Ecological Impact Assessment

June 2024

Land South of A507 and west of Buntingford

Prepared by
CSA Environmental

On behalf of
Hallam Land Management Limited

Report No: CSA/6815/02

CSA environmental

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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

Commercial development including employment land is proposed at Land South of A507 and West of Buntingford, Hertfordshire, for which outline planning permission will be sought.

CSA Environmental was instructed by Hallam Land Management Limited to undertake an Ecological Impact Assessment (EcIA) of the proposed development. To inform this assessment, a desktop study and UKHab survey were undertaken, in addition to wintering bird and badger surveys.

The Site is dominated by arable land with hedgerows, and no nature conservation designations cover the Site or adjacent land. Small woodlands within and adjacent to the Site provide greater interest, with Thistley Vale Brook located c. 0.02km to the west of the Site. A suite of targeted species and habitat surveys are scheduled for 2024 to inform detailed mitigation and compliance with applicable legislation where relevant.

Habitat creation is proposed to include 'Buntingford Park', to comprise structural tree planting, grasslands and SuDS, as well as wildlife niche features such as invertebrate banks. Opportunities for ecological enhancement may be secured by planning condition.

Based on successful implementation of the proposed avoidance, mitigation and enhancement, the development is not anticipated to result in any significant residual negative effects on important ecological features. The scheme is considered to accord with all relevant nature conservation legislation, as well as with the provisions of East Hertfordshire District Plan.

1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf of Hallam Land Management Limited. It sets out the findings of an Ecological Impact Assessment (EcIA) of proposed development at Land South of A507 and West of Buntingford, Hertfordshire (hereafter 'the Site'). Commercial development including employment land is proposed at the Site, for which outline 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. 13.28ha and consists of a single arable field bound by hedgerows, with a small, wooded copse (see Habitats Plan in Appendix A). The Site is located around central grid reference TL 3526 2940, to the west of Buntingford. The landscape surrounding the Site is dominated by arable fields and associated ditches and boundary hedgerows, with small, scattered parcels of semi-natural woodland. Residential and commercial land within Buntingford lies to the east.

1.4 An initial desk study and field survey, including a UK Habitat Classification survey were undertaken for the Site in November and December 2023 as part of a Preliminary Ecological Appraisal, the findings of which are presented herein. In addition, the following further survey work was undertaken between December 2023 and February 2024:

- Badger Survey (February 2024)
- Wintering Bird Surveys (December 2023 – February 2024)

1.5 The following further survey work is scheduled to be undertaken in 2024:

- Detailed Botanical Surveys
- Bat Ground Level Tree Assessment
- Bat Activity Surveys
- Water Vole & Otter Surveys
- Breeding Bird Surveys
- Reptile Surveys
- Great Crested Newt Surveys

1.6 This EcIA 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.

1.7 An EcIA 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 East Hertfordshire District Council in their review of the planning application.

1.8 This report should be read in conjunction with the Biodiversity Net Gain Assessment: Design Stage report (CSA/6755/03) 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 EcIA 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) (Department for Levelling Up, Housing & Communities, 2023) 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 November 2023 comprising a review of online resources and biological records centre data as detailed below.

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 (ZoI).

3.4 Hertfordshire 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 06 December 2023 by Alexandra Cole MCIEEM, FISC Level 4, encompassing the Site and immediately adjacent habitats that could be viewed.

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):
    - $10m^2$/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 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

3.13 Results of the UKHab survey are presented on the Habitats Plan in Appendix A. Appendix D 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

3.14 The following detailed field survey work was carried out between January and February 2024, with full methods and results provided in the relevant Appendices:

- Badger Survey (Appendix F)
- Wintering bird surveys (Appendix G)

Limitations

3.15 There were no specific limitations to the desktop study. The UKHab survey was conducted outside of the optimal period for botanical surveying when some plant species may not be visible above ground. As the aim was to identify broad habitat types, it is unlikely that this would have compromised the overall aim of the survey. Confirmatory surveys are to be undertaken in 2024.

3.16 Limitations in respect of specific surveys are addressed in the relevant appendices. However, no substantive limitations to work undertaken have been identified.

Evaluation and Assessment

3.17 Ecological features are identified, evaluated and assessed in accordance with the CIEEM Guidelines for Ecological Impact Assessment (2018), with detailed methods provided in Appendix E.

3.18 It is an established principle (CIEEM, 2018) that EcIA 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 designations were identified within 10km of the Site and no national or local statutory designations were identified within 3km of the Site.

Non-Statutory

4.3 Seven Local Wildlife Sites (LWSs) were identified within 2km of the Site. These non-statutory designations are described in Table 1 below.

4.4 LWSs are designated according to criteria applied in a county context and are therefore considered to be of ecological importance at a County level.

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		
-		
Non-Statutory Designations within 2km		
Porters Close	c. 0.8km east	Building and environs important for protected species. Supports a pipistrelle sp. maternity roost.
Downhall Ley (Buntingford)	c. 0.8km east	Building and environs important for protected species. Supports a pipistrelle sp. bat roost and Leisler's maternity roost.
Foxglade & Perryden, Aspenden	c. 0.9km south	Building and environs important for protected species. Supports pipistrelle sp. and brown long-eared bat roosts.
Wakeley Spring Green Lane (part)	c. 1.1km south	Ancient hedge and tree-lined green lanes supporting a good range of native woody species. There is a greater number of woody species along the northern end. The ground flora supports typical flora of hedgerows.
Throcking Churchyard	c. 1.2km north-west	Churchyard with heavily mown but moderately species-rich old neutral grassland plus hedgerows and trees. Grassland indicator species present include bird's-foot-trefoil *Lotus corniculatus*, common knapweed *Centaurea nigra*, cowslip *Primula veris* and common sorrel *Rumex acetosa*.

Corneybury Farm Area	c. 1.2km north-east	Building and environs important for protected species. Supports Natterer's and brown long-eared bat maternity roosts.
Burymead Lane and Paddock	c. 1.7km west	Ancient green lane and a small field. The lane supports several woodland indicators. Trees, including ash *Fraxinus excelsior* and hazel *Corylus avellana*, occur along the banks with some neutral grassland along the track. The small field supports unimproved damp neutral grassland indicators. Protected species have been recorded.

Habitats and Flora

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

Irreplaceable Habitats

4.6 There is no ancient woodland, as shown on the ancient woodland inventory, covering any part of the Site or immediately adjacent land. The closest area of ancient woodland inventory is Alswickhall Wood, located c. 2.4km east of the Site.

4.7 A small woodland (W2, c. 1.3ha) is present to the south of F1, outside of the redline boundary. This woodland is named on historic maps dating to 1888 as 'The Thicket', indicating that it is old and potentially ancient in origin. Further botanical and arboricultural survey identified a total of 3No. veteran oak *Quercus robur* trees within the woodland. However, ground flora and other evidence is not indicative of ancient woodland. In addition to The Thicket (W2), three small, wooded copses (W3, W4 & W5) are located further the south of the redline boundary and also appear on historic maps dating to 1888. W4 appears on historic maps as 'Old Gravel Pit' and comprises a steep bank with chalk substrate and vegetation comprising abundant hawthorn *Crataegus monogyna* and elder *Sambucus nigra*. It also supports a main badger sett. These woodlands are discussed in greater detail below.

4.8 No trees on or adjacent to Site are listed on the Ancient Tree Inventory.

4.9 Aspenden Hall is located off-site to the south. Based on historic maps, parkland formerly associated with the hall appears to extend into the Site with remnant woodlands (W3 and W5) having planted species (horse chestnut) present. Woodland W2 (The Thicket) may have formed the far north-eastern corner of the parkland. The former parkland within the Site appears to have come into arable cultivation in the late 19th/early 20th Century.

Notable Flora Records

4.10 The HERC provided 68 records of 25 notable plant species from within the search area. Those of potential relevance to the Site include species associated with arable habitats and field margins such as cornflower *Centaurea cyanus,* shepherd's-needle *Scandix pecten-veneris*, dwarf spurge *Euphorbia exigua* and field scabious *Knautia arvensis*.

4.11 Other species of note include 17 records of four species listed within the Wildlife and Countryside Act's Schedule 9 (WCA9) list of invasive non-native species. These species included variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*, Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Reynoutria japonica* and giant hogweed *Heracleum mantegazzianum*. However, the majority of records were given to a grid reference accuracy of 2km and therefore their exact location could not be determined. No non-native invasive species were identified during the survey.

