

Ecological Impact Assessment

October 2025

**Land at Mill Lane and
London Road, Hitchin**

Prepared by
CSA Environmental

On behalf of
Martin Grant Homes

Report No: CSA/3922/12

This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

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EXECUTIVE SUMMARY

Residential development is proposed at Land at Mill Lane and London Road, Hitchin, for which planning permission will be sought from North Hertfordshire District Council.

CSA Environmental was instructed by Martin Grant Homes to undertake an Ecological Impact Assessment (EclA) of the proposed development. This was informed by a Preliminary Ecological Appraisal (PEA) of the Site, comprising a desk study and Habitat Classification survey completed in July/August 2025, followed by a range of further detailed surveys for habitats, badger, bats, birds, reptiles and amphibians.

No nature conservation designations are present on-site or on adjacent land, with no impacts anticipated to any Sites identified locally.

The Site is dominated by neutral grassland across two fields interspersed with areas of scrub and ruderal species. The grassland is of some ecological interest, with tussocks and varied structure, particularly in the eastern parcel. Small areas of woodland, individual trees, and boundary hedgerows on the Site are of interest and priority must be given to their retention where possible, and enhancement alongside development. Net loss of habitat at the Site will be addressed via off-site registered biodiversity gains as set out in a separate Biodiversity Net Gain Assessment (BNGA).

No badger setts are preset at the Site. Mitigation is proposed in respect of bat populations at the Site. Precautionary measures have also been set out in respect of nesting birds and a small population of common lizard.

Opportunities for ecological enhancement have been identified and may be secured by planning condition, including swift bricks, bat boxes and hedgehog holes in private garden fences. Habitat opportunities to be enhanced and created at the Site include woodland, grassland, scrub, new trees and SuDS features.

Based on successful implementation of the proposed avoidance, mitigation and enhancement, as well as registered off-site biodiversity gains, the development is not anticipated to result in any significant residual negative effects on important ecological features.

1.0 INTRODUCTION

- 1.1 This report has been prepared by CSA Environmental on behalf of Martin Grant Homes. It sets out the findings of an Ecological Impact Assessment (EclA) of proposed development of Land at London Road, Hitchin (hereafter 'the Site'). Residential development is proposed at the Site, for which planning permission is sought.
- 1.2 The scope of this assessment has been determined with consideration of best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).
- 1.3 The Site occupies an area of c. 3.38ha and is located around central grid reference TL 19070 27389, to the south-east of Hitchin. It comprises two fields of neutral grassland with areas of woodland, scrub, collapsed building, individual trees, and boundary hedgerows (see Habitats Plan in Appendix A). The landscape context of the Site is dominated by a mosaic of arable fields with boundary hedgerows, sub-urban habitats and scattered parcels of semi-natural woodland.
- 1.4 An initial desk study and field survey, including a UK Habitat Classification survey were undertaken for the Site on 17 July and 07 August 2025 as part of a Preliminary Ecological Appraisal, the findings of which are presented herein. In addition, the following further survey work was undertaken between May and August 2025:
 - Detailed botanical survey (17 July 2025)
 - Breeding bird survey (May and July 2025)
 - Bat surveys (May-September 2025)
 - Reptile surveys (May-June 2025)
 - Breeding bird surveys (May-July 2025)
 - Badger survey (29 August 2025)
- 1.5 This EclA aims to:
 - Establish baseline ecological conditions at the Site.
 - Determine the importance of ecological features which could be affected by the proposed scheme.
 - Identify any likely significant impacts or effects of the proposed development on important ecological features, in the absence of mitigation, including cumulative impacts.
 - Set out any measures necessary to effectively avoid or mitigate likely significant effects, and identify residual impacts.
 - Identify any compensation measures required to offset residual impacts.

- Set out potential ecological enhancement measures that may be secured by the proposed scheme
 - Confirm how proposed mitigation, compensation and enhancement measures could be secured.
 - Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation, and where appropriate, to allow conditions or obligations to be imposed by the relevant authority.
- 1.6 An EclA can be used for the appraisal of projects of any scale. This is a best practice evaluation process, recommended by CIEEM (2018). It is intended that the evaluation of findings presented here-in will aid the authority in their review of the planning application.
- 1.7 This report should be read in conjunction with the Biodiversity Net Gain Assessment: Design Stage report (CSA/3922/13) which details further ecological assessment undertaken for the purpose of assessing Biodiversity Net Gain (BNG), and the predicted net effect of the proposed development on biodiversity.

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

Legislation

- 2.1 Legislation relating to wildlife and biodiversity of particular relevance to this EclA includes:
- The Conservation of Habitats and Species Regulations 2017 (as amended)
 - The Wildlife and Countryside Act 1981 (as amended)
 - The Natural Environment and Rural Communities (NERC) Act 2006
 - The Protection of Badgers Act 1992
 - The Environment Act 2021
- 2.2 This legislation has been addressed, as appropriate, in the production of this report with further information provided in Appendix B.

National Planning Policy

- 2.3 The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2024) sets out the government planning policies for England and how they should be applied. Chapter 15: Conserving and Enhancing the Natural Environment, is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.
- 2.4 Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services. Further guidance in respect of statutory obligations for biodiversity conservation within the planning system is provided by Government Circular 06/2005.

Local Planning Policy

- 2.5 A number of local planning policies relate to ecology, biodiversity and/or nature conservation. These are summarised in Appendix B.

Standing Advice

- 2.6 Natural England Standing Advice regarding protected species aims to support local authorities and forms a material consideration in determining applications in the same way as any individual response received from Natural England following consultation. Standing advice has therefore been given due consideration, alongside other detailed guidance documents, in the scoping of ecological surveys and production of this report.

3.0 METHODS

Desk Study

- 3.1 An ecological desk study was undertaken in February 2025 comprising a review of online resources and biological records centre data as detailed below. This updates a previous desktop study from March 2019.
- 3.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed to identify the following ecological features (based on the Site's likely 'zone of influence' in respect of such features):
 - Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
 - Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR) within 3km of the Site
 - Other relevant data e.g. Ancient Woodland Inventory within 1km of the Site
- 3.3 A review was undertaken of the location of any such designations, their distance from and connectivity with the Site, and the reasons for their designation. This information was used to determine whether they may be within the proposed development's Zone of Influence (Zol).
- 3.4 Herts Environmental Records Centre (HERC) was contacted for details of any non-statutory nature conservation designations and records of protected/notable habitats and species. This information was requested for an area encompassing the Site and adjacent land within c. 2km of its central grid reference. This search area was selected to include the likely zone of influence of effects upon non-statutory designations and protected or notable habitats and species.
- 3.5 Further online resources were reviewed for information which may aid the identification of important ecological features. The Woodland Trust's online Ancient Tree Inventory was reviewed for known ancient or veteran trees within the Site and adjacent land. Interactive online mapping provided by the charity 'Buglife' was used to determine whether the Site falls within an Important Invertebrate Area.
- 3.6 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography.
- 3.7 Where possible under the terms of the data provider, relevant desk study data are presented in Appendix C.

Field Surveys

- 3.8 A UK Habitat Classification ('UKHab') survey was carried out in fine and dry weather conditions on 17 July and 07 August 2025 by Alex Cole MCIEEM, FISC Level 4 and Revae Tilbury, encompassing the Site and immediately adjacent habitats that could be viewed. This updates a previous phase 1 habitat survey conducted in 2019.
- 3.9 UKHab is a unified and comprehensive system for mapping and classifying habitats, designed to provide a simple and robust approach to surveying and monitoring, and replaces Phase 1 Habitat survey methods. The method allows for identification of important habitat types, including habitats of Principal Importance under Section 41 (S41) of the NERC Act (2006) and Habitats Directive Annex I habitats. This method also allows for direct translation of habitats into the Statutory Biodiversity Metric (Defra, 2024).
- 3.10 The following parameters were adopted for the UKHab survey undertaken for this PEA:
- UKHab Professional edition (Butcher *et al.*, 2020, commercial End User Licence Agreement (EULA))
 - Minimum Mappable Unit (MMU):
 - 10m²/0.001ha (polygons)
 - 5m (linear)
 - Primary Habitats recorded to a minimum of Level 2 (see below) with UKHab codes provided
 - Mandatory secondary codes used
 - Base-mapping comprising a combination of aerial imagery and topographic information
- 3.11 Primary Habitats are recorded to a minimum of Level 2. Where the survey is conducted at an appropriate time of year (e.g. May to July for grassland) habitats may be recorded to Level 3, 4 or 5, only if conditions and the experience of the surveyor allow.
- 3.12 To assist with classification of grassland habitats, quadrat samples were taken during UKHab survey/dedicated botanical survey on 17 July and 07 August 2025 by Alex Cole MCIEEM, FISC Level 4 and Revae Tilbury. Representative sample locations were identified within each grassland parcel, spread evenly to avoid habitat transitions or ecotones, following a 'W' shape through the parcel and a covering a minimum of five sampling locations. Both average (mean) species count per m² and peak species counts are reported for comparison.
- 3.13 Quadrats of 1m x 1m were used, repeated five times in each sample location (i.e. 2m x 2m or 4m²). This technique assists, for example, with distinguishing between modified (g4) and other neutral (g3c) grasslands (using the threshold of nine species per m², reporting an average of the

four samples) and of lowland meadows (g3a) (using the threshold of 35 species per 2m x 2m samples).

3.14 Alongside the UKHab survey, additional field survey information was collected, comprising:

- Detailed floral species lists recorded for each identified habitat/parcel
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates)
- Evidence of, or potential for, other notable species (including S41 Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates)
- Any other survey information relevant to ecological matters

3.15 Results of the UKHab survey are presented on the Habitats Plan in Appendix A. Appendix D provides photographs of the habitats at the Site and Appendix E provides a list of floral species recorded in each habitat parcel. Nomenclature for higher plants within this report is consistent with the fourth edition of The New Flora of the British Isles (Stace, 2019).

Further Survey Work

3.16 The following detailed field survey work was carried out between May and September 2025, with full methods and results provided in the relevant Appendices:

- Badger Survey (Appendix G)
- Bat surveys (Appendix H)
- Bird surveys (Appendix I)
- Reptile Survey (Appendix J)
- Great Crested Newt Surveys (Appendix K)

Limitations

3.17 There were no specific limitations to the desk study. The field survey was conducted in good conditions, but due to time of year and the hot/dry conditions earlier in the year, plants were not in optimal condition for identification. However, this is not considered to have affected the overall results of the survey.

3.18 Limitations to protected species surveys are addressed in the relevant appendices.

Evaluation and Assessment

- 3.19 Ecological features are identified, evaluated and assessed in accordance with the CIEEM Guidelines for Ecological Impact Assessment (2018), with detailed methods provided in Appendix F.
- 3.20 It is an established principle (CIEEM, 2018) that EclA is an iterative process. Specialist advice on the avoidance and mitigation of the potential negative effects of the proposed development has been input from an early design stage.

4.0 BASELINE ECOLOGICAL CONDITIONS

Nature Conservation Designations

Statutory

- 4.1 There are no statutory designations covering any part of the Site.
- 4.2 No international statutory designations were identified within 10km of the Site.
- 4.3 Two national statutory designations were identified within 3km of the Site: Wain Wood SSSI (c. 1.7km south of the Site) and Oughtonhead Lane SSSI (c. 2.9km north-west of the Site).
- 4.4 One local statutory designation was identified within 3km of the Site: Purwell Meadow LNR (c. 2.3km north-east of the Site).
- 4.5 These statutory designations are described in Table 1 below.

Non-Statutory

- 4.6 Twelve non-statutory designations were identified within 2km of the Site. These non-statutory designations are described in Table 1 below.

Table 1. Statutory and non-statutory designations within search radii

Site Name & Designation	Distance & Direction from Survey Area	Special Interests or Qualifying Features
International Designations within 10km		
-	-	-
National Designations within 3km		
Wain Wood SSSI	c. 1.7km south of the Site	An ancient semi-natural oak <i>Quercus</i> sp. and hornbeam <i>Carpinus betulus</i> woodland which has now much reduced in size due to woodland clearance and felling. A small patch of unimproved acidic grassland is also present.
Oughtonhead Lane SSSI	c. 2.9km north-west of the Site	Designated for geological interests only
Local Designations within 3km		
Purwell Meadow LNR	c. 2.3km north-east	Combination of meadow land, wetland, and play areas. The majority of the site is grazed with periodic scrub clearance. The River Purwell flows through the site which is mainly left unmanaged.
Non-Statutory Designations within 2km		
Folly Alder Swamp LWS	c. 0.23km north-east of the Site	Old semi-natural alder <i>Alnus glutinosa</i> woodland with neutral/acid fen and marshy grassland remnants bordering Ippollytts Brook. A system of spring seepages is present plus old hornbeam <i>Carpinus betulus</i> pollards. The site supports a rich assemblage of flora,

		including greater tussock-sedge <i>Carex paniculata</i> and marsh marigold <i>Caltha palustris</i> .
Maydencroft Manor Farm, Gosmore LWS	c. 0.66km west of the Site	Buildings and surrounding areas support important protected species (bats)
St Ibbs Bush LWS	c. 0.68km south-east of the Site	Buildings and surrounding areas support important protected species.
Sperberry Hill House Meadow LWS	c. 0.92km south-east of the Site	A meadow of unimproved neutral-calcareous grassland to the east of Ippolytts Brook with old hedges and scattered trees.
Wymondley Transforming Station LWS	c. 1.03km east of the Site	An old gravel pit landscaped to form the grounds of transforming station, supporting coarse calcareous grassland with scrub invading slowly from the edges. Notable grassland species include ploughman's spikenard <i>Inula conyza</i> , and Pyramidal Orchid <i>Anacamptis pyramidalis</i> .
Priory Park Icehouse LWS	c. 1.07km north-west of the Site	Building and environment are important for protected species.
Vicar's Grove LWS	c. 1.23km south of the Site	Infilled gravel pit, on the site of an ancient woodland, a small remnant of which remains around the site boundary. Flower-rich banks occur along the south-west margin of the site plus areas of secondary scrub and ruderals.
Charlton Mill Pool LWS	c. 1.25km west of the Site	Old mill pool formed by the widening of the river channel with fluctuating water levels. South of the lake the river flows in several shallow muddy channels through swamp and wet woodland.
Windmill Hill LWS	c. 1.39km north of the Site	Calcareous gravel hill supporting short grassland. The steep roadside bank supports an interesting grassland flora including wild clary <i>Salvia verbenaca</i> , a rare species in Hertfordshire.
The Willows (Hitchin) LWS	c. 1.49km north-west of the Site	Alder and willow fen woodland with areas of marshy grassland and scrub. This site contains small streams and springs which form a source of the River Hiz.
Purwell Railway LWS	c. 1.62km north-east of the Site	Railway embankment supporting species-rich neutral and calcareous grassland with scrub. A diversity of butterfly species has also been recorded.
The Warren E. of Wain Wood LWS	c. 1.75km south-west of the Site	Consists of areas of woodland which have been removed from Wain Wood SSSI.

Habitats and Flora

- 4.7 Habitats recorded on-site are illustrated in Appendix A and D with detailed species lists provided in Appendix E. Relevant UKHab codes are provided within parentheses for each habitat type recorded e.g. Other Neutral Grassland (g3c).

Irreplaceable Habitats

- 4.8 There is no ancient woodland, as shown on the ancient woodland inventory, covering any part of the Site or immediately adjacent land.
- 4.9 No trees on or adjacent to Site are listed on the Ancient Tree Inventory.

Notable Flora Records

- 4.10 The HERC provided 272 records of 94 notable plant species from within the search area. Those of potential relevance to the Site include bluebell *Hyacinthoides non-scripta*, cornflower *Centaurea cyanus*, and harebell *Campanula rotundifolia*.
- 4.11 Six records of Japanese knotweed *Fallopia japonica* were returned by HERC for within the search area from 1987 to 2023. However, the resolution of these records is only accurate to a 2km² area, therefore exact proximity to the Site is unknown. None was noted during the Site walkover.
- 4.12 Variegated yellow archangel *Lamium galeobdolon* subsp. *argentatum*, is present within the area of on-site woodland, as described below. This species is listed as a non-native invasive species under Schedule 9 of Section 14 of the Wildlife and Countryside Act 1981. As such, it is an offence to cause the growth of this plant within the wild and all reasonable steps and due diligence must be taken to avoid this.

Other neutral grassland (g3c)

- 4.13 Areas of other neutral grassland dominate the Site across both fields F1 and F2. Species across both fields are fairly similar, but sward height is notably different, with field F2 containing more variation and being generally shorter. Areas of significantly different grassland dominated by common nettle *Urtica dioica* are also present in patches around F1.
- 4.14 The sward in field F1 is dominated by false-oat grass *Arrhenatherum elatius*, with frequent common nettle. Some species indicating greater ecological interest are present, but with lesser frequency than we would see in a higher quality grassland. Topography undulated, with localised areas of bare ground and earth piles where a BMX run has been created.
- 4.15 Grassland in field F2 comprises a similar range and proportion of species: it is dominated by false-oat grass, but with Yorkshire-fog *Holcus lanatus* being frequent instead of the higher proportion of common nettle in F1.

Cover of bare ground is higher here due to the combination of the well-used footpaths, ant-hills, and rabbit holes, but sward height is more varied.

- 4.16 Areas dominated by common nettle within the Site represent the lowest ecological interest out of the grasslands present on-Site, with fewer grass and herb species represented, and those present being indicative of nutrient enrichment. Encroaching scrub and woodland edge is occurring in some places.

