

Preliminary Ecological Appraisal

for

Maple House, Potters Bar

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Non-technical summary

The Landscape Partnership was commissioned by Chase New Homes to undertake a Preliminary Ecological Appraisal comprising a desk study, UK Habitat Classification survey, and an assessment of the potential of site features to support bats, together with an assessment of impacts at Maple House, Potters Bar.

The objectives of the appraisal were to identify the habitats and species present or potentially present and evaluate their importance, assess the impact of the development proposal and describe any measures necessary to avoid impacts, reduce impacts or compensate for impacts so that there is no net harm to ecological features.

The survey involved classifying and recording habitat types and features of ecological interest and identified the potential for protected species to be present by assessing habitat suitability for those species. The survey was undertaken by appropriately qualified and experienced personnel.

The site comprised several buildings which included one office block (Maple House), two rows of commercial shops with flats above (High Street and Princes Parade), a large outdoor car park, a parking garage, small areas of modified grassland, numerous areas of introduced shrub, and a total of 102 trees. Collectively the habitats within the proposed development site are assessed as being of value at the **Parish** level.

Based on the habitat types present, it is considered that the site has potential to support the following protected species or groups of species: breeding birds and bats.

The proposed development is for partial demolition of existing buildings (with retention of existing two-storey car park and substation) and redevelopment of the site to provide a mixed-use development comprising residential apartments (Class C3) and flexible commercial floorspace (Class E) across 4 Blocks and associated internal roads, parking, drainage, landscaping, amenity space and associated works.

In the absence of mitigation, the proposed development could give rise to the following impacts: potential recreational impacts upon Parkfield LWS, loss of habitat, potential destruction of birds' nests and/or bat roosts, and potential harm to terrestrial mammals, which would give rise to a **Minor Adverse** impact upon local sites, habitats and breeding birds, and an **Unknown** impact upon bats. Mitigation has been proposed, including retention of boundary vegetation and trees, creation of public open space, removal of vegetation outside the nesting bird season, safeguards during the construction phase for terrestrial mammals, a Construction site Management Plan (CMP) to demonstrate that construction works will not impact Parkfield LWS, and provision of a sensitive lighting scheme. This mitigation would reduce the impacts of the development proposals upon the habitats and species present, to give rise to an overall **Neutral** impact.

Further survey is recommended in respect of **bat emergence surveys on Buildings 3 & 4**, in order to understand the impact of the proposals upon roosting bats. These recommended bat surveys have subsequently been undertaken by TMA Environmental Consultants and full results can be found separately.

A number of **ecological enhancements** have been proposed, which would improve the quality of the site for native flora and fauna, including stag beetle loggeries, hedgehog tunnels, bat boxes, bird boxes, and native planting. Delivery of these enhancements would lead to an overall **Neutral-Minor Beneficial** impact.

A Biodiversity Net Gain (BNG) assessment is required under The Environment Act 2021 for most planning applications. This requires there to be a net gain of at least 10% which should be calculated using the Statutory Metric. Once this has been undertaken, the information will be provided separately.

1 Introduction

1.1 Commission

- 1.1.1 The Landscape Partnership was commissioned by Chase New Homes to carry out a Preliminary Ecological Appraisal (PEA), comprising a desk study, UK Habitat Classification survey, and an assessment of the potential of site features to support bats, together with an assessment of impacts.

1.2 Legislation and policy background

- 1.2.1 There is a range of protection given to sites and species. Sites may be designated for local, national, or global importance for nature conservation. Species may be protected by varying levels of national regulation.
- 1.2.2 The Local Planning Authority has a policy to protect features of nature conservation value within its Local Plan. Other regulators have policies relating to the consents issued by them.
- 1.2.3 Further information is given in Appendix 1.
- 1.2.4 Assessment was undertaken against current legislation and planning policy, and in accordance with standard guidance. Further information is given in Section 2 and Appendix 2.
- 1.2.5 Biodiversity Net Gain is required for most developments under The Environment Act 2021. A minimum of 10% net gain needs to be achieved under The Environment Act 2021.

1.3 Site location and context

- 1.3.1 The site is located in Potters Bar, a town on the southern edge of Hertfordshire. It occupies a prominent position on the north-western side of a major four-arm junction at the heart of the local road network. Access to the site is via the B556 to the south.
- 1.3.2 The site is bounded by Mutton Lane to the south and Potters Bar High Street to the east. Properties along both frontages are predominantly in commercial use, with residential accommodation above. Notable buildings opposite the site on the eastern side of the High Street include Key Point, a former office block currently undergoing conversion to residential use, and the Cask and Stillage public house.
- 1.3.3 To the west of the site lies a Tesco superstore, which includes a large surface car park and petrol filling station. A prominent phone mast is also located within the Tesco car park. Immediately north of the site is Goodacre Court, a sheltered housing development, and a BP petrol station.
- 1.3.4 The site itself comprises a mix of buildings and uses, including the Maple House office building, two parades of commercial units fronting the High Street with residential flats above, a car wash, and associated surface car parking (providing approximately 355 spaces).
- 1.3.5 The wider landscape consisted of the urban area of Potters Bar, which is surrounded by arable fields and pasture. The M25 lies approximately 1km to the south of the site, and the A1(M), approximately 3.2km to the west of the site.
- 1.3.6 The Ordnance Survey Grid Reference for the approximate centre of the proposed development site is TL 2596 0099. The location of the site is shown in Appendix 3. A plan showing the site is provided at Figure 01.

1.4 Description of the project

- 1.4.1 The proposed development is for partial demolition of existing buildings (with retention of existing two-storey car park and substation) and redevelopment of the site to provide a mixed-use development comprising residential apartments (Class C3) and flexible commercial floorspace (Class E) across 4 Blocks and associated internal roads, parking, drainage, landscaping, amenity space and associated works. The development proposals are shown in Appendix 3.

1.5 Objectives of this appraisal

1.5.1 The purpose of this appraisal is to inform a planning application for the proposed development, as described above. Detailed objectives are to:

- identify the habitats and species present or potentially present and evaluate their importance;
- identify any ecological constraints to development;
- assess the impact of the development proposal;
- identify any opportunities available for integrating ecological features within the development;
- describe any measures necessary to avoid impacts, reduce impacts or compensate for impacts so that there is no net harm to ecological features;
- propose ecological enhancements;
- identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA).

1.6 Previous ecological studies

1.6.1 There are no known previous ecological studies of the site.

1.7 Duration of appraisal validity

1.7.1 The assessment, conclusions and recommendations in this appraisal are based on the studies undertaken, as set out in this report, and the stated limitations. This appraisal is based on the project as described and any changes to the project would need the appraisal to be reviewed. Unless otherwise stated, the assessment, conclusions and recommendations given assume that the site habitats will continue to be used for their current purpose without significant changes until development takes place. However, changes in use or management may occur between the time of the survey and proposals being implemented. Ecological features may change naturally at any time; for example, species may be lost from existing sites or colonise new areas. Our knowledge of the ecology of the site enables us to provide an estimate of the duration of the validity of the surveys carried out and hence the applicability of this appraisal, so that any future need for review and update of this appraisal, or the surveys described within it, and the date by which such updates would become necessary, can be identified.

1.7.2 The table below sets out a guide to duration of validity of each element of each information source. If the proposed development is delayed beyond the stated timescale, updated surveys or further investigations may be required. Provided a planning application is made and validated prior to the end of the period stated below there would not normally be a requirement for a further update survey except as indicated in Section 4.6.

Information source	Date undertaken	Guideline duration of validity from date undertaken	Notes
Desk study	6 th June 2025	2 years	Further data may become available.
UK Habitat Classification survey	16 th June 2025	2 years	The habitats on site may change especially if management changes.
Ground level bat tree roost assessment	16 th June 2025	2 years	Storm damage, tree felling or other factors can change bat roost potential of trees.
Preliminary bat roost inspection: Buildings	16 th June 2025	2 years	Storm damage, maintenance, neglect or other factors can change bat roost potential of buildings.

2 Methodology

2.1 Desk study methodology

- 2.1.1 Hertfordshire Environmental Records Centre was asked to provide records of protected, rare and/or priority species and details of statutory and non-statutory designated sites, within the site boundary and within a 2km radius of the site boundary. The data were received on 6th June 2025.
- 2.1.2 The Magic website¹ was used to identify European sites within a 10km radius and national sites within a 5km radius. Sites of Special Scientific Interest designated for bats were also identified within a 10km radius. The Magic website was also used to identify any Priority Habitat Inventory habitats and Natural England mitigation licences or licence returns that were present within a 2km radius from the site boundary. The Magic website was accessed on 25th June 2025.
- 2.1.3 In addition to the data search the Woodland Trust's Ancient Tree Inventory website² was used to identify veteran or ancient trees previously recorded on or within close proximity to the site. This website was accessed on 26th June 2025.
- 2.1.4 Aerial photographs and OS maps were used to gain initial information about the site and the surrounding area. This gives an indication of the types of habitat and species likely to be present and the setting of the site within the landscape.
- 2.1.5 Water bodies within 250m of the site were identified from the relevant 1:25,000 Ordnance Survey map sheet, to establish the need for protected species scoping surveys, such as great crested newt Habitat Suitability Index surveys. Consideration was also given to the green infrastructure of the local area.
- 2.1.6 The potential for protected, rare and/or priority species to be present on site has been considered in this assessment, taking into account the nature of the site and the habitat requirements of the species in question. Absence of records does not constitute absence of a species. Habitats on the site may be suitable for supporting other protected species that have not previously been recorded within the search area. Conversely, presence of a protected species in the search area does not imply its presence on-site. Records of alien species, non-localised records (e.g. tetrad records) and records dated before 2000 have not been described in detail but are taken into account when considering likely species presence or absence.
- 2.1.7 The data supplied by the Records Centre were considered in the assessment of potential impacts below.

Limitations to desk study methodology

- 2.1.8 The 2km search area overlapped slightly with Greater London. Due to the small overlap area and distance of the site from the county boundary, data was not requested from Greenspace Information Greater London. This limitation was taken into consideration during the desk study.
- 2.1.9 In accordance with BS42020 and advice from most Local Biological Record Centres, species lists are not appended to this report but are available to the Local Planning Authority on request.
- 2.1.10 Availability of records will vary in different locations, as many depend on the presence of local experts and survey effort within the local area. An absence of a record does not necessarily indicate the absence of that species.
- 2.1.11 The accuracy of the priority habitat classifications has not been validated as part of this study.

2.2 UK Habitat Classification survey methodology

- 2.2.1 The standardised UK Habitat classification and mapping methodology³ was followed. All habitats present and areas or features of ecological interest within such habitats were recorded and mapped. The survey methodology facilitates a rapid assessment of habitats and it is not necessary

¹ MAGIC: <https://magic.defra.gov.uk/MagicMap.aspx>.

² Ancient Tree Inventory ati.woodlandtrust.org.uk/

³ UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://www.ukhab.org>)

to identify every plant species on site. Where given, scientific names of plant species follow Stace ed. 4⁴. The DAFOR scale was applied to each plant species found within the site and in each habitat type, as follows:

- **D:** Dominant - a percentage cover of greater than 75%
- **A:** Abundant – a percentage cover of 51-75%
- **F:** Frequent – a percentage cover of 26-50%
- **O:** Occasional – a percentage cover of 11-25%
- **R:** Rare - a percentage cover of 1-10%

2.2.2 The survey was also used to identify potential for protected, rare and/or priority species, for example bats, mammals, amphibians and reptiles, to occur on, or in the vicinity of, the proposed development site. Although the survey methodology is not intended for species survey, any protected, rare and/or priority species which were seen during the survey were noted.

