-style-type: none"> <li>Ecological enhancement measures included within the proposed development will support Biodiversity Opportunity Areas conservation objectives, and augment adjacent core statutory Ecological Networks.</li> </ul>

**Policy SD11: Trees, Woodland and Hedgerows**

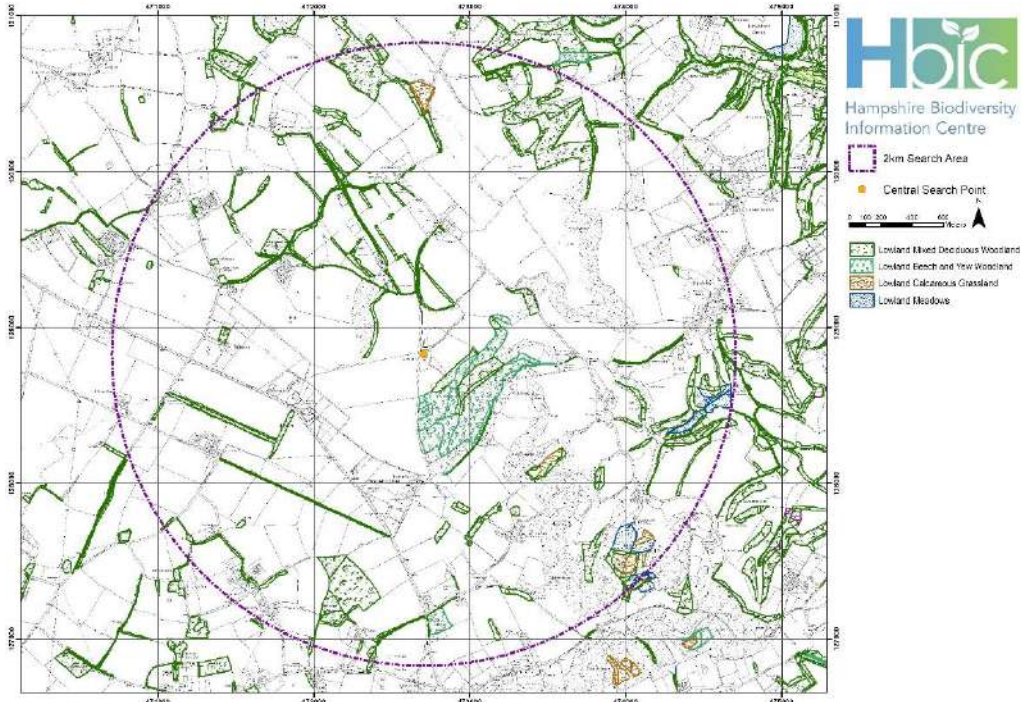
<b>Policy SD11 Clause</b>	<b>Comments on Proposed Development</b>
1. Development proposals will be permitted where they conserve and enhance trees, hedgerows and woodlands.	<ul style="list-style-type: none"> <li>The proposed development includes a scheme of ecological enhancements. These include the enhancement of existing hedgerow habitat, and the introduction of new hedgerow and semi-natural woodland habitats.</li> </ul>
4. Development proposals must provide adequate protection zones and buffers around hedgerows and other woodland and trees to prevent damage to root systems and taking account of future growth.	<ul style="list-style-type: none"> <li>A protective buffer zone will be provided against an existing hedgerow along the western boundary of the development site.</li> </ul>
6. Development proposals must demonstrate that appropriate protection measures are in place prior to any work on site throughout the development process as part of a comprehensive landscaping plan, and that suitable opportunities for the restoration, enhancement or planting of trees, woodland, and hedgerows are identified and incorporated.	<ul style="list-style-type: none"> <li>A protective buffer zone will be provided against an existing hedgerow along the western boundary of the development site.</li> <li>The proposed development includes provision for the enhancement of existing hedgerow habitat, and the introduction of new hedgerow and semi-natural woodland habitats.</li> </ul>
7. Opportunities should be identified and incorporated for planting of new trees, woodlands and hedgerows. New planting should be suitable for the site conditions, use native species and be informed by and contribute to local character, and enhance or create new habitat linkages.	<ul style="list-style-type: none"> <li>The proposed development includes provision for the enhancement of existing hedgerow habitat, and the introduction of new hedgerow and semi-natural woodland habitats.</li> </ul>



