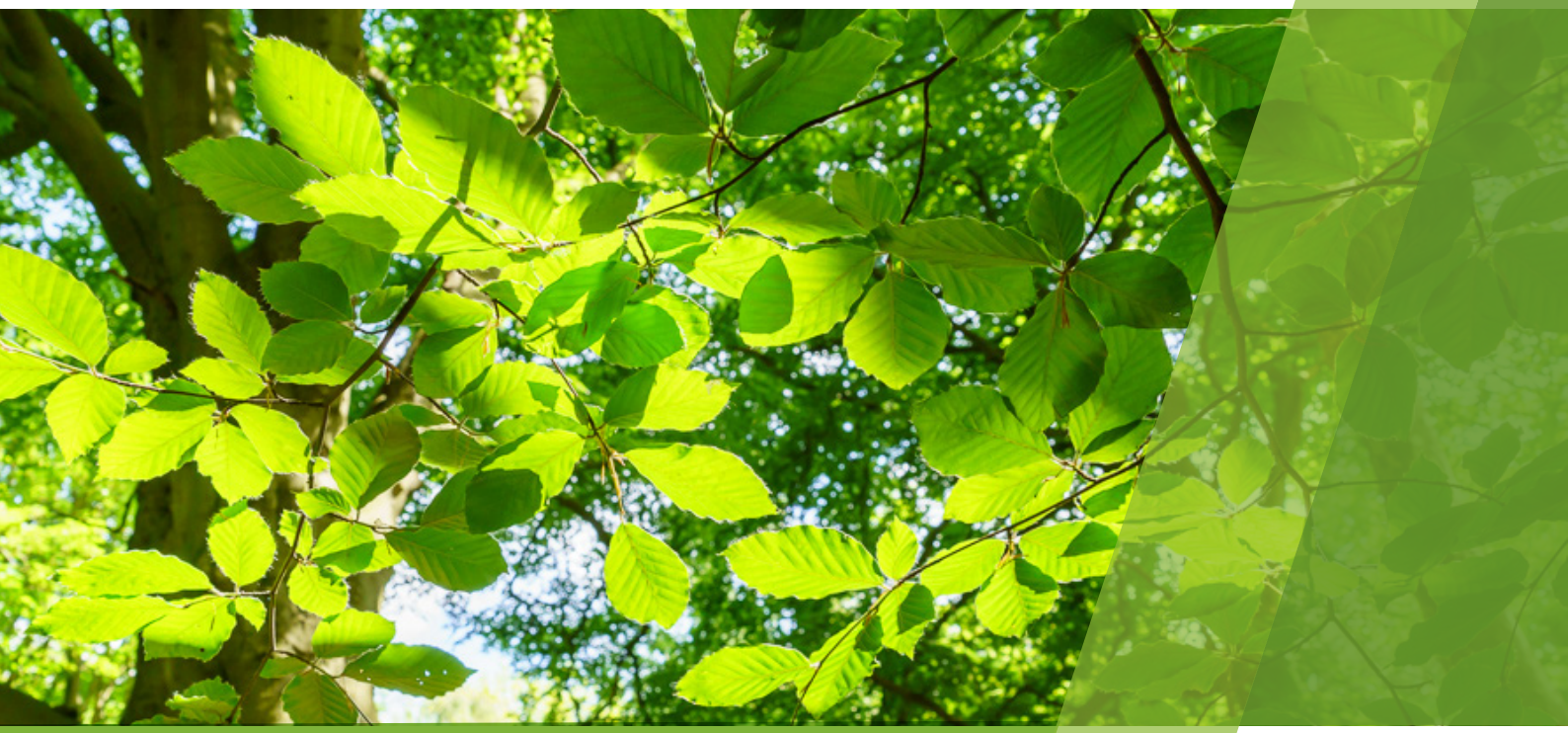
Greenwood



PRELIMINARY ECOLOGICAL APPRAISAL

CLIENT: Dipesh Patel

SITE: 69 Copse Wood Way, Northwood, HA6 2TZ

CONSULTANT: Margarita Smoldareva BSc PGDip

CHECKED BY: Oliver Tong ND Arb TechArborA

DATE: 13th of June 2022

REF: 1482 FINAL

Greenwood Environmental Ltd | Company No. 10749899 | VAT No. GB328956949

Reg. Office: 98 Hornchurch Road, Hornchurch, Essex, RM11 1JS

Contact: hello@greenwood-env.co.uk

Report Summary

Greenwood Environmental Ltd was commissioned by Dipesh Patel to provide a Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment for 69 Copse Wood Way, Northwood, HA6 2TZ. The purpose was to classify the habitats present, highlight the potential of the site to support protected species, and recommend suitable avoidance, mitigation, compensation ad ecological enhancement measures where appropriate. When implemented successfully, these recommendations will ensure that the development proceeds in line with all relevant laws pertaining protected species and their habitats, as well as contributing to an increase in site biodiversity.

Based on current proposals, the results of the Preliminary Ecological Appraisal can be summarised below:

Habitat Retention and Protection: The development proposals should be designed (where feasible) to allow for the retention of existing notable habitats including mature deciduous trees on the border of the site. Protection measures are outlined in Recommendation section.

Roosting Bats: Main residential dwelling at 69 Copse Wood Way, HA6 2TZ has high potential to support roosting bats as bat droppings were found within the loft void. Therefore, no unlicensed work can be undertaken which will contravene the legislation. Full advice is in Recommendation Section.

Biodiversity Enhancement: In accordance with the provision of Chapter 15 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed development to work towards delivering net gains for biodiversity. Examples are outlined in Recommendation section.

Lighting: In accordance with best practise guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples are outlined in Recommendation section.

Terrestrial Mammals Including Foxes and Hedgehog: Excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each workday to prevent animals entering/becoming trapped.

Reptiles: Retain rooting wood within the site and avoid additional disturbance during the construction phase. Provide natural dispersal routes through fencing.

Nesting Birds: Vegetation clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). Further information is provided in Recommendation section.

Invasive Plants

Rhododendron is Schedule 9 plant species of the WCA 1981 (as amended) and therefore limiting its growth and further spread outside the site boundary is recommended.

Validity of Report

This report is valid for one year from the date of the survey visit. Should works be delayed to later than one year after the survey than a further update of the site would be required as habitats change over time, along with their potential to support protected species.

Ecologist qualifications

Ecologist Details

Name: Margarita Smoldareva – Ecologist
Company: on behalf of Greenwood Environmental Ltd

Qualifications (in Ecology or related subject):
BSc (Hons) in Landscape Management (Land Use) in 2013 (University of Greenwich)
Postgraduate Diploma in Landscape Ecology with GIS in 2018 (University of Greenwich)
Currently studying MSc Connected Environments at University College London

Memberships:
Qualifying member of CIEEM
Landscape Institute Associate Member
Institute of Environmental Management and Assessment Associate Member

Relevant Experience:
Margarita Smoldareva has 7 years' experience (within the last 7 years) and gained a wide range of ecological skills through academic and professional experiences. She has worked in ecological consultancy during several survey seasons and has experience undertaking protected species surveys and Phase 1 Habitat Surveys. Margarita gained a Great Crested Newt Licence in 2019 and has been involved in multiple reptile translocation projects.