Arable and horticulture (c1)

4.12 The Site is dominated by a single arable field (F1), which had been sown with a winter crop at the time of survey, determined to be wheat during later surveys. Field margins across the Site are very narrow, up to a maximum of c. 1.5m, and supporting common arable plant species. Grasses include perennial rye-grass *Lolium perenne*, annual meadow-grass *Poa annua*, false oat-grass *Arrhenatherum elatius*, common couch *Elytrigia repens*, red fescue *Festuca rubra* and Yorkshire fog *Holcus lanatus*. Herb species include cow parsley *Anthriscus sylvestris*, creeping thistle *Cirsium arvense,* dove's-foot crane's-bill *Geranium molle*, nipplewort *Lapsana* sp., mugwort *Artemisia vulgaris*, common knapweed *Centaurea nigra*, bristly oxtongue *Helminthotheca echioides*, white dead-nettle *Lamium album*, common ragwort *Senecio jacobaea* and common field speedwell *Veronica persica*.



Photograph 1. Field F1 sown with a winter wheat crop, with narrow field margins. Looking north-east towards Baldock Road.

Importance

4.13 Taken together, the narrow arable field margins are indicative of the arable habitats which dominate the wider landscape. Given their limited extent and absence of rare or notable arable plants, this habitat falls short of the criteria for ecological importance and is scoped out of further assessment.

Other broadleaved woodland (w1g)

4.14 A single wooded copse W1 is located in the south-east of the Site and comprises an outgrown hazel *Corylus avellana* coppice with hawthorn, goat willow *Salix caprea*, dog rose *Rosa canina*, ash, ivy and elder.



Photograph 2. Woodland W1 with outgrown hawthorn, hazel and dense bramble scrub.

Importance

4.15 Woodland W1 falls short of the threshold for consideration under the Hertfordshire Local Wildlife Sites selection criteria. However, this woodland comprises native woody species and provides habitat opportunities for a range of species. This woodland is therefore of intrinsic ecological importance, significant at the Local level.

Hedgerows (h2a)

4.16 A total of three (H1, H2 & H5) hedgerows are present across the Site. All hedgerows are well-established and subject to varying management. Hedgerow H1 runs along the north of the Site, adjacent to the A507 and is subject to closer management, preventing encroachment on the road. H1 widens to an off-site tree-belt the east, as it runs adjacent to F1. Hedgerows H2 and H5 are associated with dry ditches. Ground flora

associated with the on-site hedgerows is restricted to the narrow field margins which comprise a range of common grass and herb species.



Photograph 3. Hedgerow H5 looking north.

4.17 On-site hedgerows comprise a range of species with mature trees including elm *Ulmus* sp., field maple *Acer campestre*, wayfaring tree *Viburnum lantana* and ash *Fraxinus excelsior*. Hedgerows also comprise understorey species including blackthorn *Prunus spinosa,* hawthorn *Crataegus monogyna*, elder *Sambucus nigra* and dogwood *Cornus* sp., with climbers including ivy *Hedera helix*, rose *Rosa* sp. and spindle *Euonymus europaeus*.

Importance

4.18 Hedgerows on-site meet the criteria as a habitat of Principal Importance 'Hedgerows' under Section 41 of the NERC Act (2006). The network of hedgerows at the Site is therefore assessed to be of ecological importance at the Local level.

<u>Lowland mixed deciduous woodland (w1f) (off-site)</u>

4.19 Woodland W2 is named on historic maps dating to 1888-1915 as 'The Thicket', indicating that it is old and potentially ancient in origin. W2 has a chalky substrate and undulating topography with features including a bank along the eastern boundary which runs adjacent to a grassed track, a central ride, deadwood and pits which contained water at the time of survey. A seasonally wet ditch also runs along the western boundary. At the time of survey there was evidence of human activity in the form of litter and fly tipping within the woodland. The woodland comprises a diverse range of mature trees, including oak trees with veteran characteristics, field maple *Acer campestre*, elm *Ulmus* sp., beech *Fagus sylvatica* and sycamore *Acer psuedoplatanus*. Understorey species include holly *Ilex aquifolium*, hawthorn and hazel.

Field maple, hazel and holly are all included on the Hertfordshire ancient woodland vascular plants list. However, ground flora was sparse at the time of survey, dominated by cow parsley, with grasses including wood meadow-grass *Poa nemoralis*, rough meadow-grass *P. trivialis* and false brome *Brachypodium sylvaticum,* and herbs including dog's mercury *Mercurialis perennis*, wood avens *Geum urbanum*, herb Robert *Geranium robertianum* and common nettle.



Photograph 4. Woodland W2 'The Thicket', with bank along eastern boundary, deadwood and mature trees.

Importance

4.20 Woodland W2 does not appear on the ancient woodland inventory, although it is shown on both OS six-inch maps dating between 1888-1915, and first edition one inch to one mile OS maps. However, field evidence does not support this woodland being ancient in origin, with less than 10 ancient woodland indicator species identified and field evidence to support evidence of ancient origin restricted to ditches, boundary banks and 3No. veteran trees.

4.21 Lowland mixed deciduous woodland is listed as a habitat of Principal Importance under Section 41 (S41) of the NERC Act (2006). Woodland W2 is therefore of ecological importance at the Local level.

Fauna

Bats

Desk Study

4.22 A total of 516 bat records were identified within the search area, dating from 1976 to 2020. These include the following species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Nathusius's pipistrelle *P. nathusii*, noctule *Nyctalus noctula*, brown long-eared bat *Plecotus auritus,* Leisler's bat *N. leisleri*, Natterer's bat *Myotis nattereri*, Daubenton's bat *M. daubentonii*, whiskered/brandt's bat *M. mystacinus*/*M. brandtii*, serotine *Eptesicus serotinus* and barbastelle *Barbastella barbastellus*. Of these records, 145 pre-date 2000 and 347 records were given to a grid reference accuracy of 1km or less and therefore their exact location could not be determined.

4.23 The closest records to the Site are of common pipistrelle (c. 0.5km to the east of the Site), from aural bat detector records near to hedgerows bordering arable land. Records of other species are c. 0.75km or further from the Site. There are 59 records that describe roosting bats, dating between 1976 and 2014, with 24 of these records considered historical (pre-2000). All bat roost records are c. 0.8km or further from the Site, with the majority in association with the village of Buntingford. Four of the LWSs within 2km of the Site are designated for their buildings and environs which support bat roosts, including maternity roosts, of the following species: Natterer's, brown long-eared bat, pipistrelle sp. and Leisler's.

Use of the Site

4.24 The on-site arable habitats provide some sub-optimal opportunities for foraging bats. However, hedgerows, in particular those with associated mature trees, and the (off-site) Thistley Vale Brook provide greater opportunities including navigational features and foraging opportunities for bats. The on-site woodland (W1) has limited potential to provide roosting opportunities for bats. However, W2-W5 provide greater opportunities. In the wider landscape, small pockets of woodland are present within a 2km radius of the Site and further afield. These include ancient and semi-natural woodlands. Thistley Vale Brook runs c. 0.02km west of the Site, continuing to the north-west and south-east and providing navigational features and foraging opportunities for bats.

4.25 Use of the Site by bats will be confirmed by bat activity surveys, to include night-time bat walkover and automated/static monitoring surveys, which are scheduled to be undertaken in 2024. Ground level tree assessments will also be undertaken of any trees identified for removal, or which will be impacted by the proposals to identify any potential rooting features/bat roosts and determine the need for further survey work.

Importance

4.26 The habitats on-site provide some limited opportunities for bats, restricted to linear features including hedgerows. Greater opportunities are afforded by adjacent woodlands, Thistley Vale Brook and the wider landscape; however, these remain limited. It is therefore anticipated that any bat assemblage found to be using the Site for foraging and commuting will be of no more than Local ecological importance. Confirmatory surveys are to be undertaken in 2024, following which the importance of the Site for bats will be reassessed. However, given the dominance of arable habitats and limited size of the woodlands, it is unlikely that the Site would support a population of bats at greater than the Local level.

Badger

Desk Study

4.27 The HERC have provided 34 records of badger *Meles meles* from within the search area, dating from 1970 to 2021. The closest record to the Site is of a roadkill from Buntingford Bypass, dating from 2014. Six records of setts were provided within the search area. The closest record of a sett dates from 1997 and is located 0.9km south of the Site, in association with a wooded belt. The most recent record of a sett dates from 2013 and is located c. 1.0km south-east of the Site in association with a new residential development.

Use of the Site

4.28 A main badger sett with c. 20 active sett entrances was identified within off-site W4 west of the Site. The sett has evidently been in recent use, with fresh spoil piles and well-defined paths between entrances and throughout W4. Three further active sett entrances with fresh spoil are located on the north-western boundary of the woodland, within the adjacent arable field. A single sett entrance was also identified at the south-western end of H4.

