

Ecological Impact Assessment

Land at Roundwood, Great Ashby, Stevenage

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1.0 Introduction

- 1.1.1 Nicholas Pearson Associates (NPA) was instructed by Croudace Homes to undertake an Ecological Impact Assessment on a parcel of land, located at Roundwood, Great Ashby, to the north east of Stevenage (OS grid reference TL251277), hereafter referred to as the "Site".
- 1.1.2 The Site consists of an approximately 11ha arable field and part of Back Lane with hedgerows and woodland boundaries. A residential development is proposed as illustrated on the Site Layout Plan¹, comprising of 281 dwellings and associated roads, parking, realignment of Back Lane, drainage, landscaping, open space, servicing facilities and associated works.
- 1.1.3 Landscaping proposals are shown on the Landscape General Arrangement². The Arboricultural Impact Assessment³ provides details of tree and hedge removal associated with the project.
- 1.1.4 To inform the proposals NPA have undertaken a desk study, habitat and protected species surveys on the Site and boundaries. Surveys which informed the EcIA were undertaken between 2016 and 2024. Habitat, Badger, Great Crested Newt, Hazel Dormouse, breeding bird and bat surveys have been undertaken. A Biodiversity Metric Calculation has been carried out.
- 1.1.5 This report and assessment presents the results of the 2024, 2023 and 2021 surveys, sets out results of older relevant surveys, identifies potential impacts and sets out the proposals to mitigate those potential impacts and provide biodiversity enhancement.

2.0 Legislation and Policy

- 2.1.1 In carrying out this appraisal relevant legislation, planning policies, development plans and best practice guidelines were consulted.

Legislation

Designated Sites

- 2.1.2 The Conservation of Habitats and Species Regulations 2017 (as amended) provide for the designation of both Special Protection Areas (SPA) and Special Areas for Conservation (SAC). The Wildlife and Countryside Act 1981 (as amended) provides for the designation of Sites of Special Scientific Interest

¹ Croudace 2024. Site Layout Plan DES-716-101_0

² NPA 2024. Landscape General Arrangement Plan. 10666 NPA XX XX DR L 3100 P05.

³ Hayden's Arboricultural Consultants 05/12/2024. Tree Survey and Arboricultural Impact Assessment.

(SSSI), which are selected as the best national examples of habitat types, sites with notable species and sites of geological importance.

Species Protection

- 2.1.3 The Conservation of Habitats and Species Regulations 2017 (as amended) (also known as the Habitats Regulations) provide strict protection to a small group of species, commonly referred to as 'European Protected Species'. The Wildlife and Countryside Act 1981 (as amended) provides full and partial protection to species listed in the schedules.

Biodiversity

- 2.1.4 The Natural Environment and Rural Communities (NERC) Act 2006 places a duty upon public bodies, in exercising its functions, to have regard to the purpose of conserving biodiversity and consider enhancement of biodiversity within all of their actions. In addition, this Act places a duty on the Secretary of State, under Section 41 (S41), to publish a list of habitats and species of principal importance for the purpose of conserving biodiversity. The Environment Act 2021 amends the NERC Act so that public bodies have a duty to conserve and enhance biodiversity and amends the Town and Country Planning Act 1990 so that a biodiversity gain of 10%, as described under the statutory metric is required.

Planning Policy

National Planning Policy Framework

- 2.1.5 The NPPF requires Local Planning Authorities to set out a strategic approach to make sufficient provision for "conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measure to address climate change mitigation and adaptation (Para 20)". Section 15 of The NPPF includes guidance outlining that policies and decisions should contribute to and enhance the natural local environment by protecting and enhancing sites of biodiversity value, minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks. When determining planning applications "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 (para 186a)". Opportunities "to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure

measurable net gains for biodiversity or enhance public access to nature where this is appropriate (para 186d).

- 2.1.6 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

North Hertfordshire Local Plan 2011-2031

- 2.1.7 Policies SP1 (Sustainable development in North Hertfordshire), SP12 (Green infrastructure, landscape and biodiversity), NE1 (Strategic Green Infrastructure), NE4 (Biodiversity and geological sites) seek to protect and enhance nature conservation designations, protected species and ecologically valuable habitats and green infrastructure and ensure measurable net gains for biodiversity.
- 2.1.8 The Site is allocated under Policy GA1 (Land at Roundwood Gravely parish). Relevant ecology specific policy criteria are:
- *Retention and sensitive treatment of priority woodland habitats surrounding site to north and west;*
 - *Consider and mitigate against any adverse impacts upon adjacent local wildlife site at Parsonsgreen Wood.*

3.0 Methodology

3.1 Desk Study

- 3.1.1 Records of statutory nature conservation designations within 5km were searched for on Natural England's MAGIC website⁴. The area of search was extended to 10km for sites of international importance.
- 3.1.2 In August 2022 records of protected species and non-statutory nature conservation designations within 2km of the Site were retrieved from the Hertfordshire Environmental Records Centre (HERC).
- 3.1.3 The OS layer of Bing Maps and Natural England's MAGIC website was used to search for ponds within 250m of the Site.

⁴ <https://magic.defra.gov.uk/MagicMap.aspx> [Last Accessed 03/12/2024]

- 3.1.4 It should be noted that a lack of records does not necessarily indicate the absence of a particular species or habitat.

3.2 Field Survey

Extended Habitat Survey

- 3.2.1 Extended habitat surveys have been carried out on the Site with a detailed habitat survey carried out using the UK Habitat Classification methodology⁵, with a fine scale minimum mapping unit (MMU) of 25m² and Biodiversity Metric Condition Assessments carried out. The potential of habitats to support protected species was also considered during the survey. Surveys were carried out on 4th May 2023, 20 August 2024, 15 October 2024 and 20 November 2024.

- 3.2.2 A botanical survey of woodlands around the Site was carried out by an experienced botanist (FISC level 4) on the 18 April 2024 to provide information in regard to ancient woodlands⁶.

Badgers

- 3.2.3 A thorough search for evidence of Badgers on/adjacent to the Site was carried out, the most recent full survey being 20 August 2024. Signs of Badgers typically include the following:

- Badger setts;
- Evidence of feeding
- Dung pits/latrines; (snuffle marks and feeding scrapes);
- Pathways through vegetation;
- Snagged hairs under fence lines.

Hazel Dormouse

- 3.2.4 Surveys using nest tubes⁷ were set out on 24th June 2024 with a total of 65 nest tubes set out along all four of the Site boundaries. Checks of the tubes were carried out on 20 August, 3 October and 20 November 2024 by licenced ecologists and all tubes were recovered, giving a search effort score of 22.4, above the minimum search effort score of 20.

⁵ © UKHAB LTD, under licence. No onward licence implied or provided. All rights reserved.
<https://ukhab.org/commercial-eula/>

⁶ NPA 2024. Botanical Survey of Round Wood. NPA 10666 0410 P02.

⁷ Bright, Morris and Mitchell-Jones, 2006. The Dormouse Conservation Handbook, 2nd ed. English Nature.

Bats

Preliminary Assessment of Potential Roosting Features

- 3.2.5 Trees on Site were assessed from the ground on the 24 June 2024 to identify any with potential PRF-M features which would require detailed surveys to be undertaken if they could be impacted by the proposals. Once the extent of tree works was confirmed an updated ground level tree assessment (GLTA) for potential to support roosting bats was carried out on 16 October 2024 for the trees which would be impacted, this was done by a level 2 bat licenced ecologist in accordance with the methods within the Bat Conservation Trust's Bat Surveys for Professional Ecologists⁸. This included a search for suitable features such as cracks, splits, cavities, knotholes and loose bark within the trees. Based on the number and quality of features present/evidence recorded each tree was assigned a rating (negligible; PRF-I; PRF-M; confirmed roost) for its potential to support roosting bats.

PRF aerial inspection survey

- 3.2.6 Three trees (T074, T075, T076), one of which the GLTA identified as potential PRF-M (T075) were then subject to an aerial tree assessment. This was carried out by a level 2 bat licenced ecologist and certified climber on 3 December 2024. Data was collected on the potential roost features including height, aspect, ingress size and internal dimensions was logged.

Activity surveys

- 3.2.7 Bat activity surveys, comprising manual surveys and the deployment of automated detectors, were carried out to:
- Identify the assemblage of bat species using the Site;
 - Determine the frequency with which the Site is used by different species;
 - Determine the distribution of the species across the Site; and
 - Observe the nature of the activity, i.e. foraging, commuting etc.
- 3.2.8 Surveys were previously carried out in 2021⁹. To update these three surveys were carried out on 24 June, 19 August and 3rd October 2024, with survey details provided in Table 3.1 The spread of the

⁸ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London. ISBN 978-1-7395126-0-6

⁹ NPA 2023, Ecological Impact Assessment, Land at Roundwood, Great Ashby, Stevenage. NPA 10666 0400.

transect surveys does not include a spring survey as per best practice guidelines¹⁰ so survey data for 2021 which included the spring survey is also presented. As two seasons of survey data are provided, this is not considered to be a constraint.

- 3.2.9 Aside from a deviation in survey dates, the activity surveys were undertaken in accordance with best practice guidelines in suitable weather conditions (no or little rain, no strong wind above Beaufort 4, and moderate temperature, typically not below 10°C). To allow for a better comparison between the 2021 survey data the same transect route was used in 2024. During manual surveys temperature (°C), cloud cover (%), wind (Beaufort) and intensity of any rain were recorded at hourly intervals.
- 3.2.10 During the manual survey the surveyor walked a route around the Site as shown in the Bat Survey Plan (Figure 1), starting before sunset and continued for 2 hours after sunset. Point counts were undertaken along the route, during which the surveyor remained stationary, recording and observing all bats for five minutes. During the 2024 surveys, the second surveyor observed trees along the southern boundary (where the proposed southern access is to be installed) and the edge of Round Wood, moving as considered appropriate, to gain additional information on the location of likely highest impacts (southern boundary) and the best quality offsite bat habitat (Round Wood). The surveyors used Anabat Walkabout full spectrum bat detectors to record bat echolocations. The bat species, direction of travel and behaviour were noted by surveyors where possible.
- 3.2.11 Where species identification was not possible in the field the sound recordings were analysed using bat sound analysis software (Anabat Insight) to confirm species. As the calls of Myotis bat species are very similar, with most of the variation between their calls attributable to the habitat in which they occur (Russ, 2021)¹², the Myotis recordings have not been attributed to a particular species.

