

PRELIMINARY ECOLOGICAL APPRAISAL
OF
CHIPPENHAM, WESTBROOK ROAD



Abricon Ltd
1 Lyons Court
Long Ashton Business Park
Yanley Lane
Long Ashton
Bristol
BS41 9LB
United Kingdom
Telephone: +44 (0)1275 391297
Website: www.abricon.com

Site Address	Chippenham, Westbrook Road
Report type	Preliminary Ecological Appraisal
Client	Boyce Design & Build Ltd
Project number	001WILL100

The material and data in this report were prepared under the supervision and direction of the undersigned.

	Name	Position
Prepared by	Benjamin Sear	Assistant Ecologist
Checked by	Helen Saunders MCIEEM	Principal Ecologist
Approved by	Jana Prapotnikova MCIEEM	Principal Ecologist/Director

Revision History		
Version	Issue Date	Revision
1.0	16 th November 2023	DRAFT
2.0	19 th December 2023	Amendments following quality assurance dated 5 th December 2023
3.0	4 th January 2024	Amendments following quality assurance dated 20 th December 2023

DISCLAIMER

Abricon has used reasonable skill and care in completing this work and preparing this report, within the terms of its brief and contract, and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the stated scope. This report is confidential to the client and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. The opinions and interpretations presented in this report represent our reasonable technical interpretation of the information made available to us. Abricon accepts no responsibility for information or data provided by other bodies, and accepts no legal liability arising from the use by other persons of data, information or opinions in this report.

Except for the provision of professional services on a fee basis, Abricon does not have a commercial arrangement with any other person or company involved in the interests that are subject of this report.

COPYRIGHT © Abricon Limited

The material presented in this report is confidential. This report has been prepared for the exclusive use of the client and shall not be distributed or made available to any other company or person without the knowledge and written consent of the client or Abricon Limited.

VALIDITY

Due to the dynamic nature of ecological conditions the results of the survey(s) and related conclusions and recommendations as contained within this report should only be considered valid for up to 12 months from the date the last survey was undertaken.

Any alterations to the site proposals may invalidate the recommendations contained within this report.

Non-Technical Summary

Purpose of the Report	Abricon Ltd. was commissioned by Boyce Design & Built Ltd. to undertake a Preliminary Ecological Appraisal (PEA) in order to inform proposals for the development at "the site" of land at Westbrook Road, Chippenham. This report has been produced to outline the existing ecological value of the site and the potential ecological constraints and opportunities relating to the proposed development.
Description of the scheme	It is understood that the proposed plans for the site comprise the conversion of existing buildings on site to form a new a new boutique hotel with the restored existing structure of Nonsuch House, farmstay accommodation and the construction of a welcome barn, gatehouse and parking area. The proposed works will also include landscaping the grounds with the construction of a large ornamental reservoir with a boat house and bird watching platform in the centre of the site with formal paths and new planting, tennis courts and managed lawn areas. To the east of the site a new residential building with associated soft and hard landscaping and garage, car parking and access infrastructure is proposed along with an estate barn used for wider estate and agricultural management. No works within the ancient woodland habitat are proposed, instead, it is proposed to retain and protect the woodland with buffer planting around the perimeter.
Methodology	A desk study was undertaken for the site in September 2023. A field survey was undertaken on 20 September 2023. A preliminary bat roost assessment (PBRA) of the buildings on site was also undertaken in September 2023.
Baseline Ecological Conditions	The site comprises a Grade II* Listed Manor House, and a wider Estate of approximately 18.11ha. The estate includes further residential properties and outbuildings, gardens, grazed pastureland in parkland-esque setting and ancient woodland. The manor house was largely destroyed in a fire in 2022 and currently has a temporary roof. The main habitats which make up the majority of the site are modified grassland with scattered trees and lowland deciduous woodland which includes ancient woodland. Other habitats on site include a pond, hedgerows, a stream and a traditional orchard (priority habitats) within the walled gardens. In addition, there are small areas of maize crops, other neutral grassland, formal gardens and a swimming pool (non-priority habitats).
Key Issues	<i>Habitats</i> The site contains a non-statutory designated site (Wyatt's Wood & The Coppice LWS) but does not contain statutory sites. The proposed plans for the site seek to retain and protect the majority of the priority habitats identified on site (with the exception of a small section of northern hedgerow). The proposed development will result in the loss of areas of the grassland as well as cropland habitats on site, however further wildlife friendly planting (tree, woodland, and meadow planning) and habitat creation (new irrigation lake) is included in the proposed plans. The habitats on site provide suitable habitat for a wide range of species. <i>Protected and notable species</i>

	5 buildings (6, 7, 10, 12 & 13) were identified as confirmed bat roosts as evidence of roosting bats was found within in the form of bat droppings or live bats. Several further buildings (1, 2, 5, 9 & 14), although no evidence of bats was found within, they were assessed as having potential roosting features which could conceal evidence within. Buildings 3, 4, 8 and 11 were not assessed/inspected as they are not proposed to be affected by the proposal/modified. Buildings 13 & 14 will remain unaffected. The area of grassland to the central aspect of the site hosts suitability for ground nesting birds, reptiles and traversing amphibians and is regularly used for grazing. The on-site pond has been assessed as average suitability for GCN. The northern hedgerow holds value for dormice and nesting birds. ██ ██
Recommendations	<i>Further surveys</i> Bat emergence surveys are recommended for Buildings (1, 2, 5, 6, 7, 9, 10 and 12). These will be required to inform the Bat Mitigation Licence application or to establish presence/absence of roosting bats. Bat activity surveys are also recommended to assess the use of the site by foraging and commuting bats and to inform Impact Assessment. A Ground Level Tree Assessment is recommended for any trees proposed for removal or otherwise affected by the planned works to establish the potential for individual trees on the estate to support roosting bats. Reptile surveys to establish presence / likely absence and population size (if present) on site. eDNA sampling surveys of the ponds on and offsite to establish the presence / likely absence of great crested newts. Badger surveys to establish the population size and the use of the site and to inform mitigation (if relevant). <i>Biodiversity Net Gain</i> A Biodiversity Net Gain (BNG) assessment will need to be completed to assess the development proposals' likelihood of achieving net gain in terms of biodiversity on site. A requirement to achieve at least 10% biodiversity net gain will be mandatory for major developments from January 2024.

1 Introduction

1.1 Survey Background, Aims & Objectives

- 1.1.1 Abricon Ltd. was commissioned by Boyce Design & Build Ltd. to undertake a Preliminary Ecological Appraisal in order to establish the likely impacts of the proposed development at “the site” at Nonsuch House, Westbrook, Bromham, Chippenham, Wiltshire, SN15 2ED.
- 1.1.2 A Preliminary Ecological Appraisal (PEA) of the site was undertaken in September 2023, with the aim of identifying any features, habitats and rare or protected species which would constitute potential constraints to the development taking place, and assessing the ecological value of the survey area, in order to make recommendations for any further surveys or other actions which may be required.
- 1.1.3 The PEA included:
- UK Habitat Classification Survey (UKHab, 2023);
 - identification of the presence of, or potential of the site to, support protected or notable species;
 - an assessment of any structures or trees to identify the presence of, or potential for, roosting bats and nesting birds;
 - a Habitat Suitability Index (HSI) Assessment of waterbodies for great crested newt; and
 - a desk study to identify any statutory or non-statutory sites and existing species records which may cause any constraints to development.
- 1.1.4 **This report is intended for use by the project design team by providing advice as to the likely ecological constraints present within the site, as well as to establish the requirements for further surveys and possible mitigation measures required in order to address the likely impacts of the proposed development. This report does not constitute a full ecological impact assessment.**

1.2 Site Description

- 1.2.1 Nonsuch House and Estate is located to the south of the A3102 (Westbrook Road) approximately 3 miles east of the rural town of Melksham. (Central Grid Reference ST 96512 65974).
- 1.2.2 The Estate extends to approximately 18.11 Ha and includes a Grade II* Listed Manor House and a further five residential properties with its own grazed pastureland in parkland-esqe setting, swimming pool, tennis court and walled gardens.
- 1.2.3 Nonsuch House and the East Wing were severely damaged by a fire in February 2022.
- 1.2.4 In addition, the Estate also includes a various discussed outbuildings providing garaging or storage and an estate office. There is also a traditional barn and a small range of agricultural buildings. The wider estate includes grazing land, small areas of cropland and woodland which forms part of Wyatt’s Wood Local Wildlife Site.
- 1.2.5 The site is bounded:
- to the north by the A3102 beyond which lies a horticultural nursery and agricultural fields,
 - to the east by a public bridleway (Stony Lane) beyond which (from north to south) are residential properties, agricultural fields and a woodland/local wildlife site,
 - to the west by farmland and a commercial fishery.
 - and to the south by Clackers Brook with further woodland and the residential gardens of properties on the outskirts of the village of Bromham.



