

Preliminary Ecological Appraisal



Woodcote Neighbourhood Plan Sites PEA

On behalf of Woodcote Parish Council

September 2021

Ecology by Design Ltd,

Hampden House, Monument Park, Chalgrove, Oxon OX44 7RW.

Tel 01865 893346 www.ecologybydesign.co.uk

Registered in England and Wales No. 9318075.

Project Code	Title	Date of Issue
EBD01965	Woodcote Neighbourhood Plan PEA	08 September 2021

	Name	Date
Prepared by	Olyvia Hall BSc (Hons) Student CIEEM Tristan Carlyle BSc (Hons) GDip	07 September 2021
Checked by	Laura Grant BSc (Hons) MCIEEM	08 September 2021

Copyright Ecology by Design Ltd. All rights reserved.

No part of this report may be copied or reproduced by any means without prior written consent from Ecology by Design Ltd. If you have received this report in error please destroy all copies in your possession or control and notify Ecology by Design Ltd.

This report has been commissioned for the exclusive use of the commissioning party unless otherwise agreed in writing by Ecology by Design Ltd; no other party may use, make use of or rely on the contents of the report. No liability is accepted by Ecology by Design Ltd for any of this report, other than for the purposes for which it was originally prepared and provided.

Opinions and information provided in this report are on basis of Ecology by Design Ltd using due skill, care and diligence in the preparation of this report and no explicit warranty is provided as to its accuracy. It should be noted that no independent verification of any of the documents or information supplied to Ecology by Design Ltd has been made.

Under the Construction (Design & Management) Regulations (CDM, 2015) Ecology by Design employees may have designer duties. Ecology by Design staff do not take on the roles of Client, Principal Designer, Principal Contractor, Contractor or Worker. Our staff are appropriately experienced and briefed on health and safety matters. As far as is 'reasonably practical' we seek to eliminate risks and reduce hazards. This applies to all aspects of a development that we have control or influence over.

Contents

1	Executive Summary	1
2	Introduction.....	2
2.1	Background.....	2
2.2	Site Descriptions	2
2.3	Aims of Report	3
2.4	Report Structure	3
2.6	Personnel.....	3
3	Methods	4
3.1	Desk Study	4
3.2	Preliminary Ecological Appraisal	4
3.3	Preliminary Roost Assessment.....	5
3.4	Ground Level Tree Assessment	5
3.5	Habitat Suitability Index (HSI).....	6
3.6	Limitations/Constraints	6
4	Results and Interpretation	8
4.1	Designated Sites	8
4.2	Species	10
4.3	Habitat Suitability Index Assessment	11
5	Site WNP2-25.....	13
5.1	Results and Interpretation.....	13
5.2	Potential Impacts and Recommendations.....	14
6	WNP2-30	16
6.1	Habitats	16
6.2	Adjacent Habitats.....	16
6.3	Species.....	17
6.4	Potential Impacts and Recommendations.....	17
7	Reserve Site	20
7.1	Habitats	20
7.2	Adjacent Habitats.....	20
7.3	Species.....	21
7.4	Potential Impacts and Recommendations.....	22
8	WNP2-98	25
8.1	Habitats	25
8.2	Adjacent Habitats.....	25
8.3	Species.....	25
8.4	Potential Impacts and Recommendations.....	27
9	WNP2-43a	29

9.1	Habitats	29
9.2	Species	30
9.3	Potential Impacts and Recommendation Summary	31
10	WNP2-09	34
10.1	Habitats	34
10.2	Adjacent Habitats	34
10.3	Species	34
10.4	Potential Impacts and Recommendation Summary	36
11	WNP2-03	38
11.1	Habitats	38
11.2	Adjacent Habitats	39
11.3	Species	39
11.4	Potential Impacts and Recommendation Summary	40
12	WNP2-02	41
12.1	Habitats	41
12.2	Species	42
12.3	Potential Impacts and Recommendation Summary	43
13	Recommendations and Enhancement Summary	45
13.1	Protected Species Recommendations	45
13.2	Enhancements	48
14	Relevant Legislation and Policy	49
14.1	Exit from European Union	49
14.2	National Planning Policy Framework	49
14.3	Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance (England)	50
14.4	Local Planning Policy	51
14.5	Protected Species	55
15	References	59
	Appendix 1 – Photographs	60
	Appendix 2 – Figure 1	62
	Appendix 3 – Figure 2	63
	Appendix 4 – Figure 3	64
	Appendix 5 – Figure 4	65
	Appendix 6 – Figure 5	66
	Appendix 7 – Figure 6	67
	Appendix 8 – Figure 7	68
	Appendix 9 – Figure 8	69
	Appendix 10 – Figure 9	70

1 Executive Summary

Report purpose	This report presents a preliminary appraisal of the potential ecological constraints to the future development of eight sites in Woodcote, Oxfordshire.
Surveys	Surveys of the sites were conducted in August 2021, and included an extended Phase 1 habitat survey, daytime building and trees assessments for bats, and habitat suitability index assessments of ponds. Information was also recorded to enable the classification of the habitats according to the UKHab system.
Key findings	The sites range in size from 0.24ha to 1.46ha. The habitats present within the sites include various combinations of semi-improved grassland, scrub, scattered trees, tall ruderal, hardstanding, and buildings. The potential opportunities for protected and priority species vary between the sites, but relate to roosting bats, foraging and commuting bats, badgers, reptiles, hazel dormice and great crested newts.
Potential impacts and Further Survey	Impacts cannot be assessed in this PEA as there are no emerging proposals at the sites surveyed. Nevertheless, potential impacts that could arise in emerging proposals are considered, and likely survey requirements set out for each site. A full ecological impact assessment would be required for any of the sites coming forward development, based on specific development proposals.

2 Introduction

2.1 Background

- 2.1.1 Ecology by Design Ltd was commissioned by the Woodcote Parish Council to undertake a preliminary ecological appraisal (PEA) of eight sites situated within Woodcote, Oxfordshire.
- 2.1.2 The Woodcote Parish Council is updating its Neighbourhood Plan and is seeking to understand the ecological value of these sites and to identify constraints to future development within them.

2.2 Site Descriptions

- 2.2.1 The sites are located across the village of Woodcote in Oxfordshire. They are referred to in this document by the codes each has been assigned by the Woodcote Parish Council. The location of the site is shown on Figure 1 at Appendix 2.
- 2.2.2 Site **WNP2-25** is located within a cattle-grazed field in the north of Woodcote. It is approximately 0.27ha in extent and is dominated by poor semi-improved grassland.
- 2.2.3 Site **WNP2-30** incorporates part of two cattle-grazed fields in the north of Woodcote. It is approximately 1.46ha in extent and is dominated by poor semi-improved grassland, with areas of scrub and hedgerows also present.
- 2.2.4 The **Reserve Site** comprises an unmanaged field in the north-east of Woodcote. It is approximately 0.66ha in extent and is dominated by semi-improved grassland and scrub.
- 2.2.5 Site **WNP2-98** is an unmanaged strip of land in the east of Woodcote. It is approximately 0.24ha in extent and is dominated by semi-improved grassland and scrub.
- 2.2.6 Site **WNP2-43a** is a derelict commercial site in the east of Woodcote. It is approximately 0.32ha in extent and is dominated by scrub, with areas of semi-improved grassland and hardstanding present, in addition to a disused building.
- 2.2.7 Site **WNP2-09** comprises a commercial development in the south of Woodcote. It is approximately 0.25ha in extent and is dominated by buildings, associated hardstanding, and amenity habitats.
- 2.2.8 Site **WNP2-03** comprises a paddock in the west of Woodcote. It is approximately 0.44ha in extent and is dominated by poor semi-improved grassland.
- 2.2.9 Site **WNP2-02** incorporates part of an unmanaged field in the west of Woodcote, immediately adjacent to WNP2-03. It is approximately 0.37ha in extent and is dominated by poor semi-improved and semi-improved grassland.

2.3 Aims of Report

- 2.3.1 This report presents a preliminary appraisal of the potential ecological constraints at the sites to future development. The report broadly categorises the habitats present in each site and identifies the presence or potential presence of protected species. Recommendations are made for further surveys that may be required to support any forthcoming planning applications.
- 2.3.2 This report is not suitable for submission to inform a planning application at any of the sites surveyed. Ecological impact assessments (EclAs) would be required based on emerging proposals.

2.4 Report Structure

- 2.5 The report is structured as follows: the survey methodologies are detailed in Section 3; desk study results are summarised broadly in Section 4; separate assessments for each site are detailed in Sections 5-12, further survey recommendations that are detailed in Section 13 (and referenced in the preceding sections); while relevant legislation and planning policy is detailed in Section 14. Supporting photographs and figures are included as appendices.

2.6 Personnel

- 2.6.1 The project was led by Ecologist Tristan Carlyle, BSc (Hons) who has five years of experience in ecological consultancy. This project was assisted by Graduate Ecologist Olyvia Hall BSc (Hons) Student CIEEM.
- 2.6.2 Project supervision and review of the report was provided by Associate Ecologist Laura Grant, BSc (Hons) MCIEEM, who has been an ecological consultant for 14 years.

3 Methods

3.1 Desk Study

3.1.1 A desk study was carried out to identify:

- Internationally protected sites within the potential zone of influence of the site (minimum of 7km);
- Nationally protected sites within 5km of the site; and
- Non-statutory designated sites and records of protected or priority species within the neighbourhood plan area.

3.1.2 Sources consulted include:

- The Thames Valley Environmental Records Centre (consulted by the Woodcote Parish Council, data returned 22nd March 2021);
- MAGIC (www.magic.gov.uk) (last accessed 2nd September 2021); and
- Local Planning Policy documents.

3.2 Preliminary Ecological Appraisal

3.2.1 Preliminary Ecological Appraisals were conducted across three days; 10th, 18th and 23rd of August 2021 by Ecology by Design senior ecologists Tristan Carlyle and graduate ecologist Olyvia Hall using standard techniques and methodologies (CIEEM, 2017) and the nomenclature of Stace (2019).

3.2.2 Each PEA included a survey of the habitats utilising the standard Phase 1 habitat survey methodology (JNCC, 2010). Weather conditions during the survey were warm (16-18°C), calm (wind 1/2 on Beaufort scale¹) and fairly overcast (cloud 4-6/8²).

3.2.3 Opportunities for or evidence of protected and priority species were also identified. Where potential impacts on features of ecological interest are identified, the PEA is extended to include an assessment of impact. Any further surveys required are outlined and recommendations are made for appropriate avoidance, mitigation, compensation and enhancement measures.

¹ The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze etc.

² Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

3.3 Preliminary Roost Assessment

- 3.3.1 External Preliminary Roost Assessments (PRAs) were conducted, where relevant, during the PEAs by Ecology by Design senior ecologist Tristan Carlyle (Natural England class licence Level 1 - 2020-46305-CLS-CLS) and graduate ecologist Olyvia Hall.
- 3.3.2 The assessment was based on the guidance in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) and government guidance (Gov.uk., 2015).
- 3.3.3 The surveyors used a high-power torch and binoculars to inspect features of interest. All external areas of the building were inspected. Internal areas were not accessed during the PEA.
- 3.3.4 Evidence searched for included the presence of free hanging bats and bats within gaps and crevices, bat droppings, urine stains, rub marks, scratch marks and feeding remains.

3.4 Ground Level Tree Assessment

- 3.4.1 A ground level tree assessment was conducted by senior ecologist Tristan Carlyle during the PEAs. The surveyor used a high-power torch (LEDLenser Lamp) and 10x42 mm binoculars to identify features of interest. Where possible, each aspect of the tree was inspected to identify features with potential to support roosting bats such as woodpecker holes, rot holes, splits, cracks, flaking bark and/or ivy cover. Where any evidence of use by bats such as droppings, staining or scratches around such features were present this was noted.
- 3.4.2 Each tree was identified as having high, medium, low or negligible suitability for roosting bats. Collins (2016) categorizes the suitability of trees for roosting bats as follows:
 - Negligible = Negligible habitat features likely to be used by roosting bats.
 - Low = A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting suitability.
 - Medium = A tree 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.
 - High = A structure or tree 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 a and surrounding habitat.

3.5 Habitat Suitability Index (HSI)

- 3.5.1 A Habitat Suitability Index (HSI) survey was undertaken by Tristan Carlyle (Natural England class licence number 2019-43371-CLS-CLS) and Olyvia Hall on the 10th and 18th August 2021 to assess suitability for great crested newts (*Triturus cristatus*). Three ponds were assessed (P1, P2 and P4), the location of which is shown in Figure 2 at Appendix 3.
- 3.5.2 Natural England recommends calculation of HSI scores for ponds as a tool to assess habitat quality in a repeatable, objective manner (Natural England, 2017). In particular, the HSI allows individual factors that influence newt presence to be easily identified. Natural England suggests that ecological consultants apply the adapted HSI methods used by the National Amphibian and Reptile Recording Scheme (Herpetological Conservation Trust, 2008) in order to determine the HSI value of each waterbody. This adapted method simplifies the way in which terrestrial habitat is evaluated.
- 3.5.3 The suitability index is calculated by allocating scores to features associated with each waterbody; these include features such as size, quality of surrounding habitat and presence of fish. These scores are then used to calculate the overall HSI for each waterbody as a number between 0 and 1, with 0 being the least suitable and 1 being the most suitable. The HSI score allows each waterbody to be placed in one of five pre-defined categories defining its suitability for great crested newts as follows:
- <0.5 = poor
 - 0.5 – 0.59 = below average
 - 0.6 – 0.69 = average
 - 0.7 – 0.79 = good
 - >0.8 = excellent

3.6 Limitations/Constraints

- 3.6.1 The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of surveys carried out in August 2021. For the purpose of this report the results of site visits are discussed in the present tense. Any appreciable delay in referring to this report or changes to the proposed development boundary may necessitate a re-survey.
- 3.6.2 The species information gained from local record centres is largely derived from data submitted from members of the public and volunteers. For this reason, the desk study may not provide an exhaustive list of all protected species that could occur in the local area.

- 3.6.3 Invasive species were recorded where identified within the site. However, detectability of many species varies seasonally, and this report should not be assumed to demonstrate the absence of invasive species. If invasive species are suspected at the site, further survey during the appropriate season for detectability of that species should be undertaken and specialist advice sought as necessary. Ecology by Design does not guarantee the absence of harmful invasive species with this report and accepts no liability for damage or cost resulting from the presence of invasive species recorded within the site at a later date.