Table 3.1: Manual Transect Survey Timings and Weather

Date	Sunset/ sunrise Start/ Finish	Weather Conditions
17/05/21	20:51 20:36/22:48	Start/finish temp: 11.6/9.1 °C Beaufort: 0 Rain: 0 Cloud cover: 20-50%

¹⁰ Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London. ISBN 978-1-7395126-0-6

¹² Russ, J. (ed.) (2021). *Bat Calls of Britain and Europe: A Guide to Species Identification (Bat Biology and Conservation)*. Pelagic Publishing, Exeter

Date	Sunset/ sunrise Start/ Finish	Weather Conditions
28/07/21	20:56 20:51/22:56	Start/finish temp: 16.5/12.0 °C Beaufort: 1-3 Rain: Shower at 21:05-21:10, then dry Cloud cover: 80-0%
21/09/21	19:01 18:48/21:03	Start/finish temp: 19.7/15.7 °C Beaufort: 0-1 Rain: 0 Cloud cover: 10-20%
24/06/24	21:24 21:24/23:24	Start/finish temp: 19.9/16.9 °C Beaufort: 0-1 Rain: 0 Cloud cover: 0%
19/08/24	20:15 20:15/22:16	Start/finish temp: 18.0/17.0 °C Beaufort: 2-3 Rain: shower for first 10 min Cloud cover: 95-100%
03/10/24	18:32 18:32/20:32	Start/finish temp: 12/11 °C Beaufort: 0 Rain: 0 Cloud cover: 10-90%

3.2.12 Automated bat detectors were left in three locations on each of the three separate survey visits, see Figure 1 for automated detector locations. The detectors were left in place for a minimum of five consecutive nights during periods of suitable weather. Table 3.2 below provides the dates that the detectors were deployed for. AnaBat Express detectors were utilised. The detectors were programmed to come on at least 30 minutes before sunset and turn off no earlier than 30 minutes after sunrise.

Table 3.2: Automated Detector Deployment Dates

Dates deployed	Nights analysed	Number of nights analysed
11-17 May 2021	11-12 May, 14-17 May (13 May excluded, rain overnight, no bat activity recorded)	6
22-28 July 2021	22-28 July	7
22-27 September 2021	22-27 September	6
2021 Total Number of Nights		19
24 June – 8 July 2024	24-28 June 2024	5
19-26 August 2024	19-21 August, 25 – 26 August (22-24 August excluded due overnight rain or cool temperature)	5
04-14 October 2024	4, 5, 7, 12, 14 October (nights of suitable weather)	5
2024 Total No. of Nights		15

3.2.13 Identification of bat species was gained through use of the automated species identification feature within Kaleidoscope 5.1.9.g. Based on a review of historic data collected on other projects using AnaBat Expresses, the automated species identification works well for certain species (e.g. Pipistrelles) but is less accurate for others (e.g. identification to a particular *Myotis* species). As such the following protocols were followed.

- *Myotis* or Long-eared bats were not attributed to species;
- The larger bat species Noctule *Nyctalus noctula*, Leisler's Bat *Nyctalus leisleri* and Serotine *Eptesicus serotinus* (NLS) were grouped together;
- Common and Soprano Pipistrelle were grouped;
- Files labelled as Barbastelle *Barbastella barbastellus* were manually analysed;
- Files labelled as No ID (i.e. what Kaleidoscope thinks is a bat, but is unsure of what species) were manually analysed; and,
- Files labelled as Noise (i.e. what Kaleidoscope thinks is not a bat) but that passed a scan for bat calls within AnaLookW, based on the two filter parameters shown in table 3.3 below, were manually analysed.
- Where a call was of insufficient quality to determine a particular bat species/group, but it was clear it was not a horseshoe species it was labelled as Vespertilionidae/Vesper.

Table 3.3: Higher and Lower Frequency Filter Parameters for files automatically identified as Noise

	HF20	LF (Fc Max 35)
Characteristic Frequency (KHz)	29-150	16-35
Call Duration (ms)	1-100	3-70
Smoothness	20	20
Body Over (microseconds)	1000	1000

3.2.14 To help understand the likely presence of roosts on/adjacent to Site and when in the night bat activity occurred the data were split into 15 different time periods for analysis.

Breeding birds

3.2.15 A breeding bird survey was undertaken on the Site and in the tree belts and woodland immediately north and west of the Site.

3.2.16 The Breeding Bird Survey (BBS) comprised four visits from May to July 2021 encompassing the entire nesting season for most species. Visits were undertaken between 05.30 and 08.30 (in accordance with BTO guidelines). Visits were undertaken on days with no rain and light to moderate winds as poor weather can inhibit bird activity and reduce detectability. Dates, times and weather details of visits are given below in Table 3.4.

Table 3.4: Date and Time of Breeding Bird Survey Visits

Date	Time	Weather Conditions
22/05/21	06.30-08.30	Cloud: 8/8 Wind (Beaufort): 1-2 SW Precipitation: None
10/06/21	05.30-07.00	Cloud: 8/8 Wind (Beaufort): 1 SW Precipitation: None
25/06/21	05.30-07.00	Cloud: 8/8 Wind (Beaufort): 1 NW Precipitation: Light rain
09/7/21	05.30-07.00	Cloud: 8/8 Wind (Beaufort): 1 W Precipitation: None

3.2.17 A territory mapping survey¹³ was undertaken in which all singing birds were recorded (it is assumed that a singing bird is a territorial male and may thus indicate the presence of a breeding pair) and their locations marked on a map on each visit. The estimated centre of all breeding territories were then plotted using the results from each visit (based on mean positions of the data sets). Non-breeding birds or those for which breeding could not be confirmed were also recorded. The evidence used to assign the breeding status of birds is shown in Table 3.5 below.

Table 3.5: Evidence Used to Assign Breeding Status

Breeding Status	Evidence used
Possible Breeder	Observed in suitable habitat. Singing male recorded once.
Probable Breeder	Pair in suitable habitat. Permanent territory (singing male recorded more than once). Courtship and display. Visiting probable nest site. Agitated behaviour. Nest building or excavating.
Confirmed Breeder	Nest containing eggs. Nest with young seen or heard. Adults entering or leaving nest-site indicating occupied nest. Adults carrying faecal sac or food for young. Recently fledged young or downy young. Used nest or eggshells found from this season. Distraction behaviour recorded.

3.2.18 The aims of the breeding bird survey were:

- To establish what bird species breed on the site and in what number.
- To establish the value of the site to breeding birds and identify particularly valuable areas within the site for breeding birds.
- To make recommendations for mitigation action.

¹³ Bibby, C.J., Burgess, N.D. & Hill, D.A. (1992) Bird census techniques. Academic Press Limited, London, UK.

Great Crested Newt

- 3.2.19 Ponds within 250m of the development boundary were identified using online mapping and previous survey reports¹⁴. Two ponds were identified within 250m of the Site boundary, ponds "5" and "6" (numbered in accordance with previous surveys for the Site). The locations of the ponds are shown on Figure 2.
- 3.2.20 A habitat suitability index¹⁵ survey and an eDNA survey for Great Crested Newts was undertaken for these ponds in 2023. Water samples were collected for eDNA analysis on the 4th May 2023, with an egg search (single visit) carried out by a licenced surveyor at the same time. All sampling was carried out in accordance with the methodology specified in the DEFRA WC1067¹⁶ report. The samples were then sent for laboratory analysis with NatureMetrics¹⁷. Previous visits to the ponds found that both dried up frequently.
- 3.2.21 A further four ponds (ponds 1-4) were within 500m but more than 250m from the Site boundary. Natural England guidance¹⁸ states that surveys on ponds situated 250-500m from a development site are appropriate only when there is a risk that the development could have an impact on newts using that pond. In these instances, the pond would have potential to support a large population, the footprint of the development would contain favourable habitat which would be impacted by the development and there would be an absence of dispersal barriers. The Site comprises an arable field surrounded by hedgerows; very little favourable newt habitat will be impacted. A review of existing survey reports¹⁹ showed that due to the poor suitability of the ponds it was unlikely that a large population would be resident, so the ponds were excluded from further survey.

¹⁴ Nicholas Pearson Associated, January 2016. Updated Extended Phase 1 Habitat Survey. Land at Roundwood, Gret Ashby, North East Stevenage: NES 3. For and behalf of Croudace Homes.

¹⁵ Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal, Vol 10, pp 143-155.

¹⁶ Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R.A., Foster, J., Wilkinson, J., Arnett, A., Williams, P., and Dunn, F. (2014). Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford.

¹⁷ www.naturemetrics.co.uk

¹⁸ Natural England (2020) Template for Method Statement to support application for licence under Regulation 55(2) of The Conservation of Habitats and Species Regulations 2017 (as amended) in respect of great crested newts *Triturus cristatus*. Form WML-A14-2 (Version April 2020)

¹⁹ Nicholas Pearson Associated, January 2016. Updated Extended Phase 1 Habitat Survey. Land at Roundwood, Great Ashby, North East Stevenage: NES 3. For and behalf of Croudace Homes.

3.3 Biodiversity Net Gain

- 3.3.1 The Statutory Biodiversity Metric – Calculation Tool was used to calculate biodiversity metrics for the Site. The metric uses area, linear and riparian habitat features as a proxy measure to capture a quantitative value of the Site for biodiversity pre- and post-development. The calculation takes the distinctiveness, condition and spatial significance of the habitat features into account as well as the ease of habitat creation and time taken for habitats to mature.
- 3.3.2 Baseline habitat areas/hedgerow lengths were taken from the Habitat Plan (Figure 3).
- 3.3.3 Lengths of hedgerow removal were taken from the Tree Survey and Arboricultural Impact Assessment²⁰.
- 3.3.4 Tree removals required for the development are included within the calculation, including removals for based on tree health when within the applicants control however removals of already dead trees (elms) with little ecological value and a relatively small size are not included as they are not expected to remain as a potential habitat feature regardless of development. Tree removals recommended which are not related to development and are outside of the applicants control are also not included in the metric.
- 3.3.5 Measurements of the proposed areas were taken from the Landscape General Arrangement²¹. A table detailing how the habitats shown on the Landscape GA plan correspond with BNG metric habitats is provided in Appendix 7. Proposed tree sizes were estimated using the Tree Helper feature within the metric tool, all proposed trees were assumed to be small.
- 3.3.6 The Herts Ecological Networks (HEN) Map²² was used to assess strategic significance.