4.29 Hedgerows along Site boundaries and the woodland parcels provide opportunities for badger to dig setts on-Site, with arable habitats providing some limited foraging opportunities for badger.

Importance

4.30 Badgers are not of current conservation interest but both badgers, and their setts, are protected under the Protection of Badgers Act 1992 and are therefore considered as part of this assessment on this basis only.

Dormouse

Desk Study

4.31 No records of dormouse *Muscardinus avellanarius* were identified within the search area. Dormice have historically been present within Hertfordshire, although their current distribution is known to be very

limited due to fragmentation of suitable habitat for this species within the County. Both historic and more recent records as referenced in the Hertfordshire Biodiversity Action Plan show the closest known dormouse population to be within Scales Park, over 5km north-east of the Site. This woodland is separated from the Site by urban development and arable farmland, with little suitable habitat to provide connectivity.

Use of the Site

4.32 Hedgerows and the woodland (W1-W5) on and adjacent to the Site provide some habitat for dormice albeit with limited floristic and structural diversity required to provide optimal habitat for this species. These habitats have some connectivity to wider hedgerows and woodland, albeit in the absence of optimal habitats (e.g. ancient woodland >20ha). On balance there remains some potential for dormouse to be present and use of the Site by dormice will be confirmed by surveys which are scheduled to be undertaken in 2024.

Importance

4.33 The habitats on and adjacent to the Site provide some limited opportunities for dormice. It is therefore anticipated that any dormouse population found to be using the Site will be of no more than Local ecological importance. Confirmatory surveys are to be undertaken in 2024, following which the importance of the Site for dormice will be reassessed.

Riparian Mammals

Desk Study

4.34 No records of water vole *Arvicola amphibius* were identified within the search area. Two records of otter *Lutra lutra* were identified within the search area, dating from 1991 and 2008. These records were given to a grid reference accuracy of 1km or less and therefore their exact location could not be determined.

Use of the Site

4.35 Thistley Vale Brook runs c. 0.02km west of the Site boundary and connects to the River Rib (c. 0.9km east of the Site) which has the potential to support water vole and otter.

4.36 No evidence of water vole or otter was identified in association with Thistley Vale Brook during the initial PEA survey. However, the channel and banks are suitable for use by water vole for dispersal, foraging and burrowing along majority of the watercourse surveyed. In some areas, the brook becomes heavily shaded/choked with bramble scrub vegetation, reducing suitability for water vole. Overall, Thistley Vale Brook provides moderate suitability to support a water vole population and suitability could be improved if the channel and bankside vegetation were subject to an appropriate management regime.

4.37 Otter may also use Thistley Vale Brook channel for dispersal, and occasional foraging. However, adjacent habitats do not provide suitable opportunities for holts with on-site woodland separated from the brook by arable habitats. Thistley Vale Brook has overall low suitability to support otter, with the potential for use by transient individuals only.

Importance

4.38 Water vole and otter are listed as a species of Principal Importance under Section 41 of the NERC Act (2006) and presence of either species would meet the criteria for Local Wildlife Site selection. Should either species be present, the Site would therefore be assessed to be of ecological importance at, as minimum, the Local level. Given the limited extent of suitable habitat available, it is unlikely that the Site would support a population of water vole or otter significant at greater than the Local level.

4.39 Confirmatory surveys are to be undertaken in 2024, following which the importance of the Site for water vole and otter will be reassessed. However, given their legal protection water vole and otter are included in the assessment of effects below in the context of this legislation.

Other Mammals

Brown Hare

4.40 Twenty-seven records of brown hare *Lepus europaeus* were identified within the search area, dating from 1984 to 2021. Eight of these records are considered historical (pre-2000), with the rest dating from 2014 or later. The closest record dates from 1984 and is located c. 1.3km north of the Site, within an arable field.

4.41 The Site provides suitable habitat for brown hare with arable habitats providing opportunities for this species to lay-up and forage. The surrounding area provides additional habitat suitable to support this species which is known to have a large home range.

4.42 Brown hare occupy large home ranges and the c. 13ha of arable land which dominates the Site likely contributes to the home range for an individual hare, albeit, providing suboptimal habitat as the Site lacks the long grassland and mosaic of habitats favoured by this species.

4.43 Brown hare are listed as a species of Principal Importance under Section 41 of the NERC Act (2006). Given the extent of suitable habitat for this species, the Site is concluded to be of Local importance for brown hare.

Hedgehog

4.44 Thirty-two records of hedgehog *Erinaceus europaeus* were identified within the search area, dating from 1966 to 2021, with six records considered historical. The closest recent record dates from 2015 and is located is c. 0.3km north-east of the Site within the village of Buntingford.

4.45 No evidence of hedgehog was identified during the survey. On-site opportunities for hedgehog are provided by hedgerow, woodland and arable habitats which provide shelter and foraging opportunities. Within the wider landscape, nearby residential gardens situated within Buntingford provide further opportunities for this species.

4.46 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

4.47 One historical record of harvest mouse *Micromys minutus* was identified within the search area, dating from 1985. This record was given to a grid reference accuracy of 2km and therefore the exact location could not be determined.

4.48 No evidence of harvest mouse was recorded during the survey. Harvest mice are listed as a species of Principal Importance under Section 41 of the NERC Act (2006). However, the current management of the arable land dominating the Site provides no substantial breeding opportunities for this species. Therefore, based on current conditions harvest mouse are considered likely absent from the Site and are not considered further within this report.

Birds

Desk Study

4.49 A total of 9,493 records of 88 bird species were identified within the search area, dating from 2001 to 2020. Those of potential relevance to the Site comprise species associated with arable land and field margins.

4.50 Notable desk study records for the winter/passage periods include flocks of lapwing *Vanellus vanellus*, and potentially golden plover *Pluvialis apricaria*, as well as farmland passerines such as skylark *Alauda arvensis*, corn bunting *Emberiza calandra*, and yellowhammer *Emberiza citronella*.

4.51 Records for the breeding season include several passerine species of nature conservation importance (e.g. turtle dove *Streptopelia turtur*, and yellow wagtail *Motacilla flava*), as well as a number of species listed on Schedule 1 of the Wildlife & Countryside Act (1981), as amended. These include: quail *Coturnix coturnix*, stone curlew *Burhinus oedicnemus*, red kite *Milvus milvus*, hobby *Falco Subbuteo* and barn owl *Tyto alba*.

4.52 With exception of tree inspections to confirm the presence/absence of nesting barn owls (see below for further details), no breeding bird surveys have been possible, at the time of writing, due to the seasonal timing of this survey type. In the absence of this survey data, no further information pertaining to the composition and ecological importance of the Site's baseline breeding bird assemblage has been included. However, confirmatory breeding bird surveys are to be undertaken in 2024, following which the importance of the Site for birds will be reassessed.

Use of the Site

4.53 The 2023/24 winter bird surveys have identified that the Site supports a range of wintering birds that is typical of farmland and urban fringe habitats. A total of 40 species were recorded within the Site and its immediate surroundings. This included 20 priority species (i.e. species classified as being of national and/or local nature conservation priority, for example, through their inclusion on the Red and Amber Lists in the Birds of Conservation Concern 5 (Stanbury et al., 2021), as follows: barn owl; black-headed gull *Larus ridibundus*; dunnock *Prunella modularis*; fieldfare *Turdus pilaris*; greenfinch *Carduelis chloris*; herring gull *Larus argentatus*; house sparrow *Passer domesticus*; kestrel *Falco tinnunculus*; linnet *Linaria cannabina*; rook *Corvus frugilegus*; red kite; redwing *Turdus iliacus*; skylark; song thrush *Turdus philomelos*; sparrowhawk *Accipiter nisus*; stock dove *Columba oenas*; tawny owl *Strix aluco*; woodpigeon *Columba palumbus*; wren *Troglodytes troglodytes*; and yellowhammer.

4.54 The only farmland wader recorded during the 2023/24 winter bird surveys was lapwing; however, all sightings related to birds flying (commuting) over the Site. No lapwing (or any other farmland waders) were recorded within the Site and its surroundings during the winter bird surveys.