2.2.3 The survey was undertaken on 16th June 2025 and the weather conditions were sunny and dry with a light air (Beaufort 1), 30% cloud cover, and a temperature of 20°C.

Limitations to UK Habitat Classification survey

2.2.4 There were no significant limitations to the UK Habitat Classification survey.

Bat Preliminary Ecological Appraisal methodology

2.3.1 The Preliminary Ecological Assessment for Bats, as described in the Bat Survey Guidelines⁵ was undertaken.

2.3.2 In addition to the desk-top study described above, aerial photographs and other available images were reviewed. The client was asked if any previous bat surveys had been carried out, who carried them out, what the recommendations were and why a new survey is needed. Copies of reports were requested if available. Other relevant literature was searched for, where relevant.

2.3.3 A Daytime Bat Walkover was carried out concurrently with the Habitat Survey as described above. Where present, structures (buildings and other built structures e.g. bridges, and underground features) and trees were inspected to assess if they could be suitable for bats to roost in, and habitats were inspected to assess if they could be suitable for bats to commute, forage, or swarm in. Roosting and foraging habitats, and flight paths were recorded separately where they existed.

2.3.4 The categories of potential suitability are listed and definitions are provided in Appendix 4, extracted from Table 4.1 of the Bat Survey Guidelines⁶. These categories were applied to the features seen.

2.3.5 The assessment of site features suitable for hibernation potential considered

- The suitability of features to support roosting bats or to allow access for roosting bats
- the temperature and humidity conditions likely to be present within the structure during the winter period and the suitability in this respect for it to be used by hibernating bats
- the surrounding habitat, in terms of its potential for use by bats outside of the hibernation period for commuting and/or foraging purposes (i.e. is it reasonable that bats are familiar with the area and therefore may be aware of suitable roosting locations within the site?)
- the presence of known roosts within the structure, or adjacent structures, or surrounding area during the active season

2.3.6 If there were no or very limited potential roost features in a structure, and/or the temperature and humidity conditions were unsuitable, the structure would be assessed as low potential. A 'classic' hibernation site such as an underground feature, cellar or tunnel would be assessed as high potential with further surveys required. A 'non-classic' site with some features and temperature / humidity being reasonably suitable would be assessed as moderate potential, with consideration as to further survey work.

⁴ Stace, C (2019) *New Flora of the British Isles*. C&M Floristics. 4th Edition.

⁵ Collins J (ed) (2023) *Bat Surveys for Professional Ecologists Good Practice Guidelines*. Bat Conservation Trust

2.3.7 If the surrounding foraging / commuting habitat was poor quality or had poor connectivity, consideration would be given to reducing the potential level of a structure. Conversely, if the surrounding foraging / commuting habitat was good quality and had poor connectivity, consideration would be given to increasing the potential level. The presence of a known roost would lead to consideration of increasing the potential level, but the absence of a known roost would not lead to a reduction of potential level.

2.3.8 The potential suitability of trees was recorded as

- NONE – no potential roost features in the tree or highly unlikely to be any
- FAR – further assessment required to establish if potential roost features are present in the tree
- PRF – A tree with at least one potential roost feature present.

2.4 Ground level bat tree roost assessment methodology

Rationale

2.4.1 Bats are European Protected Species. Many roosts are within trees, and the protection given to roosts means that their presence or absence in trees on the proposed development site needs to be understood.

2.4.2 A ground level tree assessment (GLTA) is a detailed inspection of the exterior of a tree from the ground to look for potential roost features (PRFs) which could be used by bats for roosting. A GLTA is a preliminary assessment used to determine the available roosting resource and need for further survey or mitigation.

2.4.3 Trees chosen for survey were identified during the Preliminary Ecological Appraisal (PEA) for bats, detailed in Section 2.3.

Methodology

2.4.4 The standard Ground Level Tree Assessment (GLTA) methodology for trees⁶ was followed. Trees within the proposed development area identified in the PEA as either requiring further assessment or with at least one potential roost feature present were inspected for the presence of features which may be suitable for use by roosting bats. All trees which were considered likely to be directly impacted (e.g. felled, limb/deadwood removal or crown reduction) or indirectly impacted (e.g. construction works or development leading to vibration, noise or illumination in proximity) were assessed, with particular attention given to older and mature trees.

2.4.5 A thorough and systematic inspection was undertaken, allowing adequate time in daylight hours for survey. Close-focusing binoculars (Pentax Papilio 8.5 x 21) were carried to inspect trees from the ground to the canopy, from all sides, and from close to the trunk and further away. A high-power torch (Cluson Clulite) was carried to inspect cavities and shaded areas of the branch structure if necessary.

2.4.6 The trees which were assessed were referenced in accordance with numbering used in Tree Schedule by The Landscape Partnership⁷. The type, location and aspect of any PRFs identified was recorded.

2.4.7 During the assessment the following signs and features indicative of bat roosts was searched for:

- woodpecker holes;
- rot holes;
- hazard beams;
- other vertical or horizontal cracks and splits, such as frost cracks in stems or branches;
- partially detached bark plates;
- knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
- artificial holes (such as cavities that have developed from flush cuts) or cavities created by branches tearing out from parent stems;

⁶ Collins, J. (ed.) (2023) *Bat surveys for professional ecologists: good practice guidelines*, Fourth Edition, Bat Conservation Trust.

⁷ The Landscape Partnership (2025) Tree Survey Schedule for Maple House, Potters Bar

- cankers, caused by localised bark death, in which cavities have developed;
- other hollows or cavities including butt-rots at the base of the tree;
- potential cavities in the fork between double trunks ("compression forks"), where the wood has grown around sections of bark ("included bark");
- gaps between overlapping stems or branches;
- partially detached ivy with stem diameters in excess of 50mm;
- bat, bird or dormouse boxes.

2.4.8 Signs of a bat roost, in addition to the visible presence of bats, include:

- bat droppings in or around a potential roost feature (PRF);
- odour coming from a PRF;
- audible bat squeaks at dusk or during the day in warm weather;
- staining below the PRF.

2.4.9 Some signs, such as staining, odour or squeaking, may originate from other species, and staining may arise from wet rot which would preclude bat use. Bats or bat droppings are the only conclusive evidence of bat use, but many bat roosts have no external signs.

2.4.10 All identified features were categorised using professional judgement using the following suitability criteria

Suitability	Description
PRF-I	A PRF only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats
PRF-M	A PRF which is suitable for multiple bats and may therefore be used by a maternity colony

2.4.11 The survey was undertaken on the same date as the UK Habitat Classification Survey on 16th June 2025.

Limitations to ground level tree assessment

2.4.12 The identification of bat tree roosts is acknowledged within guidelines as challenging. For example, surveys may be limited by the physical difficulties in viewing and assessing PRFs in larger or more complex trees from the ground and some features may be missed or their significance under or overestimated. Species which use trees for roosting may also exhibit 'roost-switching' behaviour and certain species breeding colonies may rely on over 50 trees. It is therefore inevitable that not all PRFs will be in constant or even regular use and so physical signs of presence may not remain or be visible. Trees are dynamic and constantly subject to physical and situational changes beyond the surveyed area and so the assessment may be considered a snap-shot in time only. Existing features may be lost and new ones created in a short space of time.

2.4.13 A GLTA alone cannot therefore be used to determine with any confidence whether or not bats or bat roosts are present or absent and categorisation at this stage is an estimate of suitability only, intended to inform the need for further detailed survey.

2.4.14 GLTAs may be carried out at any time of the year however PRFs may be obscured or hidden by foliage in summer or lost in high contrast between a bright sky and canopy shade. The optimal period for GLTAs is between November and March when trees are not in leaf. The survey was carried out June.

2.5 Preliminary bat roost assessment methodology: Buildings

Rationale

2.5.1 Bats are European Protected Species. Many roosts are within building or other structures, and the protection given to roosts means that their presence or absence in buildings and other structures on the proposed development site needs to be understood.

2.5.2 A Preliminary Roost Assessment (PRA) is a detailed inspection of the exterior and interior of a structure to look for features that bats could use for entry/exit and roosting and to search for signs of bats.

2.5.3 Structures were chosen for survey based on the Preliminary Ecological Appraisal (PEA) for bats, detailed in Section 2.3.

Methodology

2.5.4 The standard Preliminary Roost Assessment (PRA) methodology for structures⁸ was followed. The aims of this survey are to determine the actual or potential presence of bats and the need for further survey and/or mitigation. In many situations, it is not possible to inspect all locations where bats may be present and therefore an absence of bat evidence does not necessarily equate to proof of bat absence.

2.5.5 All buildings were inspected externally only. A search was made for direct evidence of bat presence. A systematic search pattern was used in order to avoid missing parts of the building or built structure, although some may not have been visible from accessible parts of the building. During the survey, a search was made for live or dead bats, droppings, urine splashes, fur-oil staining and clean, cobweb-free gaps around potential entrance points and crevice roost sites. The sound of bats was listened for. Feeding remains such as moth wings were also searched for. Potential access points and roosting sites were recorded even if there was no direct evidence of use by bats. The inspection was thorough, and a consistent search effort was applied to all accessible parts of the buildings. Sometimes bats leave no visible signs of their presence in or outside a building, and rain can remove external signs.

2.5.6 The external search included the following, where these features were present:

- the ground, particularly beneath potential access points;
- any window-sills;
- window panes;
- walls and any loose mortar between bricks;
- behind peeling paint or lifted render;
- hanging tiles;
- weatherboarding;
- eaves;
- barge boards and soffit boxes;
- fascias;
- lifted lead flashing (particularly around chimneys); gaps under felt, including flat roofs;
- under tiles/slates;
- gaps in brickwork or stonework;
- in bat boxes;
- space between downpipe and wall;
- quoins; and
- all other relevant external features.

2.5.7 A high-power torch (Cluson Clulite) was used where necessary to survey the external parts of the building, so that no evidence of bats was missed because of poor illumination. Close-focusing binoculars (Pentax Papilio 8.5 x 21) were carried when inspecting the external parts of the building from the ground, in order to view features which might be used by bats to gain access to the building.

2.5.8 The survey of building(s) included an assessment of their potential to support bat roosts using the following categories.

Category	Description
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).

⁸ Collins, J. (ed.) (2023) *Bat surveys for professional ecologists: good practice guidelines*, Fourth Edition, Bat Conservation Trust.

Category	Description
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost site that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by large numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost site that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost site that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classical cool/stable hibernation site.
Unknown	Unable to survey fully, for example because part of the building is inaccessible.

2.5.9 The survey was undertaken on the same date as the UK Habitat Classification Survey on 16th June 2025.

Limitations to preliminary bat roost assessment: buildings

2.5.10 The buildings were not inspected internally. Buildings 2, 3 and 5 were not thought likely to possess a loft void. It was not possible to discern whether Building 4 had a loft void but permission to access was not sought due to the number of residents occupying the building and logistical time constraints of doing so. All buildings are occupied and in frequent use.

2.6 Surveyor competencies

Survey(s) undertaken	Surveyor(s)	Experience (years)	Licences Held
UK Habitat Classification survey Ground level bat tree roost assessment	Emily Costello MCIEEM	11+	Great crested newt Class Licence CL08 (Level 1) Bat Survey Class Licence CL18 (Level 2) Barn Owl Class Licence CL29 FISC Level 3
Bats: Preliminary Roost Assessment: Buildings	Ellen Campbell	1+	-

2.6.1 Staff undertaking surveys, or writing report sections, and who were still gaining experience with a particular topic to become capable (as defined by CIEEM competencies⁹) were supervised by staff who were at least capable or accomplished.