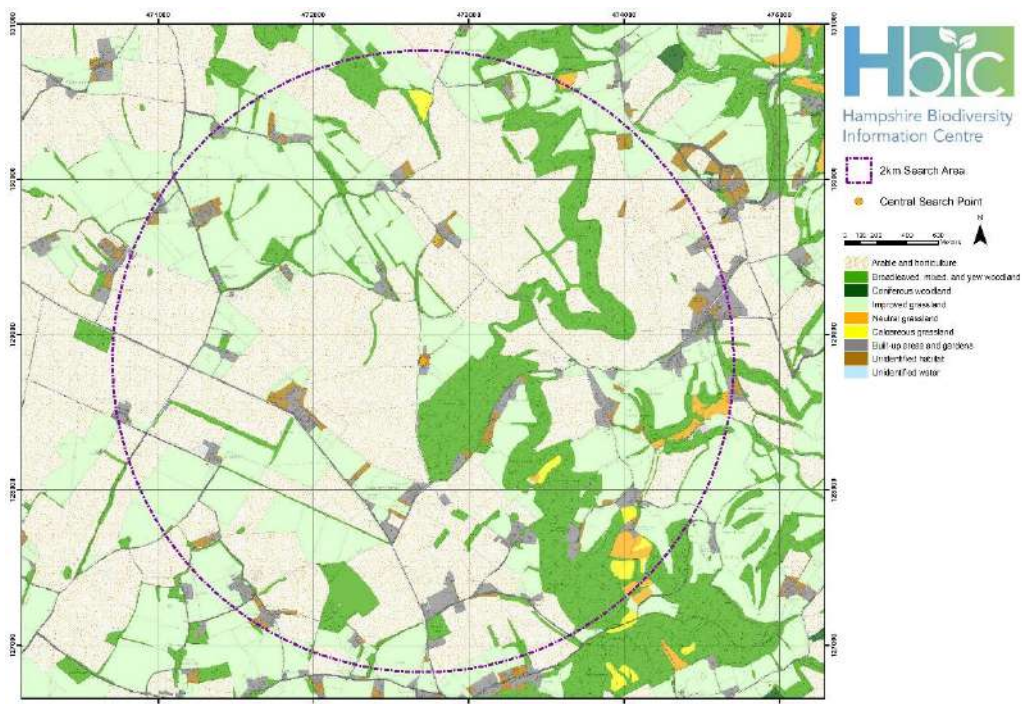
↑ **Figure One** – Proposed development site: Wildlife Habitats