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Introduction

Project Background

In May 2022, Dusek Design Associates Ltd authorised Greenwood Environmental Ltd to undertake a Preliminary Ecological Appraisal of the site at 69 Copse Wood Way, Northwood, HA6 2TZ. This assessment is required to inform a planning application associated with facilitating construction of one new residential dwelling.

To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on 26th May 2022.

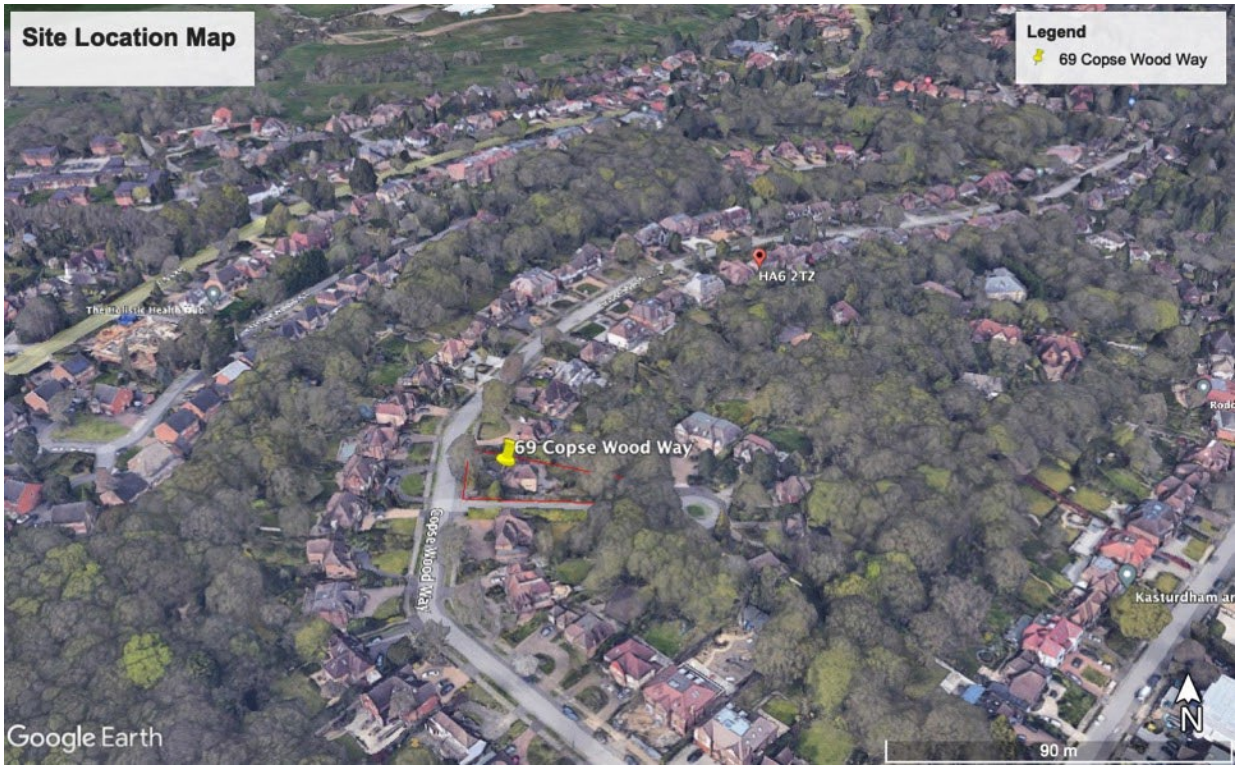


Figure 1: Site Location on Google Earth

Site Description and Context

The site is an irregular shaped parcel of land located in a semi-urban setting. The site measures to 0.12 ha and located off Copse Wood Way, Northwood. The site is centred at National Grid Reference TQ07969067.

At the time of the survey, the site comprised of residential building with an attached garage, introduced shrubs, plantation woodland, scattered trees, hedgerow and amenity grassland. The plantation woodland to the rear garden has mature trees with limited understorey growth and it is proposed to retain all this habitat.

The site is outside Hillingdon Greenbelt but is near the site. To the south, Ruislip Woods National Nature Reserve is present which spreads out further to Mad Bess Wood and Park Wood which is also designated as Site of Special Scientific Interest (SSSI).

Further green spaces include Northwood Golf Course to the east, The Gravel Pits to the north, and to the east large agricultural fields with hedgerows are present.

Documentation Provided

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.

Document Name / Drawing Number	Author
Proposed Site Layout and Location Plan	Dusek Design Associates Ltd

Table 1: Documentation Provided by Client

Methodology

Desk Study

An ecological desk study was undertaken to determine the presence of any designated nature conservation sites in proximity to the site. The consultee for the desk study was Natural England - *MAGIC* website for statutory conservation sites. The desk study included a search for UK statutory sites within a 2 km radius.

Phase 1 Habitat Survey

The walkover survey was conducted following the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. During the survey, the presence, or potential presence, of protected species was noted.

Whilst every effort is made to notify the client of any plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981, as amended) present on site, it should be noted that this is not a specific survey for these species.

Preliminary Bat Roost Assessment Field Survey

In line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), a Preliminary Bat Roost Assessment of the residential building was conducted during daylight hours. A visual assessment was undertaken to determine the presence of any Potential Roost Features (PRFs), together with a general appraisal of the suitability of the site for foraging and commuting. Table 2 provides examples of PRFs. Any accessible PRFs were inspected using binoculars, a torch and endoscope for evidence of possible bat presence. The building was surveyed externally and internally. For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

Based on the PRF's present, the survey area was assessed using the suitability classes detailed within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), as shown in Table 3.

Example of Potential Roost Features	
Internally	Externally
behind wooden panelling;	Access through window panes, doors and walls;
in lintels above doors and windows;	behind peeling paintwork or lifted rendering;
behind window shutters and curtains;	behind hanging tiles;
behind pictures, posters, furniture, peeling paintwork;	weatherboarding;
	eaves;
peeling wallpaper, lifted plaster and boarded-up windows;	soffit boxes;
	fascias;
inside cupboards and in chimneys accessible from fireplaces.	lead flashing;
	gaps under felt (even including those of flat roofs);
within attic voids:	under tiles/slates.
the top of gable end or dividing walls;	
the top of chimney breasts.	

Table 2: Potential Roost Features (Adapted from Collins, 2016)

Suitability	Description
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Negligible	Negligible habitat features on site likely to be used by roosting bats.