⁹ <https://cieem.net/resource/competency-framework/>

2.7 Assessment methodology

- 2.7.1 The assessment was undertaken in accordance with the Chartered Institute of Ecology and Environmental Management's Professional Guidance Series¹⁰.
- 2.7.2 More details of the assessment methodology are provided in Appendix 2, but, in summary, the impact assessment process involves:
- identifying and characterising impacts;
 - incorporating measures to avoid and mitigate (reduce) these impacts;
 - assessing the significance of any residual effects after mitigation;
 - identifying appropriate compensation measures to offset significant residual effects; and
 - identifying opportunities for ecological enhancement.
- 2.7.3 The hierarchical process of avoiding, mitigating and compensating for ecological impacts is explained further below.
- 2.7.4 In Ecological Impact Assessment (EcIA) it is only essential to assess and report significant *residual* effects (i.e. those that remain after mitigation measures have been taken into account). However, it is considered good practice for the EcIA to make clear both the potential significant effects without mitigation and the residual significant effects following mitigation, particularly where the mitigation proposed is experimental, unproven or controversial. Alternatively, it should demonstrate the importance of securing the measures proposed through planning conditions or obligations.
- 2.7.5 Assessment of the potential impacts of the proposed development takes into account both on-site impacts and those that may occur to adjacent and more distant ecological features. Impacts can be positive or negative. Negative impacts can include:
- direct loss of wildlife habitats;
 - fragmentation and isolation of habitats through loss of connectivity;
 - disturbance to species from noise, light or other visual stimuli;
 - changes to key habitat features; and
 - changes to the local hydrology, water quality, nutrient status and/or air quality.
- 2.7.6 Negative and positive impacts on ecological features are characterised based on predicted changes as a result of the proposed activities. In order to characterise the impacts on each feature, the following parameters are considered:
- the magnitude of the impact;
 - the spatial extent over which the impact would occur;
 - the temporal duration of the impact and whether it relates to the construction or operational phase of the development;
 - the timing and frequency of the impact; and
 - whether the impact is reversible and over what time frame.
- 2.7.7 Both short-term (i.e. impacts occurring during the site clearance and construction phases) and long-term impacts are considered.
- Conservation status**
- 2.7.8 The extent to which the proposed development may have an effect upon ecological features should be determined in the light of its expected influence on the integrity of the site or ecosystem. The integrity of protected sites is considered specifically in the light of the site's conservation objectives. Beyond the boundaries of designated sites with specific nature conservation designations and clear conservation objectives, the concept of 'conservation status' is used. Conservation status should be evaluated for a study area at a defined level of ecological value. The extent of the area used in the assessment relates to the geographical level at which the feature is considered important.

¹⁰ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.

- 2.7.9 For habitats, conservation status is determined by the sum of the influences acting on the habitats and their typical species that may affect their long-term distribution, structure and functions, as well as the long-term survival of its typical species within a given geographical area. For species, conservation status is determined by the sum of influences acting on the species concerned and inter-relationships that may affect the long-term distribution and abundance of its populations within a given geographical area.

Confidence in predictions

- 2.7.10 It is important to consider the likelihood that a change or activity will occur as predicted and also the degree of confidence in the assessment of the impact on ecological structure and function.

- **Certain** probability estimated at above 95%
- **Probable** probability estimated above 50% but below 95%
- **Possible** probability estimated above 5% but below 50%
- **Unlikely** probability estimated as less than 5%

Cumulative impacts

- 2.7.11 Consideration is also given to the potential for the development proposal to give rise to significant negative impact in combination with other proposed developments in the local area.

Overall assessment

- 2.7.12 An overall assessment of value and impact is provided. This is based upon the highest level or value of any of the features or species present, or likely to be present on the site. Similarly, the overall assessment of impact is the impact of greatest significance.

2.8 Mitigation hierarchy

- 2.8.1 The following principles underpin EcIA and have been followed, where applicable, in this assessment.

- **Avoidance** Seek options that avoid harm to ecological features (for example, by locating the proposed development on an alternative site or safeguarding on-site features within the site layout design).
- **Mitigation** Adverse effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.
- **Compensation** Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
- **Enhancement** Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

3 Results

3.1 Desk study results

European sites

- 3.1.1 The following European site (Special Protection Area, Special Area of Conservation, and Ramsar sites which are treated as if they were European sites) was identified within the search area and is detailed within the table below.

Site	Location relative to development site (approx.)	Key habitat/features of interest
Wormley Hoddesdonpark Woods SAC	6km NE	Qualifying habitats: Annex I habitats that are a primary reason for selection of this site: 9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i>. Wormley Hoddesdonpark Woods in south-east England has large stands of almost pure hornbeam <i>Carpinus betulus</i> (former coppice), with sessile oak <i>Quercus petraea</i> standards. Areas dominated by bluebell <i>Hyacinthoides non-scripta</i> do occur, but elsewhere there are stands of great wood-rush <i>Luzula sylvatica</i> with carpets of the mosses <i>Dicranum majus</i> and <i>Leucobryum glaucum</i>. Locally, a bryophyte community more typical of continental Europe occurs, including the mosses <i>Dicranum montanum</i>, <i>D. flagellare</i> and <i>D. tauricum</i>.

Sites of national importance

- 3.1.2 The following sites of national importance (Site of Special Scientific Interest, National Nature Reserve) were identified within the search area and are detailed within the table below.

Site	Location relative to development site (approx.)	Key habitat/features of interest
Northaw Great Wood SSSI	2.2km NE	This site comprises one of the country's most extensive areas of ancient hornbeam dominated woodland, in association with both sessile and pedunculate oak. Silver birch, sweet chestnut, aspen, beech, ash, and rowan also occur. Ground flora consists of either dominant bracken or bramble, with abundant honeysuckle and bluebell. Rides, glades, stream sides, and springs add considerably to the diversity of the wood's herb layer. A diverse breeding bird community also resides within this wood.
Water End Swallow Holes SSSI	4km NW	This site is designated for its geological interest. The site covers a group of more than 15 sinkholes where two streams drain from the London Clay and sink very close to the boundary of the outcrop of the chalk. The willow carr/swamp community adjacent to the sinkholes is of biological importance. Willow carr, on the more stable ground, is dominated by willow and hawthorn with lesser pond-sedge, bulrush and yellow iris beneath. Also integral with the sinkhole group are semi-natural woodland, scrub and semi-improved grassland.
Redwell Wood SSSI	4.2km W	Redwell Wood is a complex site comprising both ancient woodland of the pedunculate oak/hornbeam type and heathland, together with well-developed scrub and secondary woodland. The woodland canopy is dominated by pedunculate oak with ash and occasional hornbeam, beech and aspen. The ground flora reflects different moisture regimes.

3.1.3 Further information and site locations relative to the proposed development site are shown in Appendix 5.

3.1.4 None of the SSSIs within 10km from the site boundary were designated for bats.

Sites of local importance

3.1.5 The following sites of local importance (Potential Wildlife Site, Local Wildlife Site, County Wildlife Site, Ancient Woodland, Local Nature Reserve) were identified within the search area and are detailed within the table below.

Site	Location relative to development site (approx.)	Key habitat/features of interest
Parkfield (Potters Bar) LWS	200m N	Semi-improved, part damp neutral grassland with a good diversity of species recorded including crested dog's-tail, sweet vernal-grass, pignut, common knapweed, meadow buttercup, bulbous buttercup and lesser stitchwort. The damper sward supports species such as lady's smock, marsh foxtail and marsh marigold.
Chequers Mead House Meadows & Ponds LWS	1.1km E	Two fields of semi-improved neutral grassland supporting a reasonable mix of grass and herb species. The sward includes red fescue, crested dog's-tail, creeping bent, Yorkshire fog with common knapweed, oxeye daisy, meadow buttercup and common sorrel. Stone parsley has also been recorded. The northern field contains two ponds with some marginal/aquatic species.
Fenny Slade Hill LWS	1.2km SE	An area of old, rough, neutral grassland with damp areas, bordering hedges, invading scrub and a dry pond in the west. tufted hair-grass is abundant in the sward and grassland indicator species recorded are sweet vernal-grass, common knapweed, common sorrel, meadow buttercup and lady's smock. The scrub includes hawthorn, pedunculate oak, ash, bramble and rose.
Five Acre Wood (Potters Bar) LWS	1.2km E	Semi-natural pedunculate oak /hornbeam woodland with some old pedunculate oak standards and hornbeam coppice. Other trees present include holly, wild cherry, ash and beech. Stream runs within the wood, along the southern and eastern edges, and the southern end of the main wood has the best structure with good shrub and field layers. The wood supports a reasonably diverse ground flora with several indicator species recorded including bluebell, wood anemone, wood sorrel, wood millet and common dog-violet.
Woodland area S.E. of Little Heath Farm LWS	1.2km N	Secondary broadleaved woodland predominantly of pedunculate oak with ash and silver birch plus some scrubby areas. Some hornbeam coppice is present along the eastern wood edge. The ground flora is reasonably diverse with several woodland indicators recorded including wood meadow-grass, pignut, remote sedge, wood anemone, early dog-violet, bluebell and the local species common cow-wheat. The ground within the wood is very uneven with several ponds in the hollows plus ditches are present around much of the perimeter.
Hook Wood LWS	1.5km E	Semi-natural woodland with a stand type derived mainly from ancient pedunculate oak /hornbeam wood pasture, on the former Northaw Common. The canopy is generally closed in the north with bramble below grading to more open pedunculate oak/silver birch with bracken in the south. Oak is predominantly pedunculate but with some sessile oak. A diverse ground flora has been recorded which includes numerous woodland indicators including remote sedge, pignut, giant fescue, yellow archangel, bluebell, wood sorrel, wood meadow-grass, sanicle, common dog-violet, early dog-violet and several fern species. There is some relict heathland flora with pill sedge and upright tormentil. The Northaw Brook flows along the north edge of the wood and further streams, a lake and some small scattered ponds are also present.

Site	Location relative to development site (approx.)	Key habitat/features of interest
		The stream sides, damper valley floor areas and flush lines are of particular botanical significance with species such as soft shield-fern, lady fern, square-stalked St John's-wort, creeping jenny, greater bird's-foot trefoil, ragged robin, lesser spearwort and bog stitchwort recorded. The varied structure of the wood, along with the presence of large over-mature timber and dead wood, provides good habitat for a range of faunal species.
Fritillary Meadow LWS	1.5km NE	Meadow of species-rich damp unimproved neutral grassland noted for the presence of fritillary. The grassland is dampest near to a drain crossing the site from north to south. The sward supports a range of tall and finer grasses including meadow foxtail, Yorkshire fog, cock's-foot and red fescue with a good diversity of herbs recorded such as pignut, cowslip, bird's-foot trefoil, meadow buttercup, bulbous buttercup, meadow vetchling, lady's smock, meadowsweet and common knapweed. Substantial hedges are present to the west and south boundaries. The site is noted as one of the best sites for orthoptera in the county.
Fir and Pond woods HMWT Nature Reserve LWS	1.5km E	A mosaic of habitats including: scrub, semi-natural woodland, neutral to acid grassland, a watercourse (the Turkey Brook), a former cricket-bat willow plantation and a number of ponds. The two main blocks of woodland resemble NVC W10 (a and d) (Fir Wood in the north and Pond Wood in the south) and are dominated by old pedunculate oak and hornbeam standards, with an understorey of midland and common hawthorn, holly and blackthorn, with bracken and bramble beneath. The understorey composition within the woodland areas changes greatly in relation to Turkey Brook. The former cricket-bat willow plantation is currently in a state of limbo but is generally a damp and wet environment dominated by pendulous sedge, with areas of bulrush, greater pond-sedge and water mint. The fenced off neutral to acid grassland, almost in the centre of the site, is dominated by common bent, with the occasional areas of smooth meadow grass and false oat-grass, with red fescue persisting in waves beneath the taller sward. Black/common/chalk knapweed and meadow vetchling persists in extensive patches in the compartment, along with sheep's sorrel in the more acidic areas higher up the slope. Reflecting the geology of the site.
Ancient Semi-Natural Woodland	1.5km NE	An ancient semi-natural woodland approximately 13ha in area.
Pond Wood Ancient Semi-Natural Woodland	1.6km E	An ancient semi-natural woodland approximately 10.3ha in area.
Hook Lane LWS	1.6km E	Building and environs important for protected species.
Dugdale Hill Meadows LWS	1.8km W	Three adjoining meadows all supporting species-rich swards of mainly neutral grassland with little signs of improvement. Typical grasses in the sward include Yorkshire fog, red fescue, creeping bent, crested dog's-tail, sweet vernal-grass, and meadow foxtail with marsh foxtail frequent in damper ground to the south. Herbs recorded include meadow buttercup, common knapweed, common sorrel, greater bird's-foot-trefoil, bird's-foot-trefoil, lady's smock, and yarrow. Sedges are also common. Towards the northeast the grassland becomes slightly more acidic with sheep's sorrel present. The fields are partly bordered by substantial hedgerows.