4 Results and Interpretation

4.1 Designated Sites

4.1.1 The desk study identified one internationally designated site for nature conservation within 7km of the sites, three nationally designated sites within 5km and nine non-statutory sites within the neighbourhood plan area. Details of these sites are presented in Tables 1, 2 and 3 below, with distances and directions provided to the closest site assessed within the PEA.

Table 1: Internationally classified / designated sites within 7km of the sites assessed.

Name & international reference	Distance & direction	Size and interest
Hartslock Wood (SAC ³)	2.67 km SW of the northern sites	34.16 ha; Annex I habitats that are a primary reason for designation: • 'Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>)(*Important orchid site)' • '<i>Taxus baccata</i>- common yew- woods of the British Isles' There are no other annex I habitats present as a qualifying feature and no annex II species present as a qualifying feature.

Table 2: Statutory notified sites within 5km of the sites assessed.

Name & SSSI reference	Distance & direction	Size and interest
Hartslock SSSI	2.67 km SW of the northern sites	42.2 ha notified for the semi-natural broadleaved woodland, species-rich chalk downland, ancient yew woodland (one of few in the Chilterns), and riverine fen. One plant species listed on schedule 8 Wildlife and Countryside Act is present.
Warren Bank SSSI	2.79 km N, closest to the reserve site	3.1 ha notified for the south-east facing chalk grassland slope habitat, with scrub present. Species of interest present include rockrose (<i>Helianthemum nummularium</i>), bee orchid (<i>Ophrys apifera</i>) and chalk milkwort (<i>Polygala calcarean</i>). The site supports invertebrates of interest including butterflies dark green fritillary (<i>Argynnis aglaja</i>) and green hairstreak (<i>Callophrys rubi</i>).
Berins Hill Bank SSSI	3.34 km N, closest to the reserve site	1.8 ha notified for the presence of unimproved chalk grassland of varying sward height, as well as scrub. Notably the site is species rich despite its north-facing elevation, with species present including twayblade (<i>Listera ovata</i>), bee orchid, quaking grass (<i>Briza media</i>) and hoary plantain (<i>Plantago media</i>).

³ Special Areas of Conservation (SACs) are strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds).

Table 3: Non-statutory sites within the neighbourhood plan area

Name & Designation	Distance & direction	Details
Oxfordshire Local Wildlife Sites		
Elmorepark Woodlands	0.19 km S from WNP2-03	50.2 ha of interest for the present of lowland beech (<i>Fagus sp.</i>) and yew (<i>Taxus baccata</i>) woodland, as well as plantation woodland, scrub, and diverse ground flora. 25 ancient woodland indicator species are present.
Upper Covert	0.29 km S closest site WNP2-43a	2.7 ha of interest for the presence of lowland mixed deciduous woodland. Bluebell (<i>Hyacinthoides non-scripta</i>) is present as well as dog's mercury (<i>Mercurialis perennis</i>). To the north, a pond is located (neighbouring other seasonally wet dips).
Dean Wood	0.49 km NW, closest site WNP2-25	8.6 ha of interest for the ancient beech woodland north-facing slope present, tree species present include cherry (<i>Prunus avium</i>) and whitebeam (<i>Sorbus aria</i>). Bluebell is abundant, with a green hellebore (<i>Helleborus viridis</i>) population present.
Langtree House Chalk Bank	0.69 km NW, closest site WNP2-25	2.0 ha of interest for the chalk grassland bank present, the bank intersects Langtree House and Dean Wood. Species present include marjoram (<i>Origanum majorana</i>).
Oxfordshire Proposed Local Wildlife Site Extension		
Dean Wood Proposed Extension	0.69 km NW, closest site WNP2-25	No site information was provided. The site borders Dean Wood.
Conservation Target Areas		
Chilterns Escarpment South	0.19 km N (directly adjacent) from WNP2-33	763 ha of interest for the habitats on site include chalk grassland banks (including several LWS's and one SSSI) and woodland (including areas of ancient woodland).
Chilterns Escarpment South Central	0.29 km NW, closest site WNP2-25	952 ha of interest for the lowland mixed deciduous beech and yew woodland, wood-pasture, and arable field margins. The area is known to support farmland birds including skylark (<i>Alauda arvensis</i>) and linnet (<i>Carduelis cannabina</i>).
Chilterns Dipslope & Plateau	0.65 km SE, from WNP2-98	5,534 ha of interest for the plateaued landscape, comprised of chalk valleys, lowland meadow, acid grassland, ancient woodland and heathland.
Other Oxfordshire Site		
Greenmore Ponds	0.15 km SW, closest site WNP2-43a	0.66 ha of interest for the two ponds present, the upper pond is more vegetated and less shaded than the lower pond. A 2000 survey identified the ponds within the top 15% of ponds of the National Pond Survey due to the species richness. Great crested newt was present on the 1990 survey but recorded absent during the 2000 survey.

4.2 Species

4.2.1 The details of protected, notable and invasive species returned in the desk study undertaken with the TVERC are presented in Table 4 below. Relevant legislation and policy is referenced as appropriate, with further details are provided in Section 6.

Table 4: Presence of or potential for protected / notable / invasive species within the local area

Species	Protection or Status *	Presence/potential at the site
Bats	EPS. Some species are also SPIs. W&CA 1981 Sch5	19 records of at least seven bat species have been recorded within 2km of the site including common pipistrelle (<i>Pipistrellus pipistrellus</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), Leisler's bat (<i>Nyctalus leisleri</i>), long-eared bat (<i>Plecotus</i> sp.), noctule (<i>Nyctalus noctula</i>), myotis sp., western barbastelle (<i>Barbastella barbastellus</i>).
Dormouse (<i>Muscardinus avellanarius</i>)	EPS. SPI. W&CA 1981 Sch5	Five records of the species were returned by the desk study, with the most recent record in 2010.
Otter (<i>Lutra lutra</i>)	EPS. SPI. W&CA 1981 Sch5	No records of the species were returned by the desk study.
Great crested newt (<i>Triturus cristatus</i>)	EPS. SPI. W&CA 1981 Sch5	No records of the species were returned by the desk study.
Badger (<i>Meles meles</i>)	Protection of Badgers Act 1992.	Two records of badger were returned by the desk study.
Water vole (<i>Arvicola amphibius</i>)	W&CA 1981 Sch5	No records of the species were returned by the desk study.
Nesting birds	W&CA 1981 Sch1 / Sch5	70 records of 22 bird species were returned by the desk study, comprising a mix of species typical of urban, arable, wetland and woodland habitat.
Reptiles	EPS. W&CA 1981 Sch5	No reptile records were returned by the desk study.
Brown Hare (<i>Lepus europaeus</i>)	SPI	No records of the species were returned by the desk study.
Common toad (<i>Bufo bufo</i>)	SPI	One record of the species were returned by the desk study.
White-clawed crayfish (<i>Austropotamobius pallipes</i>)	EPS. SPI. W&CA 1981 Sch5	No records of the species were returned by the desk study.
Invertebrates	EPS. SPIs.	No records of protected invertebrate species were returned by the desk study.

Protected plants	W&CA 1981 Sch8	15 records of protected plant species bluebell (<i>Hyacinthoides non-scripta</i>) were returned by the desk study.
Invasive species	W&CA 1981 Sch9	Six records of four invasive plant species were returned by the desk study; butterfly-bush (<i>Buddleja davidii</i>), New Zealand pigmyweed (<i>Crassula helmsii</i>) and three-cornered garlic (<i>Allium triquetrum</i>).

4.3 Habitat Suitability Index Assessment

- 4.3.1 No waterbodies are present in the eight sites assessed in this PEA.
- 4.3.2 A desk study was undertaken to identify all waterbodies within 250m of the sites assessed within the PEA. Seven ponds were identified, the locations of which are shown on the plan at Figure 2.
- 4.3.3 Four of the ponds (P1, P2, P3 and P4) could be viewed from public rights of way and were subject to habitat suitability index (HSI) assessments during the PEAs. The remaining three ponds are on private land and could not be assessed (P5, P6 and P7).
- 4.3.4 Three ditches were identified within 250m of the sites, all of which could be viewed from public rights of way and were found to be dry during the PEAs. They are considered unsuitable for supporting breeding great crested newts (GCN).
- 4.3.5 The HSI assessments of ponds P1, P2 and P4 are presented in Table 5 below. **P1** and **P4** are of average suitability for GCN, while **P2** is of below average suitability. **P3** was dry at the time of survey and a HSI assessment could not be completed of this pond. Photographs of the ponds are included at Appendix 1 (Photographs 9 – 12).
- 4.3.6 Ponds P3 and P4 together comprise the Greenmore Ponds, a Local Wildlife Site referenced in Table 3 above. The ponds have supported great crested newt in the past (1990) but the most recent surveys found the species to be absent (2000). Given the time elapsed, these results cannot be relied upon in an updated assessment of the likely presence or absence of the species.

Table 5: Habitat Suitability Index scores and suitability class

Pond ID	P1		P2		P4	
	Data	Score	Data	Score	Data	Score
1. Location	A	1	A	1	A	1
2. Pond area (m ²)	500	1	75	0.15	600	1
3. Pond drying	Never	0.9	Rarely	1	Never	0.9
4. Water quality	Poor	0.33	Mod	0.67	Poor	0.33
5. Shade	80%	0.6	100%	0.2	80%	0.6
6. Fowl	Minor	0.67	No	1	Minor	0.67
7. Fish	Possible	0.67	No	1	Possible	0.67
8. Ponds	5	0.78	4	0.72	2	0.55
9. Terrestrial habitat	Mod.	0.67	Poor	0.33	Good	1
10. Macrophytes	No	0.3	No	0.3	No	0.3
HSI Score	0.65		0.52		0.65	
Suitability Class	Average		Below Average		Average	

5 Site WNP2-25

5.1 Results and Interpretation

Habitats

- 5.1.1 The site is dominated by poor semi-improved grassland (Photograph 1 at Appendix 1). It also contains a single metal shipping container, which has negligible potential for supporting roosting bats. A habitat plan for WNP2-25 is provided at Appendix 4.
- 5.1.2 The grassland is cattle-grazed and has a short sward as a result. There are patches of bare ground in the west of the site, associated with groundworks and rabbit (*Oryctolagus cuniculus*) burrows. Perennial ryegrass (*Lolium perenne*) is abundant in the sward, with Yorkshire fog (*Holcus lanatus*) frequent and timothy grass (*Phleum pratense*), common bent grass (*Agrostis capillaris*) and cock's-foot (*Dactylis glomerata*) occurring occasionally.
- 5.1.3 Herbs are present at low density throughout the sward, with yarrow (*Achillea millefolium*) frequent, creeping thistle (*Cirsium arvense*) and broadleaved dock (*Rumex obtusifolius*) occasional and ribwort plantain (*Plantago lanceolata*), white deadnettle (*Lamium album*), creeping buttercup (*Ranunculus repens*), herb Robert (*Geranium robertianum*), red clover (*Trifolium pratense*) and self-heal (*Prunella vulgaris*) present only rarely. Common nettle (*Urtica dioica*) is encroaching in the north of the site.
- 5.1.4 Under the UKHab classification the habitat would be classified as modified grassland, owing to the low density of species (<8/m²). Using the Defra metric 3.0 condition assessment criteria, it would be classified in good condition (Passing criteria 1, 3, 4, 5, 6 and 7).

Adjacent Habitats

- 5.1.5 A shrubby hedgerow with trees borders the western boundary of the site. Woody species present include hawthorn (*Crataegus monogyna*), ash (*Fraxinus* sp.), elder (*Sambucus nigra*) and sycamore (*Acer pseudoplatanus*). Bramble (*Rubus fruticosus* agg.), ivy (*Hedera helix*), and bittersweet (*Solanum dulcamara*) are also present. The hedgerow is in good condition. To the north there is a short tree belt, where cotoneaster (*Cotoneaster* sp.) is present in the understorey.
- 5.1.6 A cypress (*Cupressus* sp.) hedge is present along the eastern boundary, with hazel (*Corylus avellana*) and wych elm (*Ulmus glabra*) present. This hedgerow is associated with a dry ditch, which extends north of the site.

Species

Bats

- 5.1.7 One record of an individual common pipistrelle was identified within 50m north-west of the site, dating from 2017. Individual bats are likely to forage over the site and could commute along the offsite hedgerows along the western boundary.

Nesting Birds

- 5.1.8 The following species have been recorded in a 1km grid square containing the site: grey wagtail (*Motacilla cinerea*), hobby (*Falco subbuteo*), lesser redpoll (*Carduelis cabaret*), marsh tit (*Poecile palustris*), peregrine (*Falco peregrinus*), red kite (*Milvus milvus*) and spotted flycatcher (*Muscicapa striata*). None were recorded during the PEA. The trees and hedgerows provide opportunities for foraging and nesting birds adjacent to the site.

Invasive Species

- 5.1.9 Cotoneaster was noted adjacent to the site. Cotoneaster is a difficult plant group in terms of identification within excess of one hundred species being naturalised in Britain. The fruits produced by the genus are eaten by birds which spread the seeds into the wild. Identification to species is only possible by examination of the seeds. Five Cotoneaster species are listed on Schedule 9. It is not possible to confirm which species is present on the site.

5.2 Potential Impacts and Recommendations

Designated Sites

- 5.2.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 5.2.2 The site comprises poor semi-improved grassland, which has limited intrinsic ecological value. Any impacts should nevertheless be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats.
- 5.2.3 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 5.2.4 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 5.2.5 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).

Nesting Birds

- 5.2.6 The hedgerows adjacent to the site boundaries could support nesting bird species and any vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Invasive species

- 5.2.7 It is recommended the cotoneaster is cleared from the habitat immediately adjacent to the site as part of any emerging proposals, as set out in **Recommendation 11** (see 13.1).