Figure 1: Site Location Plan

Imagery ©2023 Bluesky, Infoterra Ltd & COWI A/S, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2023

1.3 Proposed Development

1.3.1 It is understood that the proposed plans for the site comprise:

- the conversion of existing buildings on site to form a new a new boutique hotel with the restored existing structure of Nonsuch House, along with new tennis courts, managed lawn areas and a parterre garden,
- the construction of a welcome barn, gatehouse and parking area in the central northern area,
- the construction in the east of the site of a new residence (Offsuch House) and a estate barn with garages, associated access, parking and infrastructure,
- landscaping in the centre of the site including the creation of a large irrigation reservoir with a boathouse, bird watching platform and new pathways,
- meadow planting along the edges of the pastureland
- new tree planting in the visitor parking area and eastern boundary
- buffer woodland planting along the ancient woodland edge for protection from intensification

1.3.2 The remaining grassland will continue to be grazed by livestock.

1.3.3 No works within the ancient woodland habitat are proposed, instead, it is proposed to retain and protect the woodland with buffer planting around the perimeter.

1.3.4 Buildings 3, 4, 8, 11, 13 & 14 are not included in the current proposals and no works are planned for these structures.

1.3.5 Site plans are provided in Appendix C at the end of this document.

2 Methodology

2.1 Desk Study

- 2.1.1 A desk study of existing ecological records for the site and surrounding land was conducted in September 2023.
- 2.1.2 Records of protected species and non-statutory sites for nature conservation were received from Wiltshire and Swindon Biological Records Centre (WSBRC) from within 2km of the site.
- 2.1.3 Only records from the past ten years (since 2013) were considered within this report, to ensure that the ecological baseline of the site and the surrounding area was established from up-to-date information.
- 2.1.4 Statutory designated sites within 2km of the development site were obtained from the UK Government's Countryside Geographic Information Website (MAGIC). Data was used in conjunction with an assessment of site plans and aerial photographs.

Table 1 – Consultees for the Desk Study

Consultee	Information Provided
MAGIC Website	Statutory sites for nature conservation / EPS license return data
WSBRC	Local species records and non-statutory sites for nature conservation
LPA – Wiltshire County Council website	Planning policies and guidance documents

2.2 Field Survey

- 2.2.1 A Preliminary Ecological Appraisal was conducted on 20th September 2023 by Jana Prapotnikova MCIEEM and Benjamin Sear BSc. The first stage of the assessment was to complete a Habitat Survey following standard methodology. A UKHab Classification Survey (UKHab, 2023) is a standard technique for classifying and mapping British habitats, and the aim is to provide a record of habitats that are likely to be ecologically important.
- 2.2.2 Following this the site and nearby surrounding land (where possible) were assessed for the presence of, or potential for, protected or notable species to be present, and an assessment was made on the likely impacts of the proposed development on such species.
- 2.2.3 This survey on its own cannot always determine the presence/likely absence of a species, nor does it provide a conclusive list of botanical species. It is intended to inform the requirement for, as well as the details of, Phase 2 surveys for species and important features.
- 2.2.4 It was 12°C with a mild northerly wind and rained throughout the course of the survey.

2.3 Building Inspection

- 2.3.1 The Preliminary Roost Assessment (PRA) of the buildings on site was conducted on the 20th September 2023 by Jana Prapotnikova (NE class 2 licence) and Benjamin Sear in order to identify any evidence of use by bats and nesting birds. The PRA was used to determine whether further surveys would be required in line with the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (2023) and to identify potential roosting features (PRF) onsite.

2.3.2 To assist in a thorough search for bats and nesting birds the following equipment was used;

- Binoculars;
- Million candle power spotlight (Clulite CB2);
- Head torch;
- Ladder; and
- Digital camera.

2.4 Great Crested Newts

Identification of Suitable Water Bodies

2.4.1 Water bodies occurring within 500m of the site and on the near side of any substantial boundaries (i.e. major roads) were identified using OS maps and aerial photography. There was one pond on site and further 4 ponds/lakes present within the buffer (all near the eastern site boundary).

Habitat Suitability Index (HSI) Assessment

2.4.2 Where access was available these waterbodies (only the pond on site was assessed) were subject to a Habitat Suitability Index assessment (Oldham et al. 2000) to establish their suitability to support breeding Great Crested Newt *Triturus cristatus*. Pond locations are shown in Figure 3 below.

2.4.3 The Habitat Suitability Index (HSI) assessment provides a means of evaluating habitat quality by ascribing a numerical value to various environmental factors. These are location, pond area, frequency of drying out, water quality, shade, water-fowl impact, presence of fish, number of ponds within 1km, local terrestrial habitat, and macrophyte (aquatic plant) cover.

2.4.4 The HSI is a numerical index between 0 and 1, where lower values indicate that the waterbody is of poor suitability to support breeding great crested newts, and higher values indicate that the waterbody is of good/excellent suitability. The HSI categorical scale of pond suitability is provided in Table 6 below. Please note that the system is meant to be used as an aid in the initial assessment process and is not precise enough to allow the conclusion that a pond with a high score will support great crested newts, or that those with a low score will not.

2.5 Personnel

2.5.1 Jana Prapotnikova has worked in the consultancy sector since 2006 with a focus on mammalian ecology, particularly bats and badgers. Jana runs Abricon's Ecology Department as well as being involved in project delivery. She has managed various ecological projects and has expertise in a range of ecological survey techniques including Phase 1 habitat assessments and a variety of protected species surveys (e.g. the aforementioned mammal species as well as reptiles and great crested newts). Jana also devises ecological mitigation schemes for a variety of protected species. She is well versed in producing preliminary ecological appraisals, BREEAM/CSH Ecology Assessments, protected species licences, Ecological Impact Assessments (EclA), Construction Environmental Management plans, Biodiversity Enhancement Schemes and Ecological Design Strategies. Jana holds Natural England and Natural Resources Wales Class 2 licence for bats as well as Natural England Class and Natural Resources Wales Class 1 licence for great crested newts. She is also a Registered Consultant of the Bat Low Impact Class Licence (BLIC) and holds a CSCS card. Jana is a full member of Chartered Institute of Ecology and Environmental Management (MCIEEM).

2.5.2 Benjamin Sear BSc has been working in environmental consultancy since 2020. He holds a BSc in a related field with honours. His primary experience comprises 'extended' Phase 1 habitat surveys for Preliminary Ecological Appraisals, Preliminary Roost inspections, report writing including EclA, BNG and CEMP's, protected species surveys and habitat mapping for Biodiversity Net Gain calculations. He is a qualifying member of CIEEM and has been trained in Arboriculture for detailed tree surveys with associated report writing and figure creation.