Other broadleaved woodland (w1g)

- 4.17 A small wooded copse comprised primarily of young ash trees is present in the western corner of the western field (W1). Other species present include hawthorn, elder, and hazel. Ground flora is dominated by common nettle, with some areas on woodland edges continuous with the grassland F1. Some early ash dieback symptoms have been noted in the trees in this woodland.
- 4.18 A woodland edge area on the unmanaged (site-side) of H1 is present along the northern boundary of the western field (W2). Tree species include hawthorn, field maple, crab apple, and sycamore and ground flora is dominated by common nettle.
- 4.19 Between the two fields of the Site is a small area of woodland (W3) with a footpath running through it. Trees north of the footpath consist primarily early and semi mature sycamore, with those south of the path mature hornbeams. The ground flora here is limited, with areas of bare ground with common nettle with hogweed, field bindweed, and cleavers.
- 4.20 An area of broad-leaved woodland is present within the north of the eastern field (W4). Within the woodland are a small number of large mature horse-chestnut *Aesculus hippocastanum* and oak *Quercus* sp. trees. Understorey species include ash and hawthorn. The ground flora is dominated by common nettle, with other species including lords-and-ladies, wood avens, and creeping buttercup. Variegated yellow archangel (listed as an invasive species under Schedule 9 of the Wildlife and Countryside Act [1981]) was also found in this area of woodland.

Blackthorn scrub (h3a)

- 4.21 A small area of blackthorn scrub lies adjacent to the south-east corner of W4. The scrub here is very dense and does not contain other species.

Bramble scrub (h3d)

- 4.22 Areas of dense bramble scrub are present throughout the Site. Other species within these areas include common nettle, false-oat grass, elder, and elm.

Mixed scrub (h3h)

- 4.23 Areas of mixed scrub lie intermittently along the east and south borders of the eastern field. The scrub is made up of English elm, bramble, elder, blackthorn, oak, ivy, and hawthorn.

Individual Trees

- 4.24 A number of individual trees, not associated with woodland or hedgerows, are present within the Site. Those of particular ecological interest include larger mature trees, such as those standing within the grasslands of the fields.

Buildings (u1b5)

- 4.25 The remains of a building are located in the north-west of the eastern field, within W4. All that is left of the building is the foundations and a few layers of the brick walls.

Hedgerows

- 4.26 There are seven hedgerows present within the Site, labelled H1-H7 on the Habitats Plan (Appendix A), as detailed below. All on-site hedgerows besides H5 qualify as Habitats of Principal Importance (HoPI) as they consist of over 80% native species cover. Additionally, hedgerows H1, H2, H6, and H7 qualify as being species-rich as they contain five or more woody species within a 30m stretch.
- 4.27 H1, H2, H6, and H7 comprise out-grown hedgerows which mark the boundaries between the Site and adjacent roads or fields. Management of these hedgerows is limited and seems to be restricted to the sides which face out of the Site, meaning their bounds are poorly defined. These hedgerows all contain many woody species, including hawthorn, blackthorn, holly, hazel, ash, elm, oak, sycamore, elder, crab apple, and dog-rose. Ground flora largely consists of common nettle and dense bramble for these hedgerows.
- 4.28 H3, H4, and H5 are managed dense hedgerows marking the boundary to the adjacent care home from the Site. Each of these hedgerows is comprised of one woody species: beech, holly, and Leyland cypress respectively, although white bryony can also be found climbing in H5. Common nettle is the primary species found along the bases of these hedgerows.

Fauna

Bats

Site Context

- 4.29 A total of 149 bat records were identified within the search area, dating from 1973 to 2021. These records comprise the following species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P.*

pygmaeus, noctule *Nyctalus noctula*, brown long-eared bat *Plecotus auritus*, serotine *Eptesicus serotinus*, unidentified myotis bat species *Myotis* sp., Daubenton's bat *M. daubentonii*, and Natterer's bat *M. nattereri*. The closest records are of common pipistrelle, 0.2km to the south of the Site, from 2002.

- 4.30 HERC has provided 34 non-historic (2000-present) records of bat roosts within the search area. The closest is a Natterer's bat roost associated with Priory Park Icehouse LWS. The roost here was first recorded in 1998 but has been consistently re-documented since with a max count of 46 individuals. There are also records of roosts for brown long-eared bats, common pipistrelle, and Natterer's bat in other locations within the search area.

- 4.31 A number of trees were identified to have features suitable for roosting bats, with further surveys underway.

Roosting

- 4.32 Both on-site structures were assessed for their potential to support roosting bats. Of these buildings (labelled B1 & B2) on the Habitats Plan in Appendix A), are considered to have 'Negligible' potential. Due to the dilapidated state of the buildings, there are no void spaces which would provide roosting cavities. Similarly, the remaining masonry appears to be free of cavities and the covering of ivy would appear to make these less desirable to bats.

- 4.33 No roosts were identified to be present in any trees at the Site following a combination of Ground Level Tree Assessments (GLTA) and aerial (climbing) inspections, with full details provided within Appendix H.

Activity

- 4.34 Use of the Site by bats was assessed through bat activity surveys, including night-time bat walkover and automated/static monitoring surveys undertaken in May, June and July 2025. An additional bat activity survey is scheduled for September 2025 (covering the Autumn monitoring period) and four automated/static monitoring surveys (June to October 2025). At least seven species of bat were identified during activity surveys, including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, brown long-eared bat, barbastelle, serotine, noctule. Bat species were present which fall within the genera of *Myotis* sp., *Nyctalus* sp., and *Pipistrellus* sp. but were not identified to species level. The majority of activity recorded was attributable to common pipistrelle, with foraging and commuting behaviour observed during night-time bat walkovers. Much lower levels of activity were found for all other species, mostly attributed to occasional passes.

- 4.35 During the night-time bat walkover, early contacts of common pipistrelle were made at SSSL1, c two minutes after sunset. This is within the

standard emergence range of this species. These timings are earlier than the recognised emergence period for common pipistrelle (BCT, 2023), indicating that this bat roosts close to the Site. However, as above, no roosts have been confirmed to be present at the Site.

- 4.36 Methods and detailed results of the bat activity survey are provided in Appendix G.

Importance

- 4.37 The habitats on-site provide some foraging and commuting opportunities for bats. The greatest opportunities are afforded by the scrub, woodland, mature hedgerows and grassland. Following the UK Bat Mitigation Guidelines (2023), bat species using the Site fall into “widespread” (common pipistrelle, soprano pipistrelle and brown long-eared), “widespread in many geographies, but not as abundant in all” (noctule, Natterer’s bat and Daubenton’s bat) and “rare or restricted distribution” (Leisler’s bat, Nathusius’ pipistrelle and serotine). Barbastelle fall into the “Rarest Annex II species and very rare” category.
- 4.38 Barbastelle are noted to be considered very rare. However, the majority of activity is associated with occasional passes and opportunistic use of the Site, with no pattern to suggest a roost nearby.

Table 2. Categorising Bats by Geographic Distribution and Rarity (adapted from Reason and Wray, 2023)

Rarity in South-Eastern (score assigned per species present)	Species known to occur in the same region as the Site	Species recorded on-site	Importance in geographical context
Widespread in all geographies (1)	Common pipistrelle Soprano pipistrelle Brown long-eared	Common pipistrelle Soprano pipistrelle Brown long-eared	Local
Widespread in many geographies, but not as abundant in all (2)	Daubenton's Natterer's Noctule	(Daubenton's*) (Natterer's*) Noctule	Local
Rarer or restricted distribution (3)	Whiskered Brandt's Serotine Leisler's Nathusius' pipistrelle	(Leisler's*) Nathusius' pipistrelle Serotine	Local
Rarest Annex II species and very rare (4)	Barbastelle	Barbastelle	Local (barbastelle)
Total assemblage score/importance	28	19 (22)	National

*Assumed present based on habitats present on-site and records returned within the desk study.

Local importance score: ≤13; County importance score: 13-14; Regional importance score: 15-19; National importance score: ≥20

- 4.39 Based on a combination of desktop and survey data, the Site is anticipated to score 22 out of a maximum 28 (equating to 79%), resulting in an assemblage of National Importance based upon current guidance. Although Reason and Wray assess the Site to be importance at up to the County level, based on the low numbers of passes from each species (with the exception of common pipistrelle and soprano pipistrelle), the bat assemblage is considered to be of importance up to the **Local** Level.

Badger

- 4.40 HERC has provided 84 records of badger *Meles meles* from within the search area, dating from 1970 to 2023. The closest record is of a young badger on Hitchin Road from 2013, c. 0.4km from the Site. Records are distributed across the search area, but there is a hotspot by the A602 c. 1.2km east of the Site.
- 4.41 Habitats on-site have good potential for supporting badgers with the grassland, woodland and scrub providing good foraging and sett-building potential. Arable fields in the wider landscape increase the suitability for badgers, however it is limited by the roads passing close to the site in all directions and reducing the connectivity of nearby habitats.
- 4.42 No evidence was found during the previous survey undertaken in 2019. The update badger survey conducted in August 2025 found no badger setts or signs of badger. Given the absence of badger from the Site, badger have not been considered further.
- 4.43 Methods and detailed results of the badger survey are provided in Appendix I.

Dormouse

- 4.44 No records of dormouse *Muscardinus avellanarius* were identified within the search area.
- 4.45 The presence of some hedgerows and woodland on-Site makes it suitable for dormice, however the lack of connectivity to suitable habitats in the wider area as well as the dormice's absence from Hertfordshire means it is unlikely that they would be using the Site and are considered likely absent.

Riparian mammals

- 4.46 Five records of otter *Lutra lutra* were identified within the search area, dating from 1974 to 2022. None of the records' specific locations were given, so their distance from the Site could not be determined.
- 4.47 Four records of water vole *Arvicola amphibius* were identified within the search area, dating from 1983 to 2012. The closest record is from Ippolytts Brook c. 0.3km east of the Site from 2012.

- 4.48 No aquatic habitat is present on or adjacent to the Site. With this in mind, riparian mammals are likely absent from the Site and not considered further within the context of this report.

Other Mammals

Brown Hare

- 4.49 There were 145 records of brown hare *Lepus europaeus* identified within the search area, dating from 1975 to 2023. The closest record is c. 1.1km from the Site, dating to 2019.
- 4.50 There is limited habitat for hare on the Site and while there is extensive arable farmland in the surrounding landscape, there is limited connectivity to it due to the roads around the Site.

Hedgehog

- 4.51 There were 106 records of hedgehog *Erinaceus europaeus* identified within the search area, dating from 1966 to 2021. The closest record is c. 0.03km north of the Site at Mill Farm, from 2021. Records are distributed throughout the local area, including within the town of Hitchin.
- 4.52 It is likely that the current habitat provides foraging opportunities for hedgehog with the disused building offering hibernaculum potential.
- 4.53 Hedgehog are listed as a species of Principal Importance under Section 41 of the NERC Act (2006). As such, ecological enhancement measures have been set out to ensure hedgehog and other small mammals can make use of garden habitats at the Site following construction. However, hedgehog are not considered to be an important ecological feature in the context of this assessment.

Harvest Mouse

- 4.54 Three records of harvest mouse *Micromys minutus* were identified within the search area, although all are historic (predating 2000). There is some limited suitable grassland habitat on Site, but there is no evidence of the species being present.

Birds

- 4.55 A total of 10003 records of 96 bird species were identified within the search area, dating from 2001 to 2019. Those of potential relevance to the Site include barn owl *Tyto alba*, greenfinch *Chloris chloris*, and redwing *Turdus iliacus*. Of the bird species recorded, 33 are amber listed, 17 are red listed, 15 are Sch 1 listed, and 24 are S41 listed.
- 4.56 The mix of habitats on-Site provide foraging opportunities for a range of birds and the woodland and hedges also provide nesting opportunities. Adjacent arable land also provides opportunities for farmland birds.

Reptiles

- 4.57 HERC returned 26 records of four reptile species identified within the search area: grass snake *Natrix Helvetica*, adder *Vipera berus*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*, dating from 1934 to 2018. Most records were given to a low degree of accuracy, so their distance from the Site could not be determined. Most records were also historic, with the four non-historic records all being of slow-worm.
- 4.58 The Site provides opportunities for reptiles to be present throughout with basking and foraging opportunities provided within the grassland and hibernation opportunities within the hedgerows, woodland and scrub.
- 4.59 Reptile surveys were undertaken in May and June 2025 within suitable habitats, including grassland, scrub and woodland. Methods and detailed results of the surveys are provided in Appendix K.
- 4.60 A 'low' population of common lizard was recorded within the survey area, with a peak count of one adult female common lizard. The common lizard was found in the northern grassland adjacent to the woodland and scrub.

Importance

- 4.61 All British reptile species are listed as a species of Principal Importance under Section 41 of the NERC Act (2006). Additionally, any site supporting a breeding population of three or more native reptile species would meet the criteria for Local Wildlife Site selection. The survey area is confirmed to have a 'low' population of common lizard. Therefore, given the legal protection afforded to reptiles, this group is taken through to the assessment section on this basis.

Amphibians

- 4.62 A total of 32 records of two amphibian species were identified within the search area: common toad *Bufo bufo* and great crested newt *Triturus cristatus*, dating from 1926 to 2021. The closest record is of over 20 common toads in 2020, c. 0.7km south-east of the Site in St Ippolytts Pond. High densities of amphibians were recorded in this area, suggesting site fidelity to a number of nearby ponds. All the records of great crested newt where a specific location could be determined are also in the area around St Ippolytts Pond.
- 4.63 A more detailed appraisal of the Site in respect of great crested newt is provided below.

Great Crested Newt

- 4.64 Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist. No potential breeding ponds were identified on-site during the site survey,

while three appear to be present within a dispersible range of the Site, based on OS mapping. The on-site terrestrial habitat presents attractive hibernation and foraging habitats, but barriers between the Site and suitable water bodies suggest they are unlikely to be present on Site.

Invertebrates

- 4.65 A total of 605 records of 167 invertebrate species were identified within the search area. Those of potential relevance to the Site include pollinators such as small pearl-bordered fritillary *Boloria selene* and Essex skipper *Thymelicus lineola*. Exposed sandy soils offer burrowing opportunities for several bee species recorded from the area including big-headed mining bee *Andrena bucephalia*. The Site is not located within an Important Invertebrate Area (IAA).
- 4.66 Areas of exposed sandy soil on the Site, dilapidated buildings and a significant amount of dead wood offer some desirable habitat for a range of invertebrate groups. However, given the small scale of the Site and common habitats it is unlikely that the invertebrate assemblage would be particularly diverse or of local importance.

Summary of Ecological Features

- 4.67 Table 3 below summarises all important ecological features identified within the respective zones of influence, together with the geographic context of their importance:

Table 3. Summary of important ecological features and their geographic context

Ecological Feature	Geographic Context of Importance and/or Protection Status
Wain Wood SSSI	National
Purwell Meadow LNR	Local/County
LWSs	County
Hedgerows	Local (priority habitat)
Bats	Local & Protected (Hab Regs)
Birds	Protected (WACA)
Reptiles (common lizard)	Protected (WACA)

5.0 ASSESSMENT OF EFFECTS

The Proposed Development

- 5.1 Planning permission is sought for residential development at the Site. The following impact assessment is based on the Development Framework Plan prepared by CSA Environmental (CSA/3922/122) on behalf of Martin Grant Homes.
- 5.2 The construction phase of the proposed development will comprise the following:
- Removal of areas of grassland (parts of F1 & F2), woodland (W2 & W4 only), scrub and trees
 - Construction of up to 41 residential dwellings
 - Construction of associated gardens and access infrastructure
 - The establishment of Public Open Space (POS) including open grassland/parkland, as well as recreation routes around the periphery of residential areas
 - Establishment of Sustainable Urban Drainage Systems (SUDS) including an attenuation basin to the south
- 5.3 The operational phase of the proposed development will comprise the following:
- Occupation of new residential dwellings
 - Increase in human activity, including use of vehicles and presence of domestic pets
 - Increased artificial lighting and anthropogenic noise

Assumptions

- 5.4 The following assumptions have been made during the assessment of potential effects of the proposed development on important ecological features. Although 'assumed' and therefore taken as part of the pre-mitigation scenario, these measures are referenced in the proceeding sections where integral to the mitigation strategy.
- 5.5 In accordance with BS42020:2013, it is assumed that a Construction Environmental Management Plan (CEMP) will be secured by planning condition and prepared at the detailed design stage. In addition to the construction phase impact avoidance and mitigation measures identified in the following sections, the CEMP will detail standard environmental control measures, including though not limited to the following:
- Implementation of strict protection measures for the root protection areas of retained trees and hedgerows, in accordance with BS5837:2012

- Standard best practice construction phase pollution prevention and control measures
 - Sensitive working methods and timing to avoid direct impacts to nesting birds (generally vegetation removal outside nesting season of March through August)
 - All working measures needed to comply with the terms of any derogation licencing for wildlife specific to the works activity
 - Updated ecological surveys, where necessary, to identify shifts in the baseline ecological condition (such as to support derogation licence applications) in order that revised impact avoidance and mitigation measures can be adopted as required
- 5.6 In accordance with BS42020:2013, it is assumed that a Landscape and Ecology Management Plan (LEMP) will be secured by planning condition and prepared at the detailed design stage. The LEMP will set out measures for the establishment and long-term management of newly created and retained habitats to maximise benefits for biodiversity.