4.55 Five priority raptor species were recorded during the winter 2023/24: kestrel; red kite; sparrowhawk barn owl; and tawny owl. The majority of these the observations involved individual birds commuting and/or foraging through the Site and/or its surroundings. A peak count of four red kite was recorded in January 2024. This included two birds that appeared to be engaging in a brief period of display/courtship flight. Two birds were also observed exhibiting possible breeding behaviour in February 2024. No nest sites that could have been used by nesting red kite in previous years were recorded within woodland or mature trees within the survey area, and no evidence of nest building was recorded during the winter bird survey visits in January and February 2024. Whilst the area of mature woodland to the south of the Site appeared to offer potentially suitable roosting opportunities for this species, no evidence of any communal roost sites was recorded during the winter bird surveys.

4.56 The Site and its surroundings were found to support a range wintering passerines that was considered to be typical of farmland and urban

fringe habitats. Skylark was recorded within an area of arable farmland to the west of the Site. The remaining priority passerine species were primarily associated with the Site's hedgerow/scrub and adjacent woodland habitats. In all cases, the species recorded considered to be present at relatively low densities.

4.57 Four mature trees located in off-site woodland W2 to the south of the Site were subject to inspection from ladder and found to contain features which could be used by nesting (and roosting) barn owl, on account of their size and structure. None of the features contained any evidence to confirm current or recent occupation by barn owl; however, some of the cavities could not be comprehensively inspected due to their extent, complexity, accessibility or height. Although located within a woodland, the trees were in close proximity to surrounding farmland habitats (where a barn owl has previously been recorded foraging during the nocturnal bird surveys). In view of these factors, the presence of nesting barn owl in these features cannot be discounted.

Importance

4.58 Based upon the relatively limited diversity and low density of birds recorded during the 2023/24 winter bird surveys, the Site would be considered of no greater than Local ecological importance for this group.

Reptiles

Desk Study

4.59 A total of nine records of two reptile species were identified within the search area including eight slow-worm *Anguis fragilis* records dating from 2012-2013, and one historical adder *Vipera berus* record dating from 1934. The adder record was given to a grid reference accuracy of 10km and therefore an exact location could not be determined. The slow-worm records are all from the same location, c. 0.4km south-east of the Site in association with an arable field margin.

Use of the Site

4.60 The majority of the Site provides limited foraging and refuge habitats for reptiles being under arable cultivation. However, hedgerows and adjacent off-site grassland associated with Thistley Vale Brooke provide suitable basking, foraging and refuge opportunities. Surveys are to be undertaken in 2024 to confirm the presence/likely absence of reptiles within suitable on-site habitats.

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 two or more native reptile species would meet the criteria for Local Wildlife Site selection. Should reptiles

be present, the Site would therefore be assessed to be of ecological importance at, as minimum, the Local level. Given the limited extent of suitable habitat available, it is unlikely that the Site would support a population of reptiles significant at greater than the Local level.

4.62 Confirmatory surveys are to be undertaken in 2024, following which the importance of the Site for reptiles will be reassessed. However, given their legal protection reptiles are included in the assessment of effects below in the context of this legislation.

Amphibians

Desk Study

4.63 A total of four records of amphibians were identified within the search area, including two great crested newt *Triturus cristatus* records, dating from 2003 and 2015, and two common toad *Bufo bufo* records, dating from 1970 and 2018. The 2015 great crested newt record is c. 1.2km north-west of the Site and is associated with a 'Great Crested Newt Class Survey Licence Return'. The other three amphibian records were given to an accuracy of 1km or less and therefore their exact locations could not be determined.

Use of the Site

4.64 Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts (GCN) are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist. No permanent waterbodies were identified on-site during the site survey which may act as potential breeding ponds, although two ephemeral waterbodies were identified within W2, and 13 appear to be present within a dispersible range of the Site, based on OS mapping.

4.65 The majority of the Site, being dominated by arable habitat provides suboptimal opportunities for amphibians during their terrestrial phase. However, field margins, woodlands and hedgerows provide suitable dispersal corridors, foraging and hibernation opportunities for any GCN which may be present within the on-site ponds or those in the surrounding area.

Importance

4.66 Populations of GCN are known to be present within the wider area, but limited opportunities are present on-site for breeding amphibians. Confirmatory surveys are to be undertaken in 2024, following which the importance of the Site for amphibians will be reassessed. However, given the potential for amphibians to use the Site during their terrestrial phase and the legal protection afforded to GCN, amphibians are taken through to the assessment section on this basis.

Invertebrates

Desk Study

4.67 A total of 125 records of 25 invertebrate species were identified within the search area. Those of potential relevance to the Site include white-letter hairstreak Satyrium w-album, small heath *Coenonympha pamphilus*, Essex skipper *Thymelicus lineola* and cinnabar *Tyria jacobaeae*. The Site is not located within an Important Invertebrate Area (IIA) or within a 'B-line', a network of flower-rich pathways created by Buglife to benefit pollinators and other wildlife.

Use of the Site

4.68 The arable habitats which dominate the Site are unlikely to support a locally important assemblage of invertebrates. However, field margins, woodlands and hedgerows present on-site have the potential to support a range of common and widespread species but there is no indication that these habitats would support large or notable invertebrate assemblages.

Importance

4.69 There is no indication that habitats within the Site would support a particularly notable or large assemblage of invertebrates. As such, the invertebrate assemblage at the Site is anticipated to fall short of the criteria for Local ecological importance and invertebrates are not considered further in this assessment.

Future Baseline

4.70 The Site is presently under active arable management, including the periodic cutting of field margins and hedgerows. Notwithstanding the potential rotation of crop-type, these management interventions maintain the on-site conditions in a relatively stable state. There is no known intention to cease this management, other than to accommodate the proposed development should planning permission be granted. As such, the future baseline status of important ecological features is not anticipated to vary significantly from that at present.

Summary of Ecological Features

4.71 Table 2 below summarises all important ecological features identified within the respective zones of influence, together with the geographic context of their importance:

Table 2. Summary of important ecological features and their geographic context

Ecological Feature	Geographic Context of Importance and/or Protection Status
Non-statutory designations (7 No. LWSs)	County
Lowland mixed deciduous woodland (w1f)	Local

Other broadleaved woodland (w1g)	Local
Hedgerows (h2a)	Local
Watercourses (r1)	Local
Bats	No more than Local Protected (Wildlife and Countryside Act, 1981 [as amended]; The Conservation of Habitats and Species Regulations, 2010 [as amended])
Badger	Protected (Protection of Badgers Act 1992)
Dormouse	No more than Local Protected (Wildlife and Countryside Act, 1981 [as amended]; The Conservation of Habitats and Species Regulations, 2010 [as amended])
Water vole	No more than Local Protected (Wildlife and Countryside Act, 1981 [as amended])
Otter	No more than Local Protected (Wildlife and Countryside Act, 1981 [as amended]; The Conservation of Habitats and Species Regulations, 2010 [as amended])
Brown hare	Local
Wintering birds	Local
Nesting birds	Protected (Wildlife and Countryside Act, 1981 [as amended])
Reptiles	No more than Local Protected (Wildlife and Countryside Act, 1981 [as amended])
Great crested newt	Protected (Wildlife and Countryside Act, 1981 [as amended]; The Conservation of Habitats and Species Regulations, 2010 [as amended])

5.0 ASSESSMENT OF EFFECTS

The Proposed Development

5.1 The following consent is sought from East Hertfordshire District Council:

"Outline planning application for development of employment land (flexible use B2, B8, E(c) and E(g)), up to 60 elderly accommodation units, informal open space, associated works and infrastructure including a new access from A507, with all matters reserved save for access."

5.2 The following impact assessment is based on the Framework Plan (HLM082/016/E) prepared by David Lock Associates and the Draft Illustrative Masterplan (HLM082-020) prepared by Stantec on behalf of Hallam Land Management Limited.

5.3 The construction phase of the proposed development will comprise the following:

- Cessation of arable cultivation
- Removal of sections of hedgerow from H1 and H6 (c. 0.72km) for vehicular and pedestrian accesses
- Construction of employment land (4.71ha)
- Provision of Informal Open Space (6.31ha), including proposed structural planting concentrated at the west of the Site, as well as recreational routes around areas of open space
- Establishment of Sustainable Drainage Systems (SuDS) including attenuation basins set within Informal Open Space to the east of the employment land

5.4 The operational phase of the proposed development will comprise the following:

- Occupation of new employment land
- Increase in human activity, including use of vehicles
- Increased artificial lighting and anthropogenic noise

Assumptions

5.5 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.

5.6 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 of development. 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 woodland, 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 precautionary working methods for protected species specific to the
- works activity
- Updated ecological surveys, where necessary, to identify shifts in the baseline ecological condition (such as to support EPS derogation licence applications) in order that revised impact avoidance and mitigation measures can be adopted as required

5.7 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 of development. The LEMP will set out measures for the establishment and long-term management of newly created and retained habitats to maximise benefits for biodiversity.