- 2.5.3 Helen Saunders BSc (Hons), PGDip, MCIEEM has worked in ecological consultancy for over 10 years and is an experienced project manager and environmental survey coordinator, including for major infrastructure projects. She is a full member of CIEEM and skilled in undertaking various ecological surveys including Preliminary Ecological Appraisal, protected species surveys and habitat condition assessment for Biodiversity Net Gain. Helen has also provided advice on wildlife legislation and planning policy including commenting on ecological matters regarding planning applications on behalf of local planning authorities.

2.6 Limitations

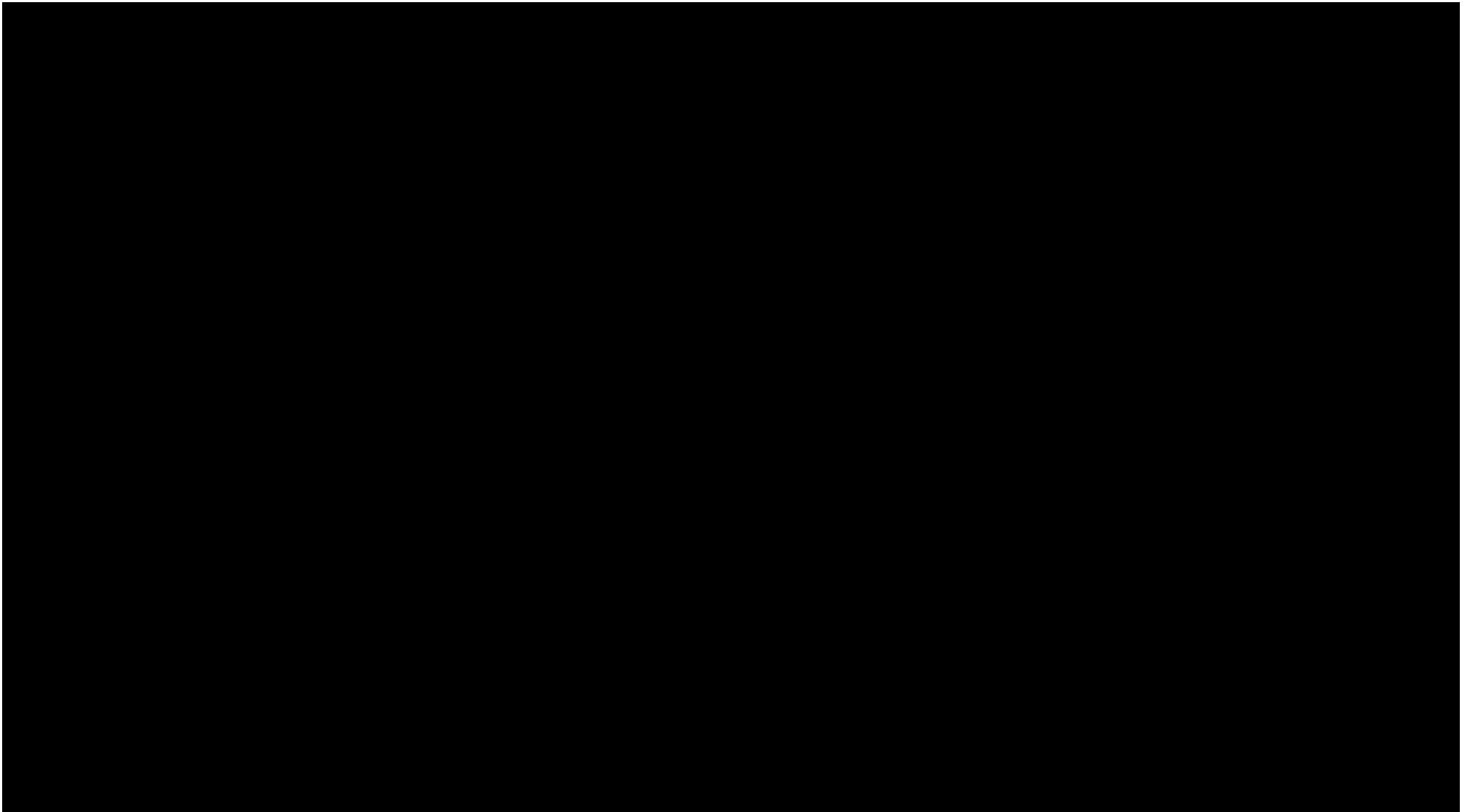
General Ecological Constraints

- 2.6.1 This survey only offers a “snapshot” of the site conditions and takes no account of seasonal differences, or of any species which may take up residence subsequently.

Site Specific Constraints

- 2.6.2 No site-specific constraints were encountered during the survey.
- 2.6.3 Although full access of the burned down Buildings 1 and 2 was not possible due to safety limitations, approximately 80% of the building was inspected internally including the basement present within.
- 2.6.4 The woodland was not fully surveyed although a walkover following the footpath running through the woodland was carried out as it is to be retained and protected under the proposed plans, therefore survey effort was focused along the northern edge of the woodland, the area closest to the development footprint.
- 2.6.5 The northern boundary was accessed from the southern side (so from the site) only, due to presence of busy A3102.

3 Ecological Appraisal Maps - Habitat Map



4 Results

4.1 Desk Study

Table 2 - Designated sites within 2km

Site Name	Designation	Reason for Designation	Approximate Distance from Site
Statutory Sites			
Spye Park	Site of Special Scientific Interest (SSSI)	A mixture of semi-natural & plantation woodland on greensand with some low-lying wet areas and remnant pasture woodland with old, pollarded trees.	1.2km northwest
Non-Statutory Sites			
Wyatt's Wood & The Coppice	LWS	An ancient woodland site Wet woodland on northwest facing slope.	On-Site and adjacent
Berrymoor Wood	LWS	A small ancient broadleaved woodland site comprising of two compartments on an east-facing slope. Mostly mature coppice and some plantation.	0.6km southwest
Colwell Copse	LWS	An ancient woodland site, formerly poplar plantation cleared and planted with hybrid poplars again.	0.7km northwest
Chittoe Mill Meadow	LWS	A mixture of semi-natural & plantation woodland on greensand with some low-lying wet areas and remnant pasture woodland with old, pollarded trees.	0.8km north
Silverstreet Lane Meadow	LWS	A small damp hay meadow in a forested area running down to the Chittoe Brook with unimproved neutral grassland and interesting fen communities.	0.8km northwest
Broadoak Wood	LWS	An ancient woodland site mainly of mature oak plantation over hazel with areas of suckering elm.	1km northwest
Spye Park Heath	LWS	Mosaic of lowland heath, acid grassland and bracken on a level greensand site, formerly used as a nursery plantation for Corsican Pine.	1.1km north
Prickmoor Wood	LWS	Mostly conifer plantation, with small semi-natural broadleaved stands on an ancient woodland site.	1.2km west
Silverstreet Wood	LWS	A small corner of high forest on Spye Park SSSI boundary.	1.3km northwest
Scutts Copse	LWS	A small stand of ancient semi-natural broadleaved woodland.	1.4km northwest
Maple Wood	LWS	A small stand of ancient semi-natural broadleaved woodland.	1.5km west

Horse Lane Farm, Brook Field	LWS	Two small neutral pastures with unimproved and semi-improved grassland, a small brook and the course of an older brook swamp and rush-pasture communities.	1.6km south
Reynolds Wood	LWS	Even aged mature oak plantation of tall trees except towards western edge where ash and birch take over.	1.6km northwest
St. Edith's Leigh Wood	LWS	A small stand of ancient semi-natural broadleaved woodland.	1.6km northeast
Southview Farm Meadow 1	LWS	A neutral hay meadow on gently sloping clay land with semi-improved mesotrophic grassland, bisected by a wet ditch with old Willow pollards.	1.7km northwest
Stable Moor Copse	LWS	A small stand of ancient semi-natural broadleaved woodland.	1.8km northeast
Deepets Wood Copse	LWS	A small ancient woodland site entirely replanted with conifers.	1.9km east
Basin Covert	LWS	Ancient woodland site with large areas of conifer plantation surrounded by a perimeter of semi-natural broadleaved woodland.	2km west
Southview Farm Meadow 2	LWS	A neutral hay meadow on gently rolling clay land with semi-improved mesotrophic grassland and large in-field Oaks.	2km northwest
The Brake	LWS	Even-aged plantation of mature ash and oak.	2km northwest
Whetham Woods	Local Wildlife Site (LWS)	Ancient semi-natural broadleaved woodland and conifer plantation.	2km northeast