Nature Conservation Designations

Wain Wood SSSI

- 5.7 The Site lies c. 1.7km from this SSSI such that no direct effects are possible during construction or in occupation of residential development at the Site. Furthermore, given the small scale of development and the relative distance of the SSSI from the Site, no indirect recreational impacts are predicted.

Purwell Meadow LNR

- 5.8 The Site lies 2.3km from the LNR such that no direct effects are possible during construction or in occupation of residential development at the Site. Furthermore, given the small scale of development and the relative distance of the LNR from the Site, no indirect recreational impacts are predicted.

Non-Statutory Designations

- 5.9 Four Local Wildlife Sites (LWSs) are present within 1km of the Site. All are located within private land with no public access. None are located adjacent to the Site. In light of this, no impact pathways to these designations from the proposed development have been identified.
- 5.10 The remaining eight LWSs identified are located beyond 1km of the Site and therefore, given the small scale of development proposed no indirect recreational impacts are predicted.

Habitats and Flora

- 5.11 The Site does not support any notable or priority habitat or that of local importance as confirmed by detailed botanical surveys. However, the

scheme has sought to retain and enhance as many areas of grassland, scrub, trees and non-priority woodland alongside development of the Site. Residual losses of habitat which cannot be addressed on-site will be compensated for off-site via registered biodiversity gains as set out in the separate BNGA report.

Hedgerows

- 5.12 The Site is bounded by native species hedgerows as indicated on the Habitats Plan (see Appendix A). Native hedgerows (all onsite bar H5), are a Section 41 Habitat of Principal Importance, a LBAP priority habitat in Hertfordshire, and represent important foraging, refuge and dispersal.
- 5.13 Based on proposed design, the majority of hedgerows will be retained alongside development, and protected in accordance with tree protection measures. Limited losses of hedgerow H1 will be compensated for through new hedgerow planted proposed on-site around development parcels.

Fauna

Bats

- 5.14 All British bat species and their roosts are protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).
- 5.15 The Site was confirmed to support a Locally Important assemblage of bats, with no confirmed roosts found within any trees inspection and climbed to date.
- 5.16 The proposals are likely to result in an increase in artificial lighting at the Site. Artificial lighting of retained and created habitat during construction and operational phases has the potential to disturb bats and other nocturnal wildlife. To ensure ecological functionality of retained hedgerows and boundary habitats for bats a sensitive external lighting scheme will be prepared. The future lighting scheme will be developed in consultation with a bat ecologist to avoid/minimise light spill onto retained and created habitat. This is to maintain dark corridors for bats and other nocturnal wildlife.
- 5.17 Despite the absence of confirmed roosts it is recommended that prior to any felling works further assessment of trees be undertaken and aerial (climbing) inspections be repeated to ensure any bat roosts are identified and to avoid any legal infringements.
- 5.18 In the event that bat roosts are identified for any trees to be felled, a derogation licence should be sought from Natural England to undertake felling works that would otherwise be unlawful.

Birds

- 5.19 All wild birds are protected from killing and injury, and their nests and eggs are protected from damage and destruction, under the Wildlife and Countryside Act 1981 (as amended). Therefore, any clearance of nesting habitat or features required to facilitate the development should avoid the period between March and August (inclusive) when nesting birds are most likely to be present. If this is not possible, habitat will need to be checked for nesting birds by a suitably qualified ecologist prior to clearance with works only proceeding if no nesting evidence or behaviour are observed.

Reptiles

- 5.20 All British reptile species are listed within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded protection against killing and injury under parts of sub-section 9(1) of the Act. In addition, all British reptile species are S41 priority species in England.
- 5.21 A small population of common lizard is present at the Site based on a single individual recorded. Accordingly, a precautionary approach to vegetation clearance at the Site is proposed to avoid works that would otherwise be unlawful. This will comprise the following:
- Timing of vegetation clearance outside of the hibernation season (i.e. not between November and February) and avoiding inclement weather/temperatures (above 5C overnight and 10C during day, avoiding precipitation) to ensure common lizard can disperse from clearance areas
 - Phased clearance of grassland and scrub with a high >200mm then low cut <200mm clearing towards retained habitats
 - Works undertaken under the supervision of an Ecological Clerk of Works (ECoW) to ensure any reptiles which are identified can be moved
- 5.22 The above may be secured by an appropriately worded planning condition.

Residual Effects

- 5.23 Table 4 below summarises the assessment of potential impacts on each important ecological feature, proposed mitigation and the assessed residual effects.

Table 4. Summary of effects

Important Ecological Feature	Potential Impacts and Effects	Avoidance & Mitigation Measures	Mechanism by which Measures are Secured	Residual Effects
Wain Wood SSSI	No significant effect	-	-	No significant effect
Purwell Meadow LNR	No significant effect	-	-	No significant effect
LWSSs	No significant effect	-	-	No significant effect
Hedgerows and trees	Removal of small section of Hedgerow H1	New hedgerow planting	Detailed design	No significant effect
Bats	Potential development edge effects from artificial lighting causing disturbance of foraging bats	New habitat creation, management of POS for biodiversity gain, sensitive lighting strategy Update tree assessment and aerial (climbing) inspections	LEMP and Lighting Strategy secured through Planning Condition	No significant effect
Nesting Birds	Potential damage or destruction of nests and eggs	Sensitive timing of works / nest checks by ecologist	Legal requirement / secured through CEMP	No significant effect
Reptiles	Legal offences during clearance	Precautionary approach to site clearance/ ECoW	Secured by condition	No significant effect

Compensation

- 5.24 The net loss of non-priority habitats (grassland, woodland, scrub and individual trees) cannot be fully compensated for on-site. As set out within the separate BNGA report the residual net loss of biodiversity will be compensated for via the BNG regime through the securing of registered off-site gains to ensure a net gain of 10% is achieved in accordance with statutory requirements.

Enhancement

- 5.25 The Development Framework Plan includes landscape planting enhancements which will make positive contributions to on-site

biodiversity, acknowledging off-site compensation is required to achieve a 10% gain.

5.26 New habitat creation will provide opportunities for species confirmed to be present on-site at baseline, such as nesting birds. In addition to these enhancements which are embedded into development proposals, a range of additional ecological enhancement measures will be delivered as part of the proposed development, as identified below. Further details will be set out in a LEMP at the detailed design stage, however as an indicative guide:

- Inclusion of plant species of known wildlife value within the landscaping scheme, including night-scented varieties to benefit bats.
- Provision of new bat roosting opportunities: At least 10 no. bat boxes will be erected on mature trees or new builds. These will be a purpose-built, durable and long-lasting variety such as available from Schwegler or Habibat. These will be incorporated into the fabric of new builds.
- Provision of new bird nesting opportunities: At least 10 no. bird nesting boxes will be provided in new/retained planting to benefit generalist bird species.
- Creation of log piles: Timber generated from tree clearance works at the Site will be used to make at least 3 log piles for wildlife benefit. These will be sited within boundary vegetation where they will be least disturbed. New material can be added as required following any future management works.
- Provision of hedgehog gaps: Hedgehogs have been scoped out of detailed assessment and no specific mitigation is proposed, however it is important that opportunities for hedgehogs to move through the landscape are preserved. Although not strictly an 'enhancement' measure, provision of hedgehog-friendly gravel boards or equivalent, providing a minimum 5 x 5 inch gap, will be used to maintain permeability for hedgehogs across the development and associated gardens. The number and location of hedgehog gaps will be determined at the detailed design stage and set out within the LEMP.

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Appendix A

Habitats Plan



- Site boundary
- Other neutral grassland with tall herbs (g3c 16)
- Other neutral grassland (g3c)
- Other woodland-broadleaved (w1g)
- Blackthorn scrub (h3a)
- Bramble scrub (h3d)
- Mixed scrub (h3h)
- Buildings (u1b5)
- Hedgerows (h2)
- Hedgerows (Priority Habitat) (h2a)
- Trees and groups of trees



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Project	Land at Mill Lane and London Road, Hitchin	Date	August 2025	Drawing No.	CSA/3922/120
Drawing Title	Habitats Plan	Scale	A3@1:1250	Rev	A
Client	Taylor Wimpey UK Limited	Drawn	RT	Checked	JW

Appendix B

Legislation and Planning Policy

- 1.1. The **Conservation of Habitats and Species Regulations 2017** (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.
- 1.2. The **Wildlife and Countryside Act 1981** (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. Additionally, badgers are protected under the **Protection of Badgers Act 1992**.
- 1.3. The **Environment Act 2021** received Royal Assent in November 2021. Through an amendment to the Town and Country Planning Act 1990 the Environment Act introduced a mandatory requirement for all planning permissions to be conditional upon the submission of a Biodiversity Gain Plan for approval by the Local Planning Authority. The Plan will need to demonstrate a net gain of at least 10% in the biodiversity value of the development site.
- 1.4. Section 40(1) of the **Natural Environment and Rural Communities (NERC) Act 2006** (as amended) states that each public authority, "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving and enhancing biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications, with particular regard to the Section 41 (S41) lists of 56 habitats and 943 species of principal importance. The UK Biodiversity Action Plan (BAP) has been superseded by the Biodiversity 2020 Strategy, however Local BAPs continue to influence biodiversity management and conservation effort, including through the spatial planning system, at the local scale.
- 1.5. The **National Planning Policy Framework (2024)** (NPPF) sets out the government planning policies for England and how they should be applied. With regards to ecology and biodiversity, Chapter 15: Conserving and Enhancing the Natural Environment, paragraph 187, states that the planning system and planning policies should minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

- 1.6. Paragraph 193 sets out the principles that local planning authorities should apply 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.
 - 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.
 - Development whose primary objective is to conserve or enhance biodiversity should be supported; while 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.
- 1.7. Accompanying the NPPF, central government guidance on the implementation of planning policies is set out within online Planning Policy Guidance (PPG). The Natural Environment PPG addresses principles across a broad spectrum of topics targeting biodiversity conservation, from individual site and species protection through to the supporting of ecosystem services, and the use of local ecological networks to support the national Nature Recovery Network. In particular, the PPG promotes the delivery of measurable Biodiversity Net Gain through the creation and enhancement of habitats alongside development.
- 1.8. The **Government Circular 06/2005**, which is referred to within the NPPF, defines statutory nature conservation sites and protected species as a material consideration in the planning process.
- 1.9. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

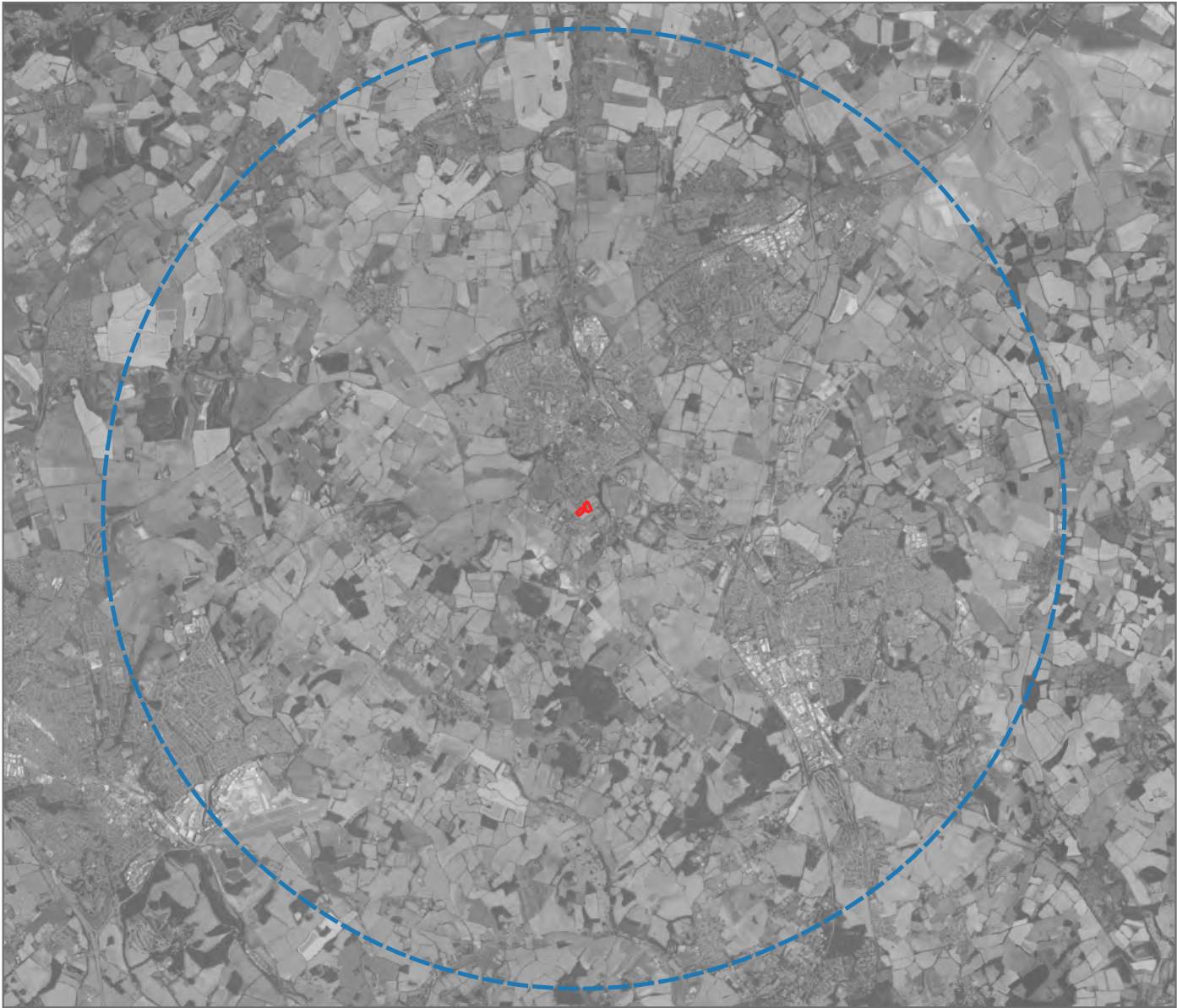
Table 1. Summary of regional and local planning policy relating to ecology

Policy	Summary
North Hertfordshire Local Plan 2011-2031 (adopted 2022)	
Policy SP5: Countryside and Green belt	We support the principles of the Green Belt and recognise the intrinsic value of the countryside. Green Belt and Rural Areas Beyond the Green Belt are shown on the Policies Map. We: a) Have conducted a comprehensive review of the Green Belt. Land has been removed from the Green Belt to: - enable strategic development at the locations referred to in Policies SP8 and SP3; - enable local development around a number of the District's towns and villages; and - define boundaries for villages referred to in Policy SP2 which fall within the Green Belt but were previously 'washed over' by this designation; b) Have provided new Green Belt to cover, in general terms, the area bounded by the Metropolitan Green Belt to the east, the Luton Green Belt to the west and the A505 Offley bypass to the north; c) Will only permit development proposals in the Green Belt where they would not result in inappropriate development or where very special circumstances have been demonstrated; and d) Will operate a general policy of restraint in Rural Areas beyond the Green Belt through the application of our detailed policies.
Policy SP12: Green infrastructure, landscape, and biodiversity	We will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhanced. We will: a) Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure; b) Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty; c) Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features: - Internationally designated sites - Nationally designated sites - Locally designated sites; - Non-designated sites that include important habitats and species d) Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity; and e) Protect other open spaces and support provision of new and improved open space.
Policy NE1: Strategic green infrastructure	Planning permission will be granted provided that development: a) Protects, conserves and where possible enhances the strategic green infrastructure network;

Policy	Summary
	b) Avoids the loss, fragmentation, severance or negative impact on the function of the strategic green infrastructure network; c) Creates new strategic green infrastructure where appropriate and is accompanied by a plan for its long-term maintenance and management; and d) Has suitable mitigation measures or appropriate replacement to satisfactorily address adverse impacts on the strategic green infrastructure network.
Policy NE4: Biodiversity and geological sites	Planning permission will only be granted for development proposals that appropriately protect, enhance and manage biodiversity in accordance with the hierarchy and status of designations and features listed in Policy SP12. All development should deliver measurable net gains for biodiversity and geodiversity, contribute to ecological networks and the water environment, and/or restore degraded or isolated habitats where possible. Applicants should, having regard to the status of any affected site(s) or feature(s): a) Submit an ecological survey that is commensurate to the scale and location of the development and the likely impact on biodiversity, the legal protection or other status of the site; b) Demonstrate that adverse effects can be avoided and / or satisfactorily minimised having regard to the hierarchy of protection below: i. locating on an alternative site with a less harmful impact; ii. providing adequate mitigation measures; or iii. as a last resort compensated for. The acceptability of approach(es) to avoidance, mitigation and compensation will be commensurate with the status of the asset(s) likely to be affected by the application; Compensation is unlikely to be an appropriate solution for proposals affecting nationally or internationally designated sites other than in the most exceptional circumstances. c) Include appropriate measures to manage construction impacts by demonstrating how existing wildlife habitats supporting protected or priority species will be retained, safeguarded and managed during construction; d) Integrate appropriate buffers of complimentary habitat for designated sites and other connective features, wildlife habitats, priority habitats and species into the ecological mitigation and design. The appropriateness of any buffers will be considered having regard to the status of the relevant habitat. 12 metres of complimentary habitat should be provided around wildlife sites (locally designated sites and above), trees and hedgerows. It may be necessary to exceed this distance for fragile habitats such as ancient woodland or to provide appropriate root protection for mature trees; and e) Provide a long-term management and monitoring plan including mitigation measures as necessary. Local Geological Sites are ratified by the Herts & Middlesex Wildlife Trust (HMWT) and are afforded the same protection as Local Wildlife Sites.