6 WNP2-30

6.1 Habitats

- 6.1.1 The site is dominated by poor semi-improved grassland (Photograph 2 at Appendix 1). It spans two fields, which are divided by a hedgerow running from east to west. There is also an area of dense scrub in the north-east of the site, in addition to log piles on the southern boundary. A habitat plan for WNP2-30 is provided at Appendix 5.
- 6.1.2 The grassland is cattle-grazed and has a short sward as a result, though there are longer patches along the southern boundary. The sward is dominated by perennial ryegrass, with cock's-foot frequent, Yorkshire fog and red fescue (*Festuca rubra*) occasional and crested dog's-tail present rarely.
- 6.1.3 Herbs are present at a low density, and include occasional nipplewort (*Lapsana communis*), common mouse ear (*Cerastium fontanum*), common cat's-ear (*Hypochaeris radicata*), mallow (*Malva* sp.), meadow buttercup, creeping thistle, hogweed (*Heracleum sphondylium*) and broadleaved dock.
- 6.1.4 Under the UKHab classification the habitat would be classified as modified grassland, owing to the low density of species (<8/m²). Using the Defra metric 3.0 condition assessment criteria, it would be classified in moderate condition (Passing criteria 1, 3, 4, 6 and 7).
- 6.1.5 The scrub in the north-east of the site is a belt of blackthorn, exceeding 5m in width in places and, as such, classified here as a standalone habitat (and not a hedgerow). The scrub is of a single age class, with a poorly developed edge and no clearings/glades. As such, it would be classified in poor condition (Passing criteria 3 only).
- 6.1.6 The hedgerow within the site is comprised of hazel, hawthorn, blackthorn (*Prunus spinosa*), field maple (*Acer campestre*), elder and holly (*Ilex aquifolium*), with a rose species (*Rosa* sp.) also present. It was assessed as being in good condition.

6.2 Adjacent Habitats

- 6.2.1 A second hedgerows runs along the southern boundary of the site, with a similar composition to the on-site hedgerow described above. A margin of nettles (<5m) runs along the base of the hedgerow. It was assessed as being in good condition.

6.3 Species

Bats

- 6.3.1 One record of an individual common pipistrelle is present within 250m north-west of the site, dating from 2017. Individuals are likely to forage over the site and to commute along the boundary hedgerow. However, the hedgerow bisecting the site only serves to connect two residential areas and, as such, is considered unlikely to be important to commuting bats.

Nesting birds

- 6.3.2 The hedgerows within and adjacent to the site provide opportunities for foraging and nesting birds. The following species have been recorded in a 1km grid square containing the site: grey wagtail, hobby, lesser redpoll, marsh tit, peregrine, red kite, and spotted flycatcher.

Great crested newt

- 6.3.3 There is potential for great crested newt to forage and hibernate in the areas of grassland with a taller sward grassland at the southern boundary of the site, within the scrub and along the hedgerow bisecting the site.

- 6.3.4 **P1** is approximately 160m north at the closest point, separated from the site by short-grazed grassland. **P2** is 120m east of the site but is separated by numerous residential properties, fences, driveways, and Reading Road, which are considered to present a barrier to movement.

Hazel Dormouse

- 6.3.5 The nearest dormouse record is in a woodland approximately 0.8km south of the site. The site is not directly connected to this woodland, or any other woodland recorded supporting dormice. Consequently, this hedgerows within and adjacent to the site, while ostensibly suitable for the species, are considered to have negligible potential to support hazel dormouse.

Reptiles

- 6.3.6 No reptile records were returned in the desk study. The scrub and grassland with a longer sward at the southern boundary of the site provide suitable habitat for reptiles, while the two log piles recorded in this area also suitable hibernacula.

6.4 Potential Impacts and Recommendations

Designated sites

- 6.4.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 6.4.2 The site comprises poor semi-improved grassland, which has limited intrinsic ecological value. The feature of greatest ecological interest is the hedgerow bisecting the site, which should be retained, if possible, under emerging proposals.
- 6.4.3 Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats. If the hedgerow is to be relocated, as discussed, then additional hedgerow planting will be required to offset the impacts.
- 6.4.4 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 6.4.5 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 6.4.6 Habitat loss could result in the loss of foraging and some limited commuting opportunities for bats with the site. If the hedgerow within the site is lost or relocated, it is recommended that bat activity surveys are undertaken in support of a planning application. See **Recommendation R4** (at 13.1).
- 6.4.7 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).

Nesting Birds

- 6.4.8 The hedgerows within and adjacent to the site could support nesting bird species and any vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Great crested newts

- 6.4.9 The site contains multiple areas of suitable terrestrial habitat for great crested newts and is connected to potential breeding pond **P1**. Therefore, targeted surveys for the species are recommended, of ponds **P1** and **P2** (the latter on a precautionary basis). The full details are set out in **Recommendation 6** (see 13.1).

Reptiles

- 6.4.10 Any impacts on the suitable habitats would have the potential to kill or injure reptiles, including clearance of grassland and scrub and the demolition/removal of the log piles. If a large area of suitable habitat is to be cleared, surveys may be required prior to determining the scale of impacts and required mitigation (**Recommendation R7** – see 13.1). If a small area, it may be appropriate to address this via sensitive clearance (**Recommendation R8** – see 13.1).

7 Reserve Site

7.1 Habitats

- 7.1.1 The site is dominated by semi-improved grassland (Photograph 3 at Appendix 1), with dense areas of scrub present along the northern and western boundaries, with additional parcels in the centre and south-west of the site. A habitat plan for the Reserve Site is provided at Appendix 5.
- 7.1.2 The grassland sward is unmanaged and tussocky as a result. The sward is comprised of abundant Yorkshire fog, common bent and cock's-foot, with occasional timothy grass and red fescue. Herbs are present at a low density, and include common knapweed (*Centaurea nigra*), bird's-foot trefoil (*Lotus corniculatus*), self-heal, ragwort (*Jacobaea vulgaris*), bush-vetch (*Vicia sepium*), sorrel (*Rumex acetosa*), yarrow, ribwort plantain, creeping buttercup, mallow (*Malva* sp.) and hogweed (*Heracleum sphondylium*). An area of regenerating oak saplings is present in the northwest corner of the grassland.
- 7.1.3 Under the UKHab classification the habitat would be classified as other neutral grassland, owing to the density of species approximating (9/m²). Using the Defra metric 3.0 condition assessment criteria, it would be classified in poor condition (passing criteria 4 and 5).
- 7.1.4 The dense scrub lines along the western and northern boundaries (**S1**) are dominated by bramble. The northern belt also includes standard trees, with species present including hawthorn, oak, hazel, cherry sycamore and ash. Ground flora present in this area includes herb-robert, greater stitchwort (*Stellaria holostea*), broadleaved dock, lords and ladies (*Arum maculatum*), wood avens (*Geum urbanum*) and bluebell. The parcel of scrub in the south-west of the site (**S2**) is also dominated by bramble, with honeysuckle, hawthorn, elder and oak present. Several rabbit (*Oryctolagus cuniculus*) burrows were noted within this area. Ground flora present include nettle and lords and ladies. The parcel of scrub in the centre of the site (**S3**) is comprised of bramble, ash, hawthorn and elder. The scrub includes specimens of different age classes, and each parcel has a well-developed edge, but no clearings/glades are present. As such, it would be classified in poor condition (Passing criteria 2, 3 and 4).

7.2 Adjacent Habitats

- 7.2.1 An offsite treeline is present to the north of the site, behind the dense scrub. Visible tree species present include oak, hawthorn, hazel, cherry, sycamore, and ash. Much of the treeline is blocked by the dense scrub and thus is inaccessible.

7.3 Species

Bats

- 7.3.1 One record of an individual common pipistrelle is located approximately 500m west of the site boundary, dating from 2017. Two common pipistrelle day roosts and one soprano pipistrelle day roost were identified on a building south of the site, Chiltern Rise Cottage, in surveys undertaken in 2014 and 2018 (Planning Ref: P20/S2110/FUL).
- 7.3.2 Individuals are likely to forage over the site and to commute along the off-site treeline. No trees with bat roosting potential were identified within the site; a single mature oak immediately southwest of the site was classified as having low suitability, given its age and the fact only partial access could be obtained.

Badger

- 7.3.3 The nearest badger sett record is located approximately 200m from the site. A potential badger sett was identified on the northern aspect of the adjacent treeline, the location of which is marked on Figure 6.
- 7.3.4 A mammal path was noted on the western boundary of the site, that was potentially created by a badger. No other evidence of badger activity was recorded within the site. The dense scrub on the northern and western boundaries prevented a complete assessment being undertaken; however, no entrances into this scrub were observed.

Nesting birds

- 7.3.5 The scrub, trees and rough grassland within the site provide opportunities for foraging and nesting birds. The following species have been recorded in a 1km grid square containing the site: grey wagtail, hobby, lesser redpoll, marsh tit, peregrine, red kite, and spotted flycatcher.

Great crested newt

- 7.3.6 There are no waterbodies within the site. It does contain suitable terrestrial habitat for the species, and there is the potential for great crested newt to forage and hibernate in the areas of scrub and grassland within the site.
- 7.3.7 **P1** is 10m north at the closest point, separated from the site by Tidmore Lane. This pond was assessed as being of average suitability for the species. It is isolated in the landscape, reducing the likelihood newts are present. **P2** is 160m south of the site but is separated by numerous residential properties, fences, driveways, and Reading Road, which are considered to present a barrier to movement.

Hazel Dormouse

- 7.3.8 The nearest dormouse record is in a woodland approximately 1km south of the site. The site is not directly connected to this woodland, or any other woodland recorded supporting dormice. Consequently, this scrub and trees within the site, while ostensibly suitable for the species, are considered to have negligible potential to support hazel dormouse.

Reptiles

- 7.3.9 The scrub and grassland provide suitable habitat for reptiles within the site. The scrub is dense, with few clearings, but provides potential hibernating opportunities. The grassland provides some potential foraging opportunities, but the sward is uniformly long, reducing its suitability for reptiles. No reptiles were recorded during surveys undertaken in 2018 on land immediately south of the site, comprising similar habitats.

Invertebrates

- 7.3.10 Cinnabar moth (*Tyria jacobaeae*) caterpillars, a S41 priority invertebrate species, were noted foraging on common ragwort on-site.

7.4 Potential Impacts and Recommendations

Designated sites

- 7.4.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 7.4.2 The semi-improved grassland is of some intrinsic ecological value, but this value has been reduced through the lack of management. The feature of greatest ecological interest is the scrub along the northern boundary with scattered trees present throughout. This should be retained, if possible, under emerging proposals.
- 7.4.3 Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats
- 7.4.4 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 7.4.5 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 7.4.6 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 7.4.7 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).

Badger

- 7.4.8 Works within 25m of the potential badger setts would risk killing or injuring the species, as damaging or destroying a sett. If any works are to proceed within 25m of this location, it is recommended that monitoring work is undertaken to establish whether the burrow is part of an active badger sett, through **Recommendation 9** (see 13.1). If badgers are present, and impacts would arise on the species or its sett, then works would only be able to proceed under licence from Natural England.

Nesting Birds

- 7.4.9 The scrub, woodland habitat and tussocky grassland within the site could support nesting bird species and vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Great crested newts

- 7.4.10 The site contains multiple areas of suitable terrestrial habitat for great crested newts and is connected to a potential breeding pond **P1**. Therefore, targeted surveys for the species are recommended in **P1** if the terrestrial habitat is to be impacted. The full details are set out in **Recommendation R6** (see 13.1).

Reptiles

- 7.4.11 Common reptiles were not recorded in surveys undertaken on adjacent land in 2018, and it is considered likely the faunal group was absent from the site at that time. However, these surveys are now considered invalid given their age.
- 7.4.12 It is unlikely large populations of common reptiles will have colonised the site in the time since, however, it cannot be concluded they are absent from the site. Any impacts on the suitable habitats would have the potential to kill or injure reptiles, including clearance of grassland and scrub and the demolition/removal of the log piles.
- 7.4.13 It is considered appropriate to address this through a sensitive clearance of any affected habitats, rather than undertaking a suite of surveys. Further detail is provided in **Recommendation 8** (see 13.1).

8 WNP2-98

8.1 Habitats

- 8.1.1 The site is dominated by semi-improved grassland (Photograph 4 at Appendix 1), with an area of dense scrub present in the northern corner. The west of the site is also used as a refuse tip, with discarded wood and building materials in several piles. A habitat plan for WNP2-98 is provided at Appendix 7.
- 8.1.2 The grassland sward is unmanaged, with a sward comprising abundant false oat-grass and cock's-foot. Tall ruderal species are present throughout, including abundant hogweed, common nettle, creeping thistle, hedge bindweed, field bindweed, mugwort (*Artemisia vulgaris*) and common ragwort. Other species present include a rose (*Rosa* sp.), a sow thistle (*Sonchus* sp.) and woody nightshade (*Solanum dulcamara*).
- 8.1.3 Under the UKHab classification the habitat would be classified as other neutral grassland, owing to the lack of management and density of species approximating 9/m². Using the Defra metric 3.0 condition assessment criteria it would be classified in poor condition, failing all the condition criteria. Notably, the cover of 'undesirable species' exceeds 5% of the total habitat area (approximating 20%).
- 8.1.4 The scrub in the north-west of the site is comprised entirely of bramble. The scrub is largely of a single age class, while it is encroaching on the surrounding grassland. No clearings/glades are present. As such, it would be classified in poor condition (passing criteria 3 and 4 only).
- 8.1.5 Several scattered broadleaved and coniferous trees are present at the boundaries of the site. To the north, hawthorn, ash, and elder are present. To the south, silver birch (*Betula pendula*), hawthorn and cypress are present. A sycamore tree is present to the west, with ash and silver birch trees to the east.

8.2 Adjacent Habitats

- 8.2.1 A native hedgerow is present along the northwest boundary, dominated by hawthorn with ash, ivy and hedge bindweed also present. It is in good condition.

8.3 Species

Bats

- 8.3.1 Records of noctule and common pipistrelle are located approximately 350m south-west of the site boundary, dating from 2008.

- 8.3.2 Individuals are likely to forage over the site. No trees within the site were identified to support potential roosting features (PRFs). A building immediately south of the site does support PRFs and is considered to be of moderate to high suitability for roosting bats (a full assessment could not be undertaken from the site itself).

Badger

- 8.3.3 The nearest badger sett record is located more than 500m from the site. No evidence of badger activity was recorded within the site, although the height of the tall ruderal vegetation and scrub prevent a full assessment of the site.

Nesting birds

- 8.3.4 The scrub, trees and rough grassland within the site provide opportunities for foraging and nesting birds. Records of song thrush and red kite are located within 300m of the site boundary; neither species was observed on-site during the PEA.

Great crested newt

- 8.3.5 There are no waterbodies within the site. It does contain suitable terrestrial habitat for the species, and there is the potential for great crested newt to forage and hibernate in the areas of scrub and grassland within the site. **P7** is located 20m east of the site and could not be accessed during the PEA. Mapping produced by the Ordnance Survey indicates it is very small (approximately 25m²) and it is well isolated from other ponds.

Hazel Dormouse

- 8.3.6 The nearest dormouse record is in a woodland approximately 600m south of the site. The site is not directly connected to this woodland, or any other woodland recorded supporting dormice. Consequently, this scrub and trees within the site, while ostensibly suitable for the species, are considered to have negligible potential to support hazel dormouse.