4.2 Field Survey

Table 3 – Habitat Survey Results

HABITATS			
Feature	UKHab Code	Description	Evaluation
Priority Habitats			
Species-rich native hedgerow (H1)	h2a5	Two native species-rich native hedgerows were present along the northern boundary of the site. Woody species present included oak <i>Quercus robur</i> , blackthorn <i>Prunus spinosa</i> , hawthorn <i>Crataegus monogyna</i> , hazel <i>Corylus avellana</i> , elder <i>Sambucus nigra</i> and wild privet <i>Ligustrum vulgare</i> . Ground flora species present included ivy <i>Hedera helix</i> , broad-leaved dock <i>Rumex obtusifolius</i> .	The longer of two hedgerows (approximately 125 m in length) is potentially an Important Hedgerow under The Hedgerow Regulations 1997.
Lowland mixed deciduous woodland	w1f	To the northern and eastern boundaries of the site can be found strips of UK native woodland formed of the following woody UK native species: oak, hazel, field maple <i>Acer campestre</i> , ash <i>Fraxinus excelsior</i> , beech, horse chestnut, sweet chestnut <i>Castanea sativa</i> and Scots pine <i>Pinus sylvestris</i> .	Priority habitat under the NERC Section 41 Habitats and Species and UK BAP.
Lowland mixed deciduous woodland Ancient Woodland Site	w1f 28	A c.4ha in size ancient woodland habitat area can be found in the southern aspect of the site. Woody UK native species include oak, field maple, ash, beech, horse chestnut, sweet chestnut and Scot's pine. Ground flora within the woodland includes wood sorrel <i>Oxalis acetosella</i> , wood anemone <i>Anemonoides nemorosa</i> , lungwort lichens <i>Lobaria pulmonaria</i> , harts tongue fern <i>Asplenium scolopendrium</i> , common lady fern <i>Athyrium filix-femina</i> and springy turf moss <i>Rhytidiadelphus squarrosus</i> .	Ancient woodland is a material planning consideration and requires a 15m buffer surrounding it to protect it from development activities.
Other rivers and streams	r2b	Clackers Brook is a reportable WFD water body, with an overall classification of 'Poor'.	Clackers Brook has been valued at Local importance, as it is likely to provide habitat of value to aquatic species at the local scale.
Traditional orchard	g27	Open-grown fruiting domestic apple <i>Malus sp.</i> and pear <i>Pyrus sp.</i> trees within a walled garden with herbaceous vegetation. The swimming pool is located in this walled habitat area (TN1).	Wildlife foraging potential.
Other Habitats			
Modified grassland with scattered trees	g4 11	The grazed pastureland in parkland-esqe setting habitat across the centre of the site is predominately grazed modified grassland with scattered trees which covers approximately 60% of the site. The grassland was dominated by perennial ryegrass <i>Lolium perenne</i> with other species present including tormentil <i>Tormentil</i> , a brome <i>Bromus sp.</i> , docks <i>Rumex spp.</i> and yellow oatgrass <i>Trisetum flavescens</i> Several mature trees are scattered throughout	Nutrient rich and generally species poor sheep grazed grassland – low/moderate ecological value.

		the grassland including cherry, lime, beech <i>Fagus sylvatica</i> and horse chestnut <i>Aesculus hippocastanum</i> .	
Other neutral grassland	g3c	More species-diverse tussocky grassland comprising smooth meadow grass <i>Poa pratensis</i> , cock's-foot <i>Dactylis glomerata</i> , yarrow <i>Achillea millefolium</i> , common ragwort <i>Senecio jacobaea</i> , yellow oatgrass <i>Trisetum flavescens</i> , cow parsley <i>Anthriscus sylvestris</i> , false oatgrass <i>Aarhenatherum elatius</i> , a hawksbeard <i>Crepis sp.</i> , cats-ear <i>Hypochaeris radicata</i> , meadow barley <i>Hordeum brachyantherum</i> , ribwort plantain <i>Plantago lanceolata</i> , common sorrel <i>Rumex acetosa</i> .	Moderate/high ecological value.
Developed land – sealed surface. Buildings	u1b5	The main complex of buildings on site are located within the north-western corner of the site. These include Nonsuch House, further residential properties and stone, timber or brick-built farmyard outbuildings. Locations are shown in Figure 2 below. There is also a single-storey tin-roofed engine shed within the ancient woodland habitat area and a small stone outbuilding within the walled orchard.	Detailed descriptions and potential of the buildings to support roosting bats and nesting birds are shown in Table 7.
Developed land – sealed surface. Other developed land	u1b6	There are paved access routes into the site and hard-standing parking provision.	Negligible ecological value
Artificial unvegetated unsealed surface	u1c	Gravel access driveway connecting the entrance of the site to the Nonsuch house and its related outbuildings.	Negligible ecological value
Standing Water – Pond (Non-Priority)	r1a 41	A 280m ² pond was found within the ancient woodland habitat area.	The on-site pond has been assessed as holding average suitability for Great Crested Newts (GCN).
Freshwater, Ditch	r50	Three c.100m drainage ditches found within the ancient woodland habitat area, leading to Clackers Brook.	Moderate ecological value.
Bracken	g1c	A c.50m ² area of bracken-dominated grassland habitat area can be found along the central section of the northern edge of the ancient woodland.	Limited ecological value.
Other cereal crops	c1c7	Two fenced off areas containing maize crop <i>Zea mays</i> is located in the site's eastern aspect.	Negligible ecological value.
Line of trees	g33	A line of Lawson's cypress <i>Chamaecyparis lawsoniana</i> trees and a line of laurel <i>Laurel sp.</i> trees is present north and south of the tennis court area.	Low ecological value.
Vegetated garden	u828	Collection of grassland areas, shrub beds and trees found within the garden bounds of Nonsuch House as well as the garden associated with Building 11 'The Bungalow'.	Low ecological value
Invasive Species	TN2	<i>Rhododendron ponticum</i> was noted within the ancient wet woodland and <i>cotoneaster sp.</i> to the hedgerow found southeast of the hard standing pathway and parking area, bounding the existing fence line.	Schedule 9 invasive species.