Table 3: Classification of Structures with Bat Potential (Adapted from Collins, 2016)

Habitat Suitability Index Assessment – Great Crested Newts

All surveyed ponds were visually assessed for their suitability to support great crested newts by a suitably qualified ecologist. Ponds were assessed utilising the great crested newt Habitat Suitability Index (HSI) developed by Oldham *et al* in 2000 and revised by ARG UK in 2010. The HSI is a numerical index between 0 and 1, wherein a score of 1 represents optimal habitat for great crested newts. The HSI score is used to define the suitability of the pond on a categorical scale (Table 4). It should be noted, however, that the system is not precise enough to allow the conclusion that a pond with a high score will definitely support great crested newts whilst those with a low score will not.

HSI SCORE	POND SUITABILITY TO SUPPORT BREEDING GREAT CRESTED NEWTS
< 0.5	**POOR**
0.5 – 0.59	**BELOW AVERAGE**
0.6 – 0.69	**AVERAGE**
0.7 – 0.79	**GOOD**
> 0.8	**EXCELLENT**

Table 4: Great Crested Newt HSI Scoring

The HSI is given by assigning a quantitative figure to each of 10 variables, including pond area, water quality and level of shading, which are all factors thought to affect great crested newts. The tenth root of the product of these variables is then calculated, giving a figure for habitat suitability.

An ecological walkover assessment of the site was undertaken in order to assess the suitability of the habitats on site to support great crested newts. An assessment was also made of the habitat connectivity between ponds and the site, based on a review of habitat survey data (if available), aerial imagery and mapped sources.

Legislation and Policy

This chapter provides an overview of the framework of legislation and policy which underpins nature conservation and is a material consideration in the planning process in England. The reader should refer to the original legislation for the definitive interpretation.

General Biodiversity Legislation And Policy

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (the Habitats Regulations 2019)

The Habitats Regulations 2017 (as amended) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into English and Welsh law. Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1 January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of sites or species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

The Habitats Regulations 2019 have created a 'National Site Network' on land and at sea, including both the inshore and offshore marine areas in the UK. The National Site Network includes:
Existing Special Areas of Conservation (SACs), which are designated due to their importance to the habitats and species listed in Annexes I and II of the Habitats Directive;
Existing Special Protection Areas (SPAs), which are designated due to their importance for wild birds in accordance with the Wild Birds Directive; and,
New SACs and SPAs designated under these Regulations.

SACs and SPAs in the UK no longer form part of the European Union's Natura 2000 ecological network. Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new National Site Network. However, guidance provided by Freeths (2020) recommends that SACs and SPAs can continue to be referred to as "European sites" / "European marine sites".

Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats. All Ramsar sites remain protected in the same way as SACs and SPAs.

The 2019 Regulations establish management objectives for the National Site Network. The network objectives are to:
Maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status; and,
Contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

The appropriate authorities must also have regard to the:
Importance of protected sites;
Coherence of the National Site Network; and,
Threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

The network objectives contribute to the conservation of UK habitats and species that are also of pan-European importance, and to the achievement of their favourable conservation status within the UK.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Habitat Regulations 2017 and the Habitats Regulations 2019, offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species.

The Countryside and Rights of Way (CRoW) Act 2000
The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the National Assembly for Wales to have regard for biodiversity, and provides increased powers for the protection and maintenance of SSSIs. The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The Natural Environment and Rural Communities (NERC) Act 2006
Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. These lists superseded Section 74 of the CRoW Act 2000.

The Hedgerow Regulations 1997
The Hedgerow Regulations make provision for the identification of important hedgerows which may not be removed without permission from the Local Planning Authority.

UK Post-2010 Biodiversity Framework
The UK Biodiversity Action Plan (BAP), published in 1994, was the UK Government's response to signing the Convention on Biological Diversity (CBD) at the 1992 Rio Earth Summit. The new UK Post-2010 Biodiversity Framework replaces the previous UK level BAP. The UK Post-2010 Biodiversity Framework covers the period 2011-2020 and forms the UK Government's response to the new strategic plan of the United Nations Convention on Biological Diversity (CBD), published in 2010 at the CBD meeting in Nagoya, Japan. This includes five internationally agreed strategic goals and supporting targets to be achieved by 2020. The five strategic goals agreed were:
Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
Reduce the direct pressures on biodiversity and promote sustainable use;
To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
Enhance the benefits to all from biodiversity and ecosystem services; and,
Enhance implementation through participatory planning, knowledge management and capacity building.

The Framework recognises that most work which was previously carried out under the UK BAP is now focused on the four individual countries of the United Kingdom and Northern Ireland, and delivered through the countries' own strategies. Following the publication of the new Framework the UK BAP partnership no longer operates but many of the tools and resources originally developed under the UK BAP still remain of use and form the basis of much biodiversity work at country level. In England the focus is on delivering the outcomes set out in the Government's 'Biodiversity 2020: a Strategy for England's Wildlife and Ecosystem Services' (DEFRA, 2011). This sets out how the quality of our environment on land and at sea will be improved over the next ten years and follows on from policies contained in the Natural Environment White Paper.

Species and Habitats of Material Consideration for Planning in England
Previous planning policy (and some supporting guidance which is still current, e.g. ODPM Circular 06/2005, now under revision), refers to UK BAP habitats and species as being a material consideration in the planning process. Equally many local plans refer to BAP priority habitats and species. Both remain as material considerations in the planning process but such habitats and species are now described as Species and Habitats of Principal Importance for Conservation in England, or simply priority habitats and priority species under the UK Post-2010 Biodiversity Framework. The list of habitats and species remains unchanged and is still derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006. As was previously the case when it was a BAP priority species hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

National Planning Policy Framework And Practice Guidance

In July 2021, the National Planning Policy Framework (NPPF) was updated, replacing the previous framework published in 2012 and revised in 2018 and 2019. A presumption towards sustainable development is at the heart of the NPPF. This presumption does not apply however where developments require appropriate assessment under the Birds or Habitats Directives.

Chapter 15, on conserving and enhancing the natural environment, sets out how the planning system should contribute to and enhance the natural and local environment by:
protecting and enhancing existing sites of biodiversity value;
minimising impacts on and providing net gains for biodiversity; and,
establishing coherent ecological networks.

If a proposed development would result in significant harm to the natural environment which cannot be avoided (through the use of an alternative site with less harmful impacts), mitigated or compensated for (as a last resort) then planning permission should be refused. With respect to development on land within or outside of a Site of Special Scientific Interest (SSSI) which is likely to have an adverse effect (either alone or in-combination with other developments) would only be permitted where the benefits of the proposed development clearly outweigh the impacts on the SSSI itself, and the wider network of SSSIs. Development resulting in the loss of deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons for the development, and a suitable compensation strategy is provided.

Chapter 15 identifies that development whose primary objective is to conserve or enhance biodiversity should be supported and opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature.