Reptiles

- 8.3.7 The scrub and grassland provide suitable habitat for reptiles within the site. The scrub is dense, with few clearings, but provides potential hibernating opportunities. The grassland provides some potential foraging opportunities, but the sward is uniformly long, reducing its suitability for reptiles.

8.4 Potential Impacts and Recommendations

Designated sites

- 8.4.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 8.4.2 The semi-improved grassland is of very limited intrinsic ecological value. The feature of greatest ecological interest is the scattered trees present at the site boundaries, although they are largely semi-mature. Trees should nevertheless be retained, if possible, under emerging proposals.
- 8.4.3 Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats
- 8.4.4 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 8.4.5 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 8.4.6 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 8.4.7 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).

Nesting Birds

- 8.4.8 The scrub, trees and tussocky grassland within the site could support nesting bird species and vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Great crested newts

- 8.4.9 The site contains suitable terrestrial habitat for great crested newts and is connected to pond **P7**. The pond is considered unlikely to be suitable for the species given its small size and isolation, but a habitat suitability index assessment should be undertaken in the first instance, providing access can be obtained. This will determine whether full targeted surveys for the species are required to support any emerging proposals, the full details of which are set out in **Recommendation 6** (see 13.1).

Reptiles

- 8.4.10 The habitats present are of poor suitability for common reptiles. However, it cannot be concluded they are absent from the site. Any impacts on the suitable habitats would therefore have the potential to kill or injure reptiles, including clearance of grassland and scrub.
- 8.4.11 It is considered appropriate to address this through a sensitive clearance of any affected habitats, rather than undertaking a suite of surveys. Further detail is provided in **Recommendation 8** (see 13.1).

9 WNP2-43a

9.1 Habitats

- 9.1.1 The site is dominated by scrub and semi-improved grassland (Photograph 5 at Appendix 1), with hardstanding and a disused commercial building in the centre of the site, with additional structures and areas of bare ground and tall ruderal also present. A habitat plan for the WNP2-43a is provided at Appendix 8.
- 9.1.2 The grassland sward is unmanaged and tussocky as a result, with the sward containing Yorkshire fog, cock's-foot, false-oat grass and perennial ryegrass. Herbs are nevertheless present at a high density throughout the sward, including red bartsia, red clover, creeping thistle, yarrow, common ragwort, ribwort plantain, greater plantain (*Plantago major*), mugwort, herb Robert, colt's-foot (*Tussilago farfara*), common cat's-ear, black medick (*Medicago lupulina*), broad-leaved willowherb (*Epilobium montanum*) and hairy tare (*Vicia hirsuta*).
- 9.1.3 Under the UKHab classification the habitat would be classified as other neutral grassland, owing to the density of species, which are present between 9 and 15/m² across the site. Using the Defra metric 3.0 condition assessment criteria, it would be classified in poor condition (passing criteria 4 and 5).
- 9.1.4 The scrub is dominated by bramble with grey willow (*Salix cinerea*) frequent in the centre and west of the site. There are standard oak (*Quercus* sp.) and ash trees present within the habitat, in addition to patches of common nettle. A cotoneaster species was also recorded during the PEA. The scrub includes specimens of different age classes, and each parcel has a well-developed edge, but no clearings/glades are present. As such, it would be classified in poor condition (passing criteria 2, 3 and 4).
- 9.1.5 Areas of tall ruderal vegetation are present, including locally abundant stands of common nettle to the south-west, north-west and north-east of the site. Hardstanding is present, comprising a gravel path from the site entrance leading to the centre of the site, where a concrete area is present, adjacent to building **B1**; a single-storey metal building. Plant species, typical of the assemblage present within the grassland, are present at low density across the hardstanding. Additional structures are present in the form of three metal storage containers, one in the north (**B2**) and two in the south (**B3** and **B4**) of the site.
- 9.1.6 Two lines of cypress trees are present at different locations along the north-western boundary of the site, the locations of which are included at Appendix 8. Additional scattered broadleaved trees are present across the east of the site, including multiple oak trees.

9.2 Species

Bats

- 9.2.1 Records of noctule and common pipistrelle are located approximately 100m south-east of the site boundary, dating from 2008. Individuals are likely to forage over the site. Multiple trees within the site were found to support potential roosting features, including two mature oaks in the east of the site, the locations of which are illustrated at Appendix 8. These were assessed as being of moderate suitability for bats.
- 9.2.2 No potential roosting feature were identified on the exterior of building **B1**; however, the southern aspect could only be partially viewed. Potential access points were identified in the form of gaps within the corrugated roof. The building was assessed as being of low suitability for roosting bats. The remaining structures are of negligible suitability.

Badger

- 9.2.3 The nearest badger sett record is located more than 1km from the site. No evidence of badger activity was recorded within the site; however, the scrub was impenetrable in places, particularly in the east of the site, preventing inspection of this area for badger signs. Notably, no mammal paths were present within the scrub.

Nesting birds

- 9.2.4 Records of song thrush (*Turdus philomelos*) and red kite are located within 100m of the site boundary; neither species was observed on-site during the PEA. There are opportunities for foraging and nesting birds within the site. Nesting opportunities include the buildings, trees, scrub, and rough grassland habitat.

Great crested newt

- 9.2.5 There are no waterbodies within the site. It does contain suitable terrestrial habitat for the species, and there is the potential for great crested newt to forage and hibernate in the areas of scrub and grassland within the site. **P5** is located approximately 35m south-east of the site, with **P6** approximately 80m south. Neither ponds could be accessed during the PEA. Ponds **P3** and **P4** are also located within 250m, with **P4** assessed as being of average suitability for great crested newt.

Hazel Dormouse

- 9.2.6 The closest dormouse records are located approximately 300m south of the site, comprising nut remains and the presence of an individual. The woodland in which these records are noted

is well connected to the site and borders its eastern boundary. The scrub and trees within the site may therefore be used by hazel dormouse.

Reptiles

- 9.2.7 Suitable reptile habitat is present on site, in the form of scrub and grassland habitats, which provide potential foraging and sheltering opportunities for common reptiles. In addition, a log pile is present to the west of the site, forming a potential hibernaculum.

Invasive Species

- 9.2.8 Cotoneaster was noted within the scrub habitat. Cotoneaster is a difficult plant group in terms of identification within excess of one hundred species being naturalised in Britain. The fruits produced by the genus are eaten by birds which spread the seeds into the wild. Identification to species is only possible by examination of the seeds. Five Cotoneaster species are listed on Schedule 9. It is not possible to confirm which species is present on the site.

9.3 Potential Impacts and Recommendation Summary

Designated sites

- 9.3.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 9.3.2 The semi-improved grassland is of limited intrinsic ecological value. The feature of greatest ecological interest is the developed scrub and scattered trees present through the site. These areas should be retained, wherever possible, under emerging proposals.
- 9.3.3 Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats
- 9.3.4 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 9.3.5 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 9.3.6 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 9.3.7 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).
- 9.3.8 If building B1 is impacted under emerging proposals, further survey work will be required to determine whether roosting bats are present or likely absent, as set out in **Recommendation R1** (see 13.1). If any trees with the potential to support roosting bats, further survey work will be required to determine whether roosting bats are present or likely absent, as set out in **Recommendation R2** (see 13.1).

Badger

- 9.3.9 No activity signs were recorded during the PEA; nevertheless, there is the potential for setts to be present in inaccessible areas of the site. Therefore, sensitive clearance is recommended on a precautionary basis, as set out in **Recommendation R9** (see 13.1).

Nesting Birds

- 9.3.10 The scrub, trees and tussocky grassland within the site could support nesting bird species and vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Great crested newts

- 9.3.11 The site contains suitable terrestrial habitat for great crested newts and is well-connected to ponds **P3, P4, P5** and **P6**. One of these ponds, P4 was assessed as being of average suitability for GCN, while ponds P5 and P6 could not be accessed.
- 9.3.12 A habitat suitability index assessment should be undertaken of ponds P5 and P6 in the first instance, providing access can be obtained. This will determine the extent to which full targeted surveys for the species are required to support any emerging proposals.
- 9.3.13 If any suitable habitat is to be damaged under the proposals, eDNA or aquatic surveys will be required of all potential breeding ponds within 250m of the site as a minimum. The full details of this survey work are out in **Recommendation 6** (see 13.1).

Dormouse

- 9.3.14 There is potential for dormouse to utilise the scrub and trees within the site and any impacts to these habitats would risk killing or injuring the species and damaging or destroying breeding sites or resting places. If there is the potential for these habitats to be impacted full surveys should be undertaken to determine whether the species is present or likely absent, as set out in **Recommendation 10** (see 13.1).

Reptiles

- 9.3.15 The habitats present are suitable for common reptiles. Any impacts on the suitable habitats would therefore have the potential to kill or injure reptiles, including clearance of grassland and scrub.
- 9.3.16 As these habitats are limited in extent, and similar habitats are widely available in the surrounding landscape, it is considered appropriate to address this through a sensitive clearance of any affected habitats, rather than undertaking a suite of surveys. Further detail is provided in **Recommendation 8** (see 13.1).

Invasive species

- 9.3.17 It is recommended the cotoneaster is cleared from the site as part of any emerging proposals, as set out in **Recommendation 11** (see 13.1).

10 WNP2-09

10.1 Habitats

- 10.1.1 The site is dominated by hardstanding (Photograph 6 at Appendix 1). The site contains a two-storey brick building in use as commercial offices (**B1**). The building has a pitched, slate tile roof, and is generally in good condition. There are associated areas of lawn and ornamental planting, in addition to scattered trees at the site boundaries. A habitat plan for the WNP2-09 is provided at Appendix 9.
- 10.1.2 The lawn is comprised of semi-improved grassland that is regularly mown, with a short sward as a result. The sward is dominated by perennial ryegrass, with cock's-foot occasional. Herbs are present at a high density, including abundant red clover and occasional self-heal and pennywort (*Umbilicus rupestris*). Creeping cinquefoil (*Potentilla reptans*), dog violet (*Viola riviniana*), herb-robert, dandelion (*Taraxacum* sp.), yarrow, common daisy (*Bellis perennis*), wood sorrel (*Oxalis acetosella*), wild strawberry (*Fragaria vesca*) and foxglove (*Digitalis purpurea*) are only rarely present.
- 10.1.3 Under the UKHab classification the habitat would be classified as other neutral grassland, owing to the density of species, which are present between 9 and 15/m² across the habitat. Using the Defra metric 3.0 condition assessment criteria, it would be classified in poor condition (passing criteria 4 and 5).
- 10.1.4 Several scattered broadleaved trees are present across the site, including white poplar (*Populus alba*), oak, holly, hawthorn, willow (*Salix* sp.), cherry, rowan (*Sorbus aucuparia*), clematis (*Clematis* sp.), silver birch and an ornamental birch species. A row of cypress trees also run along a short stretch of the southwest boundary of the site.

10.2 Adjacent Habitats

- 10.2.1 A roadside verge is present to the north-east of the site, with the following species present; creeping thistle, common ragwort, pendulous sedge, herb Robert, bramble, honeysuckle (*Lonicera* sp), wood avens, blackthorn, creeping buttercup, woody nightshade, dandelion, rose sp.

10.3 Species

Bats

- 10.3.1 Records of noctule and common pipistrelle are located approximately 350m north-east of the site boundary, dating from 2008. The site contains negligible habitat for foraging or commuting bats.

10.3.2 Two trees were identified with roosting features, including an oak tree and a beech tree located towards the western site boundary.

10.3.3 Several potential roosting features were identified on B1, including missing tiles and areas of missing mortar on the southern and eastern elevations of the roof, and gaps at the eaves of the dormer windows on the eastern elevation. These are marked on Figure 9 at Appendix 10. Building **B1** was assessed as being of moderate suitability for roosting bats. The associated structures, including a bike shed and bin store, are of negligible suitability.

Badger

10.3.4 The nearest badger sett record is located more than 1km from the site. No evidence of badger activity was recorded within the site, and the species is considered likely absent from the site.

Nesting birds

10.3.5 The nearest bird record returned by the desk study is of mallard (*Anas platyrhynchos*), located 130m to the west of site. There are some limited opportunities for foraging and nesting birds within the site, in the form of the grassland and ornamental planting.

Great crested newt

10.3.6 There are no waterbodies within the site. The grassland within the site has a short sward is unsuitable for great crested newt. The ornamental planting is dense along the north-eastern boundary and potentially provides some limited sheltering opportunities at its base. However, the closest pond identified, **P4**, is approximately 100m north of the site at its closest point, and is separated from the site by woodland, a small area of residential development and a road (Long Toll). It is considered there is negligible potential for any newts present to utilise the limited ornamental planting within the site, and is therefore considered likely absent from the site.

Hazel Dormouse

10.3.7 The closest dormouse records are located approximately 120m east and west of the site, comprising nut remains and the presence of an individual. The woodland in which these records are noted is well connected to the site and borders its northern and western boundaries. The trees within the site connected to this woodland may therefore be used by hazel dormouse.

Reptiles

10.3.8 The habitats within the site are of negligible suitability for reptiles. The grassland does not provide any foraging opportunities, while the sheltering opportunities are limited to the small

areas of ornamental planting. Given the lack of records returned in the desk study, and the developed nature of the site, reptiles are considered likely absent.

10.4 Potential Impacts and Recommendation Summary

Designated sites

- 10.4.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 10.4.2 The semi-improved grassland is of limited intrinsic ecological value. The feature of greatest ecological interest within the site is the scattered trees toward the western boundary. These areas should be retained, wherever possible, under emerging proposals.
- 10.4.3 Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats
- 10.4.4 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 10.4.5 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 10.4.6 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 10.4.7 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).
- 10.4.8 If either of the trees with bat potential or building **B1** are impacted under emerging proposals, further survey work will be required to determine whether roosting bats are present or likely absent, as set out in **Recommendation R1** (see 13.1).

Nesting Birds

- 10.4.9 The trees and ornamental planting within the site could support nesting bird species and vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Dormouse

- 10.4.10 There is potential for dormouse to utilise the trees within the site connected to the adjacent woodland. These trees are located along the northern and western boundaries. Any impacts to these habitats would risk killing or injuring the species and damaging or destroying breeding sites or resting places. If there is the potential for these habitats to be impacted full surveys may be required to determine whether the species is present or likely absent, as set out in **Recommendation 10** (see 13.1).