Appendix C

Desk Study Information



 Site boundary

 10km buffer

*No International Statutory Designations found within search area



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/112
Drawing Title	International Statutory Designations	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW



-  Site boundary
-  3km buffer
-  Site of Special Scientific Interest (SSSI)
-  Local Nature Reserve (LNR)



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/113
Drawing Title	National and Local Statutory Designations	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW



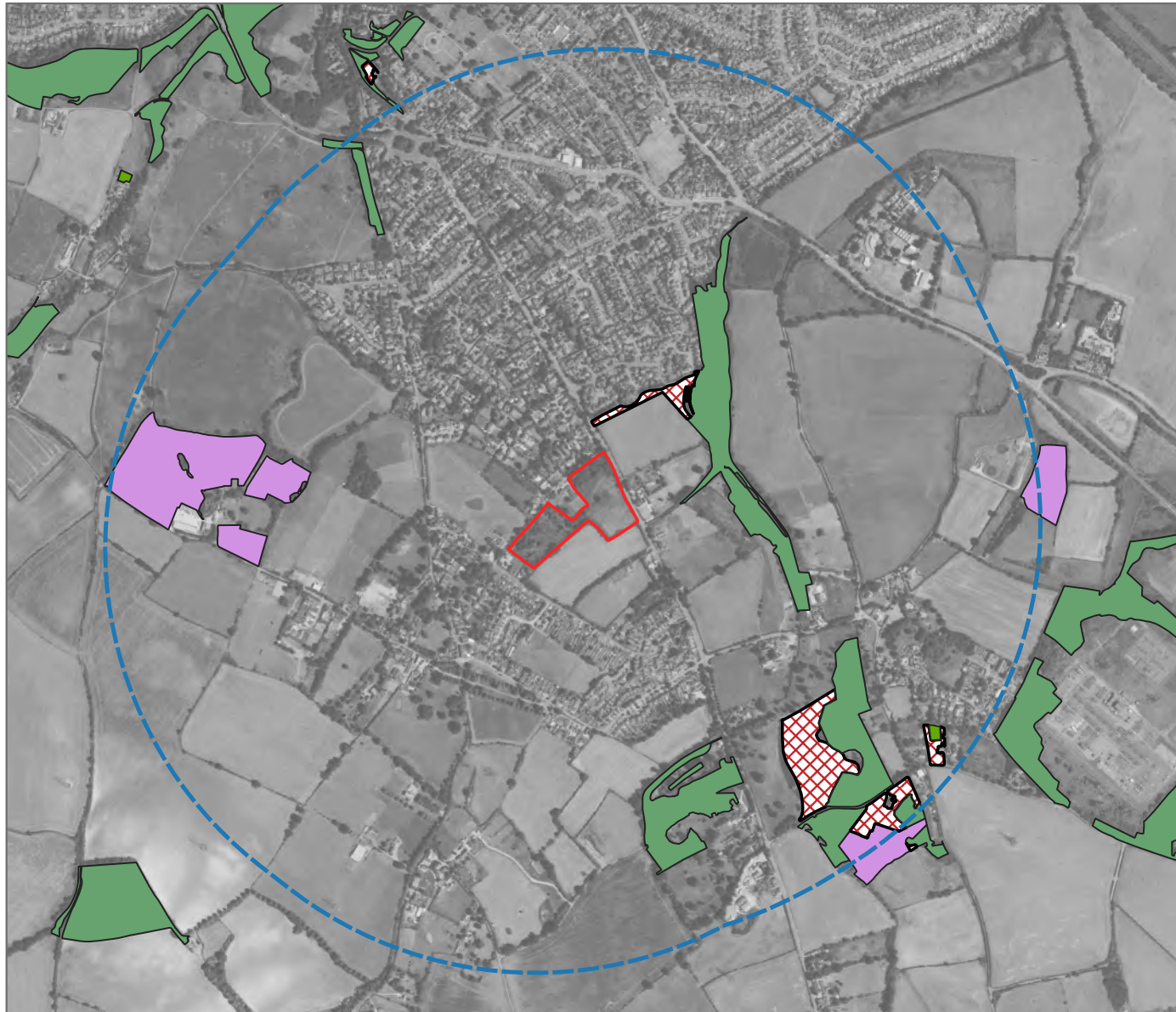
-  Site boundary
-  2km buffer
-  Local Wildlife Site (LWS)

Contains information from Herts Environmental Records Centre (HERC). Exact boundaries of designations may differ.
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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/114
Drawing Title	Non-Statutory Designations	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW



- Site boundary
- 1km buffer
- Deciduous woodland
- Good quality semi improved grassland
- No main habitat but additional habitats present
- Traditional orchard



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/115
Drawing Title	Priority Habitats	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW



-  Site boundary
-  2km buffer
-  Ancient & Semi-Natural Woodland
-  Ancient Replanted Woodland



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/116
Drawing Title	Ancient Woodland	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW



- Site boundary
- 1km buffer
- Granted European Protected Species (EPS)
Licence Applications: Bats

*No Great Crested Newt (GCN) Class Survey
Licence Returns found within search area



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/117
Drawing Title	Granted EPS and GCN Licences	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW



-  Site boundary
-  250m buffer
-  500m buffer
-  Ponds (with reference)



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/118
Drawing Title	Pond Plan	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW

Appendix D

Photographs



Photograph 1. False oat grass sward which dominates grassland at the Site



Photograph 2. Woodland W1.



Photograph 3. Dense bramble scrub.



Photograph 4. Woodland W4.



Photograph 5. Looking SE across F2 towards dense bramble scrub and H6 behind



Photograph 6. Mixed scrub in the E corner of F2 with grassland in front.

Appendix E

Habitats and Flora Species List

Table 1. Habitat Polygons

Site Name	3922 Land at Mill Lane and London Road, Hitchin										
Survey Date and Surveyor(s)	17/07/2025 and 07/08/2025 Alex Cole MCIEEM and Revae Tilbury										
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type									
		F1 other neutral grassland (g3c)	F1 grassland dominated by common nettle (g)	F2 other neutral grassland (g3c)	Blackthorn scrub (h3a)	Bramble scrub (h3d)	Mixed scrub (h3h)	W1 - woodland copse - other broadleaved woodland (w1g)	W2 - woodland edge - other broadleaved woodland (w1g)	W3 other broadleaved woodland	W4 other broadleaved woodland (w1g)
Bryophytes											
Rhytiadelphus squarrosus	Springy turf-moss	x									
Ferns											
Pteridium aquilinum	Bracken			x							
Herb Species											
Achillea millefolium	Yarrow	x		x							
Aegopodium podagraria	Ground-elder										x
Artemisia vulgaris	Mugwort			x							
Arum maculatum	Lords-and-ladies									x	x
Asparagus officinalis	Garden asparagus		x								
Calystegia arvensis	Field bindweed	x								x	
Chenopodium album	Fat-hen	x									
Cirsium arvense	Creeping thistle	x	x	x							
Cirsium vulgare	Spear thistle			x						x	
Clematis sp.	Clematis						x				
Galium aparine	Cleavers									x	x
Galium verum	Lady's bedstraw			x							
Geranium pyrenaicum	Hedgerow crane's-bill	x									
Geum urbanum	Wood avens									x	x
Glechoma hederacea	Ground-ivy	x									x
Heracleum sphondylium	Hogweed	x	x	x						x	
Hieracium pilosella	Mouse-ear-hawkweed			x							
Lamiasrum galeodbolon argentatum	Variegated yellow archangel										x
Lamium album	White dead-nettle	x									
Lamium purpureum	Red dead-nettle		x								
Lotus corniculatus	Common bird's-foot-trefoil			x							
Myosotis sp.	Forget-me-not	x									
Plantago major	Greater plantain	x									x
Polygonum sp.	Knotgrass									x	
Ranunculus repens	Creeping buttercup									x	x
Reseda luteola	Weld	x									
Rumex acetosa	Common sorrel			x							

Scientific Name	Common Name	Habitat Parcel Number/Habitat Type									
		F1 other neutral grassland (g3c)	F1 grassland dominated by common nettle (g)	F2 other neutral grassland (g3c)	Blackthorn scrub (h3a)	Bramble scrub (h3d)	Mixed scrub (h3h)	W1 - woodland copse - other broadleaved woodland (w1g)	W2 - woodland edge - other broadleaved woodland (w1g)	W3 other broadleaved woodland	W4 other broadleaved woodland (w1g)
<i>Rumex</i> sp.	Dock									x	x
<i>Scorzoneroideis autumnalis</i>	Autumn hawkbit	x		x							
<i>Senecio jacobaea</i>	Common ragwort	x									
<i>Sisymbrium officinale</i>	Hedge mustard	x									
<i>Sonchus asper</i>	Prickly sowthistle	x									
<i>Stellaria media</i>	Common chickweed			x							
<i>Taraxacum</i> agg.	Dandelion									x	
<i>Torilis japonica</i>	Upright hedge-parsley									x	
<i>Urtica dioica</i>	Common nettle	x	x	x		x	x			x	x
<i>Verbascum</i> sp.	Mullein	x									
<i>Veronica persica</i>	Common field-speedwell			x							
Sedges and Rushes											
<i>Carex otrubae</i>	False fox-sedge			x							
Grasses											
<i>Agrostis capillaris</i>	Common bent	x									
<i>Agrostis stolonifera</i>	Creeping bent									x	
<i>Alopecurus pratensis</i>	Meadow foxtail	x		x							
<i>Anisantha sterilis</i>	Barren brome	x								x	
<i>Anthoxanthum odoratum</i>	Sweet vernal-grass			x							
<i>Arrhenatherum elatius</i>	False oat-grass	x	x	x		x					x
<i>Bromus hordeaceus</i>	Soft-brome			x							
<i>Dactylis glomerata</i>	Cock's-foot	x		x						x	x
<i>Elytrigia repens</i>	Common couch		x								
<i>Festuca rubra</i>	Red fescue	x		x							
<i>Holcus lanatus</i>	Yorkshire-fog	x	x	x						x	
<i>Lolium perenne</i>	Perennial rye-grass	x		x						x	
<i>Poa annua</i>	Annual meadow-grass	x									
Woody Species											
Broadleaved											
<i>Acer campestre</i>	Field maple								x		
<i>Acer pseudoplatanus</i>	Sycamore								x		
<i>Aesculus hippocastanum</i>	Horse-chestnut										x
<i>Betula pendula</i>	Silver birch										x
<i>Carpinus betulus</i>	Hornbeam									x	
<i>Corylus avellana</i>	Hazel							x			
<i>Crataegus monogyna</i>	Hawthorn			x			x	x	x		x
<i>Fraxinus excelsior</i>	Ash							x	x		x
<i>Hedera helix</i>	Ivy						x			x	x

Scientific Name	Common Name	Habitat Parcel Number/Habitat Type									
		F1 other neutral grassland (g3c)	F1 grassland dominated by common nettle (g)	F2 other neutral grassland (g3c)	Blackthorn scrub (h3a)	Bramble scrub (h3d)	Mixed scrub (h3h)	W1 - woodland copse - other broadleaved woodland (w1g)	W2 - woodland edge - other broadleaved woodland (w1g)	W3 other broadleaved woodland	W4 other broadleaved woodland (w1g)
<i>Juglans regia</i>	Walnut		x								
<i>Malus sylvestris</i>	Crab Apple								x		
<i>Prunus spinosa</i>	Blackthorn						x				x
<i>Quercus robur</i>	Pedunculate oak								x		
<i>Quercus</i> sp.	Oak	x		x			x				x
<i>Rosa</i> sp.	Rose	x									x
<i>Rubus fruticosus</i> agg.	Bramble	x	x			x	x			x	x
<i>Sambucus nigra</i>	Elder					x	x	x	x		x
<i>Ulmus procera</i>	English elm					x	x				
<i>Ulmus</i> sp.	Elm			x							

Table 2. Linear Habitats

Site Name	3922 Land at Mill Lane and London Road, Hitchin							
Survey Date and Surveyor(s)	17/07/2025 and 07/08/2025 Alex Cole MCIEEM and Revae Tilbury							
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type						
		H1 hedgerow (h2a) (priority)	H2 hedgerow (h2a) (priority)	H3 hedgerow (h2a) (priority)	H4 hedgerow (h2a) (priority)	H5 hedgerow (h2) (non-priority)	H6 hedgerow (h2a) (priority)	H7 hedgerow (h2a) (priority)
Herb Species								
Alliaria petiolata	Garlic mustard	x						
Anthriscus sylvestris	Cow parsley	x						
Arum maculatum	Lords-and-ladies	x						
Bryonia dioica	White bryony					x		
Lamiastrum galeodbolon argentatum	Variegated yellow archangel	x						
Lapsana sp.	Nipplewort	x						
Urtica dioica	Common nettle	x		x	x	x		
Grasses								
Brachypodium sylvaticum	False brome	x						
Woody Species								
Coniferous								
Cupressus × leylandii	Leyland cypress					x		
Broadleaved								
Acer campestre	Field maple	x						
Acer pseudoplatanus	Sycamore		x					
Corylus avellana	Hazel	x	x					
Crataegus monogyna	Hawthorn	x	x				x	x
Fagus sylvatica	Beech			x				
Fraxinus excelsior	Ash	x	x					x
Hedera helix	Ivy	x						x
Ilex aquifolium	Holly	x	x		x		x	
Malus sylvestris	Crab Apple						x	
Prunus spinosa	Blackthorn		x				x	x
Quercus robur	Pedunculate oak		x					x
Quercus sp.	Oak	x						
Rosa sp.	Rose	x						
Rubus fruticosus agg.	Bramble	x					x	x
Sambucus nigra	Elder	x	x				x	
Ulmus procera	English elm						x	x
Ulmus sp.	Elm	x						

Table 3. Quadrats

Site Name	3922 Land at Mill Lane and London Road, Hitchin													
Survey Date and Surveyor(s)	17/07/2025 and 07/08/2025 Alex Cole MCIEEM and Revae Tilbury													
Scientific Name	Common Name	Habitat Parcel Number/Habitat Type												
		F1 other neutral grassland (g3c)	Q1	Q2	Q3	Q4	Q5	F2 other neutral grassland (g3c)	Q1	Q2	Q3	Q4	Q5	
Bryophytes														
Rhytidiadelphus squarrosus	Springy turf-moss	x	x											
Ferns														
Pteridium aquilinum	Bracken							x						
Herb Species														
Achillea millefolium	Yarrow	x						x						
Calystegia arvensis	Field bindweed	x			x									
Chenopodium album	Fat-hen	x												
Cirsium arvense	Creeping thistle	x						x			x		x	
Cirsium vulgare	Spear thistle							x						
Galium verum	Lady's bedstraw							x						
Geranium pyrenaicum	Hedgerow crane's-bill	x		x										
Glechoma hederacea	Ground-ivy	x					x							
Heracleum sphondylium	Hogweed	x					x	x						
Hieracium pilosella	Mouse-ear-hawkweed							x						
Lamium album	White dead-nettle	x												
Lotus corniculatus	Common bird's-foot-trefoil							x						
Myosotis sp.	Forget-me-not	x					x							
Plantago major	Greater plantain	x												
Reseda luteola	Weld	x												
Rumex acetosa	Common sorrel							x			x	x		
Scorzoneroideis autumnalis	Autumn hawkbit	x						x						
Senecio jacobaea	Common ragwort	x												
Sisymbrium officinale	Hedge mustard	x												
Sonchus asper	Prickly sowthistle	x												
Stellaria media	Common chickweed							x						
Urtica dioica	Common nettle	x	x	x	x	x	x	x						x
Verbascum sp.	Mullein	x												
Veronica persica	Common field-speedwell							x						
Sedges and Rushes														
Carex otrubae	False fox-sedge							x						
Grasses														
Agrostis capillaris	Common bent	x												
Alopecurus pratensis	Meadow foxtail	x				x		x			x			x
Anisantha sterilis	Barren brome	x												
Anthoxanthum odoratum	Sweet vernal-grass							x						

Scientific Name	Common Name	Habitat Parcel Number/Habitat Type											
		F1 other neutral grassland (g3c)	Q1	Q2	Q3	Q4	Q5	F2 other neutral grassland (g3c)	Q1	Q2	Q3	Q4	Q5
<i>Arrhenatherum elatius</i>	False oat-grass	x	x	x	x	x	x	x		x	x	x	x
<i>Bromus hordeaceus</i>	Soft-brome							x					
<i>Dactylis glomerata</i>	Cock's-foot	x						x					
<i>Elytrigia repens</i>	Common couch				x								
<i>Festuca rubra</i>	Red fescue	x			x	x		x	x		x		
<i>Holcus lanatus</i>	Yorkshire-fog	x			x			x	x	x	x	x	
<i>Lolium perenne</i>	Perennial rye-grass	x		x				x	x				
<i>Poa annua</i>	Annual meadow-grass	x											
Woody Species													
Broadleaved													
<i>Crataegus monogyna</i>	Hawthorn							x					
<i>Quercus</i> sp.	Oak	x						x					
<i>Rosa</i> sp.	Rose	x											
<i>Rubus fruticosus</i> agg.	Bramble	x											
<i>Ulmus</i> sp.	Elm							x					



-  Site boundary
-  Quadrats: F1
-  Quadrats: F2



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Project Land at Mill Lane and London Road, Hitchin

Drawing Title Quadrats Plan

Client Martin Grant Homes

Date August 2025

Scale Refer to scale

Drawn RT

Drawing No. CSA/3922/128

Rev -

Checked JW

Appendix F

Evaluation & Assessment Methods

- 1.1. Ecological features are evaluated and assessed in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) 2018 Guidelines for Ecological Impact Assessment (EclA). For clarity, the evaluation and assessment process adopted within this EclA is set out below.