Chapter 11, making effective use of the land, sets out how the planning system should promote use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Substantial weight should be given to the value of using suitable brownfield land within settlements for homes and other identified needs. Opportunities for achieving net environmental gains, including new habitat creation, are encouraged.

In March 2014 the Department for Communities and Local Government released guidance to support the National Planning Policy Framework (NPPF), known as the National Planning Practice Guidance (NPPG).This has been produced to provide guidance for planners and communities which will help deliver high quality development and sustainable growth in England.

The guidance includes a section entitled 'Natural Environment: Biodiversity, geodiversity and ecosystems and green infrastructure', which was updated in July 2019. This document sets out information with respect to the following:
the statutory basis for seeking to conserve and enhance biodiversity;
the local planning authority's requirements for planning for biodiversity;
what local ecological networks are and how to identify and map them;
how plan-making bodies identify and safeguard Local Wildlife Sites, including Standard Criteria for Local Wildlife Sites;
the sources of ecological evidence;
the legal obligations on local planning authorities and developers regarding statutory designated sites and protected species;
definition of green infrastructure;
where biodiversity should be taken into account in preparing a planning application;
how policy should be applied to avoid, mitigate or compensate for significant harm to biodiversity and how mitigation and compensation measures can be ensured;
definitions of biodiversity net gain including information on how it can be achieved and assessed; and,
the consideration of ancient woodlands and veteran trees in planning decisions and how potential impacts can be assessed.

The NPPG July 2019 issue also includes a section entitled 'Appropriate assessment: Guidance on the use of Habitats Regulations Assessment' which provides information in relation to Habitats Regulations Assessment processes, contents and approaches in light of case law. This guidance will be relevant to those projects and plans which have the potential to impact on European Sites and European Offshore Marine Sites identified under the Conservation of Habitats and Species Regulations 2017 (as amended).

Desk Study Results

Nature Conservation Sites

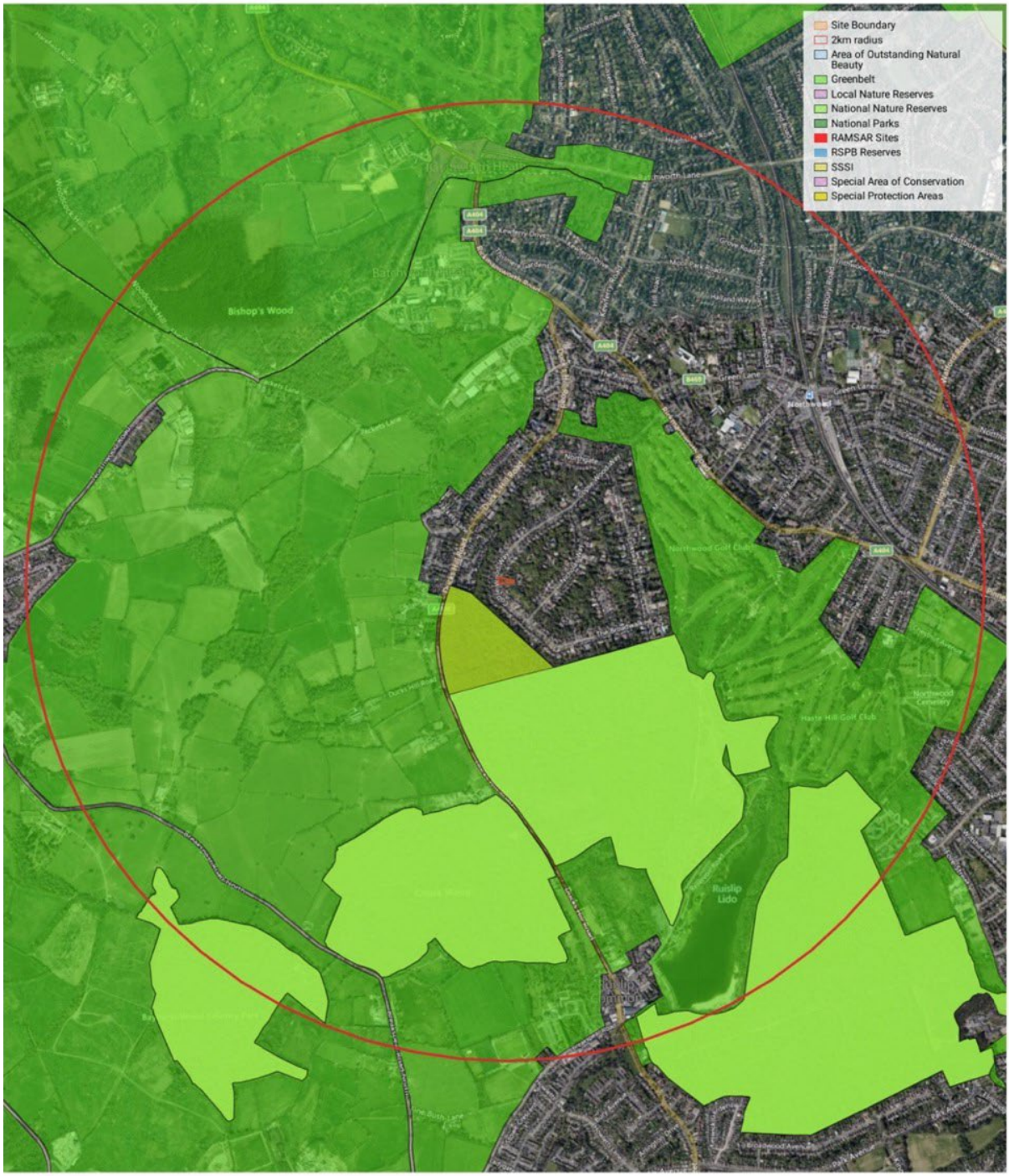
Statutory nature conservation sites located in proximity to the survey area are summarised in Table 5. Map 1 shows the Site location and the 2 km radius.

Site Name	Designation	Proximity to Survey Area
UK Statutory Sites		
Batchworth Heath	Local Nature Reserve	1.7km
Ruislip Woods including Copse Wood, Bayhurst Wood Country Park	Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR)	360m

Table 5: Summary of Nature Conservation Sites

The site is within SSSI Impact Zone however due to small scale of the development; it is believed that no opposing impact will be caused to habitats and species associated with Ruislip Woods SSSI/NNR.

Sites Designated for Wildlife Conservation within 2km



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Site: 69 Copse Wood Way, HA6 2TZ

500 m
Scale 1:20769 (at A4)

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Map 1: Sites Designated for Nature Conservation with 2 km of Site Boundary

Phase 1 Habitat Survey

The survey was carried out on 26th May 2022 by Margarita Smoldareva BSc (Hons) PGDip, Ecologist.