3.4 Assessment

- 3.4.1 The assessment of the importance of ecological features and the significance of impacts was made in accordance with the Guidelines for Ecological Impact Assessment (CIEEM, 2018)²³. A 'significant effect' was defined as an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general.

²⁰ Hayden's Dec 2024. Tree Survey and Arboricultural Impact Assessment. Project No 11056 Land at Roundwood.

²¹ NPA 2024. Landscape General Arrangement Plan. 10666 NPA XX XX DR L 3100 P05.

²² <https://maps.north-herts.gov.uk/Maps/Map.aspx?MapName=Biodiversity&initialDialog=layersDialog>

²³ CIEEM (2018), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1 Chartered Institute of Ecology and Environmental Management, Winchester. Collins, J (ed.) (2016) *Bat surveys for professional ecologists: good practice guidelines (3rd ed)*. The Bat Conservation Trust, London

4.0 Baseline Ecological Conditions

4.1 Designated Sites

Statutory Sites

- 4.1.1 There is 1 Local Nature Reserve and 2 sites of national importance within 5km of the Site. No sites of international importance were within 10km of the Site. Details of statutory designated sites are provided in Table 4.1 below.

Table 4.1: Statutory Nature Conservation Designations within area of search

Site Name	Reasons for designation	Distance from Site.
Weston Hill Local Nature Reserve (LNR)	An urban fringe LNR with chalk grassland and woodland.	4.4km north
Knebworth Woods Site of Special Scientific Interest (SSSI)	Oak and Oak-Hornbeam woodland rich in fungi and bryophytes with breeding Nightingale. Acid and neutral meadows.	4.7km south-west
Benington High Wood Site of SSSI	An ancient woodland, one of the best examples of Pedunculate Oak-Hornbeam woodland of the Ash-Maple variant.	4.8km south-east

Non-statutory Sites

- 4.1.2 There were 18 Local Wildlife Sites (LWS) within 2km of the Site. Details of LWS within 1km of the Site are provided in table 4.2 below. Tilekiln Wood and Parsonsgreen Wood LWS is 10m to the north-east of the Site, separated from the Site by Back Lane.

Table 4.2: Non-statutory Nature Conservation Designations within 1km

Site Name	Reasons for designation	Distance from Site.
Tilekiln Wood & Parsonsgreen Wood, LWS 22/010	Ancient semi-natural Oak <i>Quercus robur</i> Hornbeam <i>Carpinus betulus</i> coppice woodland with areas cleared and replanted with conifers. Former Oak/Hornbeam coppice woodland.	10m
Harbourclose Wood, LWS 21/029	Ancient semi-natural Pedunculate Oak, Ash <i>Fraxinus excelsior</i> , Hornbeam and Field Maple <i>Acer campestre</i> woodland with a reasonable diversity of woodland flora, species include Bluebell <i>Hyacinthoides non-scripta</i> and Lady's Fern <i>Athyrium filix-femina</i> .	0.2km
Claypits Wood (N. of Stevenage) LWS 22/011	Ancient semi-natural Pedunculate Oak and Hornbeam woodland with some Elm <i>Ulmus</i> sp. Bluebell and Dog's Mercury <i>Mercurialis perennis</i> occur in the ground flora. There are some very damp areas plus ponds (pits resulting from clay extraction).	0.4km
Stonesley Wood, LWS 21/033	Ancient semi-natural Oak/Hornbeam/Ash/ Maple Woodland replanted with Sycamore <i>Acer pseudoplatanus</i> , Beech <i>Fagus sylvatica</i> and Scots Pine <i>Pinus sylvestris</i> . Ground flora supports woodland indicator species including Bluebell.	0.5km
New Spring Wood, LWS 22/009	Ancient woodland site supporting broadleaved woodland of Pedunculate Oak and Ash with some Hornbeam and Hazel <i>Corylus avellana</i> coppice and an area of scrub in the north.	0.5km
Ledgeside Plantation, LWS 21/027	Linear block of woodland and scrub situated on NW facing scarp slope with areas of chalk grassland. A small remnant of ancient woodland can be found in the NE side of the Site. Records of Glow worms and range of butterflies within the verge area.	0.6km
Brooches Wood, LWS 22/008	Originally Ancient Woodland, now divided into two compartments by a central ride, with secondary woodland of Ash, Hazel/Hornbeam coppice, Birch <i>Betula</i> spp and Oak to the north.	0.6km
Wellfield Wood, LWS 22/005	Ancient semi-natural Pedunculate Oak and Hornbeam coppice woodland replanted with mainly Beech, Birch, Poplar <i>Populus</i> sp, Field Maple and various conifers. Wild Service-tree <i>Sorbus torminalis</i> has been recorded.	0.8km
Exeter Close, LWS 22/036	Buildings and environs important for protected species, wildlife site criteria: species.	0.8km

Strategic Significance

- 4.1.3 The entire Site is within the Strategic Zone of the HEN Strategic Significance Map²⁴, so for the Biodiversity Metric Calculation habitats of biodiversity value have been given a strategic significance 1.15 multiplier.

²⁴ <https://maps.north-herts.gov.uk/Maps/Map.aspx?MapName=Biodiversity&initialDialog=layersDialog>

4.2 Habitats

General Description

- 4.2.1 The Site comprised an arable field, a section of Back Lane and small areas of semi-urban land adjoining Great Ashby. The field was bounded by a hedgerows along the eastern and northern boundaries and a mature tree line to the south. There was broad-leaved woodland on the western boundary and plantation woodland outside the northern boundary. The wider landscape consisted of residential development to the south and east, ancient semi-natural woodland to the north-east, pasture to the north-west and broadleaved woodland to the west.
- 4.2.2 The broad habitats are described below and should be read in conjunction with Figures 2 and 3. Photographs are provided in Appendix 1 and Target Notes are detailed in Appendix 2. The results of botanical surveys in the woodlands adjacent to the Site are provided in a separate report²⁵. Biodiversity Metric Condition Assessments are provided separately as excel spreadsheets (NPA 10666 0412).
- 4.2.3 The Site can be divided into the following UK Habitat Classification types.
- Arable/ Cereal Crop
 - Hedgerows
 - Ecologically Valuable Line of Trees associated with Ditch
 - Tall Forbs
 - Developed land; sealed surface
 - Introduced Shrub
 - Other Neutral Grassland
 - Mixed Scrub
- 4.2.4 Offsite boundary habitats comprise
- Lowland Mixed Deciduous Woodland
 - Other Woodland; Broadleaved

Arable/ Cereal Crop

- 4.2.5 The Site comprised an arable field which was regularly sown with a cereal crop. The margins around the field boundary were very narrow (<1m) (cross compliance margins). Species in the margin included Common Nettle *Urtica dioica*, Cleavers *Galium aparine*., Barren Brome *Anisantha sterilis*, Common

²⁵ NPA 2024. Botanical Survey of Round Wood. NPA 10666 0410 P02.

Couch *Elytrigia repens* and Rough Meadow-grass *Poa trivialis*. No crop was sown for the 2024 season and the fallow field supported abundant Hoary Willowherb *Epilobium parviflorum*, American Willowherb *E. ciliatum*, and Spear Thistle *Cirsium vulgare* with Brome *Bromus sp.*, Blackgrass *Alopecurus myosuroides*, Barley *Hordeum vulgare*, Common Ragwort *Jacobaea vulgaris*, Groundsel *Senecio vulgaris*, Creeping Thistle *Cirsium arvense*, Common Fleabane *Pulicaria dysenterica* and Dwarf Spurge *Euphorbia exigua*.

Hedgerows

- 4.2.6 The entire eastern boundary of the Site consisted of a mature species-rich intact hedgerow with trees (TN1, Appendix II) running adjacent to Back Lane. The following species were recorded within the hedgerow: Holly *Ilex aquifolium*, Spindle *Euonymus europaea*, Blackthorn *Prunus spinosa*, Field Maple *Acer campestre*, Hawthorn *Crateagus monogyna*, Sycamore *Acer pseudoplatanus*, Ash *Fraxinus excelsior*, Hazel *Corylus avellana*, Dogwood *Cornus sanguinea*, Dog Rose *Rosa canina* and Common Oak *Quercus robur*, with the ground flora comprising of Common Nettle, Cow Parsley *Anthriscus sylvestris*, Bramble *Rubus fruticosus* agg. and Cleavers. A dry ditch ran adjacent to the hedgerow base at the southern end.
- 4.2.7 Along the northern boundary was a species-poor hedgerow (TN10 TN12) with several large gaps. Species recorded included: Holly, Blackthorn, Hawthorn, Elder and Dog Rose, with Bramble as the base. There were mature Oak and Ash trees at the eastern end. Westwards the boundary continued into areas of intermittent scrub and young Oak trees separating the Site from the bridleway that runs adjacent with the northern boundary. A mature Oak was present in the western end of the hedge. A dry ditch and/or small bank was present along most of hedgerow.
- 4.2.8 A species rich native hedgerow was present along the eastern side of Back Lane, separating the lane from Haybluff Drive. Trees and a small bank were present at the section of hedge adjacent to Haybluff Drive.

Ecologically Valuable Line of Trees with ditch

- 4.2.9 The southern boundary consisted of a line of trees (TN 21) running adjacent to Back Lane, species comprised of Common Oak, Sycamore, Elm *Ulmus sp.*, Ash and Holly. The canopy of the treeline was not continuous with gaps due to Dutch Elm disease. Mature trees and log piles were present within the tree line. The line of trees was associated with a dry ditch.

Tall Forbs

- 4.2.10 Vegetation underneath the line of trees comprised Ivy *Hedera helix*, and tall herbs such as Nettle and Garlic Mustard *Alliaria petiolata*.

Developed land; sealed surface

- 4.2.11 A single carriageway road, Back Lane, ran along the southern and eastern sides of the Site.

Introduced shrub

- 4.2.12 Non-native shrubs were planted along the bottom of the hedge at the end of Haybluff Lane, species included planted *Hypericum* and *Cotoneaster* shrubs (planted, not self sown) and Periwinkle *Vinca sp.*

Other Neutral Grassland

- 4.2.13 A small area of rough grassland was present where Botany Bay Lane joins Back Lane in the south-east of the Site. It was species poor with False Oat-grass *Arrhenatherum elatius*, Nettle, Dandelion *Taraxacum sp.* and Common Hogweed *Heracleum sphondylium* and an approx. 20% cover of Bramble scrub.