Establishing Potentially Important Ecological Features

- 1.2. Ecological features are assessed where they are considered to be important, and where they may be impacted by a proposed development. A feature may be considered important for a variety of reasons, such as quality, extent, rarity and/or statutory protection. Table 1 below sets out a non-exhaustive list of ecological features that are typically considered, along with key examples:

Table 1. Potentially important ecological features (adapted from CIEEM 2018)

Potentially Important Ecological Features	Typical examples
Statutory designated sites under international conventions or European Legislation	Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA)
Statutory designated sites under national legislation	Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR)
Non-statutory, locally designated wildlife sites	Local Wildlife Sites (LWS), County Wildlife Sites (CWSs), Sites of Importance for Nature Conservation (SINCs)
National biodiversity lists	Habitats or Species of Principal Importance for the Conservation of Biodiversity (Section 41, NERC Act 2006), Ancient Woodland Inventory
Local biodiversity lists	Local Biodiversity Action Plan (BAP) priority species or habitats
Red Listed / Rare Species	Species of conservation concern, Red Data Book (RDB) species, Birds of Conservation Concern, nationally rare and nationally scarce species
Legally Protected Species	E.g. species listed under Sch.5 of the W&C Act 1981, or Sch.2 of the Hag. Regs. 2017
Legally Controlled Species	E.g. species listed under Sch.9 of the W&C Act 1981

- 1.3. It should also be noted that the social, community, economic or multi-functional importance attributed to ecological features are not assessed as they fall outwith the scope of this assessment.

Establishing Likely Zone of Influence

- 1.4. The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects as a result of the project and associated activities. The project's zone of influence varies across different ecological features, which have different vulnerabilities and

sensitivities. For the purposes of this assessment, the following zones were considered:

- International statutory nature conservation designations up to 10km from the Site
 - National and local statutory nature conservation designations up to 3km from the Site
 - Non-statutory locally designated wildlife sites up to 1km from the Site
- 1.5. These arbitrary distances are considered sufficient for identifying the nature conservation designations which could be subject to significant effects. However, it is acknowledged that in certain circumstances effects beyond these distances are possible and should be considered as far as is reasonably practicable to do so.
- 1.6. For other ecological features, such as habitats and species, the appropriate zone of influence is described and justified as appropriate within the report, depending on their respective sensitivity to an environmental change.
- 1.7. The results of professionally accredited or published scientific studies have been used and referenced, where available, to establish the spatial and temporal limits of the biophysical changes likely to be caused by specific activities, and to justify decisions about the zone of influence.

Geographic Context and Significance Criteria

- 1.8. The importance of ecological features, as well as the significance of any likely impacts and their effects, are considered here within a defined geographic context:
- International
 - National
 - Regional
 - County
 - Local
- 1.9. While higher geographic tiers correspond to clearly defined areas, local context is subjective and will vary on a case-by-case basis. It will range from the Site and its surroundings, to ecologically connected environs, to the scale of the District/Borough, according to the professional judgement of the author.
- 1.10. The size, conservation status and the quality of features are all relevant in determining their importance and assigning this to the geographic scale. Where the importance of a feature is considered to fall below the Local scale, they are scoped out of detailed assessment.

- 1.11. Impacts and their effects are taken to be significant where they support or undermine biodiversity conservation objectives, with the scale of significance defined according to the above geographic context. Where an impact or effect is unlikely to be perceptible at a Local scale, this is taken to be not significant.

Characterising Ecological Impacts and their Effects

- 1.12. Where likely significant ecological impacts and effects are identified in connection with the proposed project, these are considered and described with reference to the following characteristics (where this is helpful in accurately portraying the ecological effect and determining the scale of significance):
- Positive or negative (i.e. does the anticipated change accord with nature conservation policies and objectives?)
 - Extent (i.e. the spatial area over which the impact or effect may occur)
 - Magnitude (i.e. the quantified size, amount, intensity or volume)
 - Duration (i.e. the timeframe over which the impact or effect may occur, in both human and ecological terms)
 - Frequency and timing (i.e. the number of times an activity occurs, where this is likely to influence the effect)
 - Reversibility (i.e. is spontaneous recovery possible or may the effect be counteracted by mitigation?)

Appendix G

Hedgerows

1.0 Legislation

1.1 All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are categorised as habitats of Principal Importance under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006). Hedgerows are also assessed under the Hedgerows Regulations 1997.

1.2 The term 'hedgerow' is not defined in the Hedgerows Regulations, but is defined in the Hedgerow Survey Handbook (Defra, 2007) as:

"...any boundary line of trees or shrubs over 20m long and less than 5m wide at the base, provided that at one time the trees or shrubs were more or less continuous. It includes an earth bank or wall only where such a feature occurs in association with a line of trees or shrubs. This includes 'classic' shrubby hedgerows, lines of trees, shrubby hedgerows with trees and very gappy hedgerows (where each shrubby section may be less than 20m long, but the gaps are less than 20m)."

1.3 The Hedgerows Regulations are aimed primarily at countryside hedgerows and apply to:

"...any hedgerow growing in, or adjacent to, any common land, protected land, or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if:

- it has a continuous length of, or exceeding, 20m; or*
- it has a continuous length of less than 20m AND, at each end, meets (whether by intersection or junction) another hedgerow."*

1.4 In terms of length of hedgerows and their measurement:

- Each hedgerow is to be regarded as starting and/or ending at the point where it forms a junction or intersection with another hedgerow.
- Gaps are also treated as part of a hedgerow if there are 20m or less or have been made in contravention of the Regulations. A gap is defined as an opening, whether or not it is filled (i.e. by a gate).

1.5 The Hedgerows Regulations do not apply to garden hedges i.e. those which lie within the curtilage of, or mark the boundary of the curtilage of, a dwelling house.

2.0 Methods

2.1 The hedgerow assessment survey was undertaken on 17 July and 07 August 2025 by Alex Cole MCIEEM and Revae Tilbury, encompassing all hedgerows within and bounding the Site.

2.2 The information collected via desktop and during the site survey, and the methods of assessment are based on the Criteria for Determining 'Important' Hedgerows as outlined within the Hedgerows Regulations.

Species-richness is determined using criteria from the Hedgerow Survey Handbook. In addition to this a Condition Assessment of each hedgerow was undertaken in-line with the Statutory Biodiversity Metric (Defra, 2024).

- 2.3 Each hedgerow was assigned a reference number H1 to H7, and the location of each hedgerow is shown on the Habitats Plan (CSA/3922/120).

Criteria for Determining 'Important' Hedgerows

Archaeological and Historical

- Marks a pre-1850 parish or township boundary
- Incorporates an archaeological feature
- Is part of, or associated with an archaeological site
- Mark the boundary of, or is associated with, a pre-1600 estate or manor
- Forms an integral part of a pre-Parliamentary enclosure field system

Wildlife and Landscape

- Includes certain categories of species of birds, animals or plants listed in the Wildlife and Countryside Act of Joint Nature Conservation Committee (JNCC) publications.
- Includes at least seven woody species, on average, in a 30m length, OR
- Includes at least six woody species, on average, in a 30m length and is associated with at least three of the Associated Features listed below.
- Includes at least six woody species including one of the following:
 - Native black-poplar *Populus nigra* ssp *betulifolia*
 - Large-leaved lime *Tilia platyphyllos*
 - Small-leaved lime *Tilia cordata*
 - Wild service-tree *Sorbus torminalis*
- Includes at least five woody species, on average, in a 30m length and be associated with at least four of the Associated Features listed below.

* List includes species native in part or all of the UK and those considered archaeophytes as per the Hedgerow Regulations and Hedgerow Survey Handbook

- 2.4 The number of woody species is reduced by one in northern counties. The list of 56 woody species comprises mainly of shrubs and trees. It generally excludes climbers and bramble, but includes wild roses.
- 2.5 Hedgerows that are located adjacent to a footpath, bridleway, or Road Used as a Public Path (RUPP), or byway open to all traffic AND include at least four specified woody species, on average, in a 30m length AND has at least two of the Associated Features listed below.

Associated Features

- A bank or wall that supports the hedgerow along at least one half of its length
- Gaps which in aggregate do not exceed 10% of the length of the hedgerow
- On average, at least one tree per 50m
- At least three woodland species (as listed on Schedule 2 of the Regulations) within 1m, in any direction, of the outermost edges of the hedgerow
- A ditch along at least one half of the length of the hedgerow
- Connections scoring four points or more. A connection with another hedgerow score one point; a connection with a pond or a woodland scores two points
- A parallel hedgerow within 15m of the hedgerow

Criteria for Determining 'Species-rich' Hedgerows

- 2.6 To determine species-richness, a 30m section of hedgerow is selected. Where the structural species making up the 30m section of hedgerow include at least five (or at least four in northern and eastern England, upland Wales and Scotland) woody species that are either native somewhere in the UK, or which are archaeophytes, the hedgerow is defined as species-rich. Climbers and bramble do not count towards the total except for roses *Rosa* sp.

Statutory Biodiversity Metric Condition Assessment

- 2.7 The Statutory Biodiversity Metric condition assessment criteria for hedgerows uses a series of ten attributes, representing key physical characteristics to determine whether a hedgerow is in favourable condition.
- 2.8 Each attribute is assigned to one of five functional groups (A-E), as indicated below, and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.
- 2.9 The hedgerow condition assessment generates a weighting (score) ranging from 1-3 which is used in the Statutory Biodiversity Metric. The scores places each hedgerow in a category of 'Good', 'Moderate' or 'Poor' condition.

Attributes

- A1. Height
- A2. Width
- B1. Gap – hedge base
- B2. Gap – hedge canopy continuity
- C1. Undisturbed ground and perennial vegetation
- C2. Nutrient-enriched perennial vegetation

- D1. Invasive and neophyte species
- D2. Current damage
- *E1. Tree class
- *E2. Tree health

* Additional group, applicable to hedgerows with trees only

Limitations

- 2.10 Some hedgerows have dense bramble scrub in front of them, so they could not be observed as closely as would be ideal, however this is not considered to have impacted the results of the survey.

3.0 Results

- 3.1 Hedgerow numbers are shown on the Habitats Plan (CSA/3922/120) in Appendix A. Full survey results are shown in Table 1 below and Tables 2 – 4 at the end of the appendix. Species lists for each hedgerow are available in Appendix E (Table 2).

Table 1. Hedgerow Survey Results Overview

Number	Length (m)	Important Hedgerow? (As defined by 'Hedgerow Regs')	Species Rich? (5 or more woody species along selected 30m section?)	Condition: 'Good', 'Moderate' or 'Poor'? (As defined by the Statutory Biodiversity Metric Condition Assessment)
H1	150	✓	✓	Good
H2	66	×	×	Good
H3	72	×	×	Good
H4	15	×	×	Good
H5	44	×	×	Good
H6	108	✓	×	Good
H7	44	×	×	Good

Table 2. Hedgerow Survey Results (H1 - H7)

Date of Survey	17/07/25 and 07/08/25						
Surveyor(s)	Alex Cole and Revae Tilbury						
General Hedgerow Information	H1	H2	H3	H4	H5	H6	H7
Hedgerow length (m)	150	66	72	15	44	108	44
Average height along length of hedgerow (m)	7	4	2	3	3	5	5
Average width at widest point of hedgerow (m)	3	3	1.5	1.5	1.5	5	5
Is woody component of hedgerow <5m at base?	No	No	No	No	No	No	No
Number of 30m sections for specified sampling technique	2	1	1	1	1	2	1
Average number of native woody species (following specified sampling technique)	5	3	1	1	0	4	4
Number of native woody species (along total length)	11	3	1	1	0	4	5
Species-rich hedgerow? (5 or more native woody species in 30m section)	Yes	No	No	No	No	No	No

Table 3. Assessment of Important Hedgerows (H1 - H7)

Application of Regulations	H1	H2	H3	H4	H5	H6	H10
Does the hedgerow lie within, or mark the boundary to, a private garden?	No	No	Yes	Yes	Yes	No	No
Regulation 4: Criteria for determining "Important Hedgerows"							
Has the hedgerow existed for 30 years or more? (Consider age of trees/coppice and review aerial photography or historic mapping.)	Yes	Yes	No	Yes	Yes	Yes	Yes
If so, does it meet one or more of the criteria listed in Part II of Schedule 1, listed below?	Yes	No	No	No	Yes	Yes	No
As such, is it an Important Hedgerow ?	Yes	No	No	No	No	Yes	No
Schedule 1: Additional Criteria for Determining "Important Hedgerows" - Part II, Criteria							
Archaeology and history							
Has a desk-based assessment of historic/archaeological significance been undertaken?	No	No	No	No	No	No	No
If so, has the hedgerow been considered 'important' under these criteria?	-	-	-	-	-	-	-
Wildlife and Landscape							
Does the hedgerow 'contain' any of the following species, or are there records of these species (within the last five or ten years for animals or plants, respectively) with no subsequent negative records?:	Yes	No	Yes	No	Yes	Yes	No
Those listed in Part 1 of Schedule 1 (birds protected by special penalties e.g. barn owl), Schedule 5 (animals which are protected e.g. hazel dormouse) and schedule 8 (plants which are protected e.g. bluebell) of the Wildlife and Countryside Act 1981.	No	No	No	No	No	No	No
Those included on the Birds of Conservation Concern 'Red' or 'Amber' list. (Primary legislation refers to the outdated 'Red Data Birds in Britain', 1990)	Yes	No	Yes	No	Yes	Yes	No
Those categorised as 'endangered', 'extinct', 'rare' or 'vulnerable' in Red data books for Vascular Plants, Insect, Invertebrates other than insects (see primarily legislation for more details)	No	No	No	No	No	No	No
Does the hedgerow include at least 7 woody species? (Subject to specified sampling technique)	No	No	No	No	No	No	No
Does the hedgerow include 6 woody species and support at least 3 additional features, or 5 woody species and at least 4 of the following additional features, as set out below?:	No	No	No	No	No	No	No
Bank or wall which supports the hedge along half its length?	Yes	No	No	No	No	No	No
Gaps <10% aggregate length of hedgerows?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
One standard tree per 50m?	Yes	Yes	No	No	No	No	Yes
At least three woodland (ground flora) species within 3m of the hedgerow?	No	No	No	No	No	No	No
Ditch along at least half hedgerow length?	No	No	No	No	No	No	No
At least 4 points based on the following: 1 point for 'connection' with another hedgerow and 2 points for connection with a pond or broadleaved woodland? (N.B. A hedgerow is considered connected when it meets or ends within 10m of another feature, where it would meet it if continued.)	No	No	No	No	No	No	No
Parallel hedgerow within 15m?	No	No	No	No	No	No	No
Does the hedgerow include at least 6 woody species including one of the following: black-poplar tree, large-leaved lime, small-leaved lime or wild service-tree?	No	No	No	No	No	No	No
Is the hedgerow adjacent to a bridleway or footpath?	No	No	No	No	No	No	No
Is the hedgerow adjacent to a bridleway or footpath and include at least four woody species and two additional features?	No	No	No	No	No	No	No
Schedule 2: Woodland Species (ground flora)	2	0	0	0	0	0	0
Lords-and-ladies <i>Arum maculatum</i>	✓						
Wood false-brome <i>Brachypodium sylvaticum</i>	✓						
Schedule 3: Woody Species (including species native in the UK and archaeophytes)^A ^A *Species only found in Hedgerow Regulations ^B **Species only found in Hedgerow Survey Handbook	11	3	1	1	0	4	5
Apple, crab <i>Malus sylvestris</i>	✓						
Ash <i>Fraxinus excelsior</i>	✓						✓
Beech <i>Fagus sylvatica</i>			✓				
Blackthorn <i>Prunus spinosa</i>						✓	✓
Elder <i>Sambucus nigra</i>	✓	✓				✓	
Elm, English <i>Ulmus procera</i>	✓					✓	✓
Hawthorn <i>Crataegus monogyna</i>	✓	✓				✓	✓
Hazel <i>Corylus avellana</i>	✓	✓					
Holly <i>Ilex aquifolium</i>	✓			✓			
Maple, field <i>Acer campestre</i>	✓						
Oak, pedunculate <i>Quercus robur</i>	✓						✓
Rose <i>Rosa species</i>	✓						
Sycamore <i>Acer pseudoplatanus</i> **	✓						

Table 4. Statutory Biodiversity Metric Condition Assessment of Hedgerows (H1 - H7)

Hedgerow Condition Assessment	H1	H2	H3	H4	H5	H6	H7
Hedgerow Type	Native hedgerow with trees and ditch/bank	Native hedgerow with trees	Native hedgerow	Native hedgerow	Non-native hedgerow	Native hedgerow	Native hedgerow with trees
A1. Height >1.5m average along length	Pass	Pass	Pass	Pass	Pass	Pass	Pass
A2. Width >1.5m average along length	Pass	Pass	Pass	Pass	Pass	Pass	Pass
B1. Gap - hedge base, Gap between ground and base of canopy <0.5 m for >90% of length [unless 'line of trees']	Pass	Pass	Pass	Pass	Fail	Pass	Fail
B2. Gap - hedge canopy continuity. Gaps make up <10% of total length; and no canopy gaps >5m	Pass	Pass	Pass	Pass	Pass	Pass	Pass
C1. Undisturbed ground and perennial vegetation. >1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length [measured from outer edge of hedgerow], present on at least 1 side of hedgerow	Pass	Pass	Pass	Pass	Pass	Pass	Pass
C2. Nutrient-enriched perennial vegetation. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground (nettle, cleavers & docks)	Fail	Fail	Fail	Fail	Fail	Fail	Pass
D1. Invasive & neophyte species. >90% of hedgerow and undisturbed ground vegetation is free of invasive non-native plant species and recently introduced species [i.e. <10% invasives]	Fail	Pass	Pass	Pass	Pass	Pass	Pass
D2. Current damage. >90% of hedgerow or undisturbed ground is free of damage caused by human activities [i.e. pollution, manure, rubble, poor management]	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hedgerows with Trees Only							
E1. Tree age. There is more than one age-class (or morphology) of tree present (e.g. young, mature, veteran and/or ancient), and there is on average at least one mature, ancient or veteran tree present per 20-50m of hedgerow.	Pass	Pass	-	-	-	-	Pass
E2. Tree health. At least 95% of hedgerow trees are in a healthy condition [excluding veteran features valuable for wildlife]. There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Pass	Pass	-	-	-	-	Pass
Condition							
Poor, Moderate or Good	Good	Good	Good	Good	Good	Good	Good

^ Hedgerow Regulation 1997 states elm, rose and willow 'species' only, whereas the Hedgerow Survey Handbook lists out the individual species within these categories.