Parameter	Condition
Temperature (ºC)	15
Cloud (%)	20
Wind (Beaufort)	F0-1
Precipitation	Dry

Table 3: Weather Conditions During Field Survey

Habitats on Site

Habitats recorded on site are described below. Target Notes (TN) are also noted in the description and located on the Phase 1 map.

Amenity Grassland

Well maintained historically grassland to the front of the building and the rear garden. At the time of the survey the grass was cut short. Species recorded: dominated by perennial rye grass *Lollium perenne* with an occasional black medick *Medicago lupulina* and white clover *Trifolium repens.* In some areas introduced shrubs were noted growing within this habitat however due to small scale it was challenging to highlight within the habitat map.

To the north of the site boundary, in the neighbouring private garden, standing waterbodies was recorded.

Attribute	**Description**
Pond P1	
Description	A small sized pond to the north (off-site)
Grid Reference	TQ07969068
Pond Area	Approximately 4 m^2
Distance from Development Boundary	Approximately 3m north
Permanence	Rarely dries
Water Quality	Poor – heavy algal blooms or surface scum.
Shade	70% from nearby vegetation.
Macrophytes	Limited levels of macrophyte presence recorded.
Egg Laying Habitat	Limited egg laying opportunities provided by present macrophytes. No leaf litter present during the survey.
Open Courtship Area	Small areas of open water suitable for courtship present.
Wildfowl	None recorded during the survey.
Fish	No evidence of fish recorded.
Surrounding Terrestrial Habitat	Heavy duty pond lining and sharp edging presents difficulties for dispersal, no further standing waterbodies within 250m radius.

Pond Ref.	**HSI Category**										**HSI Score**
	SI 1	**SI 2**	**SI 3**	**SI 4**	**SI 5**	**SI 6**	**SI 7**	**SI 8**	**SI 9**	**SI 10**	
P1	1	0.01	0.9	1	0.01	1	1	0.01	0.67	0.01	0.29 (poor)

Key:

SI 1 – Location
SI 2 – Pond Area
SI 3 – Pond Drying
SI 4 – Water Quality
SI 5 – Shade
SI 6 – Waterfowl
SI 7 – Fish
SI 8 – Ponds Within 1km
SI 9 – Terrestrial Habitat
SI 10 – Macrophytes

Table 6: **HSI Scoring Table for Waterbodies**

Introduced Shrubs

Portions of introduced shrubs were noted growing within amenity grassland borders to the west and east of the site. Species included: *Griselia* sp., *Hebe sp*, Japanese acer *Acer palmatum,* elephant ears *Colocasia esculenta, Iris sp.*

TN2 – To the rear garden some of the introduced shrubs were in potted.

TN5 – *Rhododendron ponticum* plants were noted to the rear of the garden which are Schedule 9 plant species.

Scattered Trees

Numerous mature scattered trees were located to the west, south-west and one to the mid-north of the site. All trees were in good condition and are set to remain as part of the proposed development. Species included: oak *Quercus robur* and Cypress *Cupressus sp*..

Planted Woodland

To the east of the site, deciduous woodland plantation was recorded containing mature trees which had consistent canopy cover and dominated by oak trees. This habitat is to be retained as part of the proposed development. Due to the closed canopy cover the understorey growth was limited and comprised of common ivy *Hedera helix* as a ground cover. Along the northern site boundary bramble *Rubus fructicosus* was noted as an understorey growth.

TN3 – Dead wood was noted, and it is recommended that it is retained.

Species Poor Intact Hedgerow

Privet *Ligustrum sp*., hedgerow was recorded along the southern site boundary used to provide natural screening and historically managed. Few gaps few noted within the hedgerow.

Hardstanding

Residential building with attached garage were to the centre of the site with paved access road, vehicle parking area to the west and further paved areas to the rear of the building.

The building was two storey brick built with clay tiled hipped roof. It was in good state of repair and had undergone full inspection for bat evidence – please refer to bat roost assessment section for further information.

TN1 – The building was noted as high potential to provide bat roosting opportunities.

Fauna recorded during Site visit

Eurasian Blue tit *Cyanistes caeruleus*

Invasive Plants

Rhododendron ponticum – TN5

Plate 1: Entrance to the Property off Copse Wood Way

Plate 2: Plantation Woodland and dead wood

Plate 3: Standing Waterbody (off-site)