Mixed Scrub

- 4.2.14 There were shrubs along the northern edge of Botany Bay Lane, between the footpath and a garden fence. A mix of species include Bramble, Dogwood, Hazel, Hawthorn, Oak and Ash saplings, Wild Privet *Ligustrum vulgare* and some very small ornamental trees (<7cm dbh) were present.

Lowland Mixed Deciduous Woodland (offsite)

- 4.2.15 Offsite, immediately adjacent to the western boundary of the Site was an area of broad-leaved woodland called Round Wood (TN 17), approximately 2.2 hectares in size, dominated by Common Oak, Ash and Beech with occasional Elm., Sycamore, Cherry *Prunus sp.* and Holly. Hazel and Blackthorn were present in the understory with Bluebell *Hyacinthoides non-scripta* and Nettle in the ground layer. A more detailed description of the wood and other offsite woods is provided in the Botanical Survey of Roundwood report ²⁶. While the most northern part of this woodland appeared more recent in origin, it was not possible to rule out the possibility that the majority of this area of woodland was Ancient Replanted Woodland, so it is categorised as possible Ancient Replanted Woodland.

²⁶ NPA 2024. Botanical Survey of Round Wood. NPA 10666 0410 P02.

4.2.16 Located to the north east of the Site was the ancient broad-leaved woodland Parsonsgreen Wood which is part of the Tilekiln and Parsonsgreen Wood Local Wildlife Site (LWS), approximately 8.25 ha. It is Ancient Semi-natural Woodland. The woodland comprised of Common Oak and Hornbeam *Carpinus betulus*.

Other Woodland; Broadleaved (offsite)

4.2.17 Located to the north and separated from the Site by the bridleway was an area of plantation woodland (TN 11) surrounded by a six-foot post and wire fence, species recorded included: Common Oak, Blackthorn and Elder.

4.2.18 Along the western boundary and connected to Round Wood was an area of plantation woodland (TN 14), comprising of predominantly Ash with Elder, Blackthorn and Hawthorn.

4.3 Species

Desk Study

4.3.1 Records of legally protected or otherwise notable species of flora and fauna within 2km of the Application Site were provided by HERC. A summary of the most significant results is given in Table 4.3 below.

Table 4.3: Summary of species records returned within 2km of the Site

Species group	Record summary
Bats	Records of Common Pipistrelle <i>Pipistrellus pipistrellus</i> , Soprano Pipistrelle <i>Pipistrellus pygmaeus</i> , Natterer's Bat <i>Myotis nattereri</i> , Nathusius's Pipistrelle <i>Pipistrellus nathusii</i> , Brown Long-eared Bat <i>Plecotus auratus</i> , Noctule Bat <i>Nyctalus noctula</i> , Barbastelle <i>Barbastella barbastellus</i> , Serotine <i>Eptesicus serotinus</i> and Leislars <i>Nyctalus leisleri</i> . Nearest roost record was 700m from the Site.
Badgers	
Hazel Dormouse	Nearest record at low resolution but at least 800m from Site, woodland likely to be partially connected.
Other Mammals	Records of Hedgehog within 500m of the Site. Records of Brown Hare <i>Lepus europaeus</i> within 1km.
Birds	The data search returned records of a number of garden and farmland birds of conservation concern, including House Sparrow <i>Passer domesticus</i> , Dunnock <i>Prunella modularis</i> , Fieldfare <i>Turdus pilaris</i> , Redwing <i>Turdus iliacus</i> , Yellowhammer <i>Emberiza citrinella</i> , Skylark <i>Alauda arvensis</i> , Grey Partridge <i>Perdix perdix</i> , Lapwing <i>Vanellus vanellus</i> , Marsh Tit <i>Poecile palustris</i> (in garden), Yellow Wagtail <i>Motacilla flava</i> , Woodcock <i>Scolopax rusticola</i> , Starling <i>Sturnus vulgaris</i> , Linnet <i>Linaria cannabina</i> , House Martin <i>Delichon urbicum</i> . Records of WCA Schedule 1 birds included Hobby <i>Falco Subbuteo</i> and Red Kite <i>Milvus milvus</i> .
Reptiles	No records returned from last 20 years.
Amphibians	One record of Great Crested Newt <i>Triturus cristatus</i> (low resolution but at least 700m away). Records of Common Toad <i>Bufo bufo</i> .
Invertebrates	Moth records from within 1km
Flora	Records of Bluebell <i>Hyacinthoides non-scripta</i> , Bird's-nest Orchid <i>Neottia nidus-avis</i> , Lesser Skullcap <i>Scutellaria minor</i> , Wood Vetch <i>Vicia sylvatica</i> and Common Cudweed <i>Filago vulgaris</i> .

Bats

Assessment of potential roosting features

- 4.3.2 The ground based assessment and aerial inspections of the trees identified one tree with PRF-M features (potential to support multiple roosting bats) onsite. A number of trees were identified with PRF-I features (potential to support individual roosting bats), one of which was confirmed by climbing inspection. The locations of the trees are shown on Figure 1, the bat survey plan. Descriptions and photos of these trees are provided in Appendix 3.

Emergence surveys

- 4.3.3 As no trees with PRF-M potential would be impacted by the proposals, no full emergence surveys were conducted in 2024, however during the activity surveys the centre and western end of the southern boundary, and Roundwood were viewed by a surveyor, no evidence of roosting bats emerging onto the Site was observed however there was early Pipistrelle activity noted at the edge of Round Wood (individual bat) indicating a possible Pipistrelle roost within the wood.
- 4.3.4 No roosting bats have been found in previous emergence surveys at the Site (ie 2021 and previous).

Activity surveys

- 4.3.5 The activity surveys recorded at least 7 species of bat commuting/foraging on/adjacent to Site, these being Common Pipistrelle, Soprano Pipistrelle, Noctule, Serotine/Leislars, Myotis species, Brown Long-eared bat and Barbastelle.
- 4.3.6 As shown on Table 4.4 activity was dominated by Pipistrelle bats. Full activity survey results are provided in Appendix 4.
- 4.3.7 During the manual surveys it was noted that there was near constant bat activity on the western boundary of the site, adjacent to Round Wood. Multiple pipistrelle bats, which were mostly Common Pipistrelle were recorded foraging along the woodland edge during each survey. Bats were recorded intermittently along the north, east and south boundaries of the Site, with most of the activity being commuting bats. Limited bat activity was recorded in the field centre.
- 4.3.8 During the May 2021 transect, it was noted that there was early activity (from 17 minutes past sunset) by Common Pipistrelle bats next to Round Wood and in August 2023 Common Pipistrelle foraging was recorded at 15 minutes past sunset in Round Wood.

Table 4.4: Bat Passes Recorded by the Automated Detectors

Species/ species group	2024 Total Count of Passes (15 nights)	2024 % Total of Passes	2021 Total Count of Passes (19 nights)	2021 % Total of Passes
Pipistrelle Species	2202	83.82%	5987	93.74%
NLS	335	12.75%	284	4.45%
Barbastelle	69	2.63%	53	0.83%
Myotis	18	0.69%	42	0.66%
Vesper	3	0.11%	11	0.17%
Brown Long-Eared bat	0	0%	10	0.16%

- 4.3.9 Barbastelle is a rare species of bat so more detailed consideration of the use of the Site by this species was given. The earliest Barbastelle passes recorded were at 55 minutes past sunset on 25 August 2024 and 62 minutes past sunset on the 27th July 2021 (with further passes at 66 and 71 minutes past sunset that night) at location 1. Passes were recorded at 46 minutes before sunrise on the 19 August 2024, 52 and 60 minutes before sunrise on the 24 June 2024 and 65 minutes before sunrise on the 25 and 28 June 2024. In 2021 the latest pass was 59 minutes before sunrise on the 29th of July 2021.
- 4.3.10 A study of Barbastelle activity²⁷ found that Barbastelle emerged on average 24 min $\pm$ 6.9 SD after sunset and then typically remained within the woodland roost area for 28 $\pm$ 17.4 min before commuting.
- 4.3.11 When Barbastelle was present, there was generally a small number of passes recorded per night. The highest activity level recorded by a static detector was in August 2024 at detector 1 (southern boundary) when 28 and 19 passes were recorded in single nights (Table 4.5). The spread of activity on these nights was consistent with a single Barbastelle foraging for a short period of time. Across the entire Site the mean number of passes per detector per night was 1.53 in 2024 and 0.9 in 2021.
- 4.3.12 Given the limited number of records and the time after sunset that they first appear, the Site is not considered an important resource for Barbastelle bats.

²⁷ Zeale M, Davidson-Watts I & Jones G (2012), Home range use and habitat selection by barbastelle bats (*Barbastella barbastellus*): implications for conservation. *Journal of Mammalogy* 93(4): 1110-1118

Table 4.5: Barbastelle Passes per Night Recorded by the Automated Detectors (all records)

Detector	Record Date	Number of passes recorded
1	20210722	4
	20210723	3
	20210724	1
	20210726	8
	20210727	5
2	20210722	10
	20210723	4
	20210724	1
	20210725	1
	20210726	5
	20210727	1
3	20210922	1
	20210923	3
	20210924	2
	20210925	3
	20210926	1
1	20240625	1
	20240626	1
	20240627	1
	20240820	7
	20240821	1
	20240825	19
	20240826	28
	20241007	1
2	20240821	1
	20240826	2
3	20240624	2
	20240625	1
	20240626	1
	20240628	2
	20240819	1

Badgers

4.3.13



Hazel Dormouse

- 4.3.14 The hedgerows, treelines and woodland on the boundaries of the site appeared suitable for Hazel Dormouse but nest tube surveys in 2016 and 2024 found no evidence of Hazel Dormouse.

Other Mammals

- 4.3.15 The Site also provide suitable habitat for Hedgehog *Erinaceus europaeus* and Brown Hare *Lepus europaeus*, although the Site only provides limited areas of refuge and none have been observed during the course of the other ecology surveys.