Table 4 – Protected Species Survey Results

Protected and Notable Species		Habitat Assessment	Field Signs	Evaluation of potential presence or absence
Badgers				
Bats	Roosting Bats - Structures	14 buildings on site (see Figure 2).	Records of multiple bat roosts were noted within 2km of the site including: LHB – records of significant maternity roost of 199 bats and several hibernation roosts (mostly in buildings). 3 records of smaller maternity roost adjacent or possible on site. GHB – including 1 day roost and 2 small hibernation roosts. BLE – 1 maternity roost of 32 bats CP – one possible maternity roost and 2 smaller roosts Ser – 1 small maternity roost SP – 1 day roost Furthermore, field records of barbastelle bats were noted within 2km buffer.	Confirmed roosts: Buildings 6, 7, 10, 12 and 13 (Denoted by TN4 on Figure 3). Evaluation of potential suitability of the buildings onsite: High: Building 5 Moderate: Buildings 9 and 14 Low: Buildings 1 and 2 Not evaluated: Buildings 3, 4, 8 and 11

Protected and Notable Species		Habitat Assessment	Field Signs	Evaluation of potential presence or absence
			Direct sightings, droppings, urine, grease marks, and feeding remains were found during the site survey in multiple buildings (see table 7 for full details).	
	Roosting Bats - Trees	Multiple mature trees are present on site and within the woodland areas.	Various trees containing Potential roosting Features (PRFs) were noted on site and within the woodland areas – accidental observation as full Ground Level Tree Assessment was not carried out.	Likelihood of presence: high
	Foraging/Commuting Bats	There is of high-quality foraging habitat, i.e. broadleaved woodland, hedgerows and grazed pastureland in parkland-esqe setting, well connected to the wider landscape via woodland edge and continuous hedgerows / tree lines and a tree lined watercourse (Clacker's Brook).	There are 295 records for 12 bat species within a 2km search area of the site boundary. The closest of which are 3 records for LHB maternity roost (15 count) located adjacent to the site (or possible on site).	Suitability of habitat: High Summary: Based on Bat Conservation Trust (BCT) Guidelines (Collins, 2023) the site is considered to offer high quality, continuous flight paths and foraging habitat for a wide range of bats including Annex II species such as lesser and greater horseshoe and barbastelle bats.
Birds		Structures: On roofs or under eaves. Within barns, stables and other buildings with open access. Cavities within the walls Site: Woodland, trees, hedgerows, pond/stream and taller grassland and bracken all considered optimal for variety of bird species.	There were 115 local records for wild birds within 2km of the site boundary. The closest of which are red kite <i>Milvus milvus</i> and starling <i>Sturnus vulgaris</i> . Direct sightings, nests, droppings and Feathers within multiple building including robin, swallow and tit. A red kite was observed perching within the crown of a lone oak tree in the central of the site - TN5.	Likelihood of presence: Confirmed Summary: The use of the farm-related outbuildings and stables by species such as observed during the site survey. The site provides nesting and foraging opportunities for birds within the hedgerows and trees around the site boundaries, the ancient woodland habitat. Presence of ground nesting birds like skylarks within the grassland habitats on site likely.
Dormouse		The woodland areas onsite provide good resources for foraging and nest building and are well connected to further woodland and the wider landscape.	No records of dormice found within the 2km buffer. No field signs or local records of hazel dormice <i>Muscardinus avellanarius</i> although thorough search not performed.	Likelihood of presence: Moderate Summary: Although no records of dormice were found within desktop search, it is possible a population of dormice is present in the woodland and hedgerow areas on site.
Great Crested Newt		1 potential breeding pond (P1) was identified within the ancient woodland on site.	The LRC data search returned one record for GCN 1.4km to the northeast. No direct sightings.	Likelihood of presence Moderate Summary: There is abundant suitable habitat around the pond for GCN in their terrestrial phase and elsewhere around the site for dispersing newts

Protected and Notable Species	Habitat Assessment	Field Signs	Evaluation of potential presence or absence
	6 additional waterbodies were identified within 500m of the site boundary – 2 of which were north of A3102 which is considered to be a barrier to newt dispersal. There was a range of optimal terrestrial habitat on site which includes most semi-natural environments including rough grassland, woodland, hedgerows, and low-intensity farmland. Tree stumps, mammal burrows, stone piles, log piles, compost heaps for shelter and hibernation. The site lies in yellow (moderate) risk zone for GCN (Defra).	HSI score of the onsite pond was 0.63 – average suitability (Table 5). The offsite ponds have not been assessed due to lack of access.	including with the taller grassland and ruderal habitats.
Otter	A shallow stream (Clacker's Brook) can be found to the southern boundary of the site within the ancient woodland. this does represent a suitable habitat for otters due to the wide variety of selection for potential holt locations but does not likely provide an adequate foraging resource for otter.	No direct field sightings. The protected species record search revealed that there is a single historical record for otter <i>Lutra lutra</i> within 2km of the site, namely a record found 0.6km west of the site boundary (dead otter at the side of the A3102). The only waterway near that record is Clackers Brook.	Likelihood of presence: Moderate Summary: Recent record of otter noted during data search. Record linked to Clackers Brook.
Water vole	The site hosted vegetated banks alongside the southern stream system as well as a pond.	No direct field sightings. There are 5 historical records for water vole <i>Arvicola amphibius</i> within 2km of the site boundary, all found 0.6km northwest of the site, north of A3102.	Likelihood of presence: Low Summary: There are no recent records for water on or near a waterway connected to the site. Records separated from site by A3102.
Reptiles	Mosaic of habitats with potential for Shelter, basking and foraging including rough grassland, bracken, hedgerows, woodland, and garden areas. Numerous potential refugia and hibernation areas found on site which include tree stumps, mammal burrows, stone piles, and log piles.	No direct field sightings. 13 historical records for reptiles can be found within 2km of the site boundary. The closest 3 reptile records include for grass snake <i>Natrix helvetica</i> 1.3km northwest and 2km south, as well as common lizard <i>Zootoca vivipara</i>, found 1.5km north of the site.	Likelihood of presence: Moderate Summary: Reptiles are most likely present with the habitats on site.

Protected and Notable Species	Habitat Assessment	Field Signs	Evaluation of potential presence or absence
Hedgehog	The grassland, farmland, woodland, gardens and hedgerows all offer suitable foraging and sheltering habitat.	No direct sightings. There are 19 records for hedgehog <i>Erinaceus europaeus</i> within 2km of the site boundary, the closest of which can be found on the northern boundary of the site.	Likelihood of presence: High Summary: There is an abundance of suitable habitat. Hedgehog are considered highly likely to be present on site.
Brown Hare	Grassland, woodland edges. Favours a mosaic of arable (cereal crops), grassland (with long areas for shelter) and hedgerows. Hare forms (resting places) may be in a grass tussock or behind a rock to give some protection.	No sightings or field signs e.g. hare forms were observed but there are 15 records for brown hare <i>Lepus europaeus</i> within 2km of the site boundary, 2 of which can be found within the bounds of the site.	Likelihood of presence: Moderate/High Summary: The site provides suitable habitat for brown hare in the form of the former arable grassland, since there are local records, it is considered that they have a low likelihood of being present on site.
Invertebrates	The site provides diverse range of habitats (mature trees, deadwood, tussocky grassland, waterbodies, and hedgerows) suitable for common and widespread species. However, majority of the grassland was species poor, the sward height relatively uniform and the site does not contain a diverse mosaic. The ancient woodland potentially provides a suitable habitat for rarer and saproxylic species	No field signs due to rain during the site survey. Local species records indicate that a range of widespread species can be found within 2km of the site boundary: cinnabar, grey dagger, buff ermine, emerald phoenix, blood vein, oak hook tip, ghost hook tip, white admiral, grizzled skipper and violet oil beetle. These species are associated with broadleaved/deciduous woodland and grassland habitat types which are found on-site.	Likelihood of presence: Moderate Summary: The site provides some suitable habitat for a wide range of common species, however, the modified grassland habitat which forms the majority of the site provides relatively low value habitat for invertebrates

Table 5 – HSI assessment of pond onsite.

	Pond 1
Date HSI Assessment Undertaken	20/09/2023
SI1 – Location	1
SI2 – Pond area	0.55
SI3 – Pond drying	0.9
SI4 – Water quality	0.67
SI5 – Shade	0.2
SI6 – Fowl	1
SI7 – Fish	0.67
SI8 – Ponds	0.45
SI9 – Terrestrial habitat	1
SI10 – Macrophytes	0.5
HSI Score	0.63
Suitability	Average



Figure 3 - Ponds within a 500m buffer of the site boundary.