11 WNP2-03

11.1 Habitats

- 11.1.1 The site is dominated by poor semi-improved grassland, with patches of tall ruderal vegetation and a bare ground track running from north to south through the site (Photograph 7 at Appendix 1). A habitat plan for the WNP2-03 is provided at Appendix 10.
- 11.1.2 The poor semi-improved grassland appears to be in use as a paddock and has a short sward as a result of grazing. The sward comprises common bent grass, perennial ryegrass and crested dog's-tail. Herbs are present at a low density and include occasional yarrow, red clover, self-heal, cropping buttercup and yarrow, with nipplewort, common sorrel, oxeye daisy (*Leucanthemum vulgare*) and red bartsia present only rarely. A small mammal burrow, considered likely to belong to a fox (*Vulpes vulpes*), is present within the grassland to the west of the site.
- 11.1.3 Under the UKHab classification the habitat would be classified as modified grassland, owing to the density of species, which are present at a rate of approximately 6/m² across the habitat. Using the Defra metric 3.0 condition assessment criteria, it would be classified in poor condition (passing criteria 4 and 5).
- 11.1.4 A disused allotment is present in the south-east corner of the site. Flowerbeds are present, with planted species including rhubarb (*Rheum rhubarbarum*). The majority of species present are typical of tall ruderal species, including common nettle, sun spurge (*Euphorbia helioscopia*), smooth sow-thistle (*Sonchus oleraceus*) and a willowherb, with welsh poppy (*Papaver cambricum*) yarrow, cock's-foot, selfheal, dandelion, dove's-foot cranesbill (*Geranium molle*), field forget-me-not (*Myosotis arvensis*), germander speedwell (*Veronica chamaedrys*), foxglove and broad-leaved plantain also present rarely.
- 11.1.5 An area of tall ruderal vegetation is present to the east of the site, with species present including viburnum (*Viburnum carlesii*), common nettle, ground elder (*Aegopodium podagraria*), green alkanet (*Pentaglottis sempervirens*), black medick, golden rod (*Solidago* sp.), common knapweed, broadleaved dock, pineapple mayweed (*Matricaria discoidea*), sun spurge, bindweed (*Convolvulus* sp), fleabane (*Pulicaria dysenterica*), goosefoot (*Chenopodium* sp.) and toadflax (*Linaria vulgaris*). An additional stand of common ruderal vegetation is present in the north-west of the site.

11.2 Adjacent Habitats

- 11.2.1 A species-rich native hedgerow is present along the western boundary. Species present include ash, hazel, garden privet (*Ligustrum ovalifolium*), blackthorn, hawthorn, beech, field maple and elder. It was assessed as being in good condition.

11.3 Species

Bats

- 11.3.1 A record of two pipistrelle droppings was returned on Beech Lane from 2009, directly adjacent to the site. Individuals are likely to forage over the site and to commute along hedgerows.
- 11.3.2 A single ash tree was identified with a potential bat roost feature, comprising a rot hole located approximately 15m from ground level on the southern elevation. The tree is of moderate suitability for roosting bats. It is located off-site, immediately adjacent to the south-western corner of the site.

Nesting birds

- 11.3.3 A record of Hobby was returned in the desk study, relating to a 1km grid square containing the site. The species was not recorded during the PEA. There are some limited opportunities for foraging birds within the site, with nesting opportunities restricted to the boundary vegetation.

Great crested newt

- 11.3.4 There are no waterbodies within the site, or within 250m of the site. The site does not contain any suitable terrestrial habitat for great crested newt, which is considered likely absent from the site.

Hazel Dormouse

- 11.3.5 The closest dormouse record is located approximately 345m south of the site, within Elmorepark Woodlands, where nut remains were reported in 1998. The woodland is not directly connected to the site. The hedgerows running along the eastern and western boundaries are indirectly connected to the woodland, via the wider hedgerow network.

Reptiles

- 11.3.6 The habitats within the site are of negligible suitability for reptiles. The grassland does not provide any foraging or sheltering opportunities. Reptiles are considered likely absent from the site.

11.4 Potential Impacts and Recommendation Summary

Designated sites

- 11.4.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 11.4.2 The poor semi-improved grassland and tall ruderal vegetation are of limited intrinsic ecological value. Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats
- 11.4.3 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 11.4.4 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application.

Bats

- 11.4.5 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 11.4.6 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats or, if directed onto the tree with potential roosting features, roosting bats. It is recommended this is addressed through **Recommendation R5** (see 13.1).
- 11.4.7 If the tree with potential roosting features is impacted under emerging proposals, further survey work will be required to determine whether roosting bats are present or likely absent, as set out in **Recommendation R3** (see 13.1).

Dormouse

- 11.4.8 The hedgerows adjacent to the site boundaries are indirectly connected to woodlands where dormice have been recorded. However, as these are located outside of the red line, it is assumed for the purpose of this assessment that no impacts will arise on the hedgerows in any emerging proposals. On this basis, no further consideration of the species would be required.

12 WNP2-02

12.1 Habitats

- 12.1.1 The site is dominated by a combination of poor semi-improved and semi-improved grassland, with small areas of scrub and scattered trees at the site boundaries (Photograph 8 at Appendix 1). A habitat plan for the WNP2-02 is provided at Appendix 10.
- 12.1.2 The most abundant habitat is semi-improved grassland in the south-west of the site. This area is unmanaged and was loosely fenced off from the remainder of the site and surrounding field. Within the sward Yorkshire fog is frequent, common bent abundant and cock's-foot occasional; with timothy grass and crested dog's-tail present rarely. Herbs present include birds-foot trefoil, ox-eye daisy, yarrow, germander speedwell, ladies bedstraw (*Galium verum*), common sorrel, creeping buttercup, lesser stitchwort, red clover, ragwort and cut-leaved cranesbill (*Geranium dissectum*).
- 12.1.3 Under the UKHab classification the habitat would be classified as other neutral grassland, owing to the density of species, which are present at a rate of approximately 10/m² across the habitat. Using the Defra metric 3.0 condition assessment criteria, it would be classified in poor condition (passing criteria 4 and 5).
- 12.1.4 To the north and east the grassland changes in structure and composition. This area had been mown shortly before the PEA was undertaken; the diversity and abundance of species within the sward is lower, indicating these areas are more regularly managed. Common bent grass is dominant, with red fescue frequent, yorkshire fog and cock's-foot occasional. Herbs are present at a much lower density, with field bindweed frequent and common cat's-ear, yarrow, common knapweed and common ragwort present rarely.
- 12.1.5 Under the UKHab classification these areas of grassland would be classified as modified grassland, owing to the density of species, which are present at a rate of approximately 6/m². Using the Defra metric 3.0 condition assessment criteria, it would be classified in moderate condition (passing criteria 1, 3, 4, 6 and 7).
- 12.1.6 A small area of dense scrub is present in the southeast corner of the site. Bramble is dominant, with an ornamental acer species and hazel present, as well as common nettle, common ragwort, false-oat grass (*Arrhenatherum elatius*), creeping thistle and comfrey (*Symphytum officinale*). Three copper beech (*Fagus sylvatica* f. *purpurea*) trees are present in the south-west of the site.

- 12.1.7 A native hedgerow is present along the western boundary. It is dominated by hawthorn, with frequent blackthorn and field maples, in addition to rarely occurring dogwood, beech and a rose species. The hedgerow is relatively immature and narrow.

12.2 Species

Bats

- 12.2.1 A record of two pipistrelle droppings was returned on Beech Lane from 2009, directly adjacent to the site. Individuals are likely to forage over the site and to commute along the hedgerow.

Nesting birds

- 12.2.2 A record of Hobby was returned in the desk study, relating to a 1km grid square containing the site. The species was not recorded during the PEA. There are some limited opportunities for foraging birds within the site, with nesting opportunities restricted to the boundary vegetation.

Great crested newt

- 12.2.3 There are no waterbodies within the site, or within 250m of the site. The site does not contain any suitable terrestrial habitat for great crested newt, which is considered likely absent from the site.

Hazel Dormouse

- 12.2.4 The closest dormouse record is located approximately 420m south of the site, within Elmorepark Woodlands, where nut remains were reported in 1998. The woodland is not directly connected to the site. The hedgerow along the western boundary of the site is indirectly connected to the woodland, via the wider hedgerow network.

Reptiles

- 12.2.5 No records of reptile were returned by the desk study. The semi-improved grassland within the site is of some limited suitability for reptiles. However, as it has developed a rank sward, with dense grass tussocks present, the habitat provides sub-optimal basking and foraging opportunities.

Invasive species

- 12.2.6 Cotoneaster was identified within the scrub. Cotoneaster is a difficult plant group in terms of identification within excess of one hundred species being naturalised in Britain. The fruits produced by the genus are eaten by birds which spread the seeds into the wild. Identification to species is only possible by examination of the seeds. Five Cotoneaster species are listed on Schedule 9. It is not possible to confirm which species is present on the site.

12.3 Potential Impacts and Recommendation Summary

Designated sites

- 12.3.1 The site does not lie within an impact risk zone for any SSSI. Furthermore, given the small scale of the site, it is considered that any emerging residential proposals are unlikely to have the potential to significantly impact any designated sites identified in this PEA.

Habitats

- 12.3.2 The habitats within the site are of limited intrinsic ecological value. The feature of great interest is the hedgerow along the western boundary, and it is recommended this feature is retained in any emerging proposals. Any habitat impacts should be mitigated or compensated for through the enhancement of retained habitats or creation of new habitats
- 12.3.3 The South Oxfordshire District Council Local Plan requires all development proposals to provide net gain in biodiversity wherever possible, and no net loss as a minimum. All proposals will be expected to demonstrate this using a recognised biodiversity accounting metric.

Species

- 12.3.4 This section identifies the presence or potential presence of protected species within or adjacent to the site, identifying where potential impacts may arise and recommending further survey work where required to progress a planning application..

Bats

- 12.3.5 Habitat loss could result in the loss of foraging opportunities for bats; however, these are common in the wider landscape and the site is considered unlikely to be relied upon by any bats in the landscape.
- 12.3.6 Increased levels of artificial light within or adjacent to the site could disturb foraging and commuting bats. It is recommended this is addressed through **Recommendation R3** (see 13.1).

Nesting Birds

- 12.3.7 The hedgerow, trees and scrub within the site could support nesting bird species and vegetation clearance could result in the killing or injury of birds, or the damage or destruction of a nest. It is recommended this is addressed through **Recommendation R5** (see 13.1).

Dormouse

- 12.3.8 The hedgerow within the site is indirectly connected to woodlands where dormice have been recorded. The closest record is approximately 420m from the site. However, the closest

woodland block is approximately 800m from the site, as measured by the shortest connections through the wider hedgerow network. This reduces the likelihood the species will be present. In addition, the hedgerow within the site is relatively young and narrow, reducing its suitability for the species. Hazel dormouse are considered likely absent; however, if the hedgerow is to be impacted under emerging proposals, consultation with the local authority would be advised to agree whether targeted surveys would be required.

Reptiles

- 12.3.9 The habitats present are suitable for common reptiles. Any impacts on the suitable habitats would therefore have the potential to kill or injure reptiles, including clearance of grassland and scrub.
- 12.3.10 As these habitats are limited in extent, and similar habitats are widely available in the surrounding landscape, it is considered appropriate to address this through a sensitive clearance of any affected habitats, rather than undertaking a suite of surveys. Further detail is provided in **Recommendation 8** (see 13.1).

Invasive species

- 12.3.11 It is recommended the cotoneaster is cleared from the site as part of any emerging proposals, as set out in **Recommendation 11** (see 13.1).

13 Recommendations and Enhancement Summary

13.1 Protected Species Recommendations

13.1.1 *Bats*

Recommendation R1 - If buildings with the potential to support roosting bats are to be demolished/refurbished then further survey would be required to establish if bats are present or likely absent and – if present – to enable characterisation of the roosts.

Emergence and/or return to roost surveys should be completed between May and September with surveyors located around the buildings focused on potential roosting features. If a building is of low suitability, a single survey between May and August is required. This rises to two surveys for buildings of moderate suitability (with at least one before the end of August) and three surveys for buildings of high suitability (at least two before the end of August). In the event roosting bats are present and will be impacted by the proposals, works will only be able to proceed under licence from Natural England.

Recommendation R2 - This recommendation refers to sites with trees with potential roosting features (PRFs) for bats. These surveys could entail either (a) climbing the trees and investigating the PRFs with an endoscope (tree climbing surveys can be undertaken at any time of year), or (b) emergence and re-entry surveys could be undertaken. Trees with moderate suitability for bats would require two separate surveys between May and September, with at least one completed before the end of August. Trees with high suitability for bats require three surveys, with two completed before the end of August. In the event roosting bats are present and will be impacted by the proposals, works will only be able to proceed under licence from Natural England.

Recommendation R3 - Any lighting for the development will need to be designed sensitively in accordance with industry standard guidance (BCT & ILP, 2018) and the following principles will need to be adopted:

- Maintaining dark corridors along the site boundaries;
- Not illuminating planted or retained trees on site or boundary trees;
- Where lighting is required, ensuring:
- Light levels are less than 3 Lux;

- o LED luminaires with a warm white spectrum ideally <2700 Kelvin (to avoid blue / UV elements);
- o Bollard or low-level downward directional luminaires are used and mounted on the horizontal (with no upward tilt); and
- o Security lighting, if required, is motion-activated with short (1 minute) timers.

Recommendation R4 - Walked transects should be undertaken within the site to observe and record bat activity. A pair of surveyors slowly walk a pre-determined transect route, stopping at regular intervals to observe and record bat activity (using an Elekon Batlogger M). The number of surveys required varies according to the suitability of the site for foraging and commuting bats. Three surveys are required for sites of low suitability (one each in Spring, Summer and Autumn), rising to monthly surveys between April and October for sites of moderate suitability and bi-monthly surveys over this period for sites of high suitability.

13.1.2 *Birds*

Recommendation R5- Any wild birds' nests are protected whilst in use. If any active wild birds' nests are found prior to the vegetation clearance or building demolition, then these must be left alone until they cease to be in use. Ideally, works to suitable nesting habitat/features should be scheduled to avoid the bird nesting season (March to August inclusive). Should such works take place during March-August inclusive, they must be immediately preceded by a check for any active nests by a suitably qualified ecologist. Any active nests identified during works (regardless of time of year) would need to be protected and left with a suitable buffer (to be defined by the ecologist) until the nest is no longer active.