Birds

- 4.3.16 A total of 34 species were recorded during the survey (of which three were confirmed breeders, six were probable breeders, 16 were possible breeders, 2 were non-breeders and seven were only recorded flying over. Several species of conservation concern (five Red List species, nine Amber List species and four Species of Principal Importance) and two species afforded special protection under Schedule 1 of the Wildlife and Countryside Act 1981 were recorded from the Site, its boundaries or flying over the Site.
- 4.3.17 One Red listed Species, Skylark, was recorded displaying breeding behaviour within the Site, with two permanent territories recorded during the survey. The Red listed Greenfinch was recorded as a possible breeder in a hedgerow on the eastern boundary of the Site. Amber listed species comprising Stock Dove *Columba oenas*, Common Woodpigeon *Columba palumbus*, Tawny Owl *Strix aluco*, Willow Warbler *Phylloscopus trochilus*, Eurasian Wren *Troglodytes troglodytes*, Song Thrush *Turdus philomelos*, and Dunnock *Prunella modularis* were also recorded as probable or possible breeders on the boundaries of the Site. Figures 4a-4d and Appendix 5 provide full results of the survey.

Reptiles

- 4.3.18 Opportunities for reptiles were limited to the woodland edge and hedgerows located at the boundaries.

Amphibians

- 4.3.19 The hedgerows, treelines and woodland on the Site boundaries offered suitable terrestrial habitat for Great Crested Newt and other amphibians, however the arable field was of poor suitability.
- 4.3.20 Two offsite ponds were identified within 250m of the Site, both in woodland approximately 30m north-east of the Site. Both had "poor" suitability for Great Crested Newts (Appendix 6)
- 4.3.21 No newt eggs were found during the egg search. The eDNA survey was returned as negative and as such Great Crested Newts are considered to be absent.

Invertebrates

- 4.3.22 Standing and fallen deadwood was noted within Round Wood to the west of the Site, with occasional deadwood within the Site boundaries.
- 4.3.23 Due to the widespread nature of the habitats on the Site (arable land without topological variations) it is considered unlikely that a notable assemblage of invertebrates would be present on the Site itself.

4.4 Biodiversity Net Gain

Application of the mitigation hierarchy and avoidance of impacts to irreplaceable habitats

- 4.4.1 There are no irreplaceable habitats on the Site.
- 4.4.2 The mitigation hierarchy has been followed by retaining mature trees, incorporating a buffer to protect the offsite woodland and by buffering and minimising loss of hedgerows to that required to allow access onto the Site.

Metric Calculation Results

- 4.4.3 The proposals shown on the Landscape General Arrangement²⁸ show a net gain of 17.77% habitat units and 14.27% hedgerow units.
- 4.4.4 The metric calculation is provided separately as an Excel spreadsheet document (NPA 10666 0412 Roundwood The Statutory Biodiversity Metric Calculation Tool).

²⁸ NPA 2024. Landscape General Arrangement Plan. 10666 NPA XX XX DR L 3100 P05.

5.0 Impacts and Mitigation

5.1.1 A number of ecological receptors have been identified. Table 5.1 below identifies the potential impacts for each of these receptors and incorporates mitigation measures to avoid and reduce these impacts. In addition, it sets out additional ecological enhancements.

Table 5.1: Potential Impacts and Mitigation

Ecological Receptor	Period	Potential Impact	Design response/ Mitigation / Enhancement Measures	Residual Effects
Statutory designated sites	Construction and Operation	None predicted given distance to the Site.	N/A	N/A
Tilekiln Wood & Parsonsgreen Wood, LWS	Construction	- Risk of construction activities physically damaging LWS. - Risk of impact associated with polluted run-off from machinery spills or silt via overland flows / groundwater (though risk is limited due to topography and separation by Back Lane.	- Back Lane separates the Site from the LWS. Site boundary features (woodland and hedgerow). A 15m buffer from proposed residential areas are included in the design, tree and hedgerow protection will be used, creating a barrier between construction works and the LWS. Site accesses located to the south of the designated Site - Best practice working methods to be strictly adhered to (to be set out with CEMP or similar) to prevent/retain pollution events.	Not Significant
	Operation	- Proposed development could weaken habitat linkages with the wider landscape by narrowing habitat corridors or by light pollution. - Potential minor increase in recreational pressure though there is not a public right of way through the LWS, which is already immediately next to residential areas.	- Corridors of semi-natural habitat around the edge of the Site will be widened with lighting control measures proposed to avoid offsite light spill (see Bats below). - The proposals include the provision of a footpath which will allow residents to take a local walk (eg for dog walking) within the Site, along its green edges. Design for new footpaths avoided linking these directly towards the LWS.	Not significant

Ecological Receptor	Period	Potential Impact	Design response/ Mitigation / Enhancement Measures	Residual Effects
Other Non-statutory designed sites.	Construction and Operation	Impacts to the other non-statutory designated sites are not anticipated	N/A	N/A
Onsite habitats	Construction and Operation	- Potential loss or damage to mature trees, hedgerows and other neutral grassland. - Loss of 77m of hedgerow and 32m of tree line.	- Tree and hedgerow protection measures will be installed to protect retained habitats. - Creation of semi-natural habitats including wildflower grassland, hedgerows, shrub and tree planting, orchard and an overdug section of the attenuation basin, will be undertaken around the edges of the Site, and tree planting will be provided within the development, as shown on the Landscape General Arrangement Plan P05. The creation of these habitats will buffer the retained boundary habitats and provide biodiversity net gains in area (17.77%) and hedgerow (14.27%) based habitats.	Positive effects as demonstrated by measurable net gains.
Offsite habitats	Construction	- Risk of damage to offsite woodland during construction works, - Risk of introduction on non-native invasive species into adjacent offsite woodland through import of materials and landscape planting.	- A 15m wide buffer has been provided alongside Round Wood (possible Replanted Ancient Woodland) - Fencing will be installed to protect trees and offsite habitats. - Planting within buffer areas at site edges to comprise native species or species which are known not to be invasive. - Avoidance of use of known potentially invasive species in landscape proposals.	Not significant
	Operation	Additional recreational pressure into offsite habitats.	- Onsite planting will include planting of dense native scrub alongside the existing potential ancient woodland to prevent access into the woodland from the Site. Proposals also include a swale positioned to deter access to the woodland edge. - Onsite walking routes are provided. Offsite links are positioned not to link directly into areas of existing established woodland,	Not significant

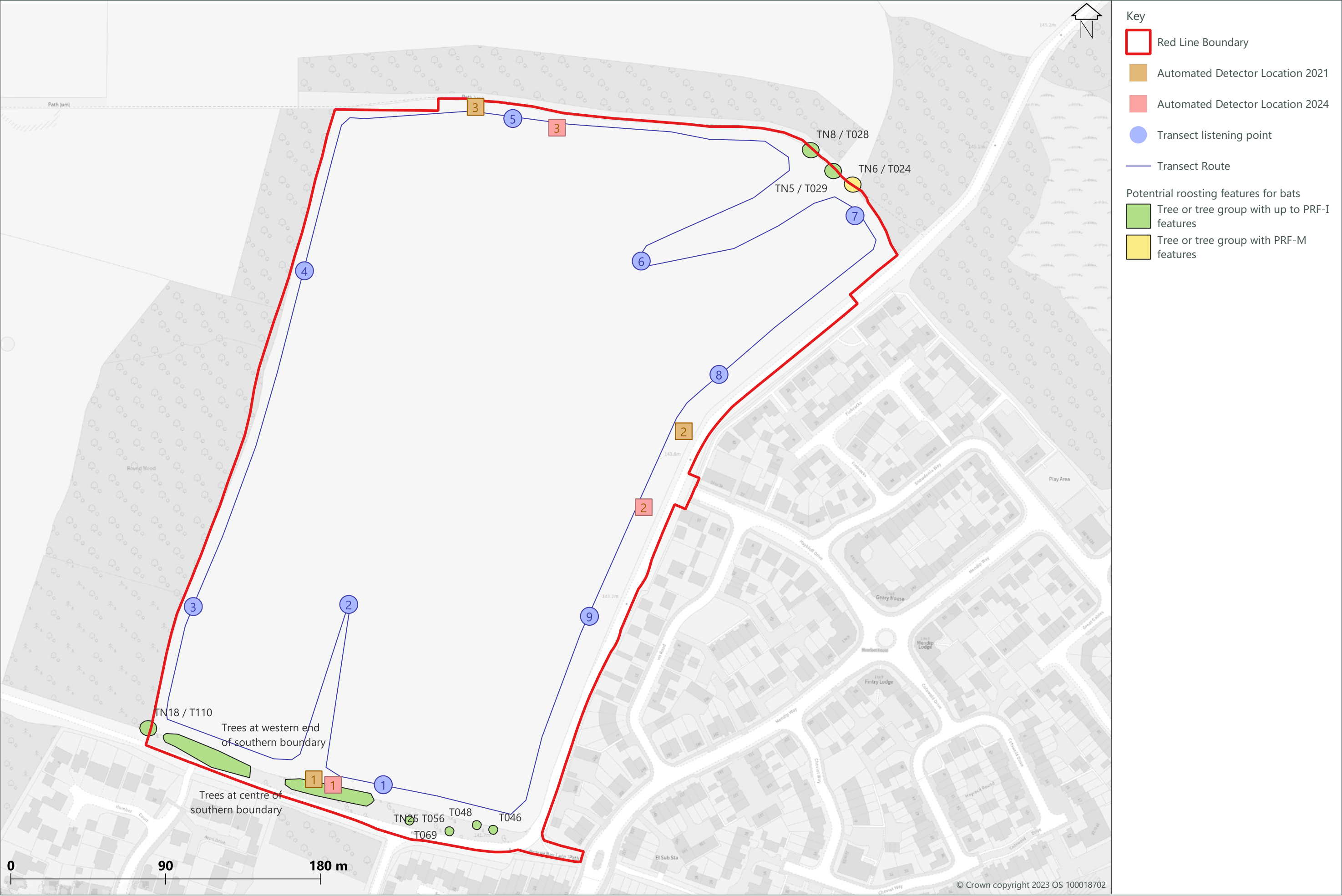
Ecological Receptor	Period	Potential Impact	Design response/ Mitigation / Enhancement Measures	Residual Effects
Bats – Roosts	Construction	- No roosts identified but some trees which will be impacted were considered to have potential (PRF-I) to support roosting bats. - Offsite woodland contained trees with suitability to support bat roosts. These trees will be retained but potential for lighting to impact roosts. - Potential to increase roosting opportunities.	- An ecologist will provide guidance on mitigation measures for tree felling/works in the season prior to the works, to avoid risk of legislative breaches (the suitability of trees for bats changes over time). Methods for removal of trees will be in line with good practice. - Construction lighting not to spill ≥ 0.5 Lux into retained offsite woodland, buffer areas to be provided. 25 bat boxes to be installed integral to new dwellings along the western and southern edges of the development.	Not significant / increase in potential roosting opportunities.
	Operation	- lighting negatively impact foraging/commuting behaviour. - Risk of ongoing tree management impacting a bat roost.	- See below for requirements for proposed lighting. - New footpaths will not be routed underneath the canopy of existing trees, except where they cross a line of trees. Where trees provide features suitable for roosting bats or if trees have not been surveyed recently (ie within 18 months), they will be surveyed prior to works being undertaken with works done under licence if necessary.	Not significant
Bats – Foraging and commuting	Construction and Operation	- Construction lighting negatively impact foraging/commuting behaviour. - Loss/deterioration of bat foraging/commuting habitat through development proposals/accidental damage. - Lighting negatively impact foraging/commuting behaviour. - Management reducing the suitability of bat habitat (boundaries).	- Proposed lighting will not spill ≥ 0.5 Lux onto the canopies of offsite woodland habitats to the north and west of the Site. Alongside the possible Ancient Woodland (Round Wood) this dark zone will be extended so that proposed lighting will not spill ≥ 0.5 Lux within 1m of the canopy edge. - On the south and east boundaries, a 7m wide sensitive lighting zone will be located following the route of the existing hedgerow or tree line. It is anticipated that the majority of the length of the eastern hedgerow will be subject to light spill of < 1 lux at the centreline and along the majority of the southern boundary light spill would be < 0.5 lux at the centreline however several road junctions and pedestrian crossings are required	Not significant