Appendix H

Bats

1.0 Legislation

1.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:

- Deliberately capture, injure, or kill a bat
- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
- Damage or destroy a breeding site or resting place used by bats

1.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection

1.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is committed irrespective of whether the causal act was deliberate or otherwise.

1.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural England to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

2.0 Methods

2.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 4th edition (Collins, 2023).

Ground Level Tree Assessment (GLTA) - Trees

2.2 A GLTA is a detailed inspection of the exterior of a tree from the ground to look for features that bats could use for roosting, Potential Roost Features (PRFs).

2.3 All trees on-site were inspected from ground level, using binoculars and high-powered torches as appropriate. The survey was completed on 20

- 2.4 A description of each tree was made, including the species, height, diameter at 1.5m from ground level and condition.
- 2.5 The aim of this inspection was to look for PRFs from ground level and give a preliminary description of each (such as type of PRF, height, size and location on tree). Surveyors also recorded direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of trees to support bats whilst in hibernation.
- 2.6 Following the GLTA, each tree was assigned one of the following categories:
- **PRF** – A tree with at least one PRF.
 - **FAR** – Further assessment required to establish if PRFs are present in the tree.
 - **None** – Either no PRFs in the tree or highly unlikely to be any.

Assessing 'Potential' of Trees to Support Roosting Bats

- 2.7 Each PRF was assigned to one of the following categories:
- **PRF-I** – Tree with a Potential Roost Feature (PRF) that is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surroundings.
 - **PRF-M** – PRF is suitable for multiple bats and may therefore be used by a maternity colony.
- 2.8 The categories above are intended to provide initial guidance on whether further inspections are necessary to prove presence or likely absence of roosting bats, rather than to assign importance to such features.
- 2.9 The potential of a tree to support roosting bats is often influenced by its age, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat - particularly woodland, parkland and wetland- as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Potential Roost Feature (PRF) Inspection Survey/Climbing Survey

- 2.10 Trees due to be removed/impacted by proposals were subject to a climbing/aerial access and endoscope inspection of trees where safe to do so.
- 2.11 A total of one inspection was undertaken using rope access by Natural England licensed bat worker and qualified tree climbers Jason Walker (Natural England Class Licence WML-CL18, Registration Number 2024-11947-CL18-BAT) and Eleanor Sheehan (Natural England Class Licence WML-CL18, Registration Number 2024-11948-CL18-BAT) on 01 August 2025 in fine and dry weather conditions.
- 2.12 Aerial rope access surveys were undertaken of Trees T25, T31, T39, T41 and T48 as these trees were found to support PRFs or had potential for PRFs to be present.
- 2.13 A thorough inspection of the PRFs was conducted using endoscopes and high-powered torches as necessary. During the initial inspection, measurements and details of each feature was recorded and each was assigned a category of suitability to support roosting bats (PRF-I or PRF-M), as per the BCT guidelines.
- 2.14 Following the first climbing survey, PRF-I features were either upgraded to PRF-M features and subject to further survey work, or discounted from further survey in line with latest guidance.
- 2.15 In line with latest guidance, PRF-M features were subject to three climbing surveys in the bat active season (May to August) to determine presence/absence of bats and characterise any roosts present. If bats or bat droppings were found, the tree was noted as a confirmed roost.

Activity Surveys

Night-time Bat Walkover/Vantage Point Surveys

- 2.16 Night-time Bat Walkover (NBW) surveys were undertaken in May and June 2025. On each occasion, surveyors were stationed at specific points within the Site prior to sunset, and stationed on potential flight lines close to potential roost sources such as groups of buildings or woodland. Locations were predetermined by the results of the Daytime Bat Walkover (see Figure 1).



Stationed Surveyor Locations  SSL1  SSL2

Figure 1. Stationed surveyor locations (SSL) during the Night-time Bat Walkover Surveys undertaken in May and July 2025.

- 2.17 The surveys were led by Laura Farrar ACIEEM (Bat Class Survey Licence WML-CL17, Registration Number 2020-44517-CLS-CLS), Sara Miller (Natural England Class Licence WML-CL18, Registration Number 2020-45345-CLS-CLS) and Eleanor Koss in suitable weather conditions (see Table 1).

Table 1. Night-time Bat Walkover survey timings and weather conditions

Survey Date (2025)	Sunset Time	Start Time	End Time	Temp. (°C)		Cloud Cover (oktas)		Wind (Beaufort Scale)		Precipitation
				Start	End	Start	End	Start	End	
01/05	20:26	20:26	22:26	19	15	2	1	0	0	No rain
02/07	21:24	21:24	23:24	23	20	0	8	2	3	No rain

- 2.18 Surveyors remained in position to count, observe behaviour and make acoustic recordings of commuting (or foraging) bats for 30 minutes after

sunset. Any observations of bat activity such as feeding or commuting behaviour was noted, or identification of key flightlines (such as height, direction of travel, numbers of bats and response to weather or other features on-site). Alternatively, if streams of commuting bats were noted elsewhere on-site, surveyors used back-tracking methods to move towards a roost, responding to live observations. Surveyors were equipped with BatLogger M/M2 bat detectors and Nightfox binocular cameras to assist with observations after sunset and allow any bat contacts to be recorded.

- 2.19 As part of the stationed observation, whilst surveyors are positioned across the Site at the start of the survey, vantage point observations were undertaken, including notes on early emerging/high-flying bats such as noctule. Notes made on behaviour include flight height, numbers of bats and direction of travel.
- 2.20 Following 30 minutes of stationed observations, surveyors walked a single transect route, which aimed to cover all accessible areas, features and habitats at the Site. The transect route was repeated at least once during each survey to minimise temporal bias and walked at a moderate and consistent speed with qualitative observations of bat behaviour made by the surveyor.
- 2.21 Transect surveys are intended to gather data on the spatial distribution of bat activity across the Site, identifying areas of relative importance for bats, including key flight lines. In addition direct observation of bats allows for qualitative assessments of how bats use the Site to be made complementing quantitative data collected through remote monitoring.

Automated/Static Surveys

- 2.22 Two Wildlife Acoustics Songmeter (SM4) detectors were deployed for during May and June 2025 to provide two data-sets. The position of these Monitoring Locations (ML) are shown on Figure 2 below.



Monitoring Locations ● ML1 ● ML2

Figure 2. The position of each Monitoring Location (ML) surveyed during remote monitoring surveys in May and June 2025.

- 2.23 The detectors were setup to automatically record ultrasonic signals for the period from half an hour before sunset to half an hour after sunrise each night, with each monitoring period spanning at least five consecutive nights.
- 2.24 Static detectors were deployed across the Site to provide a representative sample of all habitats in the survey area that could be impacted by the proposals. Both detectors are located within hedgerows and are adjacent to woodland, neutral grassland and scrub habitats that will provide foraging opportunities for bats. The adjacent woodlands may also provide roosting opportunities.
- 2.25 Weather conditions were obtained for each night surveyed using historic weather data from the World Weather Online website, with weather observations taken from the nearest weather station. The five nights showing the most optimal weather conditions (in terms of temperature,

precipitation and wind speed, see Table 1) were taken forward for analysis.

- 2.26 Recordings are triggered when a bat echolocation call is detected and will contain a variable number of call 'pulses'. Each file containing call pulses by bats is designated as a 'bat contact' for each species present. The maximum recording duration is 15 seconds after which time a new recording file, and thus a new bat contact, is generated if echolocation calls are still being detected. This means that periods of prolonged bat activity near a detector is represented as multiple bat contacts, rather than a single one.

Analysis of Data

Call Analysis

- 2.27 Bat calls were recorded using Elekon Batlogger M/M2 detectors. This detector automatically records ultrasonic signals with a one second delay between recordings. Recordings of bat contacts were subsequently analysed using BatExplorerPro software, with sonograms reviewed to confirm bat identification to genera, or where possible, species level.
- 2.28 Each of the recorded files, which contain a variable number of call 'pulses', was designated a 'bat contact'. At the point of contact, each sound file is assigned a GPS location.
- 2.29 For analysis of data recorded during static monitoring, quantitative analysis of bat activity was then undertaken by calculating the average bat contacts per hour on each night monitored, for each species.
- 2.30 Bat activity can show considerable inter-night variability and is dependent on a number of variables, including temperature, wind, and seasonality, amongst others. To account for this variability the median values for the average hourly bat contacts per night are reported, rather than a mean value which would misrepresent the average activity.

Reviewing Video Footage

- 2.31 Analysis of Night Vision Aid footage was carried out using VLC Media Player and Canon Utility software at a review speed of no more than 1.5x to avoid skipping of frames and any emergencies. A still shot from each Night Vision Aid was taken at the end of the survey to provide evidence of the camera coverage/field of view at the darkest point of the survey and appropriate level of illuminance, as required in line with best practice guidance (see the end of this report).

Limitations

- 2.32 It should be noted that the findings described herein for remote monitoring surveys are based on the bat activity recorded at the

location immediate to each detector, and therefore only describe localised activity at the Site. Where needed to be located within hedgerows, surrounding foliage has been removed to prevent interference from vegetation covering the microphone.

- 2.33 In addition, comparisons drawn on the number of detector activations by different species/genera can only give an indication of relative species abundance at the Site, as detectability varies between species.
- 2.34 It is acknowledged that the quantum of bat contacts recorded during a survey may not give a true reflection of the abundance of bats using the Site. For example, a single bat foraging close to a detector may trigger several hundred activations in the course of one night. However, this activity level does provide a proxy for the level of use by bats, and therefore its relative importance.
- 2.35 The activity survey work presented includes NTBWs from the Spring and Summer survey periods, with a third NTBW to be completed during the September survey period. along with May and June static monitoring periods, with further survey work to be completed/analysed from July, August, September and October 2025.

3.0 Results

Ground Level Tree Assessment (GLTA) - Trees

- 3.1 All on-site trees were included in the assessment. A total of 16 on-site trees were identified as having PRFs that could be used by individual (PRF-I) or multiple bats (PRF-M). Two trees (T28 and T38) were identified as having PRF-Ms and would therefore warrant further investigation. T62, T34, T16, T63, T6, T11, T15, T7, T9, T29, T27, T36 and T53 were all identified as having PRF-Is. T6, T7 and T29 were identified as having features that may require further investigation.

Potential Roost Feature (PRF) Inspection Survey/Climbing Survey

- 3.2 Five trees were identified prior to the tree climbing survey with potential to support roosting bats requiring further surveys. All trees T25, T31, T39, T41 and T48 were classified as negligible potential to support roosting bats. No live bats or definitive evidence of bat presence was seen in/on any of the trees during the initial aerial inspections.

Activity Surveys

Night-time Bat Walkover

- 3.3 During the May survey, the first contact was of a single common pipistrelle c. 2 minutes after sunset from SSL1. This bat was first observed prior to commencement of the survey. The bat was seen flying in circles, indicating foraging behaviour. The first noctule contact was detected, c. 5 minutes after sunset from SSL1.

- 3.4 During the July survey, the first contact was of a noctule, c. 13 minutes after sunset from SSL1. This bat was observed flying high overhead to the west. The first common pipistrelle was from c. 28 minutes after sunset, from SSL2. This was a brief pass.

Table 2. Summary of bat contacts recorded during stationary observations

Month (2025)	Common pipistrelle	Noctule
May	24	5
July	2	10
Total	26	15
Percentage of Total (%)	63.41	36.59

- 3.5 At least seven species of bat were recorded at the site during the transect surveys, comprising common pipistrelle, soprano pipistrelle, noctule, brown long-eared bat, barbastelle and unidentified *Myotis* sp. and *Nyctalus* sp. The majority of contacts were attributable to common pipistrelle (79.82%). Three contacts of barbastelle noted from the southern Site boundary adjacent to the grassland and blackthorn scrub during the May survey. The first contact was 89 minutes after sunset.
- 3.6 The southern areas of the Site (notably woodland W3 and W1) were found to have the highest number of contacts. This southern parcel contains a slightly more complex mosaic of habitats (trees, woodland, neutral grassland, blackthorn and mixed scrub) compared to the northern parcel. Contacts of *Myotis* sp. and brown long-eared bat were exclusively from within woodland W3.
- 3.7 The number of bat contacts recorded for each species are summarised in Table 3 below. The locations of each bat contact and the overall distribution of activity across the Site are illustrated in Figures 3 and 4.

Table 3. Summary of bat contacts recorded during transect surveys

Month	Barbastelle	Brown long-eared	Common pipistrelle	<i>Myotis</i> species	Noctule	<i>Nyctalus</i> species	Soprano pipistrelle
May	3	1	23	0	2	1	2
July	0	1	64	7	0	0	5
Total	3	2	87	7	2	1	7
Percentage of Total (%)	2.75	1.83	79.82	6.42	1.83	0.92	6.42



Figure 3. Locations of bat contacts recorded across all transect surveys

3.8 Figure 4 below provides an indicative illustration of 'hotspots' in bat activity recorded across all transect surveys undertaken at the Site.



Figure 4. Indicative 'Utilisation Distribution' (UD) of all bat species/genera at the Site estimated from all transect data combined. The UD illustrates the relative probability of a bat in flight being present at a given point at the Site, with higher/central contours having a greater probability, and lower/peripheral contours having less probability.

Static/Automated Monitoring

- 3.9 The weather conditions experienced during the ten nights where data was analysed are provided in Table 4 below.
- 3.10 There was light rain during the nights of 21 July 2025 and very light rain on 22 July 2025. The temperature dropped to a minimum of 5°C on 15 May 2025 and 6°C on 14 May 2025. This does not appear to have had an impact on bat activity, with bats still being recorded under such conditions.

Table 4. Overnight weather conditions during remote monitoring

Survey Month	Dates Sampled (2025)	Temp. (°C)		Cloud Cover (%)		Wind (km/h)		Precipitation
		Min	Max	Min	Max	Min	Max	
May	14/05	6.0	10.0	4	78	13.0	20.0	None
May	15/05	5.0	10.0	9	100	11.0	15.0	None
May	16/05	7.0	9.0	21	93	13.0	20.0	None

May	17/05	6.0	11.0	0	15	10.0	13.0	None
May	18/05	7.0	11.0	15	37	9.0	12.0	None
June	18/06	14.0	17.0	0	7	4.0	10.0	None
June	19/06	15.0	18.0	4	14	12.0	15.0	None
June	20/06	15.0	18.0	0	10	12.0	14.0	None
June	21/06	14.0	21.0	29	83	11.0	17.0	Light rain at 21:00 and 00:00
June	22/06	12.0	15.0	0	95	23.0	24.0	Very light rain at 03:00

3.11 The total number of bat contacts recorded across all monitoring locations and monitoring periods for each bat species/genera are provided in Figure 5 and Table 5 below.