13.1.3 *Great crested newts*

Recommendation R6- An environmental DNA (eDNA) survey may be undertaken of all suitability breeding ponds within 250m of the site to determine whether there are great crested newts present. If absent, no further considerations are required. If present, aquatic surveys may be required to enable population class assessment and support a European protected species mitigation licence (EPSML) application. Surveys must be undertaken between mid-March and mid-June, with half completed between mid-April and mid-May. Alternatively, the site could be registered under the District Licence held by the Council and run by NatureSpace.

13.1.4 *Reptiles*

Recommendation R7 - If a large area of reptile habitat is to be cleared, or if there is no suitable habitat towards which the reptiles can be encouraged, then a reptile survey will be required to determine whether there are reptiles on site, and if so, the population size. The results of this survey will inform an appropriate mitigation strategy, which may include a translocation of reptiles to a suitable receptor area.

Recommendation R8 - If a small area of suitable reptile habitat is to be cleared, this can be undertaken under a sensitive clearance methodology to ensure no reptiles are killed or injured in the works. This entails undertaken a phased cut during the reptile active season (April to October) and in suitable weather conditions (at least 9 degrees, clear and dry). Habitat should be cut to a height of no lower than 10cm initially, allow reptiles the opportunity to disperse, before being cleared to ground level. Habitat should be cleared directionally towards site boundaries.

13.1.5 *Badger*

Recommendation R9 - If potential badgers setts are located on site, the designs should avoid the sett entrance with a 30m buffer. If this is not possible, or if additional potential setts appear elsewhere on site, a monitoring survey should be conducted. This will comprise the use of sticks, sand and camera traps to detect presence, over a period of at least 21 days. If badgers are present and the sett cannot be retained, a licence will be required from Natural England to close the sett. Badger setts can only be closed between July and November, outside of sensitive times of year.

13.1.6 *Dormouse*

Recommendation R10 - In the first instance, impacts to potential dormouse habitat should be avoided. However, if this is not possible, a dormouse survey should be conducted. This involves the deployment of at least 50 nest tubes, which are checked throughout the year between April and November to detect signs of dormice, such as nesting material. If dormice are present, a mitigation licence will be required if the habitat is to be impacted.

Invasive Species

Recommendation R11 - It is recommended the cotoneaster is cleared from the site as part of any emerging proposals. This should be undertaken in a manner that prevents spread of the plant in the wild in accordance with the relevant legislation.

13.2 Enhancements

- 13.2.1 In line with planning policy, which requires developments to enhance the site for wildlife, a range of enhancements will be required, which will depend on the nature of the site and the proposed development. This commonly includes habitat enhancements (referenced) above, in addition to the creation of opportunities for protected species (e.g. bat and bird boxes).

14 Relevant Legislation and Policy

14.1 Exit from European Union

14.1.1 Various pieces of UK wildlife legislation are subject to a draft amendment at the time of writing by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These include the Wildlife and Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations 2017 (as amended), the Conservation of Offshore Marine Habitats and Species Regulations 2017 and the Offshore Petroleum (Conservation of Habitats) Regulations 2001.

14.1.2 The amendments prescribed by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 allow existing protections afforded by current wildlife legislation and transposed EC Council Directives to continue following the UK's exit from the European Union.

14.2 National Planning Policy Framework

14.2.1 The National Planning Policy Framework (NPPF) was updated in February 2019 (MHCLG, 2019) thereby replacing the older version of July 2018. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:

- identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

14.2.2 When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the

features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

14.2.3 The following should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

14.2.4 The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

14.3 Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance (England)

14.3.1 The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act require the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England as required by the Act. In accordance with the Act the Secretary of State keeps this list under review and will publish a revised list if necessary, in consultation with Natural England.

14.3.2 The S41 list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions, including development control and planning. This is commonly referred to as the 'Biodiversity Duty.'

- 14.3.3 Guidance for public authorities on implementing the Biodiversity Duty has been published by Defra. One of the key messages in this document is that ‘conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them.’ In England the administration of the planning system and licensing schemes are highlighted as having a ‘profound influence on biodiversity conservation.’ Local authorities are required to take measures to “promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species. The guidance states that ‘the duty aims to raise the profile and visibility of biodiversity, clarify existing commitments with regard to biodiversity, and to make it a natural and integral part of policy and decision making.’
- 14.3.4 In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for rarer species and habitats in the UK. The UK Post-2010 Biodiversity Framework, which covers the period from 2011 to 2020, now succeeds the UK BAP. The UK priority list contained 1150 species and 65 habitats requiring special protection and has been used as a reference to draw up the lists of species and habitats of principal importance in England.
- 14.3.5 In England, there are 56 habitats of principal importance and 943 species of principal importance on the S41 list. These are all the habitats and species found in England that were identified as requiring action in the UK BAP and which continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

14.4 Local Planning Policy

- 14.4.1 Below is relevant information taken from the South Oxfordshire District Council Local Plan 2035 (South Oxfordshire District Council, 2020).

14.4.2 **Policy ENV1: Landscape and Countryside**

South Oxfordshire's landscape, countryside and rural areas will be protected against harmful development. Development will only be permitted where it protects and, where possible enhances, features that contribute to the nature and quality of South Oxfordshire's landscape, in particular:

- *trees (including individual trees, groups of trees and woodlands), hedgerows and field boundaries;*

- *irreplaceable habitats such as ancient woodland and aged or veteran trees found outside ancient woodland;*
- *the landscapes, waterscapes, cultural heritage and user enjoyment of the River Thames, its tributaries and flood plains;*
- *other water course and water bodies;*
- *the landscape setting of settlements or the special character and landscape setting of Oxford;*
- *topographical features;*
- *areas or features of cultural and historic value;*
- *important views and visually sensitive skylines; and*
- *aesthetic and perceptual factors such as tranquilly, wilderness, intactness, rarity and enclosure.*

The Council will seek the retention of important hedgerows. Where retention is not possible and a proposal seeks the removal of a hedgerow, the Council will require compensatory planting with a mixture of native hedgerow species.

14.4.3 Policy ENV2: Biodiversity – Designated Sites, Priority Habitats and Species

1. The highest level of protection will be given to sites of international nature conservation importance (Special Areas of Conservation). Development that is likely to result in a significant effect, either alone or in combination, on such sites will need to satisfy the requirements of the Conservation of Habitat and Species 2017 (as amended).

2. Sites of Special Scientific Interest (SSSI) are of national importance. Development that is likely to have an adverse effect on a SSSI (either on its own or in combination with other developments) will only be permitted in exceptional circumstances, where it can be demonstrated that the benefits of the development in the location proposed clearly outweigh an harm to the special interest features and the SSSI's contribution to the local ecological network. In such circumstances, measures should be provided (and secured through planning conditions or legal agreements) that would mitigate or, as a last resort, compensate for the adverse effects resulting from development.

3. Development likely to result, either directly or indirectly to the loss, deterioration or harm to:

- *Local Wildlife Sites*
- *Local Nature reserves*
- *Priority Habitats and Species*
- *Legally Protected Species*
- *Local Geological Sites*
- *Ecological Networks (Conservation target Areas)*
- *Important or ancient hedges or hedgerows*
- *Ancient woodland and veteran trees*

will only be permitted if:

- i. the need for, and benefits of the development in the proposed location outweighs the adverse effect on the interests;*
- ii. it can be demonstrated that it could not reasonably be located on an alternative site that would result in less or no harm to the interests and*
- iii. measures will be provided (and secured through planning conditions or legal agreements) that would avoid, mitigate or as a last resort, compensate for the adverse effects resulting from development.*

4. Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) will be refused planning permission, unless there are wholly exceptional reasons justifying the granting of planning permission.

5. Where development has the potential to affect a proposed wildlife site the developer must undertake surveys and assessments to determine whether the site meets the criteria for Local Wildlife Site status.

14.4.4 Policy ENV3: Biodiversity

- a) Development that will conserve, restore and enhance biodiversity in the district will be supported. All development should provide a net gain in biodiversity where possible. As a minimum, there should be no net loss of biodiversity. All proposals should be supported by evidence to demonstrate a biodiversity net gain using a recognised biodiversity accounting metric.*

- b) *Development proposals which would result in a net loss of biodiversity will only be considered if it can demonstrated that alternatives which avoid impacts on biodiversity have been fully explored in accordance with the mitigation hierarchy*. In the absence of alternative sites or layouts, development proposals must include adequate mitigation measures to achieve a net gain of biodiversity. Where harm cannot be prevented or adequately mitigated, appropriate compensation measures will be sought, as a last resort, through planning conditions or planning obligations (depending on the circumstances of each application) to offset the loss by contributing to appropriate biodiversity projects to achieve an overall net gain for biodiversity.*
- c) *Planning permission will only be granted if impacts on biodiversity can be avoided, mitigated or, as a last resort, compensated fully.*

** For more information please refer to section 5.2 of BS 42020:2013.*

14.4.5 Policy ENV4: Watercourses

1. *Development of land that contains or is adjacent to a water course must protect and where possible, enhance the function and setting of the watercourse and its biodiversity. As a last resort development should provide mitigation for any unavoidable impacts.*
2. *Development should include a minimum 10m buffer zone along both sides of the watercourse to create a corridor favourable to the enhancement of biodiversity. Where a 10m wide buffer zone is not considered possible by the local planning authority, (for example in dense urban areas where existing development comes closer to the watercourse) a smaller buffer zone may be allowed, but should still be accompanied by detailed plans to show how the land will be used to promote biodiversity and how maintenance access to the watercourse will be created. Wherever possible within settlements and minimum 10m buffer should be maintained.*
3. *Proposals should avoid the culverting of any watercourse. Opportunities taken to remove culverts will be supported.*
4. *Outside settlements, proposals for mooring stages will not be permitted. proposals for piers, earthworks or facing riverbanks with piles and planking will not be permitted except under exceptional circumstances and agreement with the Environment Agency. Where it is necessary to protect the riverbank from erosion, the protective measures must be designed to maintain and enhance the special character of the River and its environment, including its biodiversity.*
5. *Major development proposals which are located within 20m of a watercourse will require a construction management plan to be agreed with the council before commencement of work to ensure that the water course will be satisfactorily protected from damage, disturbance or pollution.*

6. *Sites for new development with existing culverts will be expected to investigate the feasibility of de-culverting the watercourse. Where bridges are proposed as an alternative to culverting, the construction method should take into account the importance of maintaining an obstruction free bank for wildlife.*

Protected Species

14.5 Protected Species

14.5.1 European Protected Species (EPS)

The Conservation of Habitats and Species Regulations 2017 (as amended) transpose the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

“European protected species” (EPS) of animal are those which are shown on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- a) intentionally or deliberately capture, injure or kill any wild animal included amongst these species;
- b) possess or control any live or dead specimens or any part of, or anything derived from these species;
- c) deliberately disturb wild animals of any such species;
- d) deliberately take or destroy the eggs of such an animal; or
- e) intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place.

For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- a) to impair their ability—
 - i. to survive, to breed or reproduce, or to rear or nurture their young; or
 - ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- b) to affect significantly the local distribution or abundance of the species to which they belong.

Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of The Conservation of Habitats and Species Regulations 2017 (as amended), a licence can only be issued where the following requirements, known as the “Three Tests”, are satisfied:

1. The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’
2. ‘There is no satisfactory alternative’

The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

14.5.2 **Birds**

All nesting wild birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, ‘Birds Directive’) (Regulation 10 (3)) requires that the objective is the ‘preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...’ Regulation 10 (7) states: ‘In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements’.

In relation to the duties placed on competent authorities under the 2017 Regulations (as amended), Regulation 10 (8) states: ‘So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of

habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).’

14.5.3 Reptiles

All native reptile species receive legal protection in Great Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Viviparous lizard, slow-worm, grass snake and adder are protected against killing, injuring and unlicensed trade only. Sand lizard and smooth snake receive additional protection as “English Protected Species” under the provisions of The Conservation of Habitats and Species Regulations 2017 (as amended) and are fully protected under the Wildlife and Countryside Act 1981 (as amended).

All six native species of reptile are included as ‘species of principal importance’ for the purpose of conserving biodiversity under Section 41 (England) of the NERC Act 2006 and Section 7 of the Environment (Wales) Act 2016.

Current Natural England Guidelines for Developers states that ‘where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.’ Further the guidance states: ‘Normally prohibited activities may not be illegal if ‘the act was the incidental result of a lawful operation and could not reasonably have been avoided’. Natural England ‘would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.’

The Natural England Guidelines for Developers state that ‘planning must incorporate two aims where reptiles are present:

- To protect reptiles from any harm that might arise during development work;
- To ensure that sufficient quality, quantity and connectivity of habitat is provided to accommodate the reptile population, either on-site or at an alternative site, with no net loss of local reptile conservation status.’

14.5.4 Badger

Badger are protected in Britain under the Protection of Badgers Act 1992 and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended).

The legislation affords protection to Badgers and Badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;

- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett

15 References

- Bedford Borough Council (2020). Local Plan 2030.
- BCT & ILP (2018). *Guidance Note 08/18 Bats and artificial lighting in the UK*. Bats and the Built Environment series
- Biggs, J., Fox, G., Nicolet, P., Walker, D., Whitfield, M. and Williams, P. (1998). *A guide to the methods of the National Pond Survey*. Pond Action, Oxford.
- CIEEM (2017). *Guidelines for preliminary ecological appraisal, 2nd edition*. Chartered institute of Ecology and Environmental management, Winchester
- Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.
- Gov.uk (2015). *Guidance. Bats: surveys and mitigation for development projects*. Natural England and Department for Environment, Food & Rural Affairs, Worcester.
- Herpetological Conservation Trust (2008). *Habitat Suitability Index – Guidance Notes*. National Amphibian and Reptile Recording Scheme. HCT
- JNCC (2010). *Handbook for Phase 1 habitat survey - a technique for environmental audit*. Joint Nature Conservation Committee, Peterborough.
- Maddock, A. (ed) (2011). *UK Biodiversity Action Plan Priority Habitat Descriptions (updated Dec. 2011)*. Joint Nature Conservation Committee, Peterborough.
- MHCLG (2019). *National Planning Policy Framework*. Ministry of Housing Communities and Local Government
- Natural England (2017). *GCN Method Statement WML-A14-2* (Version November 2017) the Conservation of Habitats and Species Regulations 2017 (as amended) Method Statement to support application for licence under Regulation 55(2)(e) in respect of great crested newts *Triturus cristatus*. Natural England, Worcester.
- Stace, C. (2019). *New Flora of the British Isles, fourth edition*. Cambridge University Press, Cambridge.