Site	Location relative to development site (approx.)	Key habitat/features of interest
Grassland by Hook Copse LWS	1.8km E	A complex of old neutral to slightly acidic grasslands surrounded by mature hedgerows. The sward is quite variable in quality but overall, a reasonable diversity of species has been recorded. Species noted include sweet vernal-grass, crested dog's-tail, meadow buttercup, meadow vetchling, oxeye daisy, common sorrel, lesser stitchwort, sheep's sorrel and grass vetchling. Scrub is invading the northern-most field and the south-east field is unmanaged with areas of dense scrub developing. The northern-most field also contains a pond, which adds diversity. Elsewhere there are some scattered trees and scrubs. Wildlife Site criteria: grassland indicators.
Leggatts Park LWS	1.9km N	Drive with verges supporting unimproved acid grassland and an avenue of coastal redwoods trees. The sward is typically red fescue, common bent and tufted hair-grass with heath bedstraw, lesser stitchwort, field wood-rush, hairy sedge, common sorrel, sheep's sorrel and upright tormentil.
Woodland S.W. of Northaw Brook Pastures	1.9km E	Small area of old secondary woodland composed of pedunculate oak and ash with some hornbeam and other species such as field maple, birch and alder. Elder is dominant in the shrub layer with some holly and hawthorn and the ground flora is mainly of common nettle and bramble. Several woodland indicators are present, mainly dog's mercury with other species recorded such as broad buckler-fern, foxglove, bugle, bluebell and common dog-violet. A small stream flows through the wood.
Hook Copse LWS	2km E	Old, possibly ancient, semi-natural broadleaved woodland with a stream running through the middle. The canopy consists of large mature pedunculate oak, ash and hornbeam with some hazel and old hornbeam coppices. Rhododendron is frequent. The ground flora supports woodland indicators including frequent dog's mercury with other species recorded such as broad buckler-fern, slender buckler-fern, wood millet, wood meadow-grass, enchanter's nightshade and foxglove.
Furzefield Wood and Lower Halfpenny LNR LWS	2km NW	Ancient semi-natural pedunculate oak /hornbeam woodland with frequent pedunculate oak and ash standards plus hornbeam coppice and standards and frequent hazel (<i>Corylus avellana</i>) coppice. On the ground there is bracken and bramble along with a good diversity of woodland indicator species such as bluebell, moschatel, remote sedge, giant fescue, wood melick, wood millet, wood sorrel and broad buckler-fern. Broad-leaved helleborine has also been recorded.

3.1.6 Further information and site locations relative to the proposed development site are shown in Appendix 5.

Priority habitats

3.1.7 Several priority habitats were located within the local area and these included:

- Multiple areas of deciduous woodland are found in the local area, the closest of which is located 250m north of the site boundary.
- Four areas of Woodpasture and Parkland Biodiversity Action Plan (BAP) parcels are found in the local area the closest of which is located approximately 600m north of the site.
- Multiple areas of traditional orchard, the closest being located approximately 550m southeast of the site.

Protected, rare and/or priority species

- 3.1.8 A number of species records were returned for the search area. Records for protected, rare and/or priority species from within the search area are summarised below. In accordance with BS42020 and advice from most Local Biological Record Centres, species lists are not appended but are available to the Local Planning Authority on request.

Veteran trees

- 3.1.9 Twelve veteran and mature trees were returned by Hertfordshire Environmental Records Centre (HERC) and included oaks *Quercus sp.*, Scots pine *Pinus sylvestris*, and yew *Taxus baccata*, the closest of which was an oak tree located approximately 300m to the north in Parkfield LWS. HERC did not differentiate between veteran and mature trees.
- 3.1.10 The ancient tree inventory also returned numerous veteran trees within 2km, with the closest being an unknown species located approximately 600m north of the site.

Plants

- 3.1.11 Records for a number of flowering plants were return by HERC including bluebell *Hyacinthoides non-scripta*, butcher's broom *Ruscus aculeatus*, field scabious *Knautia arvensis*, fritillary *fritillaria meleagris*, heath speedwell *Veronica officinalis*, lesser spearwort *Ranunculus flammula*, ragged-robin *Silene flos-cuculi*, tormentil *Potentilla erecta*, treacle-mustard *Erysimum cheiranthoides*, water violet *Hottonia palustris*, and wood-sorrel *Oxalis acetosella*.
- 3.1.12 Records for Japanese knotweed *Reynoutria japonica*, New Zealand pigmyweed *Crassula helmsii*, and *Rhododendron ponticum*, were returned with the data search. These species are listed on the Wildlife and Countryside Act (WCA) 1981, as amended, Schedule 9 list for invasive and non-native species.

Invertebrates

- 3.1.13 Butterfly and moth species recorded include apple tip moth *Argyresthia ivella*, blackthorn gelechia *Gelechia scotinella*, buff ermine *Spilosoma lutea*, cinnabar *Tyria jacobaeae*, dusky brocade *Apamea remissa*, ear moth *Amphipoea oculatea*, grey dagger *Acronicta psi*, oak cutter *heliozela sericiella*, pale straw pearl *Udea lutealis*, purple emperor *Apatura iris*, sallow marble *Apotomis capreana*, small skipper *Thymelicus sylvestris*, and wood tortrix *Choristoneura diversana*.
- 3.1.14 Other invertebrate species returned included bare-saddled colletes bee *Colletes similis*, brown tree ant *Lasius brunneus*, delicate soldier fly *Oxycera nigricornis*, knotgrass leaf beetle *Chrysolina polita*, and violet ground beetle *Carabus violaceus*.
- 3.1.15 Stag beetle *Lucanus cervus* is relatively common in this part of the country¹¹. A recent record was returned in the data search, located approximately 1.1km northeast of the site.

Amphibians including great crested newts

- 3.1.16 Records of common toad *Bufo bufo*, and great crested newt *Triturus cristatus* were returned. The closest record of a great crested newt (GCN) was located approximately 1km east of the site boundary.
- 3.1.17 A search on MAGIC maps for GCN licence returns and mitigation licenses revealed two within a 2km radius of the site boundary. The closest licence return was located approximately 1.7km east of the site.

Reptiles

- 3.1.18 Records of slow worm *Anguis fragilis*, and grass snake *Natrix helvetica*, were returned. The closest record was of a common lizard approximately 900m west of the site boundary.

Birds

- 3.1.19 Bird records returned from HERC included black-headed gull *Chroicocephalus ridibundus*, bullfinch *Pyrrhula pyrrhula*, dunnoek *Prunella modularis*, herring gull *Larus argentatus*, nuthatch *Sitta europaea*, redwing *Turdus iliacus*, reed bunting *Emberiza schoeniclus*, starling *Sturnus vulgaris*,

¹¹ <https://ptes.org/campaigns/stag-beetles-2/stag-beetle-facts/#:~:text=Habitat%20and%20distribution,coastal%20areas%20of%20the%20southwest>. [Date accessed 26th July 2025]

stock dove *Columba oenas*, swallow *Hirundo rustica*, tree sparrow *Passer montanus*, whitethroat *Curruca communis*, and yellowhammer *Emberiza citrinella*.

Dormouse

3.1.20 No dormouse *Muscardinus avellanarius* records were returned.

3.1.21 A search on MAGIC maps for dormice mitigation licenses and licence returns revealed none within 2km of the site boundary.

Terrestrial Mammals including badgers

3.1.22 Records of badger *Meles meles*, brown hare *Lepus europaeus*, and hedgehog *Erinaceus europaeus* were returned.

3.1.23 Records for grey squirrel *Sciurus carolinensis* and muntjac *Muntiacus reevesi* were returned with the data search. These species are listed on the WCA 1981, as amended, Schedule 9 list for invasive and non-native species.

Aquatic Mammals including water voles and otters

3.1.24 Records of water shrew *Neomys fodiens* and water vole *Arvicola amphibius* were returned. The closest record of water vole was located approximately 1.6km east of the site boundary.

Bats

3.1.25 Records of brown long-eared *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, Daubenton's *Myotis daubentonii*, Leisler's *Nyctalus leisleri*, Nathusius' pipistrelle *Pipistrellus nathusii*, Natterer's *Myotis nattereri*, noctule *Nyctalus noctula*, serotine *Eptesicus serotinus*, soprano pipistrelle *Pipistrellus pygmaeus* and whiskered *Myotis mystacinus* were returned. The closest bat record was for a common pipistrelle located within 100m of the site.

3.1.26 A search on MAGIC maps for bat mitigation licenses and licence returns revealed that none were present within 2km of the site boundary.

3.2 UK Habitat Classification survey results

3.2.1 The UK Habitat types that were identified during the survey are shown on Figure 01 and each habitat is described below. Primary habitat codes (levels 2-5) are listed below in bold. Secondary habitat codes and descriptions (essential and additional) are unbolded.

Management, setting and green infrastructure

3.2.2 The site consisted primarily of two multi-storey office buildings, a covered parking garage, an outdoor car park, areas of introduced shrub, modified grassland, and two rows of commercial units with flats above adjacent to the eastern boundary. A total of 102 trees are located on site. The modified grassland and shrub beds within and surrounding the site appeared to be regularly maintained. The boundary vegetation appeared to be regularly maintained on the site side.

3.2.3 The site was clearly demarcated to the north and west by large stretches of introduced shrub, fencing and brick walls. The southern and eastern boundaries were bordered by roads and a BP petrol station.

3.2.4 The wider landscape consisted of the urban area of Potters Bar, which is surrounded by arable fields and pasture. The M25 lies approximately 1km to the south of the site, and the A1(M), approximately 3.2km to the west of the site.

Scattered trees g4 u1 32

3.2.5 As per the tree schedule, 102 trees were located on-site, and a further 9 trees were located off-site directly adjacent to the site boundary. Species present included Norway maple *Acer platanoides*, field maple *Acer campestre*, Himalayan birch *Betula utilis*, and silver birch *Betula pendula*. Other notable trees present included tulip tree *Liriodendron tulipifera*, Leyland cypress *x Cuprocyparis leylandii*, and narrow-leaved ash *Fraxinus angustifolia*, alongside native species such as rowan *Sorbus aucuparia*, ash *Fraxinus excelsior*, elm *Ulmus spp.*, Scots pine *Pinus sylvestris*, pedunculate oak *Quercus robur*, and horse chestnut *Aesculus hippocastanum*.