5 Summary of Ecological Constraints and Recommendations

Table 6 – Ecological Constraints and Opportunities

Feature	Summary	Potential Constraints and Opportunities	Recommendations – Further Surveys, Mitigation & Enhancement Measures
Designated Sites			
Statutory Designated Sites	The site is not within any statutory designations. One statutory designated site is present within 2km of the site boundary, Spye Park SSSI	Given the distance away and the nature of then development proposals, no significant impacts on Spye Park or any other statutorily designated sites are anticipated. The site does not fall within any SSSI impact risk zone.	No mitigation is deemed to be required.
Non-Statutory Designated Sites	Wyatt Wood LWS is within the bounds of the site.	The development footprint of the proposed plans is outside of the woodland area which is being retained and protected.	A minimum of 15m buffer should be established and fencing erected to ensure there is no encroachment into the buffer zone or protected area. A Construction Ecological Management Plan (CEcMP) should be prepared to detail how the habitats within and surrounding the site should be protected during the construction phase – usually conditional requirement of planning permission.
	Twenty other non-statutory sites which are afforded protection through Wiltshire's Core Policy 50 Local Sites lie within 2km of the site. One of these 'The Coppice LWS' is immediately adjacent the site along the southwest boundary.	No significant impacts on any other non-statutorily designated sites are anticipated.	No mitigation is deemed to be required.
Priority Habitats			
Species-rich Native Hedgerows	Hedgerows are a Habitat of Principal Importance (NERC Act, 2006).	The hedgerows are considered to be important ecological features in a site context. A small section of the northern hedgerow (approx. 15m) requires removal to create new site access.	The removed section should be translocated elsewhere on site rather than removed. The remainder of the hedgerow should be retained and protected through the construction phase through the installation of tree-protection fencing.

Feature	Summary	Potential Constraints and Opportunities	Recommendations – Further Surveys, Mitigation & Enhancement Measures
		The remaining section of the hedgerow may be damaged during the construction phase.	Protection measures should be outlined within CEMP document.
Lowland deciduous mixed woodland	This habitat is a Habitat of Principal Importance (NERC Act, 2006).	[REDACTED]	Retain and protect these habitat areas as part of development proposals. Protection measures should be outlined within CEMP document.
Ancient Woodland Site	Ancient woodland is a Habitat of Principal Importance (NERC Act, 2006), as well as a material planning consideration. It is also classed as irreplaceable habitat within BNG criteria.	The habitat shall be retained and protected as part of development proposals, as well as the creation of a buffer surrounding the ancient woodland to enhance and protect it from development activities.	Removal of non-native schedule 9 invasive species (Rhododendron) from the ancient woodland habitat area is recommended. Protection measures should be outlined within CEMP document.
Stream	Rivers and streams are a Habitat of Principal Importance (NERC Act, 2006).	The brook is considered to be sufficiently distant from the works that no impacts are anticipated.	No mitigation is required
Buildings	Fourteen buildings were present within the site. Buildings' suitability for roosting bats is discussed within the 'Bats' section below.	Constraints to the re-development see 'Bats' and 'Birds' sections below.	See the 'Bats' and 'Birds' sections below
Modified Grassland	n/a	No major constraints, as this habitat is of low ecological value.	The impact of habitat losses is discussed further within the 'Biodiversity Net Gain' section below.
Scattered trees		No trees are proposed to be removed.	It is recommended that trees are protected during construction where possible. All retained trees will need to be protected from indirect artificial lighting impacts (new internal, external or street lighting if proposed) and evidenced by Isolux plan. Ground Level Tree Assessment for bats are recommended for any trees where indirect impacts (i.e. increase in artificial lighting) are anticipated.

Feature	Summary	Potential Constraints and Opportunities	Recommendations – Further Surveys, Mitigation & Enhancement Measures
Other neutral grassland	n/a	Loss of this habitat will lead to a reduction in traversing grassland habitat for amphibians, reptiles and mammals, as well as foraging habitat for invertebrates.	Any habitat lost to development must be replaced on a like-for-like basis as a minimum or assign an existing area of lower value grassland to be enhanced for wildlife.
Orchard	n/a	This habitat will be modified as part of the proposed plans – turned into Estate Working garden.	Retention of fruiting trees is encouraged, of if removal required (i.e. due to disease) replacement planting is recommended.
Other Habitats			
Standing Water–Pond (Non-Priority)	Ponds are a Habitat of Principal Importance (NERC Act, 2006).	The pond will be retained and protected as part of development proposals.	No mitigation is required
Ditch	3 ditches are present within the ancient woodland area. All 3 ditched are directly connected to the stream present in the southern site boundary.	The ditched will be retained and protected as part of the development proposals.	Protection measures should be outlined within CEMP document.
Bracken	n/a	The bracken habitat area is likely to be lost to the planting of the ancient woodland buffer zone.	Bracken has low ecological value however clearance should undertake using precautionary measures due to the potential presence of protected or notable species such as adder and grass snake or nesting (game) birds.
Cropland	n/a	The cropland on site will be retained in the eastern part of the site and amalgamated as part of the proposals.	Limited ecological value no mitigation is required.
Line of trees	A short section of non-native Lawson cypress tree and Laurel tree line	This habitat shall be lost to the proposed development.	Limited ecological value no mitigation is required.
Vegetated garden	n/a	This habitat shall be retained as part of development proposals.	No mitigation is required
Invasive Species	It is an offence under the Wildlife and Countryside Act 1981 (as amended) to plant or allow to spread in the wild any species listed under Schedule 9 of the Act.	The rhododendron in the woodland is unlikely to be impacted by the development. The cotoneaster sp. within the formal garden may be removed or disturbed by the development.	Assessment by a specialist is recommended. Any schedule 9 species that are removed should be buried on site or removed from site by a licenced specialist contractor.
Protected and Notable Species			

Feature		Summary	Potential Constraints and Opportunities	Recommendations – Further Surveys, Mitigation & Enhancement Measures
Badgers		Badgers are protected by the Protection of Badgers Act 1992		
Bats	Roosting Bats	All bats are protected by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.	In the absence of mitigation, it is considered that the proposed works may result in the loss of bat roosts. It is also considered that the proposed works could potentially cause the disturbance and accidental killing and/or injury of bats during the construction phase.	To inform a planning application for the site and prior to work commencing, emergence surveys are recommended on various buildings on site between May and August – see further details in table 7 below. A European Protected Species (EPS) licence will likely be required to enable the works to proceed legally. A mitigation (where required) plan will be compiled following the completion of the emergence surveys.
	Foraging/Commuting Bats	Site contains optimal bat foraging and commuting habitats/features and is in rural setting.	In the absence of mitigation, the proposed plans (which include changes to habitat composition and site management) might result in a loss/modification of foraging habitats available to bats (including Annex II species) and/or distribution of important commuting routes.	Further surveys are required to determine the use of the site by foraging and commuting bats and to inform mitigation (where relevant). Survey guidelines for habitats of 'high' suitability state that three Night-time Bat Walkover (NBW) surveys should be completed, in Spring (April/May), Summer (June – August) and Autumn (September/October). Furthermore, NBW should be complemented by automated/static bat detector survey with static detectors deployed in strategic locations. Data to be collected for a minimum of 5 consecutive nights per month (April – October) in appropriate weather conditions.