Ecological Receptor	Period	Potential Impact	Design response/ Mitigation / Enhancement Measures	Residual Effects
			along both boundaries. At these locations lighting will be designed to a sensitive lighting design. - Across the site, the lighting design will include warm white light sources (3,000 Kelvin or lower where possible) with LED luminaires used. Luminaires will have a negligible or zero Upward Light Ratio. - Lux level contours on the horizontal plane will be produced for the Site edges at detailed design to demonstrate the above requirements are met. - Tree and hedge protection will be installed during construction. - Retention of majority of hedgerows and tree lines (except where required for site access). - Hedgerow / treeline loss required for access minimised as far as practicable. - Boundary vegetation along the north and west boundaries will be retained allowing a continued commuting route around the Site.	
Hazel Dormouse	Construction and Operation	No evidence of presence	N/A	N/A

Ecological Receptor	Period	Potential Impact	Design response/ Mitigation / Enhancement Measures	Residual Effects
Other mammals (Brown Hare & Hedgehog)	Construction and Operation	Loss of habitat and/or connectivity	- Habitat corridor retained around north and east sides of the development. - Sensitive working practises to avoid the killing or injury during construction will be provided in a CEMP or similar. - Hedgehog gaps will be provided in garden fences to allow Hedgehogs to move and forage across the Site.	Not significant
Birds	Construction and Operation	- There is a risk of harm to nesting birds on arable land (eg Skylark) during site clearance. - There is a risk of harm to nesting birds in trees or hedgerows during vegetation clearance (eg creation of accesses, tree safety works). - Loss of arable nesting or foraging habitat. Loss of land used by 2 x Skylark territory.	- Removal of trees, hedgerows or scrub will be avoided during the nesting bird season (March-August) or checks for nesting birds will be undertaken immediately before works. If nesting birds are found they will be protected. - Landscape general arrangement includes proposals for habitat suitable for nesting and foraging birds e.g. shrub and tree planting, hedgerows and meadow grassland. - Bird boxes to be installed integral to new dwellings (including Swift boxes) at a rate of 1 box per equivalent plot.	Overall effect not significant. Loss of 2 x Skylark territories. Increase in nesting and foraging habitat for shrub, tree and building nesting species.
Reptiles & Amphibians	Construction and Operation	- No evidence of Great Crested Newt presence. - There is a risk of killing or injury of reptiles/amphibians during clearance of suitable habitats (hedgerows/treelines and associated dry ditch), though it is unlikely that any significant populations would be present in the area.	- Sensitive working methods for works in suitable habitat to be detailed within CEMP or similar. - Proposals for the Site will result in an increase in available suitable habitat including the creation of over dug sections of attenuation features to create ponds and the creation of meadow grassland and shrub planting.	Minor positive effect.
Invertebrates	Construction and Operation	Increase available habitat/ resources for non-specialist invertebrates	Provision of grassland, orchard, shrub and tree habitats including fruiting and flowering plants.	Not significant

Figures:

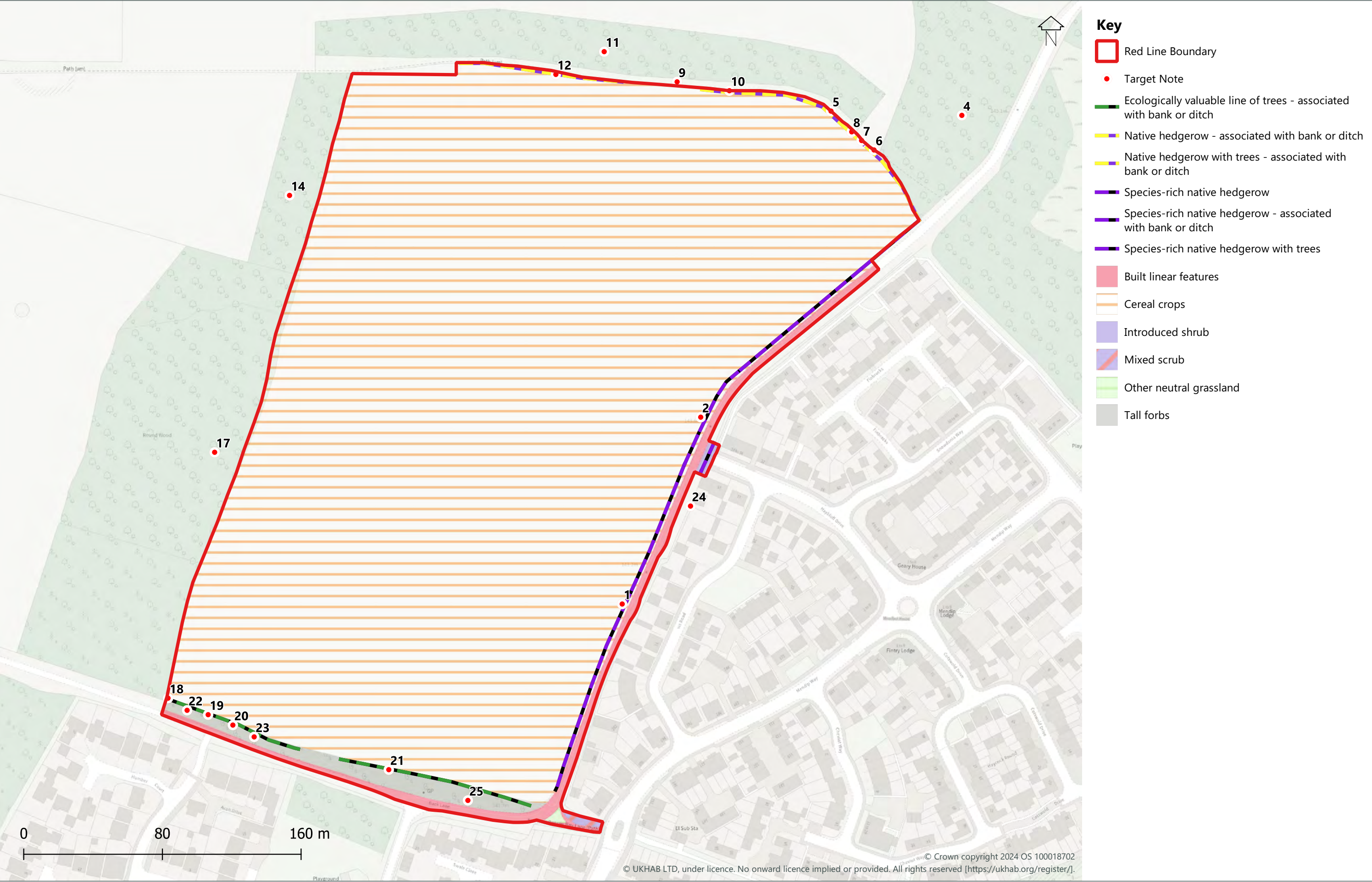
- 1: Bat Survey Plan
- 2: Site Context
- 3: Baseline Habitat Plan
- 4a: Breeding Bird Survey Results – Visit 1
- 4b: Breeding Bird Survey Results – Visit 2
- 4c: Breeding Bird Survey Results – Visit 3
- 4d: Breeding Bird Survey Results – Visit 4





Key

Red Line Boundary





Key

Red Line Boundary

Symbols:

- A bird in song
- A calling bird
- xx → A flight path of a bird from a perch
- xx → A bird seen only in flight

Species Codes:

- WP - Common Woodpigeon
- WR - Eurasian Wren
- R - European Robin
- S - Common Skylark
- BT - Blue Tit
- B - Blackbird
- BC - Blackcap
- MG - Common Magpie
- JD - Western Jackdaw
- C - Carrion Crow
- CH - Common Chaffinch

N.B. red symbols are on site records, blue symbols are records adjacent to the site.



Key

Red Line Boundary

Symbols:

- O A bird in song
- A calling bird
- A bird repeatedly giving alarm calls
- xx → A flight path of a bird from a perch
- xx A bird seen only in flight
- FAM Family party

Species Codes:

- WP - Common Woodpigeon
- WR - Eurasian Wren
- R - European Robin
- S - Common Skylark
- BT - Blue Tit
- B - Blackbird
- BC - Blackcap
- MG - Common Magpie
- GS - Great Spotted Woodpecker
- SL - Barn Swallow
- GT - Great Tit
- C - Carrion Crow
- NH - Eurasian Nuthatch
- TO - Tawny Owl
- SD - Stock Dove

N.B. red symbols are on site records, blue symbols are records adjacent to the site.

Appendix 1: Photos

Photo no.	
1	 View across the Site, an arable field. View looking to south-west (18/04/2024).
2	 Back Lane, showing hedgerow on eastern boundary of the Site on the right hand side of the photo (26/06/2024)

3



Line of trees with dry ditch and tall forb vegetation to south of Site. (26/06/2024)

4



View of Line of trees with dry ditch to south of Site. Photo taken from south-west corner showing tree line (04/05/2023).