Modified grassland g4 Scattered trees 32

- 3.2.6 A small area of modified grassland was located in the southeastern corner of the site in the Maple House garden. Trees were located within the grassland and shaded the majority of the parcel. Species present included abundant occurrences of annual meadow grass *Poa annua*, frequent occurrences of black medick *Medicago lupulina*, occasional occurrences of daisy *Bellis perennis* and yarrow *Achillea millefolium*, and rare occurrences of common mouse ear *Cerastium fontanum* and dandelion *Taraxacum officinale* agg..

Introduced shrub u1 Scattered trees 32 847

- 3.2.7 There were multiple areas of introduced shrub located across the site, lining the western and northern boundaries, adjacent to the road to the south of the site, and in the southeastern corner of the site adjacent to the eastern buildings.
- 3.2.8 Species present included cherry laurel *Prunus laurocerasus*, ivy *Hedera helix*, rosemary *Salvia rosmarinus*, lavender *Lavandula* sp., buddleja *Buddleja davidii*, iris *Iris* sp., dogwood *Cornus* sp., mahonia *Mahonia* sp., bamboo *Bambusa* sp., snowberry *Symphoricarpos albus*, golden-leaved privet *Ligustrum ovalifolium* 'Aureum', hebe *Hebe* sp., variegated privet *Ligustrum ovalifolium* 'Variegata', ornamental rose *Rosa* sp., and *Eunonymus fortune* 'Emerald 'n' Gold'. Bramble *Rubus fruticosus* agg. was beginning to encroach into these areas.

Developed land; sealed surface u1b

- 3.2.9 The site was dominated by this habitat, which included the asphalt access roads, block and brick paving, car wash with temporary canopies, and external car park areas.

Buildings u1b5

- 3.2.10 Eight buildings were present on site, which consisted of one high-rise office block, a parking garage, five detached commercial units with flats atop, and one row of seven terraced commercial units with flats atop. Full building descriptions can be found below in Section 3.5.

Built linear features u1e

- 3.2.11 Brick walls were present along the eastern boundary of the site, adjacent to the areas of introduced shrub, and adjacent to the access road into the sublevel car park.
- 3.2.12 Built linear features are not depicted on Figure 01.

3.3 Bat Preliminary Ecological Appraisal results

Buildings and other structures

- 3.3.1 The potential use of buildings and other structures were assessed as shown in the table below.

Structure name and / or number	Potential (Appendix 4)	Description	Further survey needed?
Building 1 – Canada Life	<i>Building not included within site boundary and therefore did not form part of this assessment.</i>		
Building 2 – Maple House	Negligible	Tall multi-storey office block constructed of pre-cast cladding and large windows.	Yes - PRA
Buildings 3 – High Street	Low	A group of five commercial units with flats & offices atop, with slate tiles and protruding sky lights.	Yes - PRA
Building 4 – Princes Parade	Low	A terrace of seven commercial units with flats atop constructed of brick with slate and clay tiles and brick parapets.	Yes - PRA
Building 5 – Parking garage	Negligible	A brick two storey parking garage with an open top.	Yes - PRA

PRA – Preliminary Roost Assessment

Trees

- 3.3.2 The potential bat use of trees were assessed as shown in the table below. Tree numbers have been taken from the Tree Schedule produced by The Landscape Partnership⁷. Only numbered trees below have been included in Figure 01.

Tree species and / or number	Potential (Appendix 4)	Description	Further survey needed?
T90 – Horse Chestnut – off-site	PRF	Multiple knot holes visible.	Yes – GLTA
T91 – Pedunculate Oak – off-site	PRF	At least one knot hole visible.	Yes – GLTA
T93 – Pedunculate Oak – off-site	PRF	At least one knot hole visible.	Yes - GLTA
T100 – Scots Pine	PRF	Holes visible in previously cut branches.	Yes - GLTA
T111 – English elm – off-site	PRF	Dense ivy visible	Yes - GLTA
Remaining scattered trees	None	All remaining trees had no PRFs.	No

GLTA – Ground-Level Tree Assessment

Potential flight paths and foraging habitats

- 3.3.3 The potential value of habitats as flight paths and foraging habitats were assessed as described in the table below.

Habitat	Potential (Appendix 4)	Description	Further survey needed?
Modified grassland	Negligible	Short sward and frequent management results in a poor-quality grassland unlikely to provide a significant invertebrate community for bat foraging.	No
Scattered trees	Low	Large number of trees provide flight paths and foraging opportunities for bats. Provide some connectivity to more suitable habitat in Parkfield LWS to the north.	No – See Section 4
Introduced shrub	Low	The larger areas of shrub adjacent to the northern and eastern boundaries provide a flight path and foraging opportunity for bats. Provide some connectivity to more suitable habitat in Parkfield LWS to the north.	No – See Section 4

3.4 Ground level bat tree roost assessment results

- 3.4.1 Five trees were assessed as having PRF-I features.
- 3.4.2 The results of the survey are shown in the table below and the location of the trees is shown in Figure 01.

Tree					Potential Roost Feature (PRF)				Bat Roost Potential	Comments
No.	Species	Height (m)	DBH (mm)	Dead/alive	Type	PRF Height	Facing	Stem/Limb		
T90 – off-site	Horse chestnut <i>Aesculus hippocastanum</i>	15m	1000	Alive	Knot hole	6m	S	Limb	PRF-I	Tree surveyed from southern elevation only. No endoscope used due to height of features.
					Knot hole	8m	S	Limb	PRF-I	
					Small knot hole	12	S	Limb	PRF-I	
					Small knot hole	13	S	Limb	PRF-I	
T91 – off-site	Pedunculate oak <i>Quercus robur</i>	10	1000	Alive	Knot hole	7m	S	Limb	PRF-I	Tree surveyed from southern elevation only. No endoscope used due to height of features.
					Broken-off branch	2.5m	S	Limb	PRF-I	
T93 – off-site	Pedunculate oak <i>Quercus robur</i>	10	1000	Alive	Knot hole	6m	S	Limb	PRF-I	Tree surveyed from southern elevation only. No endoscope used due to height of features.
T100	Scots pine <i>Pinus sylvestris</i>	16	620	Alive	Hole in cut branch wound	8m	SE	Stem	PRF-I	Tree surveyed from eastern elevation only. No endoscope used due to height of features.
T111 – off-site	English elm <i>Ulmus procera</i>	10	300	Alive	Dense ivy	1-4m	All	Stem	PRF-I	Dense ivy covering stem, potential roost features could be concealed.

3.5 Preliminary bat roost assessment results: Buildings

Plans of the buildings surveyed

- 3.5.1 The buildings which were surveyed are shown on Figure 01. Photographs of these buildings are shown in Figure 02.

Building 2 – Maple House

- 3.5.2 Maple House was a twelve-storey building constructed of pre-cast cladding and large glass windows. All windows and doors were lined with metal frames, with the windows tightly fitted to the frames and the frames to the cladding. A plant room was located on the top storey with vents on all elevations. However, these vents were covered in wildlife excluders and netting, preventing any bat access. The roof was flat and was not likely to contain a roof void.
- 3.5.3 No entry into the building for bats or potential roost features were identified.
- 3.5.4 No bats or evidence of bats were found externally at the time of the survey. This building is assessed as providing negligible bat roost potential.

Buildings 3 – High Street

- 3.5.5 Five commercial units with flats and office space atop lay adjacent to the eastern boundary and were of similar construction. Shops were located on the ground floor with entry at the eastern elevations. These buildings have been grouped together due to their identical construction and close proximity.
- 3.5.6 The walls were of brick construction in good condition with no crevices suitable for bat roosting. All buildings possessed an asymmetrical pitched roof with slate tiles. These tiles were generally in good condition, with a few being slightly lifted, presenting potential roost features for crevice dwelling bats. The ridge tiles were tightly fitted and in good condition.
- 3.5.7 Skylights covered in metal sheeting were present at the top of the buildings and protruded from the roof. These skylights were sealed with lead flashing. Whilst the flashing was generally in good condition, a few areas were slightly lifted providing potential roosting features. On the eastern elevation of the buildings, a wooden trim was present, with a metal trim below. Both trims had gaps underneath, between the trim and the wall, which presented suitable roosting features for crevice dwelling bats. These gaps were present across all five buildings.
- 3.5.8 Windows on all elevations were lined by metal or uPVC frames, which appeared in good condition, with the windows tightly fitted to the frames and the frames to the surrounding brickwork. No internal access or roosting crevices were present at the windows. The metal guttering was in good condition and tightly fitted to the wall with no crevices. The verges were covered in uPVC capping with no crevices or roosting features.
- 3.5.9 There were numerous spotlights on and around the buildings, as well as street lighting, which likely caused light spill along the majority of the elevations making them less suitable for roosting bats.
- 3.5.10 In summary, whilst no bat access into the building was present, no bats or evidence of bats were found externally at the time of the survey. This building is assessed as providing low bat roost potential, predominantly in the location of the lifted tiles, lifted flashing, and underneath the roof trim.

Building 4 – Princes Parade

- 3.5.11 This building consisted of seven terraced commercial units with flats atop. The building was of brick construction in good condition. Six brick chimneys were present, with brickwork and lead flashing in good condition. The southern elevation of the building was rendered with no crevices or cracks.
- 3.5.12 The roof was pitched and covered in slate tiles on the western elevation, and clay tiles on the eastern elevation. Tiles were generally in good condition, but some lifted tiles were present, particularly on the eastern elevation, providing potential roosting crevices and potential bat access into the building.

- 3.5.13 Single storey flat roofed sections were present on the western elevation, where some extensions had been built. These flat roofs were in good condition, covered in bitumen felting, which was in good condition and tightly fitted to the wall plate. Brick parapets were present on the north and south extensions and appeared to be in good condition.
- 3.5.14 Three brick parapets / facades were present on the eastern elevation. These parapets were of brick construction in good condition. Lead flashing connected the parapet to the clay roof tiles and was generally in good condition, though some lifting was present.
- 3.5.15 The ridge tiles were tightly fitted, as was the verge. No crevices or bat access points were noted at these locations.
- 3.5.16 The windows frames were constructed of uPVC, with glass panes. The glass panes were tightly fitted to the frames, and the frames to the adjacent brickwork. No crevices or bat access points were noted at the windows.
- 3.5.17 Two holes in the brickwork were present on the eastern elevation, likely where previous ventilation or pipework had been. These holes provided potential bat access into the building or potential access to roosting cavities within these holes. It was not possible to inspect the holes further as access onto the flat roofed sections was not sought.
- 3.5.18 Overall, bat access into the building was possible via holes on the eastern elevation and lifted tiles, whilst potential roosting crevices were present in the lifted and slipped tiles, and lifted flashing.
- 3.5.19 No bats or evidence of bats were found externally at the time of the survey. This building is assessed as providing low bat roost potential, predominantly in the location of the lifted and slipped tiles and lifted flashing.

Building 5 – Parking garage

- 3.5.20 This structure consisted of a two-storey parking garage constructed of brickwork in good condition. The ground floor was open on the northern and eastern elevations, permitting bat access into the structure. The internal walls were plastered and were in good condition. No crevices or potential roosting features were noted internally on this lower level.
- 3.5.21 The top floor was open topped and did not possess a ceiling. This floor was not in use at the time of survey. A brick parapet was present at the walls, with brickwork in good condition. The floors of this building were asphalt, while the staircases were brick and appeared to be in good condition. Numerous floodlights were present, likely lighting the top level and lower interior level of the car park, when in use.
- 3.5.22 Whilst bat access into the building is possible via the open lower level, no potential roost features were identified. In addition, no bats or evidence of bats was found at the time of survey. This building is assessed as providing negligible bat roost potential.

4 Evaluation of conservation status and impact assessment

4.1 Assessment rationale

- 4.1.1 The assessment is based on the ecological data presented within this report. Future changes in the wildlife present on site are beyond the scope of this report, unless specifically stated.