Feature		Summary	Potential Constraints and Opportunities	Recommendations – Further Surveys, Mitigation & Enhancement Measures
				Sensitive lighting plans for the site will be required
Birds		All birds are protected under the Protection of Birds Act (1951). Breeding birds and their nests are protected under the Wildlife and Countryside Act 1981. Site has suitability to support ground nesting birds. Some birds, e.g. barn owl, kingfisher, etc., are further protected under Schedule 1 of the Act.	As large areas of suitable ground nesting bird habitat will be affected by the works. Furthermore, the proposed plans (which include changes to habitat composition and site management) might result in a loss/modification of habitats available to birds. Timing restrictions during site clearance/demolition will apply.	Further breeding bird surveys are required to assess how birds make use of the site and to inform mitigation. Demolition of existing buildings and vegetation clearance should be undertaken outside of nesting bird season (typically March–August inclusive). If vegetation clearance/demolition works within nesting bird season cannot be avoided, then nesting bird inspections by a suitably experienced ecologist will be required prior to work commencing. Any active nests found would need to be protected until eggs have hatched and young fledged.
Dormouse		Dormice are fully protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019) and the Wildlife and Countryside Act (1981).	A 15m section of norther hedgerow is proposed to be removed/translocated in order to widen the site access area. There is a potential for these works to result in the possible killing, injury and disturbance of dormice.	Presence/absence dormice surveys of the site in the recognised survey season of April - Nov and to inform mitigation (if required).
Great Crested Newt		Great Crested Newt are fully protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019) and the Wildlife and Countryside Act (1981). Site located in yellow risk zone for GCN (Defra).	The pond on site is being retained under the proposals, however, there is a risk to individual dispersing newts during their terrestrial phase. There is a potential for the development activities to result in the possible killing, injury, and disturbance of great crested newts.	eDNA survey of the on-site pond and the 4 off-site ponds not separated from the site by barrier of dispersal (if access possible) to assess for presence/likely absence. Alternatively, a district licence is applied for through Natural England, in conjunction with submitting the planning application to the LPA for the development.
Otter		Otters are a European Protected Species (EPS) and are fully protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations	As the there are no planned works to the stream or woodland habitat no impacts are anticipated.	No further surveys are required

Feature	Summary	Potential Constraints and Opportunities	Recommendations – Further Surveys, Mitigation & Enhancement Measures
	(2019) and the Wildlife and Countryside Act (1981). Clackers Brook and the ancient woodland provide suitable habitat for otters.		
Reptiles	Common lizard, slow worm, grass snake, and adder are partially protected under the Wildlife and Countryside Act 1981. The variety of habitats on site provide optimal habitat for reptiles.	The proposed works may result in the accidental killing/injury of individuals during clearance and the loss of optimal reptile habitat which may be supporting a population of reptiles.	Presence/absence surveys and population assessment (if required) to determine reptile usage of the site in the recognised survey season of May-October and to inform mitigation (if required).
Water vole	Water Vole are protected under schedule 5 of the Wildlife and Countryside Act (1981). Clackers Brook and the ancient woodland provide suitable habitat for Water voles.	As there are no planned works to the stream or adjacent habitat no impacts are anticipated	No further surveys are required.
Other Considerations			
Biodiversity Net Gain	Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) will have to deliver <i>at least</i> 10% biodiversity net gain. This requirement will become mandatory for major developments from January 2024.	Current site proposals are likely to result in a net loss in habitat units and to a lesser extent hedgerow units.	It is recommended that a Biodiversity Net Gain Assessment is completed, using the latest DEFRA Biodiversity Metric. Results of DEFRA metric will therefore need to be used to inform the scope of on-site and off-site (if needed) compensatory habitat creation/management which is required to offset this net loss, and deliver a net gain for biodiversity as a result of the proposed development.

Table 7 – Description of Buildings, Findings and Bat Roost Potential

Building	Map Ref	Description + Findings	Roost potential	No. of surveys required
Nonsuch House	1	18 th century Grade II* manor house. Stone rubble with ashlar dressing. Severely damaged by fire in 2022. Currently has a temporary roof. Small number of PRFs present within walls.	Low	1
East Wing	2	Attached wing to main house. Severely damaged by fire in 2022. Currently has a temporary roof. Small number PRFs present within walls.	Low	1
The Stables	3	One storey converted stable block with 2-storey gabled centre. Built of ironstone rubble with ashlar dressings. Stone slate roof. No roof void present. Only external inspection carried out.	High	NA as no works proposed for this habitable building
Stable End	4	One storey stone / ashlar cottage with stone slate roof. No roof void present. Only external inspection carried out.	High	NA as no works proposed for this habitable building
Barn A	5	Utilised as garage. Stone and brick barn with clay tiles. No evidence found. Multiple PRFs present mostly within roof.	High	3
Estate Office	6	Brick built estate office building with clay pitched roof currently used for storage. 2 medium sized bat droppings found, and disused swallow's nest also noted.	Confirmed	3
Estate Office	7	Brick built estate office building with clay pitched roof currently used for storage. 4 live Lesser horseshoe bats (LHB) found inside the loft of this building. Furthermore, large amount of LHB droppings and small number (>50) of medium sized bat found in the loft and the room of the building – DNA analysis confirmed presence of LHB and brown long-eared bats (BLE). Single fly-in entrance noted on the NE elevation first floor.	Confirmed	3
Gate Cottage	8	Two storey rendered brick habited residence with concrete roof tiles. Only external inspection carried out.	Moderate	NA as no works proposed for this habited building
Barn B	9	Wooden L-shaped stable block with corrugated asbestos roof (lined). No evidence of bat found. Recent swallow's nests present in most parts. Multiple PRFs present mostly within walls or interiors.	Moderate	2
Dovecote	10	Two storey brick cottages with stone slate roof. Several patches of LHB droppings (each patch containing >50 droppings) and feeding remains were found in the converted loft room and in the ground floor room of this building. An attached open fronted lean-to used for	Confirmed	3

		storage also contained small number of LHB droppings. Multiple open fly-in entrances present. Robin's nest was also noted present inside the lean-to.		
The Bungalow	11	A brick built detached habited residence with pitched tile roof. Only external inspection carried out. Not inspected.	Not assessed as not part of the proposals	NA
Barn C	12	A brick and stone barn with clay tile roof and attached open fronted lean-to. Approximately 10 droppings were found scattered inside this building (in most rooms). DNA analysis confirmed these were derived from common pipistrelle and Natterer's bats.	Confirmed	3
Engine Shed	13	Small concrete block structure with corrugated asbestos roof. A patch of approximately 50 LHB droppings noted inside. Doorway permanently open. Bird's nests present on top of wall plate.	Confirmed although this structure will not be affected/alter ed.	NA
Summerhouse	14	Small Grade II listed rubble stone built summerhouse with pyramidical, stone-slatted roofed at southern point of triangular walled garden. Multiple PRFs present within roof.	Moderate	NA as no alterations proposed

Table 8 – Ecological Survey Timings Calendar

Ecological Survey Calendar



1 Lyons Court, Long Ashton Business Park, Long Ashton, Bristol, BS41 9LB

T: 01275 391297 F: 01275 392231 E: ecology@abricon.com

	Optimal period for surveys
	Suboptimal time for surveys
	Surveys not possible

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
Phase 1 habitat survey	Sub optimal			Optimal period						Sub optimal			
NVC	No surveys possible			Optimal Period						No surveys possible			
Bats (building inspection)	All year												
Bats (activity surveys)	No surveys possible		Limited activity	Optimal period for emergence and activity surveys						No surveys possible			
Bats (ground based tree assessment)	Optimal period				Sub Optimal				Optimal period				
Bats (tree climb & inspect surveys)	Optimal period				Sub optimal				Optimal period				
Bats (hibernation surveys & monitoring)	Optimal period		Sub optimal	No surveys possible						Sub optimal	Optimal period		
Dormouse	Nut search		Nest tube surveys									Nut search	
Great crested newt (aquatic surveys)	Hibernation: no survey possible		Pond surveys (egg searching, netting, bottle trapping, torchlight)				Habitat and larvae surveys only			Hibernation: no survey possible			
Great crested newt (terrestrial phase)	Hibernation: no survey possible		Habitat assessments;						Hibernation: no survey possible				
Otter	Surveys possible all year; limited by weather, vegetation cover and access												
Badger		Optimal period for bait marking							Sub optimal				
	Surveys possible all year; limited by weather, vegetation cover and access												
Birds	Winter bird surveys			Common bird census						Winter bird surveys			
				Breeding bird survey									
Reptiles	Hibernation: no survey possible		Limited activity	Optimal period for reptile surveys						Limited activity	Hibernation: no survey possible		
Water voles	Habitat assessment only		Surveys possible throughout this period; limited by weather, vegetation cover and access									Habitat assessment only	
White-clawed crayfish	Habitat assessment only; no surveys possible			Torchlight surveys only				Optimal period (trapping, torchlight and refugia search)			Habitat assessment only; no surveys possible		
Invertebrates	No surveys possible		Sub optimal	Optimal period						No surveys possible			