5	
Mature tree at western end of hedge along the northern boundary (04/05/2023).	
6	
Western boundary of the Site, showing Round Wood offsite (18/04/2024)	

7



Hedgerow at Haybluff Lane, showing introduced shrub at base (20/11/2024)

8



Rough grassland with scattered Bramble at junction of Botany Bay Land and Back Lane. (20/11/2024)

Appendix 2: Target Notes

Note: Numbering carried over from previous surveys.

TN	Description
1	Species-rich hedgerow, adjacent to Back Lane and comprises entire eastern boundary. Lacking recent management with hedgerow canopy in places encroaching into the field. Dry ditch running adjacent on the roadside of the hedgerow, width varies between 2-4m and a height of up to 5m in places. Species include: Holly, Spindle, Blackthorn, Field maple, Hawthorn, Sycamore, Ash, Hazel, Dogwood, Dog rose and Common oak. Ground flora: Common nettle, Cow parsley, Bramble and Cleavers.
2	There is an 8 Metre break in the eastern hedgerow for field access. Gap populated with grass margin interspersed with scrub, Species recorded: Cock's-foot, Common Couch, Yorkshire fog, Bramble, Common nettle and Broad-leaved dock.
4	Offsite lowland deciduous woodland. Oak dominated with mature trees. Woodland linked to Parsonage Green Woodland by canopy, proving a route over Back Lane. Two small ponds in the woodland.
5	Mature Oak aligning boundary and adjacent to bridleway. Ground flora of Common nettle, Bramble and Broad-leaved dock. Low potential to support roosting bats.
6	Ash tree with rot holes/ cracks. Main trunk splits into two with woodpecker holes located 4-5m from the ground previously recorded, tree now covered in dense Ivy. Most limbs have been lost. PRF-M potential given condition and situated next to woodland edge / hedgerow. Previously considered high potential however suitability for larger roosts reduced due to loss of limbs, trunk reducing.
7	Location of a Mature Ash tree which collapsed and was removed during 2022. Tree previously surveyed for roosting bats (none recorded).
8	Mature Oak, peeling bark and occasional split branch high in the canopy. Considered to offer PRF-I bat roost potential
9	Bridle way located adjacent to the northern boundary of the Site.
10	Short section of Species-poor intact hedgerow running adjacent to the bridleway along the northern boundary, 2-3m wide and 5-7m high. Species include: Holly, Blackthorn, Hawthorn with bramble as the base.
11	Broad-leaved woodland, planted in the last 30 years surrounded by 6ft mesh fence, located to the north of the bridleway. Species recorded: Oak, Blackthorn, Dog Rose, Elder with bramble dominant ground cover plant.
12	Former hedgerow with remnant shrub species: Blackthorn, Hawthorn, Dog rose now predominantly scattered clumps of bramble with old post and rail fence running internally but heavily degraded. Occasional mammals path leading from bridleway into the site.
14	Former species poor hedgerow now enveloped with broad-leaved woodland, fence still present but now predominantly overgrown. Woodland adjacent to former hedgerow comprising mainly of Ash with hedgerow species: Elder and Blackthorn with Bramble and Dog rose recorded.
17	Round wood lying adjacent to the sites western boundary. Dominated by oak, Ash and beech with occasional Elm, Sycamore and Holly. Mixed structure woodland, with large mature canopy with an understory of smaller species providing suitable habitat for Dormice. No evidence of recent woodland management with fallen and standing deadwood.
18	Mature oak identified in previous surveys with some raised bark/ splits but generally considered to be in good condition. PRF-I bat roost potential.

19	Mature oak Main trunk intact but a split branch presence and a possible hole developing where a limb has been lost. Sycamore adjacent immediately to this tree with a branch cavity (PRF-I).
20	Mature oak previously identified located within the southern boundary, with some dead branches. Considered to have PRF-I bat roost potential.
21	Tree-lined southern site boundary, running adjacent to Back Lane, species comprise of oak, Sycamore, Elm and Holly connected to Round Wood at its western end. Dry ditch running along the entirety of the tree-line with scrub species including: Bramble and nettle. Some highways works undertaken in 2022/23, deepening the dry ditch and removing some trees (mostly dead Elm).
22	Cherry, 25cm dbh. Shallow wounds. Cavities not currently visible but risk of cavities developing. Considered to have no more than PRF-I bat potential.
23	Two multistem Sycamore with wounds near base. Some decay and cavities starting but not yet formed. Both trees considered to have PRF-I potential to support roosting bats.
24	Offsite Ash tree. Some broken limbs but these all upwards facing and appeared to have healed, no cavities visible. Tree considered to have potential to support roosting bats.
25	Dead Elm with crevice in broken trunk. Potential roosting suitability for bats: PRF-I

Appendix 3: Bat Roost Assessment and Survey Results

The table below provides a summary of the trees which were considered to have potential to support roosting bats at the Site. Only details of recent (ie 2021 onwards) surveys are provided. Older (pre-2021) surveys at the Site (e.g. TN5, TN6, TN8) did not find any evidence of roosting bats.

Tree	Description	Survey method and results	2024 Potential to support roosting bats	Photograph
TN6 / T024	Ash tree covered by dense Ivy. Previously identified as having woodpecker holes, rot holes and splits. Most limbs now lost.	2024: Ground based tree assessment. 2021: emergence/re-entry 2 surveys (1 x dusk, 1 x dawn). No evidence of roosting bats.	PRF-M	
TN5 / T029	Mature Oak of size where holes would be expected. Some evidence of rot developing at branch tips. Bark lifting.	Ground based tree assessment.	PRF-I	

Tree	Description	Survey method and results	2024 Potential to support roosting bats	Photograph
TN8 T028	Mature Oak. Peeling bark and split high in canopy, rot in limbs.	Ground based tree assessment.	PRF-I	
TN18 / T110	Mature oak with some raised bark/ splits.	Ground based tree assessment.	PRF-I	
TN19 / T104 (Western end of southern boundary)	Mature oak. Main trunk intact but a split branch presence and a possible hole developing where a limb has been lost.	Ground based tree assessment. Part of group of no more than low potential trees surveyed in 2021 (2 x dusk). No evidence of roosting bats.	PRF-I	

Tree	Description	Survey method and results	2024 Potential to support roosting bats	Photograph
TN19/ T076 (Western end of southern boundary)	Semi-mature multi-stem Sycamore with branch cavity at 6m high on north face.	Aerial inspection	PRF-I	
T075 (Western end of southern boundary)	Semi-mature multi-stem Sycamore with tear out at 5m on north aspect	Aerial inspection	Negligible	
T074 (Western end of southern boundary)	Semi-mature multi-stem Sycamore with Ivy	Aerial inspection	Negligible	

Tree	Description	Survey method and results	2024 Potential to support roosting bats	Photograph
TN20 / T103 (Western end of southern boundary)	Mature oak located within the southern boundary, with some dead branches.	Ground based tree assessment. Part of group of no more than low potential trees surveyed in 2021 (1 x dusk). No evidence of roosting bats.	PRF-I	
TN22 T078 (Western end of southern boundary)	Cherry, 25cm dbh. Shallow wounds. Cavities not currently visible but risk of cavities developing.	Ground based tree assessment. Part of group of no more than low potential trees surveyed in 2021 (1 x dusk). No evidence of roosting bats.	PRF-I	

Tree	Description	Survey method and results	2024 Potential to support roosting bats	Photograph
TN21 / T095 (Centre of southern boundary)	Group of dead Elm in Southern boundary. Up to 30cm dbh but mostly small, cavities not visible. Some peeling bark but didn't appear to provide shelter.	Ground based tree assessment	Negligible	
TN23 / T100 and T101 (Western end of southern boundary)	Two multistem Sycamore with wounds near base. Some decay and cavities starting but not yet formed.	Ground based tree assessment Part of group of no more than low potential trees surveyed in 2021 (1 x dusk). No evidence of roosting bats.	PRF-I	
T069	Standing dead Elm with lifting bark at the base.	Ground based tree assessment.	PRF-I	

Tree	Description	Survey method and results	2024 Potential to support roosting bats	Photograph
TN25 T056	Crevice within broken trunk of a dead Elm, at time of survey leaning on another tree. Short lived habitat feature.	Ground based tree assessment.	PRF-I	
T048	Elm within a group of tall thin trees with some Ivy cover. Cavities not evident. Some lifting bark at base.	Ground based tree assessment.	PRF-I	
T046	Sycamore, majority of stems have died. Lifting bark.	Ground based tree assessment.	PRF-I	

Appendix 4: Bat Activity Survey Results

The table below provides the number of bat passes recorded per night at each automated detector location.

2024: Bat passes recorded during automated detector surveys

	Number of passes per night (2024)						
	Pip	N/L/S	Bar	Myo	BLE	Vesper	Total
Location 1 (Southern boundary)							
June	52.20	3.60	0.60	0.00		0.00	18.80
August	280.40	42.20	11.00	1.80		0.00	111.80
October	26.80	4.00	0.20	0.00		0.00	10.33
Mean	119.80	16.60	3.93	0.60		0.00	140.93
Location 2 (eastern boundary)							
June	15.80	3.60	0.00	0.00		0.00	6.47
August	9.60	4.00	0.60	0.80		0.40	5.13
October	4.00	0.40	0.00	0.00		0.00	1.47
Mean	9.80	2.67	0.20	0.27		0.13	13.07
Location 3 (northern boundary)							
June	43.80	5.80	1.20	0.20		0.00	51.00
August	5.40	1.40	0.20	0.20		0.20	7.40
October	2.40	2.00	0.00	0.60		0.00	5.00
Mean	17.20	3.07	0.47	0.33		0.07	21.13

Pip = Pipistrelle species (Common or Soprano)

N/L/S = Noctule/Leislars/Serotine

Bar = Barbastelle

Myo = Myotis Species

2021: Bat passes recorded during automated detector surveys

	Number of passes per night (2021)						
	Pip	N/L/S	Bar	Myo	BLE	Vesper	Total
Location 1 (Southern boundary)							
May	145.00	1.00	0.00	1.17	0.00	0.00	147.17
July	116.71	9.00	3.00	0.14	0.71	0.00	129.57
September	541.00	15.00	1.67	0.17	0.00	1.67	559.50
Mean	259.63	8.37	1.63	0.47	0.26	0.53	270.89
Location 2 (eastern boundary)							
May	7.33	2.17	0.00	0.17	0.00	0.00	9.67
July	47.57	3.43	3.14	3.43	0.29	0.00	57.86
September	6.17	7.50	0.00	0.17	0.17	0.00	14.00
Mean	21.79	4.32	1.16	1.37	0.16	0.00	28.79
Location 3 (northern boundary)							
May	14.17	1.33	0.00	0.50	0.00	0.00	16.00
July	58.14	1.00	0.00	0.29	0.00	0.00	59.43
September	24.67	4.67	0.00	0.33	0.33	0.17	30.17
Mean	33.68	2.26	0.00	0.37	0.11	0.05	36.47

Pip = Pipistrelle species (Common or Soprano)

N/L/S = Noctule/Leislars/Serotine

Bar = Barbastelle

Myo = Myotis Species

BLE = Brown Long-eared Bat

Appendix 5: Breeding Bird Survey Results

The table below provides a summary of results of four survey visits to land north-east of Stevenage between May and July 2021..