4.2 Evaluation of conservation status and assessment of designated sites

- 4.2.1 The ecological value of the site is considered below and evaluated using the methodology set out in Appendix 2 and in accordance with species legislation and planning policy, as outlined in Appendix 1.

European Sites and component Sites of Special Scientific Interest

- 4.2.2 There is one European site within a 10km radius of the development area. This site is assessed as being of **Very High** importance for wildlife.

- 4.2.3 Wormley & Hoddesdonpark Woods Special Area of Conservation (SAC) is located approximately 6km northeast of the site. Broxbourne Woods National Nature Reserve (NNR) encompasses the majority of this SAC. This SAC is easily accessible, with a small car park available and a substantial network of footpaths and Public Rights of Way (PRoW). To date, there is no guidance from the Hertsmere Borough Council on the potential development impacts to this SAC. Whilst proposals have not been finalised at this stage, the site has an allocation of an indicative 265 dwellings, to include some older person(s) housing and commercial space. An increase in residents as a result of the proposed development may result in an increase in recreational pressure upon the SAC. However, this increase is likely to be below a detectable threshold given the site's location within the town centre of Potters Bar. Furthermore, the SAC is not within a walkable distance from the site and will need to be reached via car or public transport. This is likely to further dissuade visitors to the SAC and minimise the likelihood of any increase in recreational impacts.

- 4.2.4 The impact of the proposed development upon sites of national importance is considered to be **Neutral**, due to the distance of the proposed development from the designated sites, and the character of the development within the urban area of Potters Bar.

Sites of national importance

- 4.2.5 There are three sites of national importance within the search area. These sites are assessed as being of **High** importance for wildlife at the **National** scale.

- 4.2.6 Sites of Special Scientific Interest (SSSI) Impact Risk Zones are used to assess the need for the LPA to consult Natural England on planning applications at varying distances from SSSIs. In accordance with the SSSI Impact Risk Zones User Guidance¹² consultation with Natural England would be required for the proposed development site for:

- **Infrastructure:** Airports, helipads and other aviation proposals.
- **Minerals, Oil and Gas:** Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
- **Air Pollution:** Livestock & poultry units with a floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500 tonnes.
- **Combustion:** General combustion processes >50MW energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.

- 4.2.7 The proposed development does not fall within these categories and therefore does not require the LPA to consult Natural England.

- 4.2.8 The impact of the proposed development upon sites of national importance is considered to be **Neutral**, due to the distance of the proposed development from the designated sites, the reasons

¹² Magic Maps www.magic.defra.gov.uk/MagicMap.aspx

for the sites' designation and the character of the development within the urban area of Potters Bar.

Sites of local importance

- 4.2.9 Fifteen Local Wildlife Sites (LWS) are located within 2km of the site. These sites are assessed as being of **Medium** importance for wildlife at the **County** scale.
- 4.2.10 Fourteen of the sites lie more than 1km from the site and are thus unlikely to experience increased reactional pressure or be exposed to other impacts as a result of the proposed development. The impact of the proposed development on these sites is therefore assessed as being **Neutral**.
- 4.2.11 However, Parkfield LWS is located approximately 200m north of the site and is easily accessible from the site via Public Right of Way (PRoW). This LWS consists of public open space with a traditional hay meadow, Japanese garden, and a tree trail. It is likely that the number of people accessing the park may increase as a result of the increase in residents from the proposed development.
- 4.2.12 Furthermore, due to the large size of the buildings proposed for demolition and potential pollution that may arise as a result, a Construction site Management Plan (CMP) is recommended. This will demonstrate that construction works will not impact Parkfield LWS directly or indirectly through dust, noise and other construction impacts.
- 4.2.13 The impact on all locally important sites within 250m of the proposed development is assessed as being **Minor Adverse**. It may be possible to develop mitigation to reduce adverse impacts, for example through provision of public open spaces, and careful routing of footways and roads. If a CMP is provided and adhered to during construction works, the impact of the proposed development upon sites of local importance is considered to be **Neutral**.

4.3 Evaluation of conservation status and assessment of habitats and green infrastructure

Habitats

- 4.3.1 Habitats of moderate ecological value include the scattered trees due to the large number and interconnectedness of the trees. These trees provide significant nesting habitat for birds and foraging and flight paths for bats. Habitats of lower ecological value include the modified grassland and introduced shrubs due to their management and species composition. These habitats are assessed as being of **Lower** value at the **Parish** scale.
- 4.3.2 The loss of habitats on site will be compensated for by native shrub planting, and native tree planting, in areas of public open space. Boundary trees are proposed for retention under current design plans. Further information is provided in Section 5.
- 4.3.3 Impacts of the development upon the site habitats are considered to be **Neutral to Minor Beneficial**.

Green infrastructure

- 4.3.4 The site, in particular the northern and western boundary introduced shrub, and the large number of scattered trees, provides habitat linkage to Parkfield LWS to the north of the site.

4.4 Evaluation of conservation status and assessment of species

Veteran trees

- 4.4.1 There are no veteran trees present on or in close proximity to the site. The closest veteran / mature tree returned by HERC was located approximately 300m to the north in Parkfield LWS. The closest veteran tree identified on the ancient tree inventory is located approximately 600m north of the site. No veteran trees are likely to be impacted by the proposed development or any construction activities due to their sufficient distances from the site.
- 4.4.2 The value of the proposed development site for these is therefore **Negligible**. The impact of the proposed development upon veteran trees is **Neutral**.

Plants

- 4.4.3 The character of the habitats recorded at the site and the plant records returned for the local area, suggests that the site has no potential to support protected, rare and/or priority plants. The value of the proposed development site for this group is **Negligible** and the impact of the proposed development is **Neutral**.

Invertebrates

- 4.4.4 A recent record of stag beetle was returned in the data search, located approximately 1.1km northeast of the site. However, no dead or decaying wood was found on site to support stag beetle breeding or hibernation. In addition, the large areas of hardstanding located on site are unsuitable for stag beetle commuting and foraging.

- 4.4.5 The character of the habitats recorded at the site and the invertebrate records returned for the local area, suggests that the site has no potential to support protected, rare and/or priority invertebrates. The value of the proposed development site for this group is **Negligible** and the impact of the proposed development is **Neutral**. Enhancement measures have been proposed in Section 6 to improve the sites suitability for stag beetles.

Amphibians including great crested newts

- 4.4.6 Natural England's *Method statement template for great crested newt mitigation licence*¹³ is used to determine the risk of great crested newts from being harmed by development. The area of the site is measured from OS maps and referenced against the rapid risk assessment, part of the NE method statement. This determines the distance of the pond from the development site, whether that be 100m, 250m or 500m, required to identify that an offence to great crested newts is *highly unlikely*, see table below. A large-scale OS map is then inspected to identify any ponds within the buffer distance.

Distance of breeding pond (m)	Maximum area lost or damaged (hectares)		
	Green: Offence highly unlikely	Amber: Offence likely	Red: Offence highly likely
0 - 100	Up to 0.01	0.01-0.5	>0.5
100 - 250	Up to 0.5	0.5-10	>10
250+	Up to 5	>5	N/A

- 4.4.7 Guidance on risk assessment categories
- **'Green', offence highly unlikely:** indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, precautions may need to be taken to avoid an offence.
 - **'Amber', offence likely:** indicates that the development activities are of such a type, scale and location that it is likely. Design plans for the development may need to be altered (location, layout, methods, durations or timings) to minimise the effect on great crested newts and if the scheme still results in a likely offence a licence may be required to carry out the works.
 - **'Red', offence highly likely:** indicates that the development activities are of such a type, scale and location that it is highly likely. Design plans for the development should be altered (location, layout, methods, durations or timings) to minimise the effect on great crested newts and if the scheme still results in a likely offence a licence may be required to carry out the works.

- 4.4.8 The rapid risk assessment is a simplistic assessment and provides a general overview of a situation. The following factors should be considered when using the rapid risk assessment; population size, terrestrial habitat quality, presence of dispersal barriers, timing and duration of works, detailed layout of development in relation to places newts may use for shelter and

¹³ <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>

dispersal routes. The following factors could increase the risk of committing an offence: large population size, high pond density, good terrestrial habitat, low pre-existing habitat fragmentation, large development footprint, and long construction period. The following factors could decrease the risk: small population size, low pond density, poor terrestrial habitat, substantial pre-existing dispersal barriers, small development footprint and short construction period.

4.4.9 The area of the site is approximately 1.63ha, therefore any waterbodies within 100m of a breeding pond would cause a *Red: Offence highly likely* impact. Any ponds within 100-250m of a breeding pond for great crested newt would cause an *Amber: Offence likely* impact. No ponds were located within 250m of the site.

4.4.10 The introduced shrub on site did provide some suitable foraging and commuting habitat, but the site is surrounded to the east and south by busy roads and is located in the centre of the urban area of Potters Bar. In combination with the absence of ponds on site and within 250m of the site, there is no reasonable likelihood of great crested newts being present. The value of the proposed development site for this group is **Negligible** and the impact of the proposed development is **Neutral**.

Reptiles

4.4.11 The closest reptile record was located approximately 900m west of the site. Whilst the introduced shrub located at the site boundaries did provide some protected commuting habitat, the site is relatively isolated from suitable habitat in the surrounding area, for example in Parkfield LWS to the north, and is predominantly unsuitable for reptiles given the large areas of hardstanding and urban setting. In addition, the site is fairly isolated from the two reptile records by large stretches of urban areas with little connecting habitat. Colonisation of the site from these reptile records is subsequently unlikely.

4.4.12 Subsequently, the character of the habitats recorded at the site and the reptile records returned for the local area, suggests that the site has no potential to support protected, rare and/or priority reptiles. The value of the proposed development site for this group is **Negligible** and the impact of the proposed development is **Neutral**.

Birds

Breeding birds

4.4.13 The site is likely to be used by common breeding bird species, both for nesting and foraging, with the trees, introduced shrub, and buildings being of greatest value in this respect. It is considered that the value of the site to breeding birds is **Lower** at the **Parish** scale.

4.4.14 The proposed development is likely to see the removal of multiple trees, areas of introduced shrub, and the buildings, causing a loss of nesting habitat. In addition, the development is likely to give rise to disturbance impacts on birds nesting in the retained boundary vegetation. The unmitigated impact is considered to be **Minor Adverse**. Mitigation has been proposed to reduce impacts to **Neutral** and to avoid an offence being committed.

Wintering birds

4.4.15 There are no habitats present on site which might support significant populations of wintering birds, although the site does offer some limited foraging potential for small numbers of common species. The site is considered to be of **Negligible** value for this group and the impact of the proposed development is **Neutral**.

Dormice

4.4.16 The introduced shrub and scattered trees along the northern and western boundaries did offer very limited foraging opportunities for dormice, given the lax in management. However, the closest area of ancient woodland was located 1.5km east of the site and is separated from the

site by residential areas of Potters Bar. Furthermore, there were no dormouse records returned for the site and dormice are considered to be rare within Hertfordshire¹⁴.

- 4.4.17 The site is therefore considered to be of **Negligible** value for this species and the impact of the proposed development is **Neutral**.

Terrestrial mammals including badgers

- 4.4.18 Whilst numerous badger records were returned for the local area, the habitats present on site did not provide suitable cover or protection for sett creation. No field signs of badger or other terrestrial mammals were found on site at the time of survey. The introduced shrub provided some suitable foraging opportunities for urban mammals such as fox and hedgehogs.

- 4.4.19 The site is therefore considered to be of **Negligible** value for terrestrial mammals. The impact of the proposed development is therefore **Neutral**. Precautionary mitigation has been proposed in Section 5 for the construction period only to safeguard terrestrial mammals during the construction phase.