Appendix 1 – Photographs



Photo 1: WNP2-25



Photo 2: WNP2-30



Photo 3: Reserve Site



Photo 4: WNP2-98



Photo 5: WNP2-43a



Photo 6: WNP2-09



Photo 7: WNP2-03



Photo 8: WNP2-02



Photo 9: Pond 1



Photo 10: Pond 2



Photo 11: Pond 3

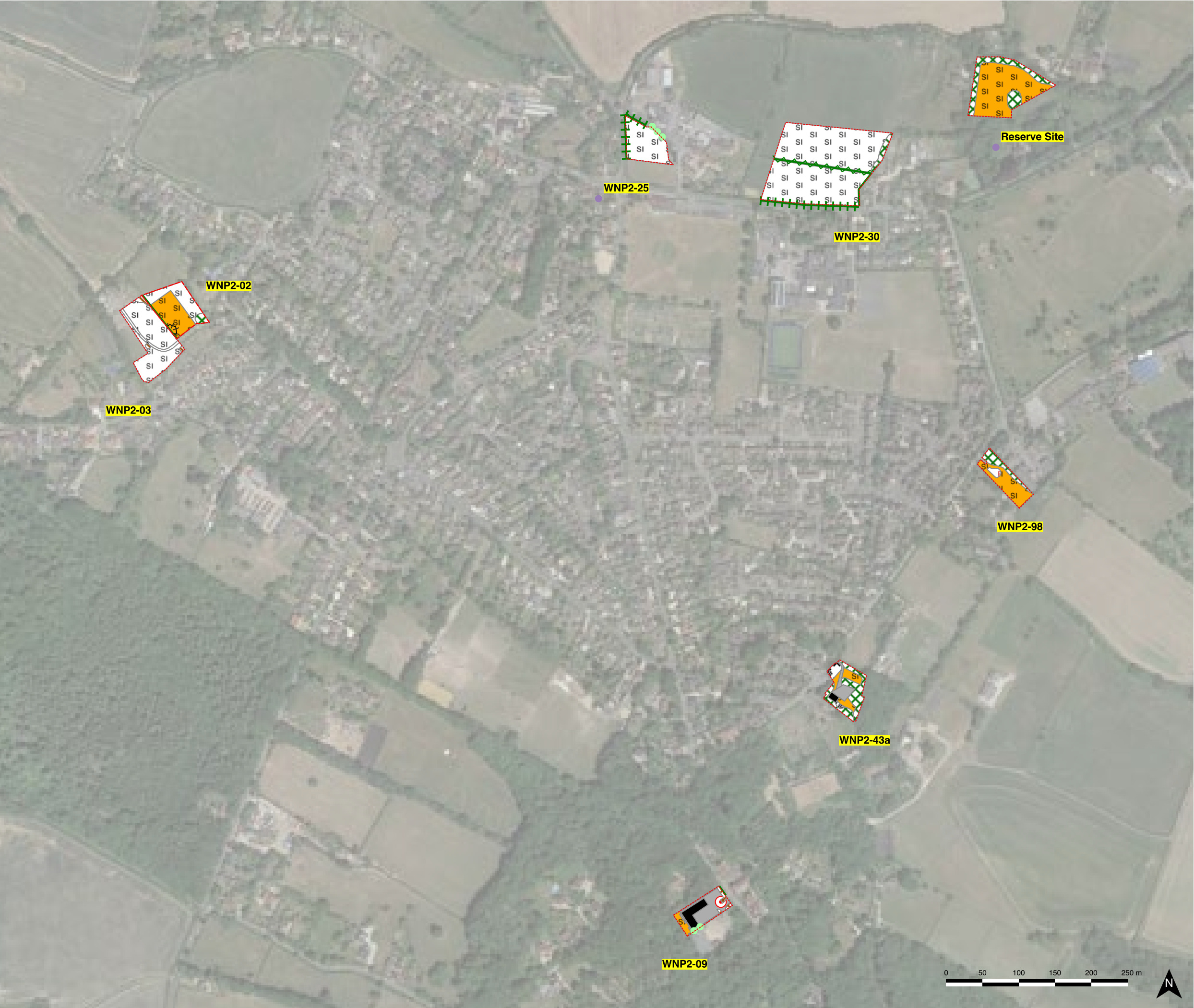


Photo 12: Pond 4

Appendix 2 – Figure 1

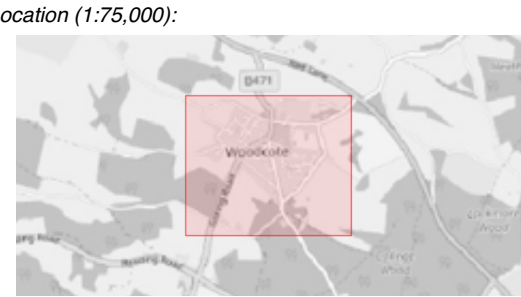
Figure 1: Site Location Plan

(See below)



LEGEND

 Site Boundaries



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
Site Location Plan

Drawing No.:	Scale (@A3):
EBD_DR_1996_001	1:5000
Central Grid Ref.:	Date Drawn:
SU 64426 81664	02/09/2021
Drawn by:	Approved by:
TC	LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.



Hampden House, Monument Park,
Chalgrove, Oxon.
OX44 7RW

t: 01865 893347
e: james@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk

Appendix 3 – Figure 2

Figure 2: Pond Map

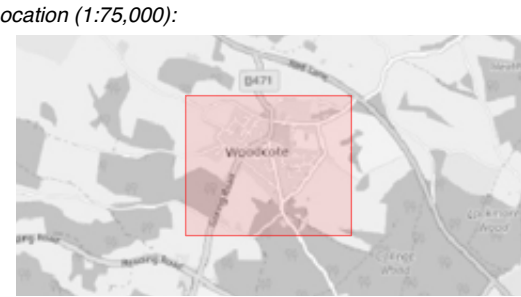
(See below)



LEGEND

Site Boundaries

Standing water



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
Pond Map

Drawing No.:	Scale (@A3):
EBD_DR_1996_002	1:5000
Central Grid Ref.:	Date Drawn:
SU 64426 81664	08/09/2021
Drawn by:	Approved by:
TC	LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

Hampden House, Monument Park,
Chalgrove, Oxon,
OX44 7RW

t: 01865 893347
e: james@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk

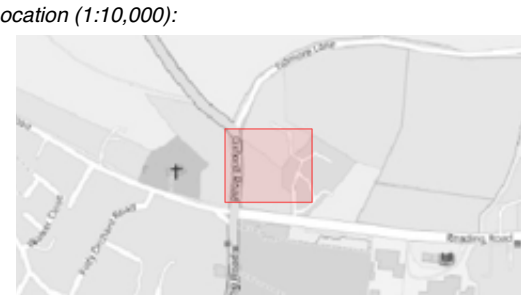
Appendix 4 – Figure 3

Figure 3 WNP2-25

(See below)



- LEGEND
- Site boundary
 - Buildings
 - Poor semi-improved grassland
 - Coniferous treeline
 - Dry ditch
 - Hedge with trees



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
WNP2-25

Drawing No.:
EBD_DR_1996_003

Central Grid Ref.:
SU 64488 82145

Drawn by:
LH/
TC

Scale (@A3):
1:350

Date Drawn:
08/09/2021

Approved by:
LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

Appendix 5 – Figure 4

Figure 4: WNP2-30

(See below)



LEGEND

Site boundary

Hedge with trees

Intact hedge

Intact hedge - native species-rich

SI

SI

Poor semi-improved grassland

Scrub - dense/continuous



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
WNP2-30

Drawing No.:
EBD_DR_1996_004

Scale (@A3):
1:650

Central Grid Ref.:
SU 64732 82132

Date Drawn:
06/09/2021

Drawn by:
TC

Approved by:
LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.



ecologybydesign

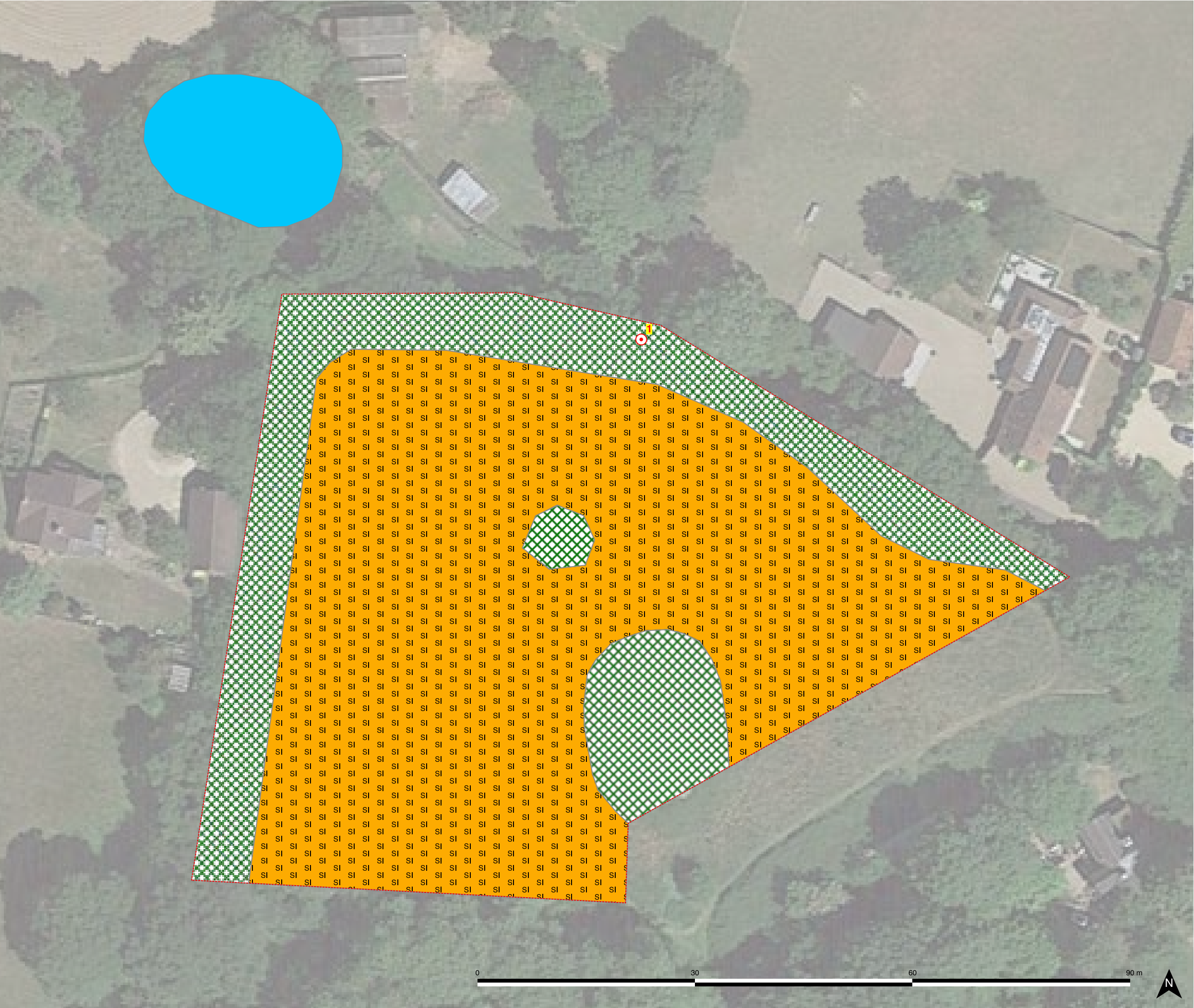
Hampden House, Monument Park,
Chalgrove, Oxon.
OX44 7RW

t: 01865 893347
e: james@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk

Appendix 6 – Figure 5

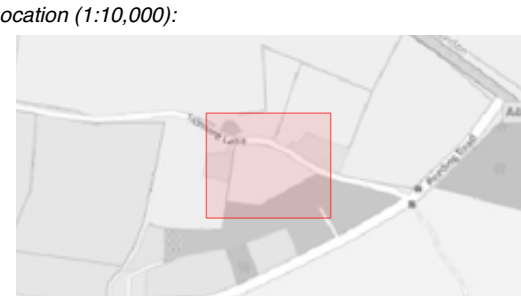
Figure 5: Reserve Site

(See below)



LEGEND

- Site Boundaries
- Neutral grassland - semi-improved
- Scrub - dense/continuous
- Standing water



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
Reserve Site

Drawing No.:	Scale (@A3):
EBD_DR_1996_005	1:500
Central Grid Ref.:	Date Drawn:
SU 65000 82230	06/09/2021
Drawn by:	Approved by:
TC	LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

Hampden House, Monument Park,
Chalgrove, Oxon,
OX44 7RW

ecologybydesign

t: 01865 893347
e: james@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk

Appendix 7 – Figure 6

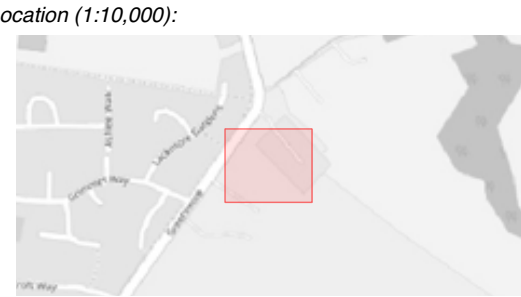
Figure 6: WNP2-98

(See below)



LEGEND

- Site Boundaries
- Neutral grassland - semi-improved
- Refuse-tip
- Scrub - dense/continuous
- Standing water