Plate 4: Limited Ground Cover

Plate 5: Rear garden – amenity grassland, scattered trees and Rhododendron

Plate 6: Rear Garden

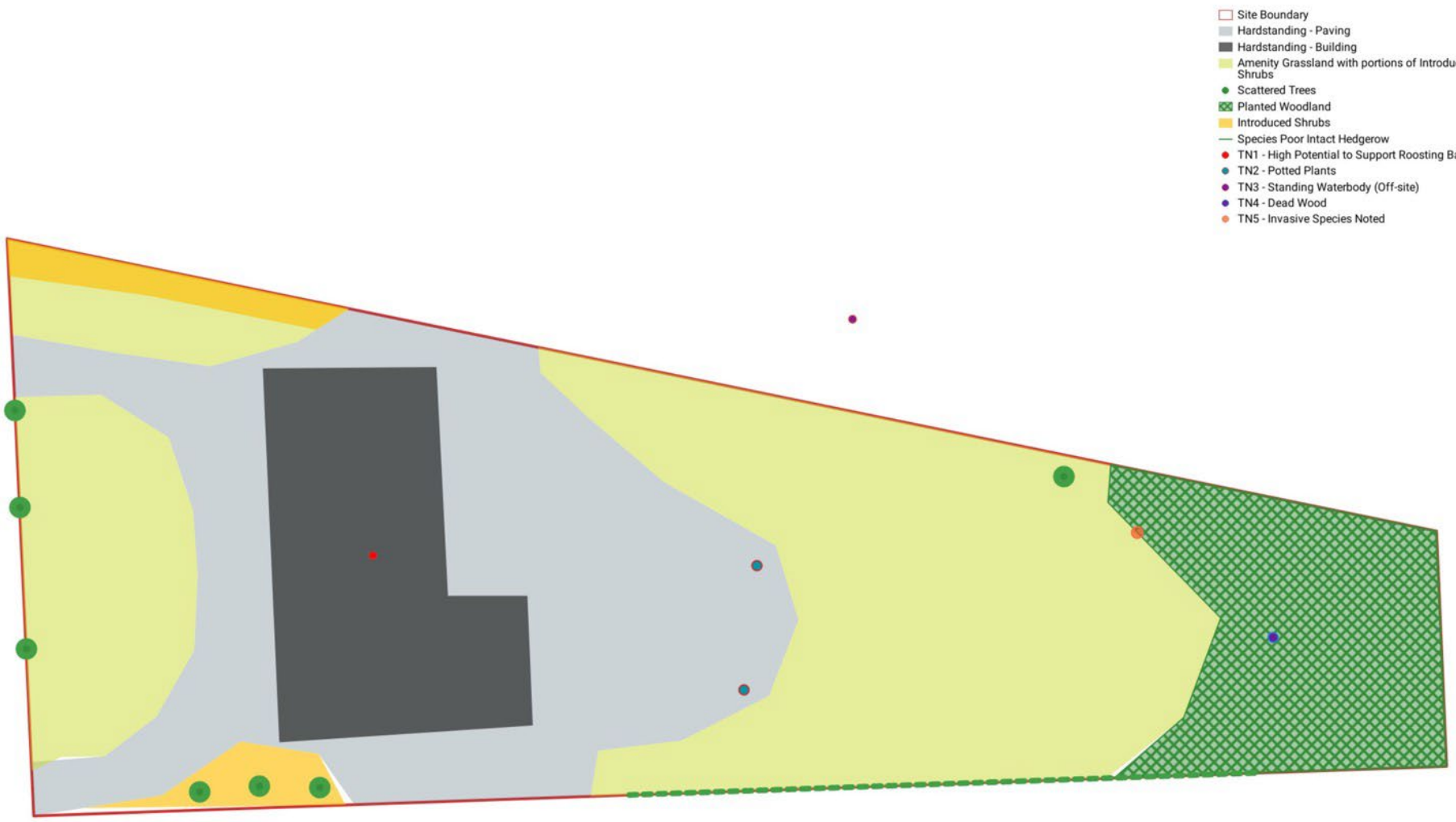
Plate 7: Woodland Plantation

Plate 8: Rear Garden

Plate 9: Side elevation – Oak Glade viewpoint

Plate 10: Scattered trees along western site boundary

Habitat Map: May 2022



Produced on May 30, 2022.

Site: 69 Copse Wood Way, Northwood, Middlesex, HA6 2TZ

5 m

Scale 1:249 (at A4)

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Preliminary Bat Roost Assessment Survey Results

Main Building - External Inspection

The main building was two storey brick built with hipped clay tiled roofs. The building was vacant and was in good condition at the time of the survey.

The hipped roof had chimney outlet on the southern elevation. Numerous lifted roof tiles were noted across all elevations. The led flashing joining the chimney brickwork and the roof tiles was also lifted in places therefore creating gaps.

The brickwork was all intact and showered no cracks or crevices or missing mortar that could be used as an ingress point. The wooden soffit boxes were all intact and showed no signs of recent damage. The windows were double glazed with uPVC glazing that were all unbroken and showed no gaps/crevices between the wall rendering and the window lintels. Similarly, the doors were tightly fitted within the brickwork and showed no possible ingress points.

No other potential roosting features were noted during the site visit apart from lifted roof tiles and lifted led flashing near chimney brickwork.

Numerous features were recorded around the building which could be utilised by bats to gain entry into potential roost locations. These features include:

- Lifted roof tiles.
- Lifted led flashing around the base of the chimney.

It was not possible to inspect the lifted/broken roof tiles, lifted led flashing due to the height at which these were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey.

Plate 11: Overview of the Western Elevation

Plate 12: Lifted Roof tiles – Rear (Eastern) elevation

Plate 13: Eastern Elevation – Gaps between roof tiles

Plate 14: Southern Elevation – Lifted Led Flashing Around Chimney

Main Building - Internal Inspection

Internally, the loft space could be accessed for inspection. The loft was previously used to store personal items and allowed space for water tank. The loft space was at a height of approximately 1.5 meters. The roof was supported by wooden beams and minor cobwebbing was noted along the ridge area. No light was shining through from the outside as all the wooden rafters and trusses were tightly fitted. Fibre glass insulation was noted between the wooden floor supporting beams. Remains of large wasps' nests were noted in various locations inside the loft along with the squirrel damage. It was noted that previously the ingress holes were repaired to limit utilisation of these ingress points.

Upon the inspection, numerous (10-20) bat droppings were noted scattered underneath the main ridge and these were taken away for crush test. The droppings crushed easily and possibly were resembling those of Brown Long Eared *Plecotus auritis.* Mice droppings were also noted during the survey.

Plate 15: Brick gable end all intact – no entry points noted

Plate 16: Remains of large disused wasps' nests

Plate 17: Bat droppings along mice droppings

Plate 18: Inside the loft

Garage Structure External and Internal Assessment

Along the northern site boundary single garage structure was noted and it was in good state of repair. The flat bitumen roof was in condition at the time of survey. The walls were made of brick built were in good condition, no missing mortar creating cracks or crevices was recorded during the survey. The doors were not tightly fitted which provide access points for bats to utilise.

During internal inspection, the flat ceiling provided had no ingress points and was all tightly fitted. The walls and floor was thoroughly inspected and no evidence of roosting bats such as droppings, urine staining feeding remains, or scratch marks were recorded during inspection.

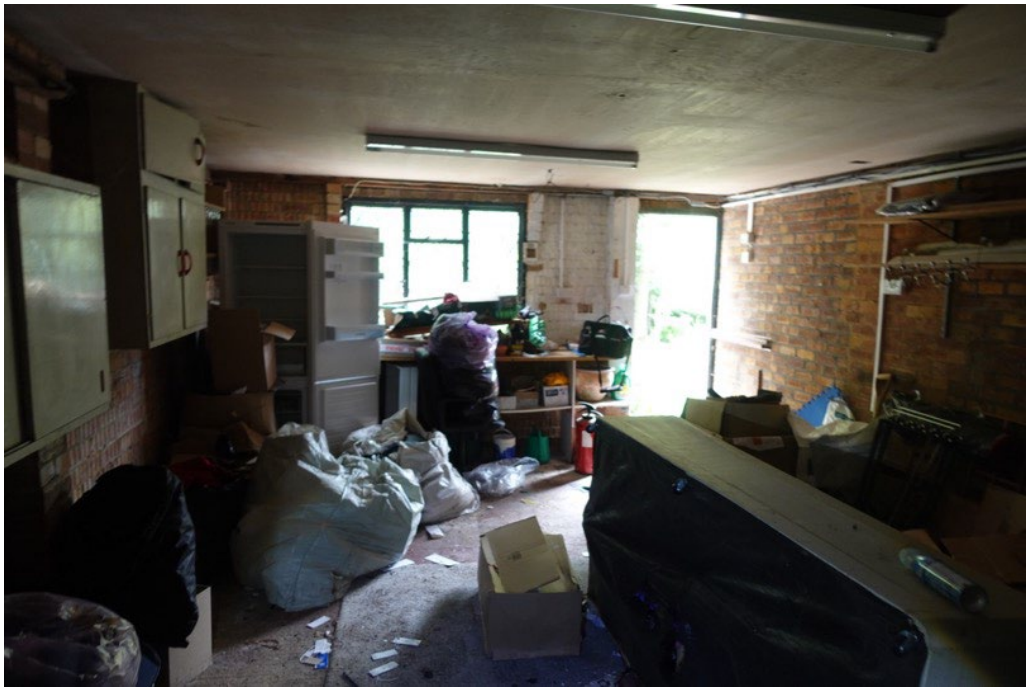

Plate 19: Inside the garage

Plate 20: Flat roof attached garage

Discussion and Conclusion

Summary of Proposals

This assessment is required to inform a planning application associated with facilitating construction of one new residential dwelling and associated landscaping.