Aquatic mammals including water voles and otters

- 4.4.20 There were no waterbodies or watercourses within the site, or in close proximity to the site boundary. In addition, the terrestrial habitats within the site provided no opportunities for resting places for otter, given the lack of dead stumps and woodland cover, and no suitable habitat for water voles as their preference is unmanaged grassland fields in close proximity to a water source, which the site does not provide.

- 4.4.21 The character of the habitats recorded at the site and the lack of mammal records returned for the local area, suggests that the site has no potential to support protected, rare and/or priority aquatic mammals. The site is therefore considered to be of **Negligible** value for aquatic mammals and the impact of the proposed development is **Neutral**.

Bats

Roosting potential - Trees

- 4.4.22 The five trees with PRF-I features do not provide enough space, shelter, or protection, to be used on a regular basis or by larger numbers of bats. These trees are considered to be of **Lower** importance for roosting bats at the **Parish** level.

- 4.4.23 None of these five trees are believed to be affected by the development. The impact of development upon these trees is considered to be **Neutral**. If the proposed development is likely to give rise to any impact upon the trees with PRF-I, this tree would need to be re-assessed for suitability pre-commencement and any mitigation requirements will be provided at this later stage.

Roosting potential - Buildings

- 4.4.24 Buildings 2, and 5 were assessed as having negligible bat roost potential on account of the lack of potential roost features and lack of evidence of bat use identified. No further survey is considered necessary on these buildings and bat roosts are very likely absent.

- 4.4.25 Buildings 3 possessed a number of potential roost features such as lifted and slipped tiles, lifted flashing, and gaps underneath the roof trim. However, the buildings are located within an urban setting with little commuting opportunities for bats to foraging areas in the local area, which reduces the roosting potential of these buildings. The external lighting on site and streetlights located adjacent to the buildings likely illuminate most or all elevations of the buildings, further reducing the suitability of these buildings for roosting bats. Subsequently, Buildings 3 were assessed as providing low bat roost potential. Further survey is required to fully assess the value of the buildings for roosting bats.

- 4.4.26 Building 4 also possessed numerous potential roost features such as slipped tiles, lifted flashing, and holes in brickwork. As with Buildings 3, the urban setting of the building and external lighting

¹⁴ <https://ptes.org/campaigns/dormice/about-hazel-dormice/hazel-dormice-range-and-distribution-in-the-uk/> [Date accessed 26th June 2025]

reduces the suitability of Building 4 for roosting bats. Building 4 is therefore assessed as providing low bat roost potential and further survey is required to fully assess the value of the buildings for roosting bats.

- 4.4.27 A summary of the findings of the buildings survey is provided in the table below. The value of some of the existing buildings to bats is **Unknown** and the impact of the proposed development is to be determined by bat emergence surveys. If a bat roost is identified during the surveys, a European Protected Species development licence will need to be sought.

Building number	Identified bat use	Potential roost present	Emergence survey needed?
2	No	No	No
3	No	Yes – Low potential underneath lifted tiles, lead flashing, and roof trim.	Yes – at least one dusk emergence survey.
4	No	Yes – Low potential underneath slipped tiles, lifted flashing, and potential access via holes in brickwork on eastern elevation	Yes – at least one dusk emergence survey.
5	No	No	No

- 4.4.28 The bat emergence surveys on Buildings 3 and 4 have subsequently been undertaken by TMA Environmental Consultants and full results and assessment can be found separately¹⁵.

Foraging/commuting potential

- 4.4.29 The introduced shrub and scattered trees provide some suitable commuting and foraging potential but are situated within an urban setting with lots of light disturbance in the direct vicinity. Whilst Parkfields LWS is situated in close proximity to the site and offers more suitable foraging habitat, the site is isolated from the LWS due to the large amount of external lighting and minimal connecting habitats. As such, the site is likely to be predominantly used for commuting and foraging purposes by relatively common and widespread bat species.
- 4.4.30 The value of the site to foraging and commuting bats is **Lower** at the **Site only** scale. The boundary vegetation is proposed for retention and if this can be maintained as dark corridors then the impact of the proposals is considered to be **Neutral**.

4.5 Cumulative impacts

- 4.5.1 There are no known cumulative impacts.

4.6 Proposals for further survey or investigation

Surveys

- 4.6.1 It is proposed that the following survey work be undertaken in order to establish whether protected habitats or species are present at the site. The seasons in which species may reliably be surveyed and a brief methodology are given in the table below.

Survey type	Season for survey	Methodology & Objectives
Bat emergence survey	May to August	A least one dusk emergence survey visits each to identify roosts within Buildings 3 & 4 with the use of night vision aids to identify roosts.

- 4.6.2 The recommended bat emergence surveys on Buildings 3 and 4 have subsequently been undertaken by TMA Environmental Consultants and full results and assessment can be found separately.

¹⁵ TMA Environmental Consultants (September 2025) Bat Survey Reports Bat Emergence Surveys for Maple House, High Street, Potters Bar, Hertfordshire, EN6 5AE

Biodiversity Net Gain calculations

- 4.6.3 A Biodiversity Net Gain assessment is required under The Environment Act 2021 for most planning applications. This requires there to be a net gain of at least 10% which should be calculated using the Statutory Metric. Once this has been undertaken, the information will be provided separately.

5 Mitigation hierarchy measures

5.1 Features with no impacts arising

- 5.1.1 No mitigation hierarchy measures are needed for the following ecological features, because no significant impacts have been identified: European sites and nationally important designated sites; veteran trees; rare plants; invertebrates; great crested newts and other amphibians; reptiles; wintering birds; badgers; dormice and aquatic mammals such as water vole and otter.

5.2 Avoidance measures

- 5.2.1 Avoidance, mitigation and compensation requirements in respect of bats roosting in buildings can be found in a separate report produced by TMA Environmental Consultants.

- 5.2.2 The following impact avoidance measures have been identified and will be delivered.

Sites of local importance – Parkfield LWS

- Creation of public open space within the development site to reduce any potential increase in recreational pressure to local sites of importance.
- A Construction site Management Plan (CMP) is required to demonstrate that construction works will not impact Parkfield LWS directly or indirectly through dust, noise and other construction impacts.

Habitats

- Site boundary features, including the northern and western introduced shrub and trees, are to be protected and retained in the built scheme.
- Landscaping should attempt to retain as many trees on-site, *in-situ*, as possible to minimise ecological impact and nesting habitat loss.
- During the construction phase, Heras or similar fencing should be deployed to ensure that the northern and western boundary trees with PRF-I, remain undisturbed for the duration of the development.

Breeding birds

- Any vegetation removal or demolition of the existing buildings required for the construction phase should take place outside of the bird breeding season of March to August inclusive, to prevent disturbance to birds, or if removed in that period, only after a survey has shown that no active nests are present.

5.3 Proposed mitigation for known impacts

- 5.3.1 The following mitigation is required to reduce the impacts of the scheme to within acceptable limits.

Habitats

- Ensure that no works come closer than Root Protection Zones of trees and shrubs (as a minimum) in retained habitats, including off-site boundary trees.

Terrestrial mammals including badgers

- Trenches should be filled in prior to the end of the working day, or a ramp left from the base of the trench to the surface, so that animals falling in can get out of the excavation.
- Pipework should be closed off at the end of each working day to avoid badgers and other animals becoming trapped.

Bats

- If the proposed development is likely to give rise to any impact upon the trees with PRF-I, these trees would need to be re-assessed for suitability and any mitigation requirements will be provided at this later stage.

- External lighting should be reduced to a minimum and designed in accordance with guidelines from the Bat Conservation Trust.¹⁶ The scattered trees adjacent to the northern and western boundaries with PRF-I should be unlit to encouraging use by bats.

5.4 Compensation for ecological impacts

Habitats

- To compensate for the loss of modified grassland, it is recommended that areas of flowering lawn are created in public open space, for example in the southeastern corner and central areas.
- To compensate for loss of introduced shrub and trees, semi-natural planting should include berry-bearing native trees and shrubs to enhance food availability for wildlife. The proposed planting should be structurally diverse, with tree, shrub and ground layers, and areas of dense shrub as well as more open areas. Each individual tree lost needs to be replaced by tree planting in order to meet Biodiversity Net Gain requirements. It is recommended that the southeastern corner and central open areas be utilised for this planting.

5.5 Species licensing

- 5.5.1 Should it to be necessary to damage or destroy a badger sett whilst it is in use, or disturb a badger in a set, a licence would be required under the Protection of Badgers Act 1992. At present this is unnecessary and only might be required if a new sett arises or an existing inactive sett comes into use prior to the construction period.
- 5.5.2 A European Protected Species (EPS) licence would be needed to implement any impacts upon otter, bats or dormice such as damaging a place used for shelter or disturbing the species in its place of shelter. At present this is unnecessary for trees, as no potential roost features are likely to be impacted by the proposed development. This may be required if buildings are found to contain bat roosts following surveys.
- 5.5.3 It is not considered necessary to enter the Natural England District Level Licensing scheme for great crested newts given the lack of ponds within 250m of the site boundary and very limited terrestrial habitat within the site itself.

¹⁶ See <https://www.bats.org.uk/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released>

6 Enhancement measures

6.1 Ecological enhancement

- 6.1.1 Ecological enhancement aims to improve the quality of the site and the immediate vicinity for native flora and fauna. Such enhancements can also provide aesthetic appeal and can add value to the proposed development.
- 6.1.2 Suggested enhancement opportunities specific to the development proposals are provided below for consideration for inclusion within a final scheme design if appropriate and where they are technically deliverable. Any enhancements listed are not necessary for mitigating impacts and therefore it is not anticipated that all options would be utilised. Any options which are included could provide a qualitative net gain for habitats and targeted species.
- 6.1.3 The options are listed in order of priority, with habitat enhancements having most benefit to wildlife. Small-scale enhancements for individual species, whilst valuable, are generally of less overall benefit than habitat enhancement measures.

6.2 Habitat enhancement

- 6.2.1 Wherever possible, planting would use native species, which support biodiversity significantly better than non-native plants. This is due to the numbers of flowers, fruits, seeds and berries that are produced by our native species and their different flowering and fruiting times throughout the year.
- 6.2.2 Habitat enhancements include the following.
- Structural native trees and shrubs should be planted to provide a foraging resource for a variety of species. Once tree and shrub loss has been compensated for (up to no net loss), as detailed above, then native planting would be classed as an enhancement.
 - New native hedgerow planting should be incorporated into landscape design plans. Species should include berry-bearing species to provide for bird foraging, and native species to attract insects. A structurally diverse range of plants should be used, including shrubs large enough to support nesting birds.
 - Removal of introduced shrub species and replacement with mixed native scrub planting.
- 6.2.3 These enhancements would benefit common invertebrates, breeding birds, badger foraging, and bat foraging.

6.3 Small-scale species enhancement measures

- 6.3.1 Small-scale enhancements to benefit individual species/species groups would include the following.
- Thirteen bat boxes (e.g. Vivara, Ibstock, Habitat or similar), suitable for a range of bat species, should be integrated into the proposed buildings. These boxes should be located on the south-eastern to south-western elevations and should be positioned at least 5m above ground level where suitable locations exist. Boxes should avoid being positioned above doors and windows.
 - Thirteen swift boxes (e.g. Vivara, Ibstock or similar) should be installed into the fabric of each proposed building. These boxes should be located on the northern or eastern elevations and should be positioned at least 5m above ground level. Boxes should avoid being positioned above doors and windows.
 - If close-board, weldmesh or other impermeable fencing is required, provision should be made to allow hedgehog to commute through the site after construction is complete through either a 130x130mm gap at ground level or inclusion of at least two Hedgehog Friendly Gravel Boards¹⁷ or similar per run of fencing.