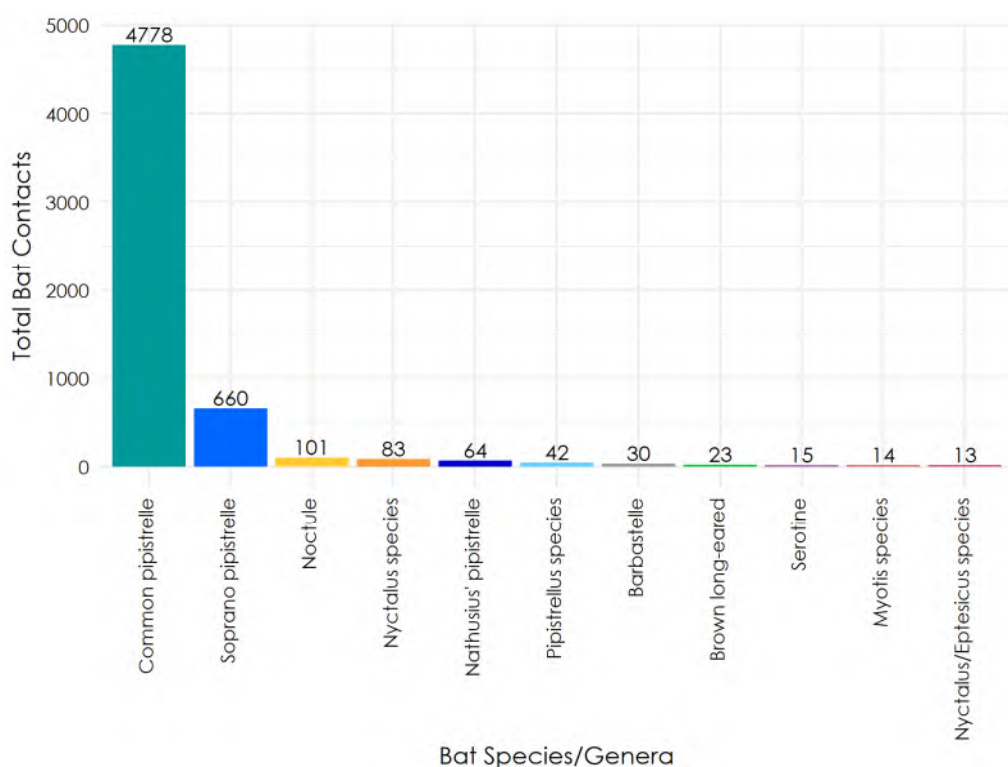


Figure 5. Total bat contacts by species/genera recorded across all remote monitoring periods and monitoring locations

Table 5. Summary of bat contacts recorded in R&D3 Expansion Zone across all remote monitoring periods and monitoring locations.

Month	Barbastelle	Brown long-eared	Common pipistrelle	Myotis species	Nathusius' pipistrelle	Noctule	Nyctalus species	Nyctalus/Eptesicus	Pipistrellus species	Serotine	Soprano pipistrelle
May	30	9	394	9	0	85	69	13	34	15	642
June	0	14	4384	5	64	16	14	0	8	0	18
Total	30	23	4778	14	64	101	83	13	42	15	660
Total (%)	0.52	0.39	82.05	0.24	1.10	1.73	1.43	0.22	0.72	0.26	11.33

- 3.12 Common pipistrelle comprised the majority of contacts, at 82.20%, followed by soprano pipistrelle which represented 11.33% of calls. Lower levels of contacts of all remaining bat species were recorded, with no other species constituting more than 2% of total bat calls.
- 3.13 Figure 6 below shows the variance in nightly activity levels for common pipistrelle and soprano pipistrelle recorded on-site. Figure 7 shows the variance in nightly activity levels for all remaining bat species identified on-site. More detailed data describing Figure 6/7 are provided in Table 6. The activity data in Figure 6/7 is presented as boxplots for each bat species, which show the inter-night variability in bat activity across the 10 nights monitored. The median value (middle line of the boxplot) is taken as the typical level of activity for that species on-site at the point monitored. The length of each coloured boxplot is the interquartile range which shows the variance in nightly activity around the median value. The ends of each whisker line define the minimum and maximum nightly activity values recorded at the monitoring location. Outlying values are nightly activity levels that are greatly different when compared to the distribution of the remaining nightly activity levels. Outliers are illustrated as black points away from the boxplot. While important to note, these outliers do not represent the bat activity more commonly found at the Site for the species in question.

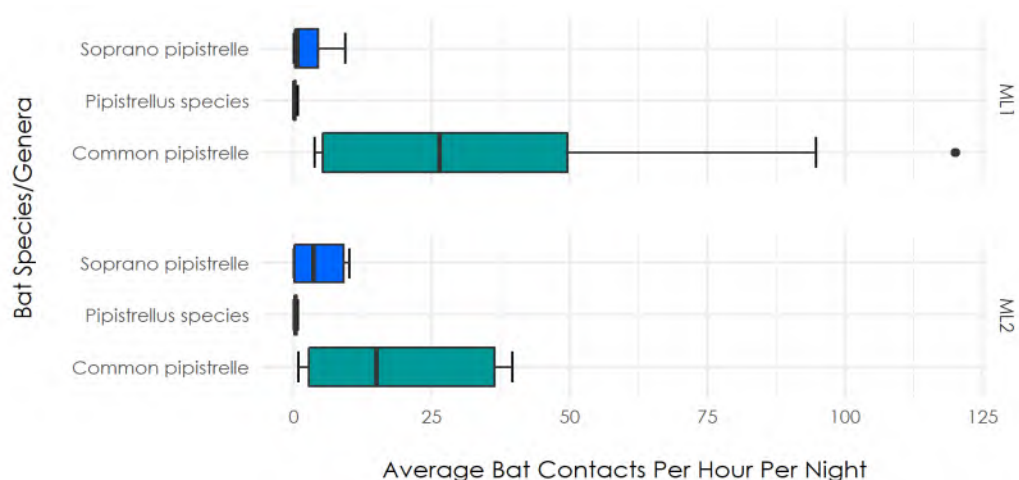


Figure 6. Average bat contacts per hour per night for each bat species/genera recorded across all remote monitoring

- 3.14 ML1 was found to have greater number of common pipistrelle activity compared with ML2, with a median of 26.423 and 14.991 contacts per hour per night respectively. ML2 had slightly higher levels of soprano pipistrelle activity compared to ML1, with a median of 3.843 and 0.543 contacts per hour per night respectively.

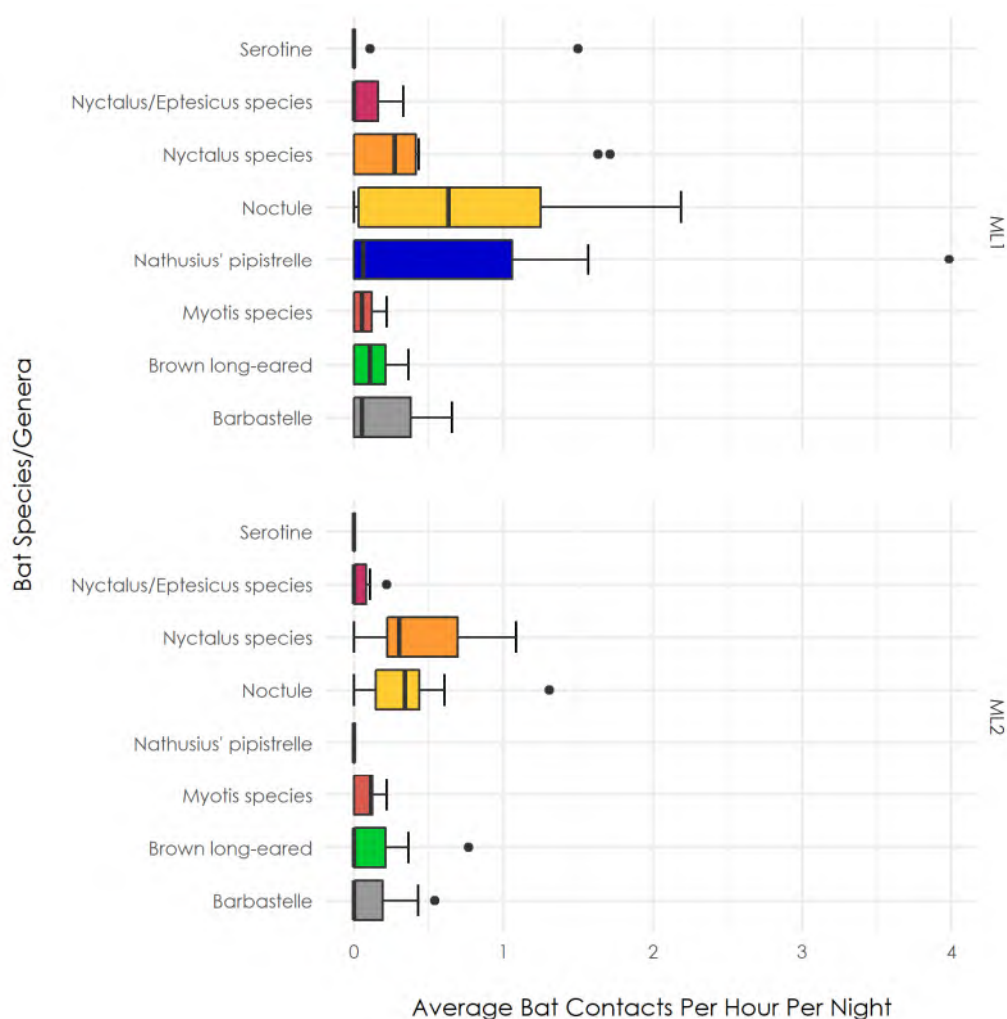


Figure 7. Average bat contacts per hour per night for each bat species/genera recorded across all remote monitoring

3.15 All remaining bat species had a median of less than one bat contact per hour per night across all locations. The majority of bat species showed similar numbers of calls from both locations, however notably ML2 had no contacts of Nathusius' pipistrelle and serotine.

Table 6. Average bat contacts per hour per night recorded during remote monitoring surveys

ML	Species	Average bat contacts per hour per night				Total bat contacts	Number of nights monitored
		Minimum	Maximum	Median	IQ range		
ML 1	Barbastelle	0	0.654	0.054	0.378	18	10
ML 2	Barbastelle	0	0.542	0	0.19	12	10
ML 1	Brown long-eared	0	0.362	0.109	0.211	10	10
ML 2	Brown long-eared	0	0.767	0	0.211	13	10
ML 1	Common pipistrelle	3.751	120.048	26.423	44.414	3210	10

ML 2	Common pipistrelle	0.754	39.614	14.991	33.721	1568	10
ML 1	Myotis species	0	0.218	0.054	0.118	6	10
ML 2	Myotis species	0	0.218	0.115	0.121	8	10
ML 1	Nathusius' pipistrelle	0	3.986	0.06	1.057	64	10
ML 2	Nathusius' pipistrelle	0	0	0	0	0	10
ML 1	Noctule	0	2.191	0.632	1.221	67	10
ML 2	Noctule	0	1.307	0.342	0.292	34	10
ML 1	Nyctalus species	0	1.715	0.271	0.416	43	10
ML 2	Nyctalus species	0	1.083	0.302	0.471	40	10
ML 1	Nyctalus/Eptesicus species	0	0.329	0	0.163	8	10
ML 2	Nyctalus/Eptesicus species	0	0.219	0	0.08	5	10
ML 1	Pipistrellus species	0	0.654	0.108	0.296	17	10
ML 2	Pipistrellus species	0	0.75	0.242	0.469	25	10
ML 1	Serotine	0	1.501	0	0	15	10
ML 2	Serotine	0	0	0	0	0	10
ML 1	Soprano pipistrelle	0	9.259	0.543	4.215	247	10
ML 2	Soprano pipistrelle	0	10.022	3.528	8.843	413	10

Appendix I

Badgers

1.0 Legislation

1.1 Badgers and their setts are protected under the Protection of Badgers Act 1992 which, in part, makes it an offence to:

- Kill, injure or take a badger
- Destroy or damage a badger sett or any part of it
- Obstruct access to, or any entrance of, a badger sett
- Disturb a badger whilst it is occupying a sett

1.2 Impacts to badgers and their setts should be avoided in the first instance by retaining setts and implementing an appropriate buffer distance to limit disturbance. Where this is not possible, a Natural England licensing system exists to permit certain works that would otherwise be illegal. This can include direct or indirect impacts which may result in any of the above offences. Where a licence has been granted, permitted impacts to a badger sett can only be carried out between the months of July and November (inclusive) and following an agreed method statement.

2.0 Methods

2.1 A dedicated badger survey was conducted on 29 August 2025 by Laura Farrar ACIEEM, using standard survey methods, searching the Site and immediately adjacent areas for field signs of badger and mapping any present such as:

- Feeding signs such as snuffle entrances made during foraging
- Hairs caught on vegetation or fences
- Latrines, usually positioned on territorial boundaries
- Foraging tracks through vegetation or under fences
- Badger setts

2.2 When badger setts are found the number of entrances are recorded as well as the level of usage. Recording this information gives an indication of the type of sett by categorising it according to the criteria listed in Table 1 below (Harris *et al.* 1989, Cresswell *et al.* 1990, Wilson *et al.* 1997).

Table 1. Badger Sett Criteria

Sett Type
Main Setts - These usually have a large number of entrances with large spoil heaps, and the sett generally looks well used. There will be well-used paths to and from the sett and between sett entrances. Although normally the breeding sett is in continuous use, it is possible to find a main sett that has become disused due to excessive digging or some other reason; it should be recorded as a disused main sett. In the first survey, the average size of an active main sett was twelve entrances (including all categories of use).
Annexe setts - They are often close to a main sett, usually less than 150 metres away, and are usually connected to the main sett by one or more obvious well-worn paths. They usually have several entrances, but may not be in use all the time even if the main sett is very active. In the first survey the average size was five entrances (including all categories of use).

Subsidiary setts - These often only have a few; four (including all categories of use) was the average number in the first survey. They are usually at least 50 metres from a main sett, and do not have an obvious path connecting with another sett. They are not continuously active.
Outlying setts - These usually have only one or two entrances, often have little spoil outside the entrance, have no obvious path connecting with another sett, and are only used sporadically. When not in use by badgers, they are often taken over by foxes or even rabbits. However, they can still be recognised as badger setts by the shape of the tunnel (not the actual entrance entrance), which is usually at least 250mm in diameter, and is rounded or a flattened oval shape. Fox and rabbit tunnels are smaller and often taller than broad.
Entrance Type
Well used entrances - These are clear of any debris or vegetation, are obviously in regular use, and may or may not have been excavated recently.
Partially used entrances - These are not in regular use and have debris such as leaves and twigs in the entrance, or have moss and/or other plants growing in or around the entrance. Partially used entrances could be in regular use after a minimal amount of clearance.
Disused entrances - These have not been in use for some time, are partially or completely blocked, and could not be used without a considerable amount of clearance. If the entrance has been disused for some time, all that may be visible is a depression in the ground where the entrance used to be, and the remains of the spoil heap, which may be covered in moss or plants.

Limitations

- 3.0 There were no specific limitations to the badger survey, which was conducted at an optimum time of year and in good conditions.

4.0 Results

- 4.1 No signs of badger or badger setts were recorded at the Site. Other signs of mammals present include those of rabbit.

Appendix J

Birds

1.0 Legislation

- 1.1 All wild birds, their nests and eggs are protected under subsection 1(1) of the Wildlife and Countryside Act 1981 (as amended). It is an offence to kill or injure any wild bird, to take or destroy their eggs, or to take, damage or destroy their nests while in use or being built.
- 1.2 In addition, certain species of wild bird, listed within Schedule 1 of the Wildlife and Countryside Act, receive additional protection under subsection 1(5) of the Act. This makes it an offence to disturb any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young. It is also an offence to disturb the dependent young of such a bird.
- 1.3 Consideration is also taken of Birds of Conservation Concern ('BoCC 5') (Stanbury *et al.*, 2021) which assigns bird species to a Red, Amber or Green list depending on factors such as their rarity, importance in an international context and severity of declines in population or range. Species on the Red list are of greatest conservation concern whilst those on the Green list do not fulfil any of the BoCC assessment criteria and are not currently of conservation interest. Full details can be found in Stanbury *et al.* (2021).

2.0 Methods

Breeding Birds

- 2.1 Breeding bird surveys were carried out by Skopeo over six visits between 06 May and 08 July 2025 to gain an understanding of the breeding bird assemblage at the site. Surveys were conducted with the following aims:
 - To determine the potential for breeding species of birds across the survey area;
 - To review the rarity and conservation status of each species found;
 - To review the likely breeding potential within the habitats present;
 - To assess the impacts of the proposed developments with regards to the species/ likely species determined; and
 - To recommend appropriate mitigation and protection measures where necessary.
- 2.2 The survey area included all accessible areas of the Site and immediately adjacent land visible from the Site. On each survey the surveyor walked a slow route across the whole site which ensured that both species of open and boundary habitats would be detected. Alternative versions of the route were taken on each visit so that different parts of the site would be surveyed at different times of day, thus avoiding temporal bias associated with bird activity. Five of the surveys commenced at dawn, when birds are most active, and continued for approximately two hours during suitable weather conditions. One dusk survey was undertaken from approximately 1.5 hours before sunset to 0.5

hours after sunset, with the aim of identifying any nocturnal birds using the Site. Birds were detected by sound or sight, using a pair of binoculars.

- 2.3 The survey methodology used considers the recommended mapping conventions given within the Bird Survey Guidelines published by the Bird Steering and Assessment Group (2022). All birds detected at the site were recorded using standardised codes to map their distribution and behaviour, and to differentiate between individuals for the purposes of territory mapping (adapted from the standard Common Birds Census method). A full map of all species is created for each survey visit, with a consolidated map of priority species created for all survey visits combined.
- 2.4 Priority species are classified using the following hierarchy:
- 1) Species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
 - 2) Species listed under Section 41 of the Natural Environment and Rural Communities Act 2006;
 - 3) Red & Amber listed by the 5th Birds of Conservation Concern Review (Stanbury *et al*, 2021).
 - 4) Localised or highly specialised species regardless of inclusion above (e.g. crossbill in coniferous woodland);
 - 5) Nationally- or locally-declining species regardless of inclusion above
 - 6) Colonial nests or roost sites containing more than one individual of any species; or,
 - 7) Exceptional counts or aggregations of any species.
- 2.5 On each survey visit the following objectives were met:
- Identification of potential breeding species within the habitats present;
 - Identification of all birds seen and heard;
 - Breeding status of each bird seen and heard;
 - Total numbers of birds, including juveniles recorded.
- 2.6 The criteria used during the 'Bird Atlas' surveys of 2007-2011 were used to ascertain the breeding status of birds at the Site (as given in Table 1 below).