Species	Code	Conservation Status ²⁹	Notes	On (O), boundary (B) or adjacent (A) to site?
Common Swift <i>Apus apus</i>	SI	Red status	Non-breeder. Observed flying over the site.	O
Stock Dove <i>Columba oenas</i>	SD	Amber status	Possible breeder. Singing birds recorded in woodland bordering the site to the north-east and west.	A
Common Woodpigeon <i>Columba palumbus</i>	WP	Amber status	Probable breeder. Five permanent territories in woodland bordering the site.	O
Lesser Black-backed Gull <i>Larus fuscus</i>	LB	Amber status	Non-breeder. Observed flying over the site.	O
Eurasian Sparrowhawk <i>Accipiter nisus</i>	SH	Amber status	Non-breeder. Observed flying over the site.	O
Red Kite <i>Milvus milvus</i>	KT	Green status Schedule 1	Non-breeder. Observed flying over the site.	O
Common Buzzard <i>Buteo buteo</i>	BZ	Green status	Non-breeder. Observed flying over the site.	O
Tawny Owl <i>Strix aluco</i>	TO	Amber status	Possible breeder. Observed in suitable habitat.	O
Great Spotted Woodpecker <i>Dendrocopos major</i>	GS	Green status	Probable breeder. Two permanent territories located in woodland bordering the site to the west and north-east.	B
Green Woodpecker <i>Picus viridis</i>	G	Green status	Possible breeder. Observed in suitable habitat bordering the site to the west.	A
Eurasian Hobby <i>Falco subbuteo</i>	HY	Green status Schedule 1	Non-breeder. Observed flying over the site.	O

²⁹ Birds of Conservation Concern 5, 2021. Downloaded from <https://www.bto.org/sites/default/files/publications/bocc-5-a5-4pp-single-pages.pdf>

Species	Code	Conservation Status ²⁹	Notes	On (O), boundary (B) or adjacent (A) to site?
Common Magpie <i>Pica pica</i>	MG	Green status	Confirmed breeder. Recently fledged young in hedgerow bordering site to the west. Birds recorded in along all site boundaries.	B
Western Jackdaw <i>Corvus monedula</i>	JD	Green Status	Possible breeder. Observed in suitable habitat bordering the site.	O
Carrion Crow <i>Corvus corone</i>	C	Green status	Possible breeder. Observed in suitable habitat bordering the site.	O
Blue Tit <i>Cyanistes caeruleus</i>	BT	Green status	Possible breeder, seven possible territories in woodland and the hedgerow bordering the site.	B
Great Tit <i>Parus major</i>	GT	Green status.	Confirmed breeder. Family party recorded in woodland bordering the site to the north-east. One possible territory and birds recorded in suitable habitat at two other locations in woodland and the hedgerow bordering the site.	B
Common Skylark <i>Aluada arvensis</i>	S	Red status S41 species	Probable breeder. Two permanent territories located towards the north of the site.	O
Barn Swallow <i>Hirundo rustica</i>	SL	Green status	Non-breeder. Observed flying over the site.	O
Long-tailed Tit <i>Aegithalos caudatus</i>	LT	Green status	Possible breeder. Recorded in suitable habitat in woodland bordering the site to the north.	A
Willow Warbler <i>Phylloscopus trochilus</i>	WW	Amber status	Possible breeder. One possible territory located in woodland bordering the site to the north.	A
Chiffchaff <i>Phylloscopus collybita</i>	CC	Green status	Possible breeder. One possible territory located in woodland bordering the site to the north-east.	A
Blackcap <i>Sylvia atricapilla</i>	BC	Green status	Probable breeder. A probable territory in woodland bordering the site to the west and possible territories in woodland bordering the site to the north-east and north-west.	A

Species	Code	Conservation Status ²⁹	Notes	On (O), boundary (B) or adjacent (A) to site?
Garden Warbler <i>Sylvia borin</i>	GW	Green status	Possible breeder. One possible territory was located in woodland bordering the site to the north.	A
Eurasian Wren <i>Troglodytes troglodytes</i>	WR	Amber status	Probable breeder. Four permanent and two possible territories in woodland bordering the site.	B
Eurasian Nuthatch <i>Sitta europaea</i>	NH	Green status	Possible breeder. Possible territories located in woodland bordering the site to the north-east and west.	A
Common Starling <i>Sternus vulgaris</i>	SG	Red status S41 species	Non-breeder. Recorded flying over the site and in adjacent housing (where presumably breeds).	O
Blackbird <i>Turdus merula</i>	B	Green status	Probable breeder. Two permanent and two possible territories in woodland bordering the site.	B
Song Thrush <i>Turdus philomelos</i>	ST	Amber status S41 species	Possible breeder. One possible territory in woodland bordering the site to the north-west.	A
European Robin <i>Erithacus rubecula</i>	R	Green status	Confirmed breeder. Recently fledged young recorded in trees bordering the site to the south. One permanent and four possible territories in other woodland bordering the site.	B
House Sparrow <i>Passer domesticus</i>	HS	Red status S41 species	Non-breeder. Recorded in adjacent housing (where presumably breeds).	A
Dunnock <i>Prunella modularis</i>	D	Amber status	Possible breeder. Two possible territories in hedgerow bordering site to the south-east and woodland bordering the site to the north-east.	B
Common Chaffinch <i>Fringilla coelebs</i>	CH	Green status	Possible breeder. Four possible territories recorded in woodland bordering the site.	A
Common Greenfinch <i>Chloris chloris</i>	GR	Red status	Possible breeder. One possible territory in hedgerow bordering site to the east.	B
Common Goldfinch <i>Carduelis carduelis</i>	GO	Green status	Possible breeder. Observed in suitable habitat bordering the site to the east.	O

Appendix 6: Offsite Ponds - Great Crested Newt Assessment**Results of HSI Calculation for Ponds within 250m of the Site**

Suitability Index		Pond 5	Pond 6
Map location	SI1	A / 1	A / 1
Pond area	SI2	8m ² / 0.05	30m ² / 0.05
No. of years in 10 dries up	SI3	Sometimes dries/ 0.5	Dries annually / 0.1
Water quality	SI4	Poor / 0.33	Moderate / 0.66
Perimeter shading	SI5	100 / 0.2	80 / 0.3
Waterfowl impact	SI6	Absent / 1.0	Absent / 1.0
Fish presence	SI7	Absent / 1.0	Absent / 1.0
No. of ponds within 1km	SI8	6 / 1.0	6 / 1.0
Terrestrial habitat	SI9	Good / 1.0	Good / 1.0
Macrophyte cover	SI10	0% / 0.3	30% / 0.6
H.S.I		0.47	0.48
Suitability for GCN		Poor	Poor
Notes		Shaded. No vegetation for egg laying.	Often dry during breeding season, though was wet in 2023.

Photographs of ponds

Pond	Photo (04/05/2023)
5	
6	

Appendix 7: Proposed habitats for BNG

Landscape Plan Key	BNG metric habitat type	Condition	Notes
Proposed building/car port	Developed land sealed surface	n/a	
Drainage features (solid blue hatch)	Ponds (non-priority habitat)	Poor	Over-dug element of attenuation basin which holds water.
Hard landscape features (excluding buildings)	Developed land sealed surface	n/a	
Proposed native tree and shrub structural mix	Mixed scrub	Mod	Edge of scrub habitat to undulate along grass boundary.
Proposed groundcover planting mix	Ground level planters	n/a	Non-shrub urban planting mix
Proposed mixed ornamental and native shrub mix	Introduced shrub	n/a	
Proposed mixed wildlife-friendly perennial mix	Ground level planters	n/a	Non-shrub urban planting mix
Proposed planted raingarden	Rain garden	Mod	
Proposed marginal aquatic planting mix	overlay NOT a separate area.	n/a	overlaps Other Neutral grassland and pond areas
Proposed native species hedgerow	Habitat tab: Other Neutral Grassland (as linear feature is adjacent to this habitat) Hedges tab: see metric, varying hedge type used depending on presence of trees and location	Mod	
Proposed flowering lawn mix suitable for both regular and relaxed mowing regimes to suit user requirements	Modified Grassland	Good	Seed mix to include at least 6 species
Proposed flowering grass meadow area	Other Neutral Grassland	Mod	Seed mix to be a native meadow mixture
Retained or reinstated groundcover flora/ tall forbs	Tall Forb	Mod	Pre-existing habitat type on shaded roadsides. New areas of this habitat to be seeded with native wildflower mix suitable for shade.
Proposed seasonal bulbs planting area	overlay NOT a separate area	n/a	Overlaps Other Neutral Grassland

Proposed wetland meadow mix to SuDs basins and swales	Other Neutral Grassland (basins)	Mod	Seed mix to be a native meadow mixture suitable for location
Proposed rear garden (incl lawns, planting beds, patios and shed/garden structures)	80% vegetated garden 20% hard standing	n/a	
Proposed front garden lawn	vegetated garden	n/a	
Proposed clipped hedge	vegetated garden	n/a	
Proposed front garden groundcover shrub mix	vegetated garden	n/a	
Proposed front garden shrub mix	vegetated garden	n/a	
Retained scrub	retained Mixed scrub	Mod	Retained
Existing hedge/tree group retained	Habitat tab: adjoining habitat used Hedges tab: existing hedge type		
Proposed community orchard	Traditional Orchard	Poor	Trees to be semi-dwarf or larger
proposed tree open space	Urban tree (89/99)	Mod	10 of these are within hedges or lines of trees, so have not been included in the Habitat tab of metric
proposed highway tree	Urban tree (172)	Poor	
proposed private garden tree	Not included		Within private garden
standard hedgerow tree	Not included in habitat tab		
wetland shrubs	Overlay, not a separate area		Scattered over Other Neutral Grassland

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