Mitigation Hierarchy

5.8 It is an established principle (CIEEM, 2018) that, wherever possible, potential negative effects should be avoided through 'Mitigation by Design', as this gives greater certainty over deliverability, demonstrates a well-designed scheme and ensures the correct application of the 'Mitigation Hierarchy' (as advocated by BS42020:2013, Defra 2019 and CIEEM, CIRIA & IEMA 2016).

5.9 The Proposed Development has sought to minimise effects on existing ecological habitat features at the Site through sensitive design, maintaining and buffering the majority of green corridors currently present at the Site, including the on-site woodland (W1), off-site woodland to the south (W2), on-site hedgerows (H1, H2 and H8) and offsite hedgerow (H5). These existing habitats are to be incorporated into green corridors within and connecting to the proposed Buntingford Park and Informal Open Space across the Site, as shown on the Framework Plan. As shown on the Illustrative Masterplan, Buntingford Park is proposed to feature new structural planting creating a green corridor along the west of the Site and new woodland planting to the west of the employment area. Tree planting is also proposed around boundaries of the open space, with structural planting, hedgerows and

tree planting buffering areas of open space from development from development edge effects.

5.10 The proposed development will necessitate the removal of c. 0.72km of hedgerow to allow access to the Site. However, the retained hedgerows, totalling c. c. 0.91km will be enhanced through infill planting to create species-rich hedgerows, representing a c. 20.46% net gain in the availability of this habitat at the site level.

5.11 This proposed habitat creation not only avoids potential negative effects on existing habitats at the Site, but also prevents loss of habitat for the range of fauna confirmed to be using the Site.

5.12 Further detail of the establishment and long to management of these habitats, to maximise benefits for biodiversity, will be set out in a LEMP at the detailed design stage.

Potential Impacts and Ecological Effects

Local Wildlife Sites (7No.)

5.13 No nature conservation designations are present on-site or adjacent which would be directly affected by the proposed scheme, either in construction or in-operation.

5.14 These Local Wildlife Sites within the surrounding area are all acknowledged to be sensitive to a range of factors. However, as above, no pathways of impact are identified from the proposed commercial/employment development to the LWSs and therefore no significant adverse effects predicted.

Other broadleaved woodland (w1g)

5.15 The on-site wooded copse (W1) is to be retained as part of the proposed development and buffered by areas of Informal Open Space. Adjacent woodland W2 is located south of the on-site green corridor and adjacent to new woodland and structural planting. Whilst retained, the woodlands will be subject to recreational pressure (i.e. trampling of woodland understorey, dog fouling, littering etc.) facilitated by the development but arising from existing and proposed residential dwellings locally.

5.16 In the absence of mitigation, the retained woodlands will also be vulnerable to damage during the construction phase from construction works located close to these habitats or within Root Protection Areas.

5.17 Overall, the proposed development is anticipated to result in impacts to woodlands W1 & W2, resulting in an adverse effect, significant at the Local level.

comprise native species of local provenance, with enhanced hedgerows proposed to be species-rich (>7 species per 30m).

5.27 This habitat creation would be secured by an appropriately worded planning condition and control of detailed landscape design.

Residual Effects

5.28 Subject to the full implementation of the above mitigation no significant adverse effects are predicted.

Bats

5.29 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).

5.30 The on-site arable habitats provide some sub-optimal opportunities for foraging bats. However, hedgerows, in particular those with associated mature trees, and the (off-site) Thistley Vale Brook provide greater opportunities including navigational features and foraging opportunities for bats. The on-site and adjacent woodlands (W1-W5) also have the potential to provide roosting opportunities for bats. Surveys are to be undertaken in 2024 to confirm the extent of use of the Site by bats, including foraging, commuting and roosting.

5.31 The proposed development will result in severance and the loss of hedgerow H1 and H6 for Site access, resulting in a reduction in connectivity across the Site.

5.32 The Site is currently unlit. New artificial lighting of retained habitat during the construction and operational phases may lead to adverse disturbance impacts to bats and other nocturnal wildlife, with a reduction of use and diversity in these areas.

5.33 Overall, given the impacts to hedgerows and woodland on-site and in the absence of mitigation, the scheme would likely result in an adverse effect on the local bat population significant at the Local level, subject to the results of confirmatory surveys.

Mitigation

5.34 It is not predicted that the loss of habitat on-site would have a significant adverse effect on the bat population within the local area. Creation of green corridors, structural landscaping and Informal Open Space across the Site, will provide enhancement of habitats available to bats at the Site.

5.35 The lighting scheme for the Site will be sensitively designed so as to avoid light spill onto created habitat, existing hedgerows and retained vegetation thereby maintaining these habitats as foraging/commuting

features for bats. This would be secured via control of detailed lighting designs and/or a suitably worded planning condition.

5.36 In addition to any mitigation required, enhancement measures will include integrated roosting features into new building/structures across the Site.

5.37 These measures would be secured by an appropriately worded planning condition.

Residual Effects

5.38 Subject to the full implementation of the above mitigation no significant adverse effects are predicted.

Badger

5.39 Badgers are protected under the Protection of Badgers Act (1992). Killing or injury of a badger, or interference with a sett is prohibited.

5.40 A main badger sett has been identified within the off-site woodland W4, with a single outlier sett located off-site at the south-western end of H4. All identified setts will be retained as part of the proposals.

5.41 Given the legal protection badgers are afforded under the Protection of Badgers Act 1992, unlicensed destruction of any active setts to make way for development of the Site would result in potential infringements.

5.42 The Site is currently unlit. New artificial lighting of retained habitat during the works may lead to adverse disturbance impacts to badger and other nocturnal wildlife, with a reduction of use and diversity in these areas.

Mitigation

5.43 No badger setts have been identified on-site. Nearby badger setts have can be retained during and following the development, with no requirement for a mitigation licence from Natural England.

5.44 During the proposed works, badgers are at risk of falling into open excavations or entering open ended pipework (above 150mm diameter), risking an offence under the above legislation. Given the protection badgers received under the Protection of Badgers Act 1992, the following precautionary measures will be implemented which could be secured via a suitably worded Planning Condition:

- Pre-construction badger survey and monitoring for signs of new sett digging.
- Covering any open excavations with wooden boards, or fitting them with appropriate escape ramps, in order to prevent badgers falling into them and injuring themselves or becoming trapped.

- Monitoring of works area for any new sett excavation during prolonged remediation, construction or landscaping works.
- Night working within 30m of any active existing or new setts will be avoided to prevent noise disturbance and night-time illumination near to setts.

5.45 These measures would be secured by an appropriately worded planning condition.

5.46 In order to maintain ecological functionality of retained and proposed habitats for badger, a sensitive external lighting scheme will be prepared. The future lighting scheme will be developed in consultation with an ecologist to avoid/minimise light spill onto retained and created habitat. This is to maintain dark corridors available for badger and other nocturnal wildlife.

Residual Effects

5.47 Following implementation of the mitigation measures set out at above, no significant residual effects are anticipated.

Dormouse

5.48 Dormice are legally protected through inclusion under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded further protection as a European Protected Species (EPS) under Regulation 43 of the Conservation of Habitats and species Regulations 2017 (as amended).

5.49 Hedgerows and woodlands (W1-W5) on and adjacent to the Site provide some habitat for dormice albeit with limited floristic and structural diversity required to provide optimal habitat for this species. These habitats also have some connectivity to wider hedgerows and woodland. Surveys are to be undertaken in 2024 to confirm the presence/likely absence of dormice within suitable on-site habitats.

5.50 Proposals include the retention of all on-site woodlands and hedgerows. However, H1 and H6 will be severed to provide access to the Site. Should dormice be found to be present on-site, in the absence of mitigation there is the potential for offences to be caused under their protective legislation.

5.51 Overall, in the absence of mitigation and should dormice be present, the scheme would likely result in an adverse effect on these species, significant at the Local level, subject to the results of confirmatory surveys.

Mitigation

5.52 The following mitigation strategy is designed to avoid contravening the Wildlife and Countryside Act (1981, as amended) and Regulation 43 of

the Conservation of Habitats and species Regulations 2017 (as amended) which protects dormice.

5.53 Any hedgerow or wooded habitats to be lost or damaged by construction works will be subject to precautionary clearance works to prevent risk of legal infringement with regard to dormice.

5.54 A two-stage approach will be taken to clearance. Above ground vegetation should be cleared between November and March, and roots and other clearance can take place from April onwards under ecological supervision. If a dormouse or dormouse nest is found, all works will cease, and advice sought from a suitably qualified ecologist.