Nature Conservation Sites

The desk study identified two UK statutory site within 2 km. Due to small site and retaining woodland plantation it is considered that development will not cause any negative impact on the statutory nature conservation sites.

Habitats

Plantation woodland

The woodland on site is of a mature age and contained a variety of native species. It is therefore of intrinsic value as it cannot be easily replaced in the short to medium term. The woodland also has the potential to support a range of protected and notable species as discussed further below. It is anticipated that some vegetation clearance will undertake to facilitate the construction of new development.

Protected/Notable Species

Roosting Bats and Foraging Bats

During the bat roosting assessment, it was noted that residential building provide high suitability for roosting bats therefore potential negative impacts are anticipated if the building is to undergo a demolition. Roosting bats are therefore a notable consideration in relation to the development and a recommendation is made.

The mosaic of habitats within the large neighboring gardens provides foraging and commuting opportunities for bats. Whilst some loss of foraging habitat will occur, any temporary or permanent lighting as part of the proposed development could however cause fragmentation to foraging and commuting habitat for bats. Foraging bats and lighting are therefore a notable consideration in relation to the development and a recommendation is made.

Terrestrial mammals including foxes and hedgehog

The vegetation on site and connectivity further east to woodland and grassland habitats provide suitable foraging, shelter and mating grounds for foxes and hedgehog and link to suitable habitat off-site. As such there is potential for these terrestrial mammals to utilize the site. To prevent any harm to these notable species, a recommendation is made.

Amphibians

The site contains no suitable breeding habitat for amphibians however the overgrown vegetation and rotting deadwood/leaves might offer suitable terrestrial habitat. Reference to Ordnance Survey mapped data and aerial imagery indicates no potential breeding site within a 500 m radius of the survey area. There was one pond to the north of the site, however during the HSI assessment, it was noted to provide very poor suitability for great crested newts as well as other amphibians therefore, amphibians are not a notable consideration in relation to the proposed development.

Reptiles

Plantation woodland with rotting woodland may provide some suitable shelter and foraging grounds for reptiles. The site is located within a semi-urban environment however it does link up to further suitable landscape for reptiles. A recommendation for reptiles is outlined in Recommendation section.

Birds

The overgrown vegetation on site provides suitable nesting habitat for common bird species and offers foraging opportunities. If proposed works will require vegetation clearance, and are undertaken during the bird nesting season there is potential to directly impact nesting birds. Given the abundance of alternative nesting and foraging habitat for birds in the surrounding area no long-term impact on local bird populations is anticipated, however recommendations to compensate for loss of habitat are provided.

Invertebrates
The site contained rotting deadwood which would offer suitable habitat for stag beetle and therefore this species has potential to be adversely impacted by the development.

Although any other invertebrate species present within the site may be temporarily displaced during the construction phase of the proposed development, providing new habitats are created as part of the development, no long-term impact on terrestrial invertebrates is anticipated. A recommendation regarding general habitat enhancement, which would increase the value of the site for invertebrates is made.

Plants
No notable plant species were recorded on site during the field survey and, given the common and widespread nature of the habitats on site, it is unlikely to support any notable plant species. Therefore, plants are not a notable consideration with regards to the proposed development.

Other Species
The following protected species are not considered to be material consideration due to the absence of suitable habitats within the development site and its surroundings: dormouse *Muscardinus avellanarius*, harvest mouse *Micromys minutus*, brown hare *Lepus europaeus*, polecat *Mustela putorius*, pine marten *Martes martes*, otter *Lutra lutra* and white clawed crayfish *Austropotamobius pallipes*.

Invasive Plants
Rhododendron ponticum is Schedule 9 plant species of the WCA 1981 (as amended) and therefore limiting its growth and further spread outside the site boundary is recommended.

Recommendations

The ecological mitigation hierarchy should be applied when considering development which may have a significant effect on biodiversity. The ecological mitigation hierarchy, as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG) should follow these principles:

- **Avoidance** – development should be designed to avoid significant harm to valuable wildlife habitats and species.
- **Mitigation** – where significant harm cannot be wholly or partially avoided, it should be minimised by design or through the use of effective mitigation measures.
- **Compensation** – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, compensation should be used to provide an equivalent value of biodiversity.
-

Nature Conservation Sites

No recommendations are made in regard to nature conservation sites.

Habitats

The following recommendations are made regarding the habitats present on site:

Biodiversity Enhancement: In accordance with the provision of Chapter 15 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed development to work towards delivering net gains for biodiversity. This will involve, for example:

Planting of habitats which will be of value to wildlife, such as:

- native seed/fruit bearing species
- nectar-rich species to attract bees and butterflies
- species which attract night flying insects which will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.
- Provision of nesting/roosting habitat, such as installation of nest boxes for species such as house sparrow, dense scrub, or native thicket for species such as song thrush, and bat boxes for species such as the common pipistrelle.
- Inclusion of hedgehog passes under any fence lines to allow connectivity between the site and the wider area.
- Creation of deadwood habitat for invertebrate species (e.g. stag beetle)

Trees and Woodland Habitat Retention and Protection: These habitats are of intrinsic value and/or Habitats of Principal Importance. Any retained trees on or overhanging the site should continue to be protected in accordance with British Standard 5837; 2012 “Trees in relation to design, demolition and construction – recommendations”.

Roosting Bats: As a bat roost/resting place has been identified in residential dwelling at 69 Copse Wood Way, no unlicensed work can be undertaken which will contravene the legislation outlined in Appendix 1.

Examples of works which will breach this legislation include:

- Roof modifications/repairs/removal;
- Timber treatment;
- Noise, vibrations and storage of odorous and dangerous chemicals;
- Alterations to bat entrance/exit points;
- Investigations works in the roof as this can cause bats to abort their young/awake from hibernation and can alter the roof temperature/humidity; and,
- Works in the main body of the building.

N.B. This is not an exhaustive list and a bat worker should be consulted to determine if the works are likely to breach any legislation.

Prior to any works being undertaken which are likely to result in a breach of the legislation, a development licence must be obtained from Natural England. The licence application process will include the submission of a method statement detailing the current status of bats on site and how the favourable conservation status of the bat population will be maintained. Prior to a licence being issued, planning permission must be granted and relevant conditions relating to protected species and habitat issues must be discharged.