Table 1. Categories of Breeding Bird Evidence

Breeding Status Categories	Evidence Criteria
Confirmed breeding:	• Distraction display or injury feigning • Used nests or eggshells found (occupied or laid within the survey period) • Recently fledged young or downy young • Adults entering or leaving a nest site in circumstances indicating occupied • Nest or an adult sitting on nest • Adults carrying food for young or faecal sacs • Nest containing eggs • Nest with young seen or heard
Probable breeding:	• Pairs observed in suitable nesting habitat in breeding season • Permanent territory presumed through registration or territorial behaviour (song etc.) on at least two different days, a week apart, at the same place • Display and courtship • Visiting probable nest site • Agitated behaviour or anxiety calls from adults • Building nest or excavating nest hole
Possible breeding:	• Species observed in breeding season in possible nesting habitat • Singing male(s) present or breeding calls heard in breeding season

Limitations

- 2.7 Only a proportion of individuals of each species will be detected on each visit, and some particularly secretive or low-density species, can be elusive and require several visits to detect. Furthermore, the importance of a site for birds can change depending on factors such as food availability, presence of roosting/nesting features and weather conditions.

Evaluation

- 2.8 The importance of the breeding bird assemblage at the Site was assessed using the criteria suggested by Fuller (1980) (see Table 2 below).

Table 2. Assessment criteria for breeding bird assemblage at a Site

Importance	Number of Breeding Species
Local	25-49
County	50-69
Regional	70-84
National	85+

3.0 Results

Breeding Birds

- 3.1 The weather conditions during the breeding bird surveys are summarised in Table 3 below.

Table 3. Weather conditions for breeding bird surveys

Date	Start time	End time	Temp (°C)		Cloud (Oktas)		Wind (Beaufort scale)		Precipitation
			Start	End	Start	End	Start	End	
06/05/25	05:25	07:20	4	6	8	8	1	1	None
22/05/25	04:55	06:45	7	9	0	0	1	1	None
29/05/25	19:40	21:30	19	14	7	2	2	2	None
04/06/25	04:45	06:35	9	10	3	3	1	1	None
25/06/25	04:40	06:30	15	16	1	0	2	2	None
08/07/25	04:50	06:45	11	11	3	0	2	2	None

- 3.2 A total of 39 species were recorded on or adjacent to the survey area during the surveys. The full results of the breeding bird survey are presented at the end of this report in Table 5. The Breeding Bird Survey Plan (CSA/3922/130) shows a consolidated map from the six survey visits, highlighting suspected territories for priority species and other notable sightings.
- 3.3 Of these, 29 species were recorded to have a breeding status of either 'confirmed', 'probable' or 'possible' and are thus considered as breeding species. The remaining ten species were either recorded flying over the Site only, or there is no suitable breeding habitat to support these species.
- 3.4 A total of 18 priority species were observed on or adjacent to the Site as summarised in Table 4 below.

Table 4. Priority bird species recorded at the Site during the breeding bird surveys

Species	BoCC 2021 Red/Amber	Section 41	Sch1	Breeding Status
Black-headed gull	Amber			Non-breeding
Dunnock	Amber	•		Confirmed
Greenfinch	Red			Confirmed
Herring gull	Red	•		Non-breeding
House martin	Red			Non-breeding
Lesser black-backed gull	Amber			Non-breeding
Linnet	Red	•		Confirmed
Mallard	Amber			Non-breeding
Rook	Amber			Non-breeding
Red kite			•	Non-breeding
Song thrush	Amber	•		Confirmed
Sparrowhawk	Amber			Non-breeding
Starling	Red	•		Non-breeding
Stock dove	Amber			Confirmed
Swift	Red			Non-breeding
Whitethroat	Amber			Confirmed
Wood pigeon	Amber			Confirmed
Wren	Amber			Confirmed

- 3.5 Bird activity was recorded across the Site, however most birds interacting with the Site did so within boundary hedgerows. In particular, the southern boundary of the Site along H2, W3, H6, and the mixed scrub was the location of many of the bird territories identified. Hedgerow H1 and woodland W4 also seem to be regularly used and important habitats to the birds at the Site.
- 3.6 No notable or large flocks were observed at the Site.

4.0 Summary

- 4.1 In summary, breeding was confirmed on-site for eight species. A further 22 species were deemed to have 'possible' breeding status which overall, in accordance with Fuller (1980), is considered to be of ecological importance at the Local Level. A total of 17 species of conservation significance were recorded, eight of which were confirmed to be breeding at the Site.

Table 5. All bird species recorded at the Site during the breeding bird surveys

Species	BoCC 2021 Red/Amber	Section 41	Sch1	Breeding Status
Blackbird				Possible
Blackcap				Possible
Black-headed gull	Amber			Non-breeding
Blue tit				Possible
Buzzard				Possible
Carion crow				Possible
Chaffinch				Possible
Chiffchaff				Possible
Coal tit				Possible
Collared dove				Possible
Dunnock	Amber	•		Confirmed
Goldfinch				Possible
Great spotted woodpecker				Possible
Great tit				Possible
Greenfinch	Red			Confirmed
Green woodpecker				Possible
Herring gull	Red	•		Non-breeding
House martin	Red			Non-breeding
Jackdaw				Possible
Lesser black-backed gull	Amber			Non-breeding
Lesser whitethroat				Possible
Linnet	Red	•		Confirmed
Long-tailed tit				Possible
Magpie				Possible
Mallard	Amber			Non-breeding
Pheasant				Possible
Red kite			•	Non-breeding
Ring-necked parakeet				Possible
Robin				Possible
Rook	Amber			Non-breeding
Song thrush	Amber	•		Confirmed
Sparrowhawk	Amber			Non-breeding
Starling	Red	•		Non-breeding
Stock dove	Amber			Confirmed
Swallow				Possible
Swift	Red			Non-breeding
Whitethroat	Amber			Confirmed
Wood pigeon	Amber			Confirmed
Wren	Amber			Confirmed



- Site boundary
- (x) Territories/singing
 - x Calling
 - x Individuals
 - xn Number of individuals

Species List:

- Red-list species:

 - GR - Greenfinch
 - HM - House martin
 - LI - Linnet
- Amber-list species:

 - D. - Dunnock
 - RO - Rook
 - ST - Song thrush
 - SD - Stock dove
 - WH - Whitethroat
 - WP - Wood pigeon
 - WR - Wren

Additionally, the following species were observed flying over the Site:

- HG - Herring gull

SG - Starling

SI - Swift
- BH - Black-headed gull

LB - Lesser black-backed gull

MA - Mallard

SH - Sparrowhawk
- Other species:
- KT - Red kite**

**Schedule 1 species (WCA 1981)

Only species included in Birds of Conservation Concern 5 (Stanbury et al, 2021), Section 41 of the NERC Act (2006) or Schedule 1 of the Wildlife and Countryside Act (1981) are considered 'notable' and included on this plan.

Locations are indicative. Circles denoting territory/colony do not show extent of territory only approximate location. Territories are presumed based on breeding evidence or multiple registrations of a species across visits.

Species flying over the Site only have been omitted (unless utilising the Site).



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Project	Land at Mill Lane and London Road, Hitchin	Date	August 2025	Drawing No.	CSA/3922/130
Drawing Title	Breeding Bird Survey Plan	Scale	Refer to scale	Rev	-
Client	Taylor Wimpey UK Limited	Drawn	RT	Checked	JW

Appendix K

Reptiles

1.0 Legislation

- 1.1 All native British reptile species are listed within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded protection against killing and injury under parts of sub-section 9(1) of the Act. In addition, all native British reptile species are adopted as Species of Principal Importance for the Conservation of Biodiversity in England in respect of Section 41 of the Natural Environment and Rural Communities Act 2006.

2.0 Methods

- 2.1 The entire site comprises suitable reptile habitat, being grassland, scrub and woodland. Within the 3.38ha of the Site, 50 artificial refugia were used to provide a survey refugia density of 14.79 refugia per ha. Reptile refugia, comprising rectangles of roofing felt measuring 1.0 x 0.5m, were installed in areas of suitable habitat present at the Site on 01 May 2025 by Laura Farrar ACIEEM. The location of these refugia is shown on the Reptile Survey Plan (CSA/3922/127).
- 2.2 Following an initial 2-week 'bedding-in' period for refugia, surveys were carried out on seven occasions during favourable weather conditions (e.g. intermittent or hazy sunshine, not too windy, sunny spells following wet or cloudy weather) between May and June 2025. Each survey visit comprised a slow walk of the Site to visually and physically check refugia for the presence of reptiles. On each occasion a visual search was also carried out within areas of suitable habitat whilst walking between refugia locations.
- 2.3 The primary aim of the reptile survey was to establish the presence or likely absence of widespread reptile species within the survey area, rather than to estimate abundance or population size. To this end, seven survey checks, an effort generally considered 'reasonable effort' in establishing the presence or likely absence of reptiles at a Site, were carried out.

Limitations

- 2.4 The Site is publicly accessible and covered in dense nettle in some areas. Both of these factors were minor limitations to the surveys as the moving of mats, or overgrown vegetation meant that some mats could not be found and checked on all of the surveys. However, this is not considered to have had a significant impact on the outcome of the surveys as a high proportion (at least 80%) of the mats were found each survey.

3.0 Results

- 3.1 A single adult female common lizard was found onsite in the eastern parcel on a single occasion (26 August 2025), the specific location of

which is noted on the Reptile Survey Plan (CSA/3922/127). Full survey results are provided in Table 1 at the end of this appendix.



- Site boundary
- Reptile refugia (total = 50)
- Common lizard



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Project	Land at Mill Lane and London Road, Hitchin	Date	August 2025	Drawing No.	CSA/3922/127
Drawing Title	Reptile Survey Plan	Scale	Refer to scale	Rev	-
Client	Martin Grant Homes	Drawn	RT	Checked	JW

Job Name & No.	3922 Land at Mill Lane and London Road, Hitchin							Beaufort Scale: 0. Calm. Vertical smoke. 1. Light air. Smoke drifts. 2. Light breeze. Leaves rustle. 3. Gentle breeze. Small twigs constantly move. 4. Moderate breeze. Small branches begin to move. 5. Fresh breeze. Small trees in leaf begin to sway.															Other Notes
Set-up Surveyor/ Project Manager	Laura Farrar/Jamie Woolam and Revae Tilbury							Precipitation: [Type] No Rain / Light / Moderate / Heavy [Duration] Intermittent / Continuous															
Set-Up Date	01/05/2025		Total Number of Refugia			50																	
Date	Start/End Times	Surveyor	Weather				Area/ Field No.	Slow worm <i>Anguis fragilis</i>					Common lizard <i>Zootoca vivipara</i>					Grass snake <i>Natrix helvetica</i>					
			Temp (°C)	Cloud Cover (Oktas; n/8)	Wind (Beaufort Scale)	Rain (Type & Duration)		Adult Male (>230mm)	Adult Female (>230mm)	Unidentified Adult	Sub-adult	Newborn	Male	Female	Unidentified Adult	Sub-adult	Newborn	Male	Female	Unidentified Adult	Sub-adult	Newborn	
Survey 1																							
19/05/2025	11:15 - 12:20	RB	15	4	2	None	Whole site	None found															n/a
Survey 2																							
22/05/2025	17:00 - 17:35	RT	14	3 - 2	1	None	Whole site	None found															n/a
Survey 3																							
03/06/2025	15:30 - 16:15	FS	17	4 - 3	4	None	Whole site	None found															n/a
Survey 4																							
06/06/2025	18:40 - 20:00	RB	17	2	1	Rain throughout day before survey	Whole site	None found															n/a
Survey 5																							
13/06/2025	08:45 - 09:15	DJW	19	1	2	None	Whole site	None found															n/a
Survey 6																							
16/06/2025	08:05 - 08:45	RT	17 - 18	0 - 1	2-1	None	Whole site	None found															n/a
Survey 7																							
18/06/2025	08:55 - 09:30	RT/EK	19 - 21	2	1	None	Whole site	None found															n/a
Additional Anecdotal Recording																							
26/08/2025	-	-	-	-	-	-	-	None found					0	1	0	0	0	None found					Adult female common lizard was found onsite in the eastern parcel
								Total Adult			Total Juvenile		Total Adult			Total Juvenile		Total Adult			Total Juvenile		
								0			0		1			0		0			0		

Appendix L

GCN

1.0 Legislation

- 1.1 Great crested newts *Triturus cristatus* are legally protected as European Protected Species (EPS) under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. These Regulations make it an offence to:
- Deliberately capture, injure or kill a great crested newt
 - Deliberately disturb great crested newts, impairing their ability to survive, breed, reproduce or rear/nurture their young
 - Damage or destroy a breeding site or resting place used by a great crested newt
- 1.2 Great crested newts are also fully protected under the Wildlife & Countryside Act 1981 (as amended), making it an offence to:
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place of shelter or protection
 - Intentionally or recklessly obstruct access to any structure or place of shelter or protection
- 1.3 Disturbance of great crested newts is covered by both the 2017 Regulations and the 1981 Act. Disturbance that impairs survival or successful reproduction would be covered by the Regulations, while less significant acts of disturbance may only be covered by the Act.
- 1.4 It is important to note that great crested newts and their habitats (such as breeding ponds) are protected throughout the year, regardless of whether or not newts are present at the time.
- 1.5 Great crested newts are also listed as a species of principal importance for the conservation of biodiversity in England, under Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. The S41 species list is used to guide decision-makers, including planning authorities, in implementing their duty under Section 40 of the NERC Act to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Licensing

- 1.6 Where development is proposed that would result in an offence under the Habitats and Species Regulations, a statutory derogation licence may be granted by Natural England to permit an act that would otherwise be unlawful. To obtain an EPS licence for development, it must be demonstrated that the purpose of the act to be licensed is for:
- “preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 55(2)(e))

- 1.7 In addition, Natural England will not grant an EPS licence unless they are satisfied that:

- "There is no satisfactory alternative" (Regulation 55(9)(a))
- "The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" (Regulation 55(9)(b))

2.0 Methods

Desk Study

- 2.1 In accordance with Natural England's Great Crested Newt Mitigation Guidelines (2001), a desktop search was undertaken in February 2025 to identify ponds within 500m of the Site which may have potential to support breeding great crested newts, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography. 500m is the generally accepted typical maximum dispersal range of this species, with great crested newt most likely to use terrestrial habitat within 250m of breeding ponds.

Habitat Suitability Index (HSI) Assessment

- 2.2 Where ponds were situated within a 500m radius, access permission was requested to undertake a Habitat Suitability Index (HSI) assessment, using the standard approach set out by Oldham *et al.* (2000). These assessments were undertaken for P2 on 23 June 2025 by Laura Farrar ACIEEM (Natural England Class Licence WML-CL08 – Registration Number 2019-41162-CLS-CLS) and Eleanor Koss.

Limitations

- 2.3 Access was not granted for two of the three ponds within 500m of the Site, so suitability for and presence of great crested newts could not be determined. Additionally, for the pond we received access to, water levels were very low (c. 10cm) and high in sediment, so an environmental DNA (eDNA) survey could not be undertaken.

3.0 Results

Desk Study

- 3.1 The desktop search for ponds and subsequent site visits identified three water bodies occurring within 500m of the Site. These ponds are identified on the Pond Plan (CSA/3922/118).

Habitat Suitability Index (HSI) Assessment

- 3.2 The HSI assessment of P2 deemed it to have a score of 0.52 – 'Below Average'. Full results of the survey are included at the end of this appendix.



-  Site boundary
-  250m buffer
-  500m buffer
-  Ponds (with reference)



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Project	Land at Mill Lane and London Road, Hitchin	Date	September 2025	Drawing No.	CSA/3922/118
Drawing Title	Pond Plan	Scale	Refer to scale	Rev	A
Client	Martin Grant Homes	Drawn	RT	Checked	JW

Table 1. HSI Results

Habitat Suitability Factors:		Pond Number and Grid Reference
		P2
		TL 19329 27707
Map location	Category	Zone A
	SI Value	1
Pond area in m ²	Category	1200m2
	SI Value	0.925
Permanence / Desiccation	Category	Rarely Dries
	SI Value	1
Water quality	Category	Bad
	SI Value	0.01
Percentage perimeter shade to at least 1m from shore	Category	91-95%
	SI Value	0.3
Waterfowl impact (excluding moorhen)	Category	Absent
	SI Value	1
Fish presence	Category	Absent
	SI Value	1
Number of ponds within 1km not separated by barriers	Category	5
	SI Value	0.75
Terrestrial habitat	Category	Moderate
	SI Value	0.67
Percentage of pond surface occupied by aquatic vegetation (March – May)	Category	66-80%
	SI Value	1
Product		0.001394438
HSI Score		0.518131392
HSI Suitability		Below Average

*Disclaimer: The HSI Calculator is a tool to provide a general assessment of great crested newt *Triturus cristatus* habitat suitability in accordance with Oldham et al., 2000 and Brady, 2010. It is the responsibility of the user to check the accuracy of the outputs. The copyright holder accepts no responsibility for repercussions (financial and/or legal) resulting from inaccurate or incorrect outputs.*



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