References

- Andrews, R. (2013). The Classification of Badger *Meles meles* Setts in the UK: A Review and Guidance for Surveyors. *In Practice*, Volume 82, pp. 27-31.
- CIEEM (2017^a) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management (CIEEM), Winchester.
- CIEEM (2017^b) *Guidelines on Ecological Appraisal 2nd Edition*. Chartered Institute of Ecology and Environmental Management (CIEEM), Winchester.
- Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th edition*. The Bat Conservation Trust, London.
- DCLG (2012). *National Planning Policy Framework*, DCLG, London.
- Defra (2007). *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. 2nd ed.* Defra, London.
- English Nature (2001). *Great crested newt mitigation guidelines*. English nature. Peterborough
- Hundt L. (2012). *Bat Surveys: Good Practice Guidelines 2nd Edition*. Bat Conservation Trust, London.
- Institution of Lighting Professionals (2023). *Bats and artificial lighting in the UK: Guidance Note 08/23*. Institution of Lighting Professionals, Rugby.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001). *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.
- Natural England (2016) *Great Crested Newts: Surveys and Mitigation for Development Projects – Standing Advice*. Online at: <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence> (Accessed December 2021).
- Oldham R. S., Keeble J., Swan M. J. S & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.
- UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://www.ukhab.org>)
- UK Governments Countryside Geographic Information website: www.magic.gov.uk

Appendix A – Wildlife Legislation & Policy

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Certain species are known as European Protected Species (EPS) and these are fully protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019). The Conservation of Habitats and Species Regulations (2017) is the transposition of the European Habitats Directive (1992) to UK legislation, amended in 2019 in accordance with Schedule 7 to the European Union (Withdrawal) Act 2018. Species protected under this legislation include (but is not limited to) bats, dormice *Muscardinus avellanarius*, great crested newts *Triturus cristatus* and otter *Lutra lutra*.

For European Protected Species, it is a criminal offence to:

- Deliberately capture, injure or kill any such species;
- Deliberately disturb wild animals of any such animal;
- Deliberately take or destroy their eggs;
- Damage, destroy, or obstruct access to a breeding site or resting place, whether the animal is present or not; and
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of a European Protected Species, or any part of, or anything derived from, such an animal.

Operations which will affect European Protected Species may require a development licence from the relevant national statutory body for nature conservation, which provides a derogation for an otherwise unlawful activity.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) makes it a criminal offence to:

- Kill, injure, or take any wild bird (with exceptions to species listed in Schedule 2);
- Take, damage or destroy the nest of any wild bird while in use or being built;
- Take or destroy an egg of any wild bird;
- Intentionally kill, injure or take any wild animal listed on Schedule 5;
- Interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places;
- Pick or sell any plants listed under Schedule 8 (such as bluebells); and
- Plant or allow to spread in the wild any species listed under Schedule.

Protection of Badgers Act 1992

Under this legislation, badgers in the UK are protected from harm (taking, injuring or killing and from cruelty) and from disturbance whilst in a sett. In addition, badger setts themselves are protected from damage, destruction or obstruction of access to whether a badger is present or not. Allowing a dog to enter a sett is also illegal.

Protected Sites

Within the UK, certain sites are afforded protection measures based on their level of importance to wildlife. They fall into two categories - statutorily designated sites and non-statutorily designated sites.

Statutorily designated sites are typically of national or international importance and as such are afforded the greatest levels of protection under various pieces of legislation. Statutory sites include Special Areas of Conservation (SAC), Special Protection Areas (SPA), National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and RAMSAR sites.

Non-statutorily designated sites are normally designated by local authorities or nature organisations and are typically of local or county wide importance for their conservation interest. Non-statutory sites include Listed Wildlife Sites (LWS), Local Nature Conservation Sites (LNCS), Sites of Importance for Nature Conservation (SINC), Sites of Nature Conservation Importance (SNCI).

Properties of non-governmental organisations such as Wildlife Trusts may also be managed for their importance to biodiversity. These areas often have no statutory basis, but often comprise part of a designated site.

The Hedgerows Regulations 1997

The Hedgerows Regulations 1997 provide ecological and historical criteria for defining 'important' hedgerows. Most hedgerows are protected from removal without permission by a local planning authority. However, permission to remove a hedgerow can only be refused if a hedgerow is assessed to be 'important' under the Hedgerows Regulations.

Environment Act (2021)

Under the Environment Act 2021, all planning permissions granted in England (with a few exemptions) will have to deliver at least 10% biodiversity net gain. This requirement becomes mandatory from January 2024. BNG will be measured using Defra's biodiversity metric and habitats will need to be secured for at least 30 years.

National Planning Policy Framework (2023)

National Planning Policy Framework (NPPF) (2023) sets out Government Policy on Biodiversity and Nature Conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications. NPPF also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within the development.

The Natural Environment and Rural Communities Act (2006)

Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006) sets out a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) drawn up in consultation with Natural England, provides a guide to local and regional authorities when implementing their duty as defined in Section 40 of the NERC Act 2006;

- "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity." - Section 40(1).
- "Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". Section 40(3).

Therefore, local planning authorities must '*have regard*' to conserving priority species and habitats. Priority species include several bat and bird species, otter, hazel dormouse, water vole, hedgehog, brown hare, harvest mouse, polecat, common reptile species, great crested newt, and common toad. Priority habitats include lowland mixed deciduous woodland, hedgerows, lowland calcareous grassland, arable field margins, traditional orchards, ponds, rivers, wood pasture and parkland.

Protection of Birds Act (1954)

Protection of wild birds, their nests and eggs

If, save as permitted by or under this Act, any person wilfully:

- kills, injures or takes, or attempts to kill, injure or take, any wild bird; or
- takes, damages or destroys the nest of any wild bird while that nest is in use; or
- takes or destroys an egg of any wild bird, or if any person has in his possession or control any wild bird recently killed or taken which is not shown to have been killed or taken otherwise than in contravention of this Act or any order made thereunder, they shall be guilty of an offence against this Act and, if that offence is committed in respect of a bird included in the First Schedule to this Act or in respect of the nest or egg of such a bird, shall be liable to a special penalty.

Appendix B – Site Photographs



Photograph 1: Building 2 northern elevation.



Photograph 2: Buildings 5,7 and 6 southern elevation.



Photograph 3: Building 6 – Estate Office N gable and E elevation.



Photograph 4: Building 8 – Gate Cottage.



Photograph 5: Building 9 – Barn B.



Photograph 6: Lean-to attached to the Dovecote (building 10).



Photograph 7: Building 12 – Barn C.



Photograph 8: Species-rich native hedgerow to the north of the site



Photograph 9: Lawson cypress line of trees north of the tennis court



Photograph 10: Part of Woodland strip in northern boundary (eastern aspect).



Photograph 11: Ancient Woodland



Photograph 12: Building 13 – Engine/water pumping shed found in the Ancient Woodland.



Photograph 13: Other neutral/rank grassland found to the fringes of the modified grassland in the northern part of the site along the species rich hedgerow.



Photograph 14: Example of scattered trees throughout the site that hold some level of bat roost suitability.



Photograph 16: Modified grassland (grazed) that comprised the majority of the site.