Residual Effects

5.55 With the implementation of the above mitigation measures, no residual effects are anticipated.

Riparian Mammals

5.56 Water vole and otter are protected under the Wildlife and Countryside Act 1981 (as amended), otter are also protected under the Conservation of Habitats and Species Regulation 2010. This legislation protects water vole and otter from deliberate capture, killing and injury, intentional or reckless disturbance, damage or destruction of a resting site (or breeding place - otter only) and obstruction of access to a resting or sheltering place (or place of protection - water vole).

5.57 Thistley Vale Brook is located off-site, c. 0.02km west. Whilst Thistley Vale Brook has not yet been subject to water vole or otter surveys, no records of water vole and only two records of otter have been provided for the search area. Surveys are to be undertaken in 2024 to confirm the presence/likely absence of water vole and otter within suitable on-site habitats.

5.58 Proposals will buffer Thistley Vale Brook with surface water run-off proposed to be discharged to an existing drainage ditch in the south-east corner of the Site, away from the brook.

5.59 Even in the event that water vole or otter be found to use Thistley Vale Brook, given its physical separation from the Site, and significant buffering from development areas, there remains very limited potential for either species to be directly affected by the proposed scheme. Therefore, it can be reasonably concluded that no significant adverse effects are likely with regard to these riparian mammals.

5.60 Nonetheless standard safeguards will be employed prior to/during construction:

- Pre-construction water vole and otter survey and monitoring for signs of new water vole burrow digging/otter holts.

Mitigation

5.18 Retained woodland and other habitats will be protected in line with standard arboricultural practice (BS5837: 2012).

5.19 Buntingford Park forms part of the development proposals and includes areas of Informal Open Space with natural play trails and new tree/copse planting. No trails cross through the on-site or off-site woodlands. However, interpretation boards/signage and information leaflets will be provided to educate and inform visitors on the importance of the habitats within and adjacent to Buntingford Park and how to limit negative impacts on these habitats. Dog waste bins will also be provided within Buntingford Park and to prevent dog fouling and build-up of nutrients.

5.20 The retained woodland habitats will be restored through appropriate management interventions, such as coppicing, thinning, retention of deadwood features and, where appropriate, under-planting/seeding. These mitigation and management interventions would be secured by an appropriately worded planning condition, with management set out within a LEMP. It should be noted that woodland restoration works are likely to serve as mitigation for recreational impacts, and therefore the overall condition of the woodlands will be maintained rather than enhanced.

5.21 These measures would be secured by an appropriately worded planning condition.

Residual Effects

5.22 Subject to the full implementation of the above mitigation no significant adverse effects are predicted.

<u>Hedgerows (h2a)</u>

5.23 The scheme would result in the direct loss of 0.72km of hedgerow, within H1 and H8. The severance of this hedgerow will result in a reduction in connectivity across the hedgerow network. Damage of any retained hedgerows could also occur due to construction works located close to hedgerows or within Root Protection Areas.

5.24 Overall, the scheme is anticipated to result in direct loss of hedgerows at the Site, resulting in an adverse effect, significant at the Local level.

Mitigation

5.25 Retained hedgerows and mature trees will be protected in line with standard arboricultural practice (BS5837:2012).

5.26 To compensate for the severance of hedgerows, retained hedgerows will be 'gapped up' with new shrub and tree planting. Planting will

- Standard safeguards against pollution events (in accordance with best management practice) will be adhered to during construction and operational phases.
- Ecological Clerk of Works (ECoW) of any works close to the brook.

Brown Hare

5.61 The proposed development will result in the loss of arable habitats used by brown hare as part of a wider mosaic of habitats within their home range. However, given the location of the Site within a wider landscape of arable habitats, no significant adverse effects are anticipated to the wider population due to the loss of on-site arable habitat.

5.62 During the construction phase there is a risk of brown hare and other small mammals falling into and becoming trapped within open excavations. The above measures proposed to safeguard badgers will also mitigate these risks.

Wintering Birds

5.63 Surveys have confirmed the Site supports a range of wintering birds that is typical of farmland and urban fringe habitats. A total of 40 species were recorded within the Site and its immediate surroundings, including 20 priority species.

5.64 The development proposals would result in the permanent loss of all arable land (13.28ha) within the Site. The employment area would account for just 4.71ha of this loss, with a further 7.24ha being subject to soft landscaping works, in order to deliver the proposed development's provision of Informal Open Space (IOS). The design of the proposed informal open space includes a range of habitat creation/enhancement measures that are considered likely to offset the loss of arable land on the Site's wintering bird assemblage.

5.65 Notwithstanding the habitat creation and enhancement measures associated with the proposed informal open space, it is considered possible that skylark *Alauda arvensis* may still be displaced from the Site as a wintering species (owing to their close association with arable habitats). However, given that: (a) a very small numbers of birds were recorded within the Site during the 2023/24 winter bird surveys; (b) and the large extent of suitable arable habitat for this species that exists in the Site's wider surroundings, their potential absence from the Site is not considered to be significant in the context of the Site's wintering bird assemblage.

Mitigation

5.66 The informal open space proposals include the provision of new wetland habitats through the creation of a Sustainable Drainage System (SuDS) basin in the south-east of the Site. These waterbodies would provide suitable foraging and roosting opportunities for a range of wetland birds,

such as mallard *Anas platyrhynchos*, snipe *Gallinago gallinago*, and reed bunting *Emberiza schoeniclus*. This could be achieved by incorporating a range of micro-habitats into the design of the wetlands, including areas of open water, vegetated waterbody margins, areas of soft mud, and stands of tall rushes and reeds.

5.67 The landscape design of the informal open space would also be expected to offer benefits to the assemblage of passerines that was recorded during the 2023/24 winter bird surveys. On-site and adjacent woodland will be retained as well as the existing hedgerow network. Further to this, a series of linear copses and new woodland habitat would be created, which would increase the extent of woodland habitat on the Site from 0.15ha (under the existing situation) to 1.05ha (under the proposed development). The new copse planting would form a corridor through the centre of the Site, and the woodland would effectively represent an extension to the existing woodland area. New tree and shrub planting would comprise a diverse mix of native species of local provenance, including a variety of fruit- and seed-bearing species. This would provide additional foraging and roosting resources for birds, particularly wintering thrushes (such as fieldfare, redwing, and song thrush). These species were recorded on the Site at relatively low densities during the 2023/24 winter bird surveys, and an increase in the availability of fruit-bearing shrubs and trees could lead to increases in the local wintering populations of these birds.

5.68 A significant proportion of the informal open space would undergo works to create an area of species-rich grassland and wildflower meadow habitat. This habitat creation measure would be achieved by planting a mix of native grasses, wildflowers and arable weeds of local provenance. Particular emphasis would be placed upon the inclusion of seed-bearing species within the planting mix, since these would offer farmland passerines (such as linnet *Linaria cannabina*, and yellowhammer *Emberiza citrinella*) with an abundant winter foraging resource. In order to maximise the availability of the seed resource for birds during the winter months, a grassland habitat management plan would also be adopted, which would require that: (a) areas of grassland/meadow be left 'uncut' and retained over the winter months: and (b) grass cutting elsewhere within the informal open space takes place after late-summer to allow flowering plants to set seed.

Residual Effects

5.69 Whilst the development proposals would give rise to the permanent loss of arable habitat within the Site, the habitat creation and enhancement measures that are embedded in the design of the informal open space (as described above) are considered sufficient to offset any associated adverse impacts upon the Site's wintering bird assemblage. Therefore, with the implementation of the above mitigation measures, no residual effects on wintering birds are anticipated.

Nesting Birds

5.70 Wild birds, their active nests, and their eggs are protected under the Wildlife and Countryside Act 1981 (as amended). Throughout the works there is the risk of offences in respect of any birds nesting in vegetation during the nesting bird season (March to August, inclusive).

5.71 Assessment of likely significant effects of the proposed development on breeding birds will be undertaken following the completion of breeding bird surveys in 2024.

Mitigation

5.72 To avoid committing an offence under the Wildlife and Countryside Act 1981 (as amended), any vegetation clearance will take place outside of the bird nesting period (i.e. outside of March to August inclusive), or failing that, following confirmation by a suitably qualified ecologist that nesting birds are absent from the habitats to be cleared.

Residual Effects

5.73 With the implementation of the above mitigation measures, no residual effects are anticipated.

Barn Owl

5.74 In addition to nesting birds more generally, the potential for nesting and roosting barn owl has been identified within cavities in four mature trees within woodland to the south of the Site. Whilst no evidence of current or recent occupation by barn owl has been recorded, comprehensive inspections have not been possible due to the nature and extent of the cavities.