To inform the licence application at least three dusk emergence and/or dawn re-entry surveys must be undertaken during the bat activity season in line with Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Collins, 2016). The bat emergence/re-entry survey season extends from May to September. At least two of the surveys should be undertaken during the peak season for emergence/re-entry surveys between May and August and one of the three surveys should be a dawn re-entry survey. These surveys need to be carried out during the activity season closest to the start date of the proposed development to ensure that the data obtained is current and appropriate for assessment by Natural England.

Lighting: In accordance with best practise guidance relating to lighting and biodiversity (Miles et al, 2018; Gunnell et al, 2012), any new lighting should be carefully designed to minimise potential disturbance and fragmentation impacts on sensitive receptors, such as bat species. Examples of good practice include:

- Using modern LED fittings rahter than metal halide or sodium fittings, as modern LEDs emit negligible UV radiation.
- The use of directional lighting to reduce light spill, e.g. by installing bespoke fittings or using hoods or shields. For example, downlighting can be used to illuminate features such as footpaths whilst reducing the horizontal and vertical spill of light.
- Where the use of bollard lighting is proposed, columns should be designed to reduce horizontal light spill.
- Implementing controls to ensure lighting is only active when needed, e.g. the use of timers or motion sensors.

Use of floor surface materials with low reflective quality. This will ensure that bats using the site and surrounding area are not affected by reflected illumination.

Terrestrial Mammals Including Foxes and Hedgehog: Excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each work day to prevent animals entering/becoming trapped.

Reptiles: Retain rooting wood within the site and avoid additional disturbance during the construction phase. Provide natural dispersal routes through fencing.

Nesting Birds: Any vegetation clearance and building demolition should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them should be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

Invasive Plants

Rhododendron ponticum is Schedule 9 plant species of the WCA 1981 (as amended) and therefore limiting its growth and further spread outside the site boundary is recommended.

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Appendix 1: Overview of Relevant Species Specific Legislation

Bats
Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The following bat species are Species of Principal Importance for Nature Conservation in England: Barbastelle Bat *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule Bat *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros*.

Birds
The Conservation of Habitats and Species Regulations 2017 places a duty on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds.

Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended).

Subject to the provisions of the act, if any person intentionally:
- kills, injures or takes any wild bird;
- takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Some species (listed in Schedule 1 of the WCA) are protected by special penalties. Subject to the provisions of the act, if any person intentionally or recklessly**:**

- disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird, he shall be guilty of an offence.

Several bird species are Species of Principal Importance for Nature Conservation in England, making them capable of being material considerations in the planning process.

Hedgehog
Hedgehogs receive some protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended); this section of the Act lists animals which may not be killed or taken by certain methods, namely traps and nets, poisons, automatic weapons, electrical devices, smokes/gases and various others. Humane trapping for research purposes requires a licence.

Hedgehogs are a Species of Principal Importance for Nature Conservation in England and are thus capable of being material considerations in the planning process.

Reptiles
All native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected against killing or injuring even during lawful development. A £5000 fine or six months custodial sentence per offence applies.

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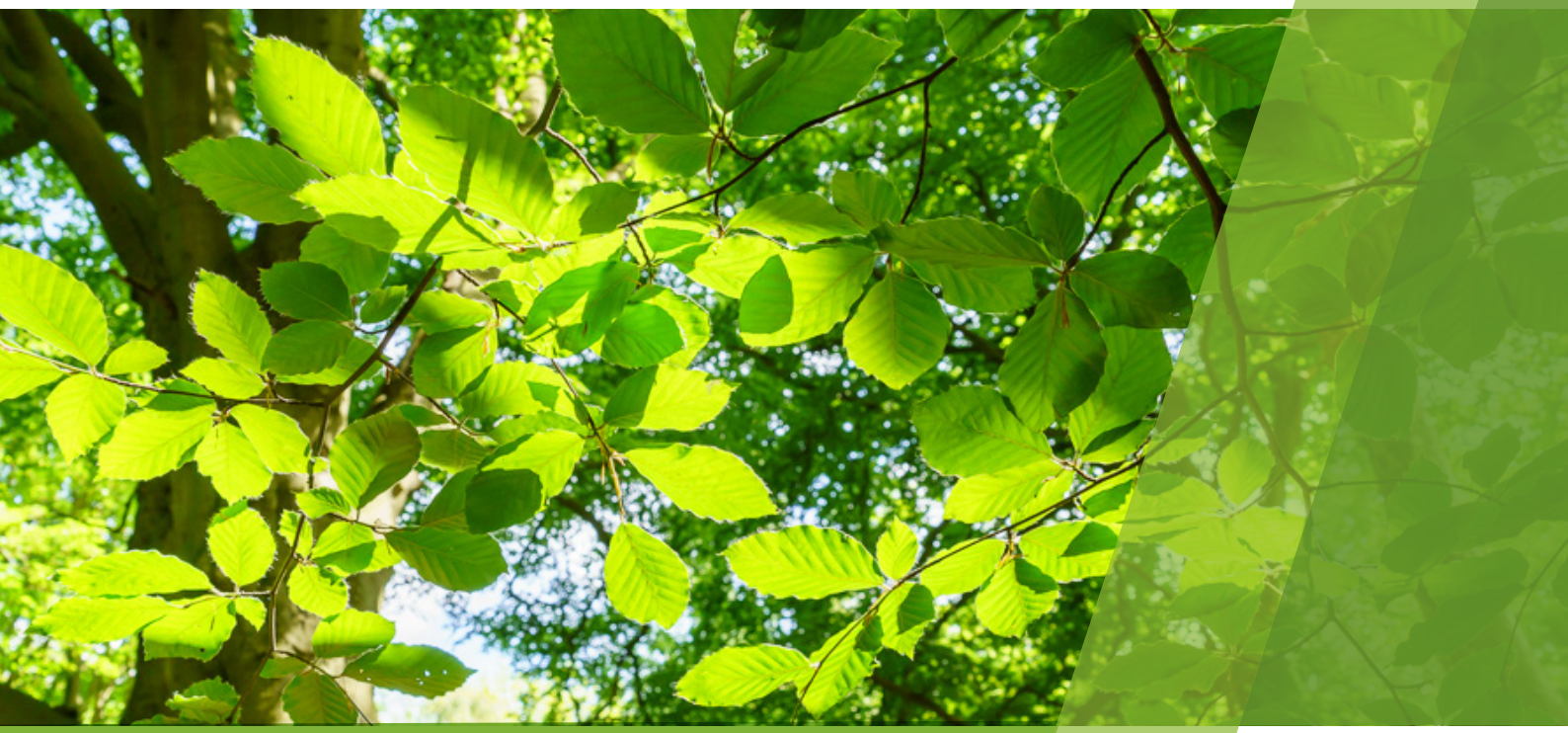

Greenwood Environmental Ltd | Company No. 10749899 | VAT No. GB328956949

Reg. Office: 98 Hornchurch Road, Hornchurch, Essex, RM11 1JS

Contact: hello@greenwood-env.co.uk