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
WNP2-98

Drawing No.:
EBD_DR_1996_006

Scale (@A3):
1:350

Central Grid Ref.:
SU 64989 81701

Date Drawn:
06/09/2021

Drawn by:
TC

Approved by:
LG

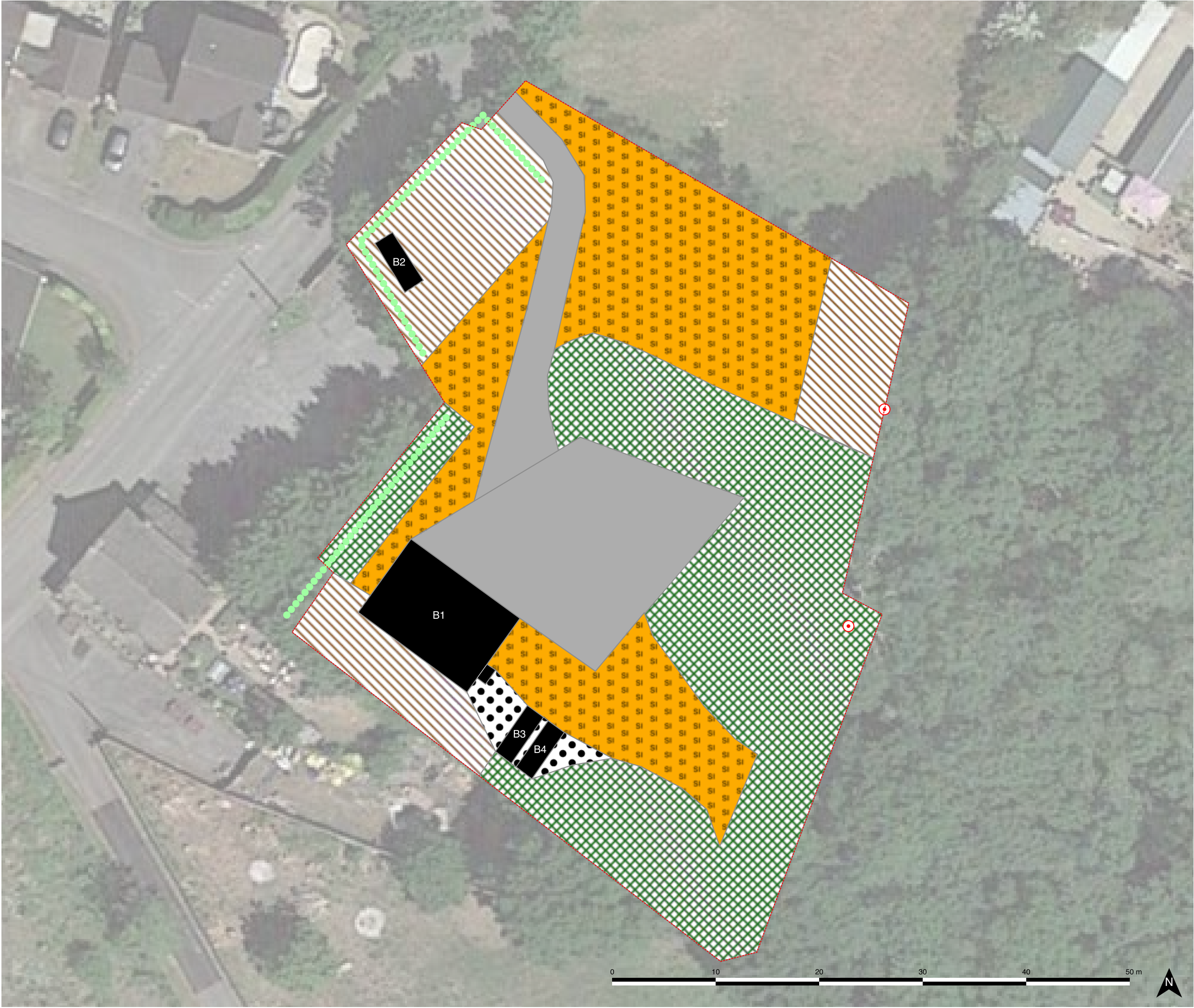
This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

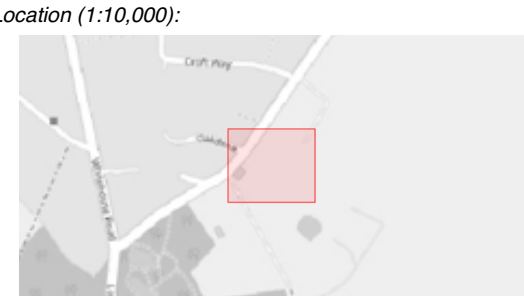
Appendix 8 – Figure 7

Figure 7: WNP2-43a

(See below)



- LEGEND
- Site Boundaries
 - Bare ground
 - Buildings
 - Hardstanding
 - Neutral grassland - semi-improved
 - Scrub - dense/continuous
 - Tall ruderal
 - Coniferous treeline
 - Tree with bat potential



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
WNP2-43a

Drawing No.:
EBD_DR_1996_007

Central Grid Ref.:
SU 64793 81400

Drawn by:
TC

Scale (@A3):
1:350

Date Drawn:
08/09/2021

Approved by:
LG

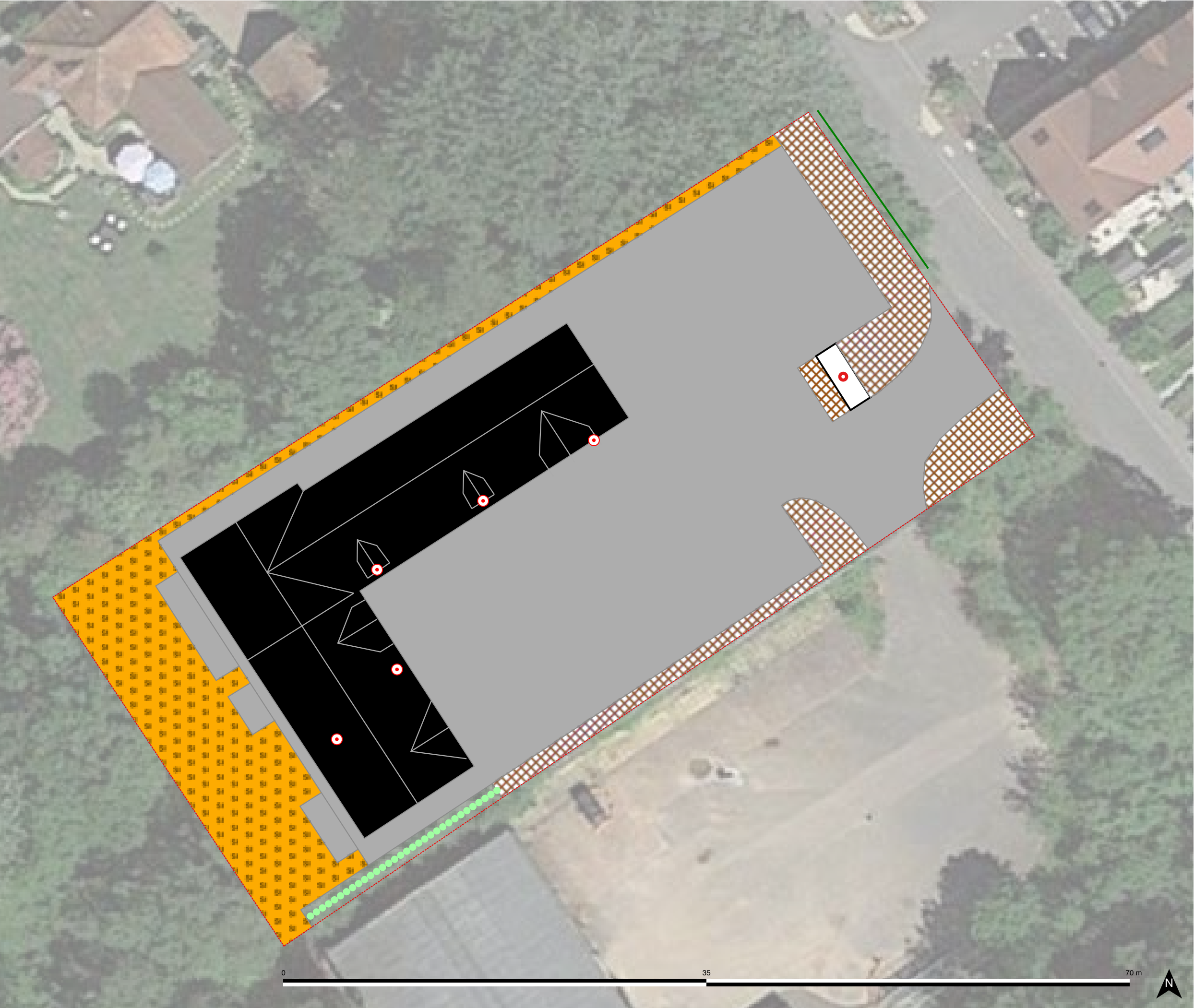
This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

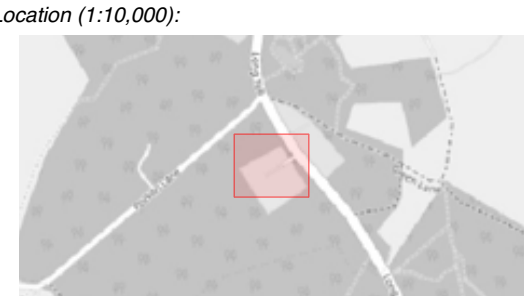
Appendix 9 – Figure 8

Figure 8: WNP2-09

(See below)



- LEGEND
- Site boundary
 - Buildings
 - Hardstanding
 - Introduced shrub
 - Neutral grassland - semi-improved
 - Other habitat
 - Coniferous treeline
 - Intact hedge
 - Potential roosting features



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
WNP2-09

Drawing No.:
EBD_DR_1996_008

Central Grid Ref.:
SU 64576 81102

Drawn by:
TC

Scale (@A3):
1:300

Date Drawn:
08/09/2021

Approved by:
LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

ecologybydesign

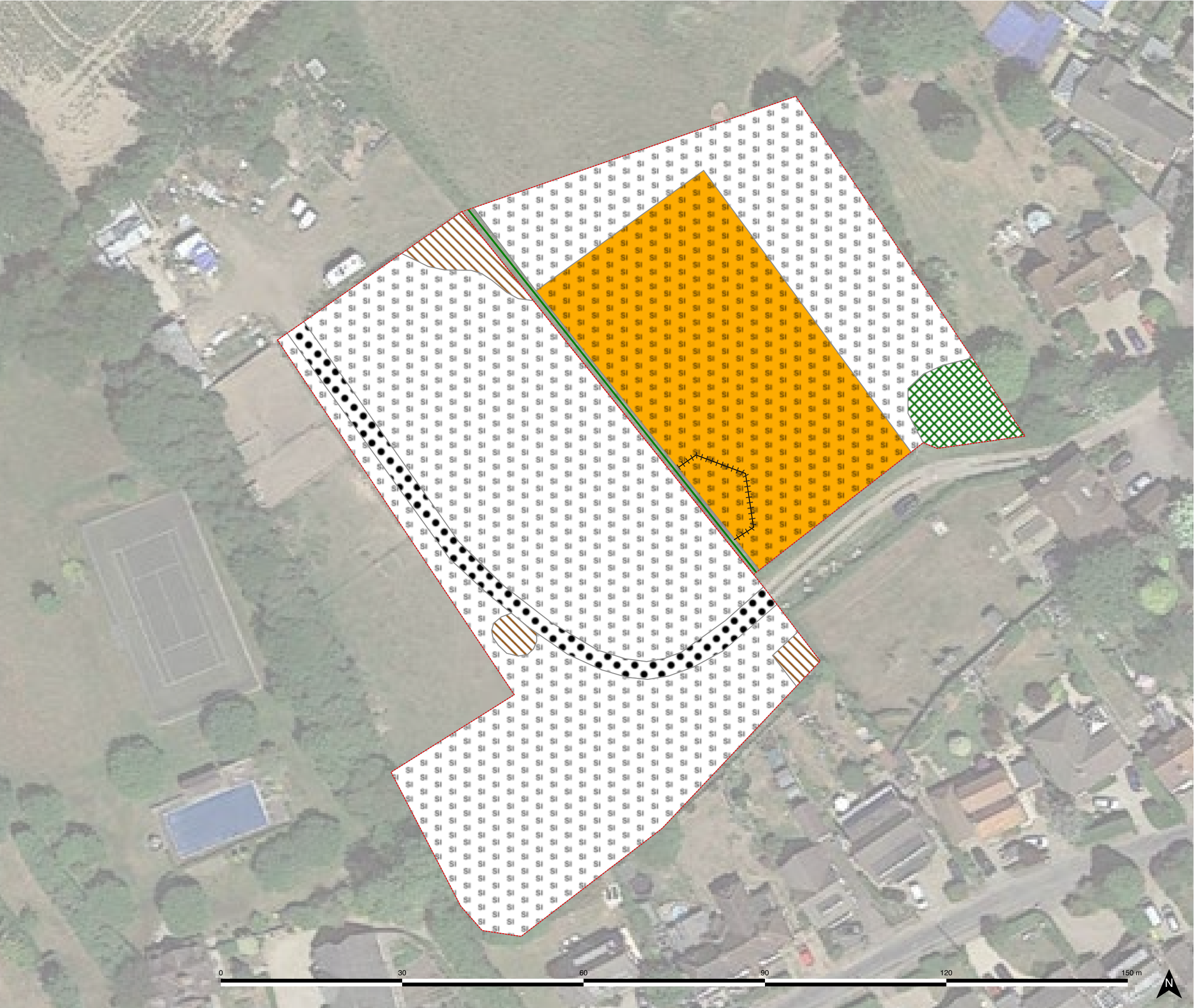
Hampden House, Monument Park,
Chalgrove, Oxon.
OX44 7RW

t: 01865 893347
e: james@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk

Appendix 10 – Figure 9

Figure 9: WNP2-03 and WNP2-02

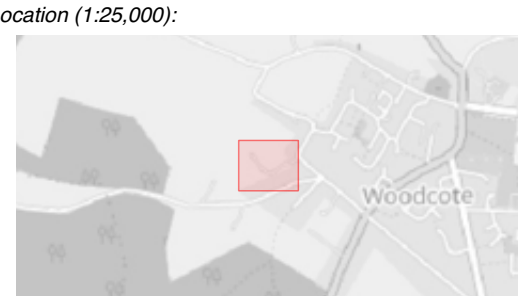
(See below)



LEGEND

Phase 1 Habitats

- ++++ Fence
- Intact hedge
- Bare ground
- SI Neutral grassland - semi-improved
- SI Poor semi-improved grassland
- Scrub - dense/continuous
- Tall ruderal



Project:
Woodcote Neighbourhood Plan

Client:
Woodcote Parish Council

Drawing Title:
WNP2-03, WNP2-02

Drawing No.:	Scale (@A3):
EBD_DR_1996_009	1:600
Central Grid Ref.:	Date Drawn:
SU 63791 81905	08/09/2021
Drawn by:	Approved by:
TC	LG

This drawing is the property of Ecology by Design Ltd and must not be reproduced without the written permission of Ecology by Design Ltd.

This drawing contains data reproduced from © OpenStreetMap Contributors and Ordnance Survey data © Crown Copyright and database right 2021. Aerial imagery - Imagery ©2021 CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The GeoInformation Group, Map data ©2021.

Hampden House, Monument Park,
Chalgrove, Oxon.
OX44 7RW

ecologybydesign

t: 01865 893347
e: james@ecologybydesign.co.uk
w: www.ecologybydesign.co.uk