5.75 In addition to the above protection under Wildlife & Countryside Act, barn owl receives protection through their inclusion on Schedule 1 of the Act, which makes it an offence to disturb this species 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 their dependent young.

5.76 The proposed development would not necessitate the felling of any of the trees identified as providing potentially suitable nesting opportunities, Therefore, the physical loss of any barn owl nest sites in these trees (if present) would not be expected to occur.

5.77 Construction phase activities are likely to give rise to increased levels of human activity, noise and potentially vibration throughout their duration. There remains potential therefore for at least one pair of nesting barn owls (if present) to be disturbed and potentially displaced.

5.78 Whilst individually unlikely to significantly undermine the conservation interests of local barn owl populations, the above potential impacts could, in combination, produce a negative effect significant at the

Local level. Disturbance to nesting barn owl as a result of activities associated with the proposed development may also constitute an offence under subsection 1(5) of the Wildlife and Countryside Act 1981 (as amended).

Mitigation

5.79 The impact assessment has identified that the development proposals could result in the effective loss of potential nesting sites within the existing area of woodland, as a result of new adjoining areas of woodland planting deterring barn owl from accessing these sites (once the new tree planting has reached sufficient maturity). Whilst this would not be expected to occur for a number of years following the planting of the new woodland habitat, artificial nest boxes will be installed at two nearby locations to mitigate for the potential future loss of these nesting opportunities. The artificial nest boxes would be installed in locations which: (i) are not currently known to support nesting barn owl; (ii) could be safeguarded in the long-term; and (iii) could be accessed to allow to annual maintenance under a Landscape Environment Management Plan (LEMP) or similar management agreement.

5.80 A monitoring programme to determine the presence/absence of nesting barn owl from any trees which are considered to offer potential nesting opportunities for this species would also be undertaken prior to and/or during nearby construction/habitat creation works. In the event that any active barn owl nest sites were identified, restrictions on the timing, nature and extent of any nearby construction and habitat creation works may need to be imposed in order to avoid displacing nesting birds, and to avoid any associated offence from being committed under the Wildlife and Countryside Act (1981), as amended. Barn owl typically nest from March to August (inclusive), although active nests have been recorded in any month of the year.

Residual Effects

5.81 With the implementation of the above mitigation measures, no residual effects are anticipated.

<u>Reptiles</u>

5.82 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 species of Principal Importance in England.

5.83 Hedgerows and adjacent off-site grassland provide limited areas of suitable habitat which may support a population of reptiles, with records of slow-worm and adder identified within the search area. Surveys are to be undertaken in 2024 to confirm the presence/likely absence of reptiles within suitable on-site habitats.

5.84 Should reptiles be found to be present on-site, in the absence of mitigation there is the potential to kill or injure reptile species and therefore result in offences being caused under their protective legislation.

5.85 Overall, in the absence of mitigation, where reptiles such as adder are present, the scheme would likely result in an adverse effect on these species, significant at the Local level, subject to the results of confirmatory surveys.

Mitigation

5.86 The following mitigation strategy is designed to avoid contravening the Wildlife and Countryside Act (1981, as amended) which protects British reptile species against intentional killing.

5.87 Any hedgerow or grassland habitats to be lost or damaged by construction works will be subject to precautionary clearance works to allow reptiles to disperse safely into adjacent retained habitat, avoiding any direct impact to individual reptiles.

5.88 Vegetation clearance will ideally take place during the period March to September, during warm and dry conditions when reptiles will be active and able to disperse safely, subject to nesting bird constraints.

5.89 Clearance will be completed in a staged manner, comprising gradual vegetation height reduction from 200mm to ground level. All arisings will be removed to prevent use as refugia.

5.90 Directional cutting will be undertaken strategically at the furthest point from the retained suitable reptile habitats, moving gradually towards retained habitats. Suitably experienced persons will move ahead of the clearance works, conducting a hand search of any potential refugia (including brash and rubble piles) for reptiles. Any reptiles found will be captured and relocated to an adjacent area of retained habitat.

5.91 Prior to the onset of works vegetation height will be maintained below 150mm to maintain habitat as unsuitable for reptiles and prevent the dispersal of reptiles into the area of works.

5.92 It is not predicted that the loss of habitat on-site would have a significant adverse effect on the reptile population within the local area. Creation of green corridors, structural landscaping, Informal Open Space and provision of wildlife ponds across the Site, will provide enhancement of habitats available to reptiles at the Site.

5.93 These measures would be secured by an appropriately worded planning condition.

Residual Effects

5.94 With the implementation of the above mitigation measures, no residual effects are anticipated.

Great Crested Newt

5.95 Great crested newts (GCN) and their habitats are strictly protected under the Wildlife and Countryside Act 1981 (as amended) and the conservation of Habitats and Species Regulations 2010. In combination this legislation protects great crested newts from deliberate capture, killing and injury, intentional or reckless disturbance, damage or destruction of a resting site or breeding place, and intentional or reckless damage, destruction or obstruction of a breeding site or rest place.

5.96 A number of ephemeral waterbodies were identified within the off-site woodland (W2), and six further water bodies appear to be present within a dispersible range of the Site, based on OS mapping. Furthermore, GCN are known to be present in the wider area. Whilst aquatic habitats on-site are limited to ephemeral waterbodies which dry and therefore provide sub-optimal suitability for GCN, there remains a small possibility these waterbodies may be used for breeding and that habitats on-site may be used by individual GCN during their terrestrial phase. Therefore, in the absence of mitigation there is the potential to kill or injure GCN and therefore result in offences being caused under their protective legislation. Surveys are to be undertaken in 2024 to confirm the presence/likely absence of GCN within ponds within dispersal distance of the Site.

5.97 The loss of habitat on-site to development is not predicted to have a significant adverse effect on the GCN population within the local area. Furthermore, creation of green corridors, structural landscaping, Informal Open Space and provision of wildlife ponds across the Site, will provide enhancement of habitats available to GCN at the Site.

Mitigation

5.98 It is acknowledged that the 'favourable conservation status' of the local GCN population is unlikely to be affected by the proposed scheme. Nonetheless, it is advised that works be covered under a mitigation ('derogation') licence or permit to ensure legal compliance (i.e. to avoid killing or injury of individual GCN), with the following options available:

- Non-licenced method statement following a precautionary approach to Site clearance, but without the need for a licence.
- 'Traditional licensing' approach, whereby a European Protected Species (EPS) 'derogation' licence is sought for the project from Natural England. With potential requirement for trapping, translocation, habitat compensation and monitoring.

- As above, but with the adoption of Natural England's New Licencing Policies (NLPs), reducing or avoiding the need for trapping and exclusion fencing, with a more 'progressive' mitigation approach focused upon the provision of new habitat for GCN.
- Registration of the Site under the Hertfordshire District Level Licencing (DLL) scheme in association with Natural England, whereby an off-site payment is made to strategic mitigation.

5.99 Utilisation of one of the above methods would prevent or cover any potential killing or injury of individual GCN during construction, which is a legal offence. Consideration of the most suitable mitigation measure to employ will be decided upon following completion of as part of a detailed application.

5.100 These measures would be secured by an appropriately worded planning condition.

Residual Effects

5.101 With the implementation of the above mitigation measures, no residual effects are anticipated.

Residual Effects

5.102 Table 3 below summarises the assessment of potential impacts on each important ecological feature, proposed mitigation and the assessed residual effects.

Table 3. Summary of effects

Important Ecological Feature	Potential Impacts and Effects	Avoidance & Mitigation Measures	Mechanism by which Measures are Secured	Residual Effects
Local Wildlife Sites	No significant adverse effect	-	-	-
Other broadleaved woodland	Local, adverse	Provision of informal open space inc. new tree/copse planting, signage, provision of dog waste bins and detailed management plan	LEMP and detailed design secured through Planning Condition	No significant effect
Hedgerows	Local, adverse	Compensatory tree planting, strengthening of boundary vegetation	Detailed design secured through Planning Condition	No significant effect
Bats	Local, adverse	Creation of green corridors, new infill planting, lighting scheme, provision of integrated bat boxes	Detailed design secured through Planning Condition	No significant effect
Badger	Potential offences caused	Pre-commencement badger survey, precautionary working methods, lighting scheme	Legal requirement/ planning condition	No legal infringement
Dormice	Potential offences caused	Precautionary working methods	Legal requirement/ planning condition	No legal infringement
Riparian Mammals	No significant adverse effect	-	-	-
Brown Hare	No significant adverse effect	-	-	-
Birds (wintering, nesting & barn owl)	Local, adverse Potential offences caused	Nesting bird avoidance measures, habitat creation, provision of integrated bird boxes	Legal requirement/ planning condition	No legal infringement
Reptiles	Potential offences caused	Precautionary working methods, habitat creation,	Legal requirement/ planning condition	No legal infringement

Important Ecological Feature	Potential Impacts and Effects	Avoidance & Mitigation Measures	Mechanism by which Measures are Secured	Residual Effects
		management of habitats on-site		
Great Crested Newt	Potential offences caused	Precautionary working methods, habitat creation, management of habitats on-site	Legal requirement/ planning condition	No legal infringement

Enhancement

5.103 Areas of new habitat creation will provide significant opportunities for a range of species on-site, as well as increasing the biodiversity of the habitats on-site through the provision of new habitats such as grassland, greater structural diversity and improved management of woodlands/hedgerows.