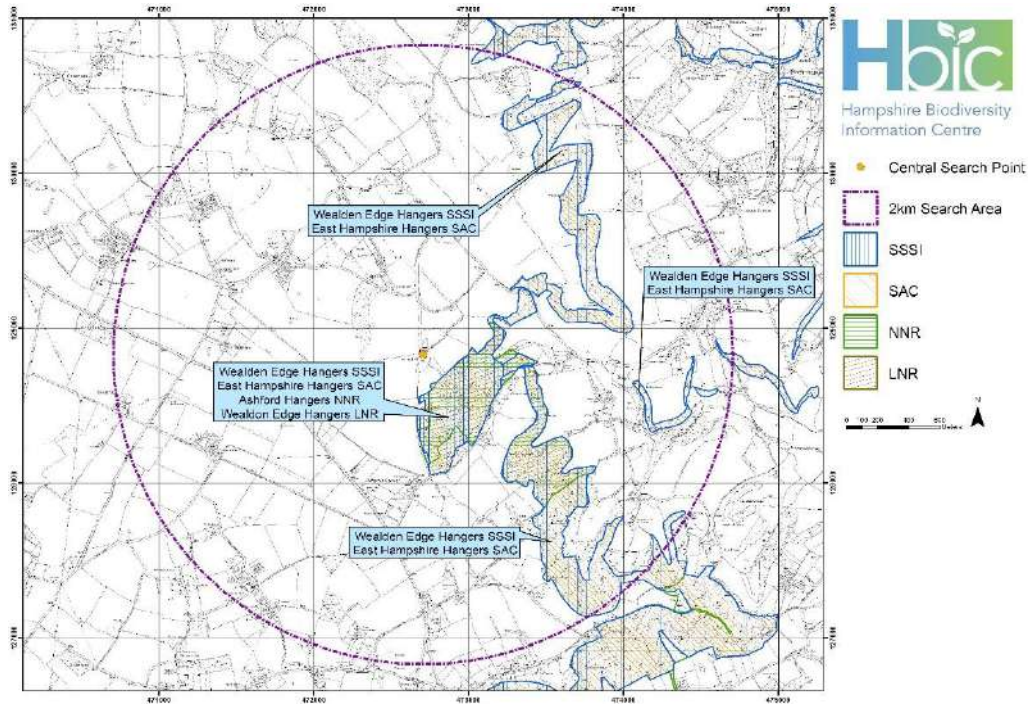
↑ **Figure Two** – Proposed development



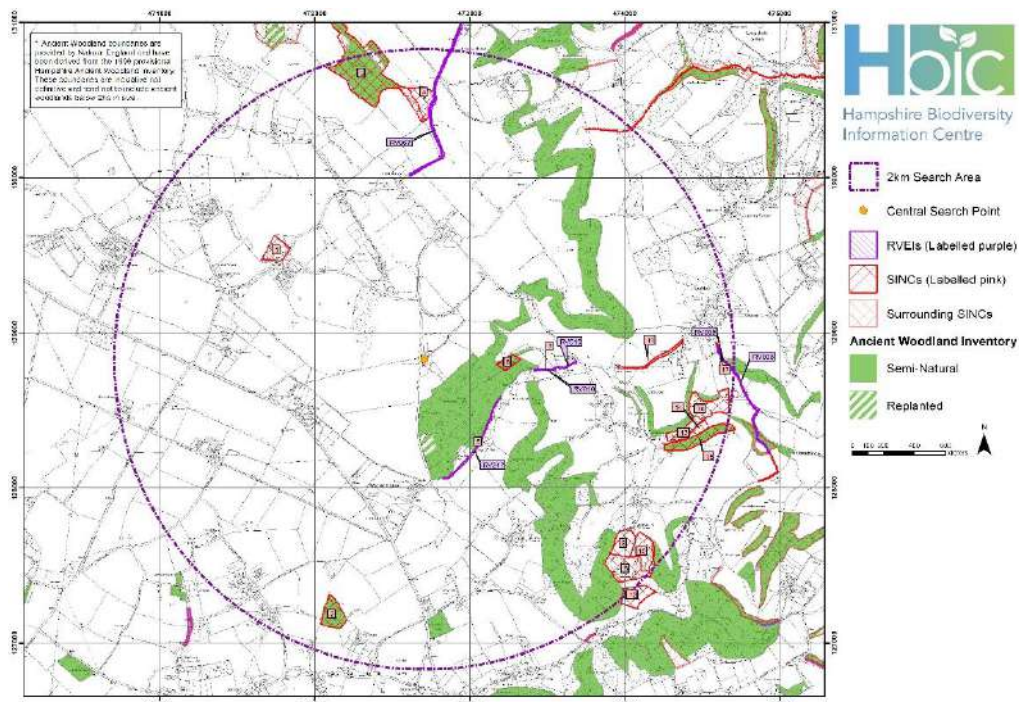
↑ Figure Three – Priority Habitats



↑ Figure Four – Broad Habitats



↑ Figure Five – Statutory Nature Conservation Sites

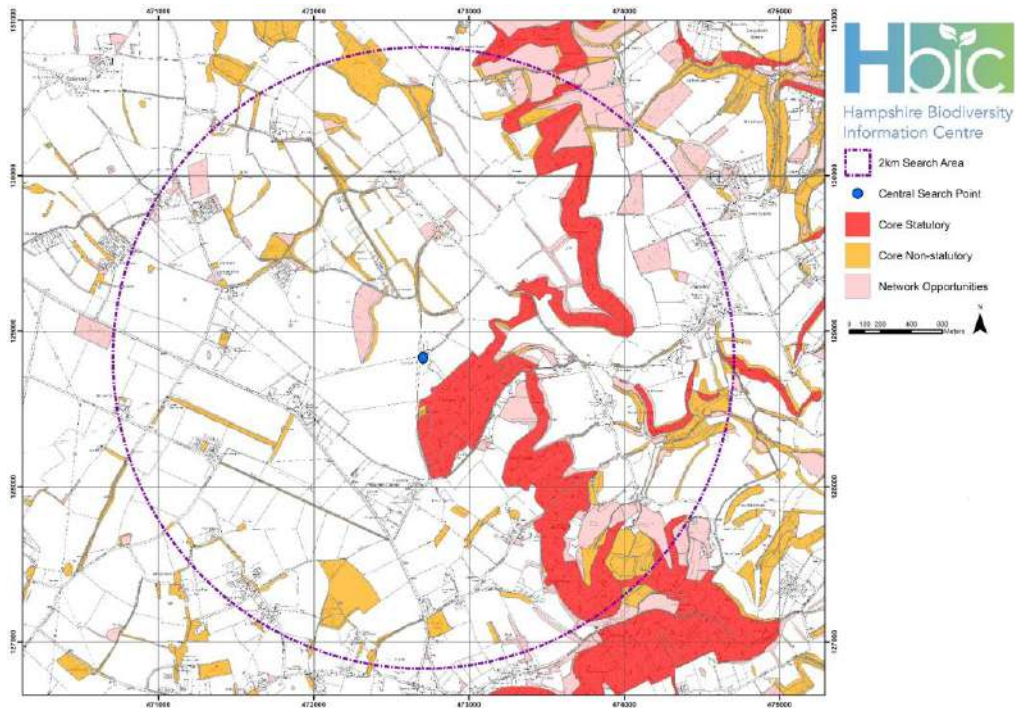


↑ Figure Six – Non-statutory Nature Conservation Sites

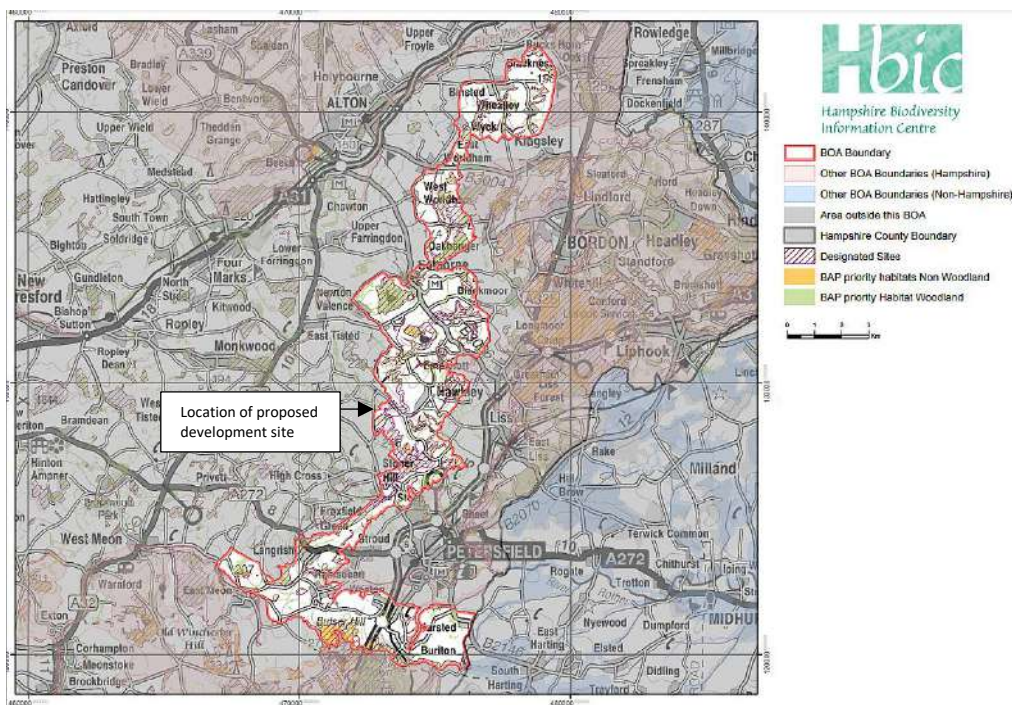




↑ Figure Seven – Outline of ecological enhancement measures to form part of the proposed development



↑ Figure Eight – Hampshire Ecological Networks plan



↑ **Figure Nine** – Hampshire Biodiversity Opportunity Area 08:  
The East Hampshire Hangers



↑ **Plate One** – Poor Semi-improved Grassland



↑ **Plate Two** – Scrub (left) Tall Ruderal patch (right)



↑ **Plate Three** – Barn One external character



↑ Plate Four - Barn One external character



↑ Plate Five - Barn One internal character



↑ Plate Six - Barn One internal character



↑ **Plate Seven** - Barn Two external character



↑ **Plate Eight** - Barn Two external character



↑ **Plate Nine** - Barn Two annexe building



↑ **Plate Ten** - Barn Two internal character



↑ **Plate Eleven** - Barn Two ridge construction



↑ **Plate Twelve** - Barn Two roof eave construction



↑ Plate Thirteen - Barn Two interior of weatherboard wall construction



↑ Plate Fourteen - Barn Two interior of annexe building



↑ **Plate Fifteen** - Barn Two West Gable wall potential bat roost features:  
Dense Ivy growth and roof verge gap