5.104 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, the following key elements/features are proposed:

- Large-scale habitat creation within Buntingford Park- the western portion of the Site will be landscaped to form an area of open grassland and linear wooded habitat running north-south.
- Structural planting across the site will established and managed to form 'ecotones' from high canopy down through shrub layers to tall herbs and grassland, to provide botanical and structural interest along areas of new structural planting, retained woodland and hedgerows.
- Wetland features will be formed around SuDS features in the east of the site to comprise wet grassland and areas of permanent water.
- A range of other ecological enhancement measures will be included subject to detailed design of commercial areas including but not limited to:
    - Wildlife ponds
    - Log piles and hibernacula
    - Further invertebrate banks
    - Bee posts/standing dead wood features
    - Ecological niches such as bird nesting, bat roosting and bee brick features, where construction allows

6.0 CONCLUSIONS

6.1 In the absence of any mitigation measures, the proposed development would have the potential to result in negative effects significant at up to the Local level. However, through the implementation of some straightforward mitigation and precautionary measures as proposed here, the development is not anticipated to result in any significant residual negative effects on important ecological features.

6.2 The Framework Plan and Illustrative Masterplan demonstrate the potential to deliver net benefits for wildlife in the form of additional habitats, with the opportunity to provide additional biodiversity enhancement measures alongside the new housing.

6.3 The measures set out herein can be secured through appropriate conditions attached to any planning consent, and the development may therefore be delivered without harm to nature conservation interests. Specifically, it is anticipated that planning conditions would be used to secure:

- Construction Environmental Management Plan (CEMP): In addition to wider environmental controls and best practice construction management, the CEMP will set out construction-phase impact avoidance measures with respect to nesting birds, barn owl, badger, water vole, otter, reptiles and GCN.
- Landscape and Ecology Management Plan (LEMP): The LEMP will detail the establishment and long-term management of retained and newly created habitats to maximise benefits for wildlife. It will include an Ecological Enhancement Plan drawing, setting out the number, type and position of enhancement features as proposed herein.
- Lighting Strategy: A sensitive lighting strategy will accompany the detailed layout, ensuring that dark corridors are maintained, and minimising light spill to retained and newly created habitats.

6.4 Based on the successful implementation of avoidance, mitigation and enhancement measures set out herein, the scheme is considered to accord with all relevant nature conservation legislation, as well as with the provisions of East Hertfordshire District Plan.

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Appendix A

Habitats Plan



N

- Site boundary
- Survey area
- Arable and horticulture (c1)
- Lowland mixed deciduous woodland (w1f)
- Other neutral grassland (g3c)
- Other woodland-broadleaved (w1g)
- Developed land. sealed surface (u1b)
- Dense scrub (h3)
- Hedgerows (h2a)
- Rivers and streams (r2) (Thistley Vale Brook)
- Trees
- Contours

Note: Hedgerow H6 contains small sections of established hedgerow, with new planting within gaps.

0 200 400 m

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Project	Land South of A507 and West of Buntingford	Date	June 2024	Drawing No.	CSA/6815/103
Drawing Title	Habitats Plan	Scale	Refer to scale	Rev	B
Client	Hallam Land Management Limited	Drawn	RG	Checked	AC

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 (2023) (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 180, 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 186 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
East Herts District Plan (adopted 2018)	
Policy NE1: International, National and Locally Designated Nature Conservation Sites	"Development proposals, land use or activity (either individually or in combination with other developments) which are likely to have a detrimental impact which adversely affects the integrity of a designated site, will not be permitted unless it can be demonstrated that there are material considerations which clearly outweigh the need to safeguard the nature conservation value of the site, and any broader impacts on the international, national, or local network of nature conservation assets. Evidence will be required in the form of up-to-date ecological surveys undertaken by a competent ecologist prior to the submission of an application. The type of evidence required will be commensurate to the scale and location of the development and the likely impact on biodiversity, the legal protection or other status of a site. Where insufficient data is provided, permission will be refused. Proposals should avoid impacts on sites of nature conservation value and wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where adverse impacts are unavoidable, measures to mitigate the impact will be sought, commensurate to the importance of the site in terms of its status in the hierarchy and the contribution it makes to the wider ecological networks. Where adequate mitigation measures are not possible, compensatory measures may be appropriate. Such compensatory schemes should seek to achieve a net gain for nature and the Council will consider the use of conditions and/or planning obligations to secure appropriate mitigation/compensation commensurate to the type and scale of development. Compensatory measures can be situated on or off the development site. The availability of compensatory measures will be a material consideration in the determination of development proposals. Ecological impacts will be quantified by utilising and taking into account a locally approved Biodiversity Metric where appropriate. Development must demonstrate a net gain in ecological units. Ecological information must be supplied in accordance with BS 42020 2013."
Policy NE2: Sites or Features of Nature Conservation Interest (Non-Designated)	"All proposals should achieve a net gain in biodiversity where it is feasible and proportionate to do so, as measured by using and taking into account a locally approved Biodiversity Metric, and avoid harm to, or the loss of features that contribute to the local and wider ecological network. Proposals will be expected to apply the mitigation hierarchy of avoidance, mitigation and compensation, as set out in the NPPF, and integrate ecologically beneficial planting and landscaping into the overall design."

Policy	Summary
Policy NE3: Species and Habitats	''Development should always seek to enhance biodiversity and to create opportunities for wildlife. Proposals must demonstrate how the development improves the biodiversity value of the site and surrounding environment. Evidence will be required in the form of up-to-date ecological surveys undertaken by a competent ecologist prior to the submission of an application. The Biodiversity value of a site pre and post development will be determined by applying a locally approved Biodiversity Metric where appropriate. Submitted information must be consistent with BS 42020 2013. Where insufficient data is provided, permission will be refused. Proposals should detail how physical features will be maintained in the long term. Development which would result in the loss or significant damage to trees, hedgerows or ancient woodland sites will not be permitted. The Council will seek their reinforcement by additional planting of native species where appropriate. Protective buffers of complementary habitat will be expected to adjoin these features, sufficient to protect against root damage and improvement of their long term condition. A minimum buffer zone of 10m (or greater if required) is considered appropriate. Proposals will be expected to protect and enhance locally important biodiversity sites and other notable ecological features of conservation value. Proposals should avoid impacting on Species and Habitats of Principle Importance as published under section 41 of the Natural Environment and Rural Communities Act 2006 (or as subsequently amended). Where adverse impacts are unavoidable, appropriate mitigation and compensation measures must be employed, commensurate to the importance, the legal protection or other status of the species or habitat. The District Council will impose conditions / planning obligations which seek to: • Facilitate the survival of existing populations as well as encouraging the establishment of new populations • Reduce disturbance to a minimum • Provide adequate alternative habitats to sustain at least the current levels of populations Development adjoining rivers or streams will be required to preserve or enhance the water environment in accordance with Policy WAT3 (Water Quality and the Water Environment). Integrated bird and bat boxes will be expected in all development bordering public green space and beneficial habitat.''
Policy WAT3: Water Quality and the Water Environment	''Development proposals will be required to preserve or enhance the water environment, ensuring improvements in surface water quality and the ecological value of watercourses and their margins and the protection of groundwater.

Policy	Summary
	Unless there is clear justification for not doing so, an undeveloped buffer strip at least 8 metres wide should be maintained alongside all main rivers, and an appropriate buffer strip should be maintained at ordinary watercourses. Any development proposals should include an appropriate management scheme for buffer strips. Opportunities for removal of culverts, river restoration and naturalisation should be considered as part of any development adjacent to a watercourse. Additional culverting and development of river corridors will be resisted.''