¹⁷ <https://www.kebur.co.uk/product/hedgehog-concrete-gravel-board/> or https://www.jacksons-fencing.co.uk/product/sc_667610/hedgehog-gravel-board-for-use-with-slotted-posts-1.83m-x-140-x-28mm-incl.1-x-end-packer-1-x-length-packer-jakcured

- Two invertebrate boxes (e.g. NHBS insect cabin or bug box) should be erected on retained trees or on poles within proposed shrub habitats.
- Two stag beetle log pyramids¹⁸ should be partly buried in a quiet, sheltered corner of the site to provide larval habitat. Hardwood logs should be retained from felled tree.
- One habitat pile should be created, using woody cut material (brash) from vegetation clearance. These should be stacked in a quiet, sheltered corner of the site to form piles measuring approximately 2m x 1m x 0.5m (height).

¹⁸ <https://ptes.org/wp-content/uploads/2020/05/Build-a-log-pyramid-for-stag-beetles.pdf>

7 Recommendations

7.1 Recommended reports

Lighting Strategy

- 7.1.1 If external lighting is proposed, it is recommended that a lighting strategy is prepared to minimise any impacts upon the northern and eastern boundary shrubs and trees that are suitable for nocturnal species.

Construction site Management Plan

- 7.1.2 A Construction site Management Plan (CMP) is required to demonstrate that construction works will not impact Parkfield LWS directly or indirectly through dust, noise and other construction impacts.

7.2 Recommended conditions

- 7.2.1 It is recommended that the following conditions, based on model conditions in Appendix D of BS42020:2013, are applied to the planning permission.
- 7.2.2 No removal of trees or shrubs or demolition of buildings shall take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check of vegetation for active birds' nests immediately before the vegetation is cleared and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest on site. Any such written confirmation should be submitted to the local planning authority.
- 7.2.3 Prior to occupation, a "lighting design strategy for biodiversity" for the proposed development shall be submitted to and approved in writing by the local planning authority. The strategy shall a) identify those areas/features on site to which bats, are particularly sensitive and that are likely to cause disturbance in or around their breeding sites and resting places, or along important routes used to reach key areas of their territory, for example, for foraging, and b) show how and where external lighting will be installed (through the provision of appropriate lighting contour plans and technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent the above species using their territory or having access to their breeding sites and resting places. All external lighting shall be installed in accordance with the specifications and locations set out in the strategy, and these shall be maintained thereafter in accordance with the strategy. Under no circumstances should any other external lighting be installed without prior consent from the local planning authority.

8 Conclusions

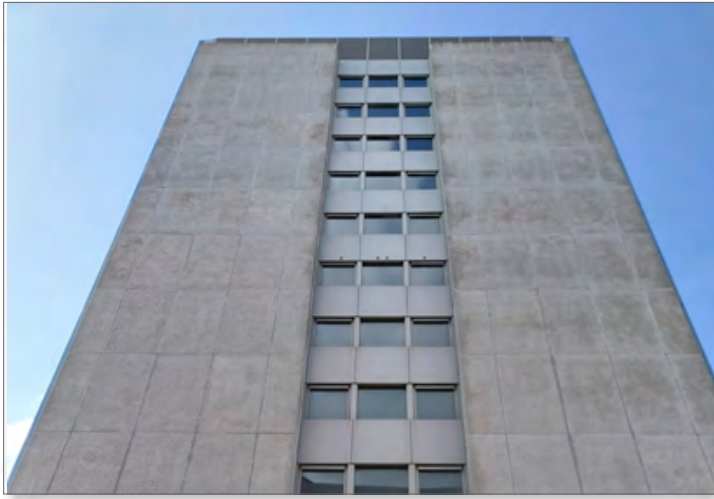
- 8.1.1 The purpose of this report was to inform a planning application for the proposed development.
- 8.1.2 The overall value of the site to wildlife is considered to be **Lower** at the **Parish** scale.
- 8.1.3 A summary of assessments of value and the impact of the proposed development without mitigation, and the residual significant effects following mitigation, is provided in the table below.

Feature	Level of value	Scale	Unmitigated impact	Confidence level	Mitigated impact
European Sites	Very High	European	Neutral	Probable	-
Sites of national importance	High	National	Neutral	Certain	-
Sites of local importance	Medium	County	Minor Adverse	Probable	Neutral
Habitats	Lower	Parish	Neutral to Minor Beneficial	-	-
Veteran trees	Negligible	-	Neutral	-	-
Plants	Negligible	-	Neutral	-	-
Invertebrates	Negligible	-	Neutral	-	-
Amphibians including great crested newts	Negligible	-	Neutral	-	-
Reptiles	Negligible	-	Neutral	-	-
Breeding birds	Lower	Parish	Minor Adverse	Probable	Neutral
Wintering birds	Negligible	-	Neutral	-	-
Dormice	Negligible	-	Neutral	-	-
Terrestrial mammals including badgers	Negligible	-	Neutral	-	-
Aquatic mammals including water voles and otters	Negligible	-	Neutral	-	-
Bats Roosting in Trees	Lower	Parish	Neutral	Probable	-
Bats Roosting in Buildings 2 & 5	Negligible	-	Neutral	-	-
Bats Roosting in Buildings 3 & 4	Unknown	Unknown	Unknown	-	-
Bats (foraging and commuting)	Lower	Site only	Neutral	-	-

- 8.1.4 An **Unknown** status indicates a need for further surveys to determine the value and impact of the development on protected habitats and/or species. Further survey requirements for this site includes **bat emergence surveys**, in order to understand the impact of the proposals upon these species. The recommended bat emergence surveys on Buildings 3 and 4 have subsequently been undertaken by TMA Environmental Consultants and full results and assessment can be found separately¹⁹.
- 8.1.5 The overall impact of the proposals is considered to be **Minor Adverse** in the absence of mitigation. The mitigated impact is considered to be **Neutral**.
- 8.1.6 The adoption of all or most of the enhancement measures detailed in Section 6 above would give rise to a **Neutral-Minor Beneficial** impact.

¹⁹ TMA Environmental Consultants (September 2025) Bat Survey Reports Bat Emergence Surveys for Maple House, High Street, Potters Bar, Hertfordshire, EN6 5AE

Figures



Building 2 - Maple House
Northern elevation.
Photograph taken 16/06/2025.



Building 2 - Maple House
Eastern elevation.
Photograph taken 16/06/2025.



Buildings 3 to 7 - High Street
Western and southern elevations.
Photograph taken 16/06/2025.



Buildings 3 to 7 - High Street
Eastern elevation.
Photograph taken 16/06/2025.



Building 8 - Princes parade
Western and southern elevations.
Photograph taken 16/06/2025.



Building 8 - Princes parade
Eastern and southern elevations.
Photograph taken 16/06/2025.



Building 9 - Parking Garage
Western and southern elevations.
Photograph taken 16/06/2025.



Building 9 - Parking Garage
Interior view of ground floor
Photograph taken 16/06/2025.

B25037 Maple House, Potters Bar

Photographs of Buildings

Figure 02

July 2025

Appendix 1

Legislative and policy context

There is a number of pieces of legislation, regulations and policies specific to ecology which underpin this assessment. These may be applicable at a National or Local level. References to legislation are given as a summary for information and should not be construed as legal advice.

Birds Directive

The European Community Council Directive on the Conservation of Wild Birds (79/409/EEC), normally known as the Birds Directive, sets out general rules for the conservation of all naturally occurring wild birds, their nests, eggs and habitats. It was superseded by the 'new' Birds Directive (2009/147/EC) which generally updated the previous directive.

Since the end of the Brexit transition period on 31st December 2020 the Birds Directive no longer is part of the UK legal system.

Habitats Directive

The European Community Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora (92/43/EEC), normally known as the Habitats Directive, aims to protect the European Union's biodiversity. It requires member states to provide strict protection for specified flora and fauna (i.e. European Protected Species) and the registration and regulation of Special Areas of Conservation.

Since the end of the Brexit transition period on 31st December 2020 the Habitats Directive no longer is part of the UK legal system.

Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 generally follow the Birds Directive and Habitats Directive but unlike the Directives there is no role for the European Union; the UK Government has taken that role following the end of the Brexit transition period on 31st December 2020. For clarity, the following paragraphs consider the case in England only, with Natural England given as the appropriate nature conservation body. In Wales, the Countryside Council for Wales is the appropriate nature conservation body.

Special Protection Areas and Special Areas of Conservation are defined in the regulations as forming a national network of 'European sites'. The Regulations regulate the management of land within European sites, requiring land managers to have the consent of Natural England before carrying out management. Byelaws may also be made to prevent damaging activities and if necessary land can be compulsorily purchased to achieve satisfactory management.

The Regulations define competent authorities as public bodies or statutory undertakers. Competent authorities are required to make an appropriate assessment of any plan or project they intend to permit or carry out, if the plan or project is likely to have a significant effect upon a European site. The permission may only be given if the plan or project is ascertained to have no adverse effect upon the integrity of the European site. If the competent authority wishes to permit a plan or project despite a negative assessment, imperative reasons of over-riding public interest must be demonstrated, and there should be no alternative to the scheme. The permissions process in that case would involve the Secretary of State. In practice, there will be very few cases where a plan or project is permitted despite a negative assessment. This means that a planning application has to be assessed by the Local Planning Authority, based on information provided by the applicant, and the assessment must either decide that it is likely to have no significant effect on a European site or ascertain that there is no adverse effect upon the integrity of the European site.

Government policy is for Ramsar sites (wetlands of global importance) to be treated as if they were European sites within the planning process.

Appropriate Assessment

Appropriate Assessment is required in certain instances under the Conservation of Habitats and Species Regulations 2017. Regulation 63 says that:

63.— (1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which-

(a) is likely to have a significant effect on a European site or a European offshore marine site

(either alone or in combination with other plans or projects), and
(b) is not directly connected with or necessary to the management of that site,
must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.

(2) A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required.

(3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.

(4) It must also, if it considers it appropriate, take the opinion of the general public, and if it does so, it must take such steps for that purpose as it considers appropriate.

(5) In the light of the conclusions of the assessment, and subject to regulation 64, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which they propose that the consent, permission or other authorisation should be given.

Regulation 70 provides that Regulations 63 and 64 apply in relation to the grant of planning permission. Regulation 70(3) specifically addresses outline applications, saying that:

"Where [Regulations 63 and 64] apply, outline planning permission must not be granted unless the competent authority is satisfied (whether by reason of the conditions and limitations to which the outline planning permission is to be made subject, or otherwise) that no development likely adversely to affect the integrity of a European site or a European offshore marine site could be carried out under the permission, whether before or after obtaining approval of any reserved matters."

The tests under the Habitats Regulations are very strict. To exclude a likely significant effect under Regulation 63(1)(a) or to exclude an adverse effect on integrity under Regulation 63(5) a competent authority must be certain beyond a reasonable scientific doubt as to the absence of such effects.

Although not provided for under the Habitats Regulations, Government policy under paragraph 176(b) of the NPPF is for Ramsar sites (wetlands of global importance) to be treated as if they were European sites within the planning process.

The competent authority is typically the local planning authority, or an Inspector / Secretary of State for appeals. The appropriate assessment contains the information the council requires for the purposes of its assessment under the Habitat Regulations.

The Habitats Regulations also are applicable to local authority land use plans and policies. If a policy or plan is likely to have a significant effect upon a European site, the permission may only be given if the policy or plan is ascertained to have no adverse effect upon the integrity of the European site. This approach gives rise to a hierarchy of plans each with related appropriate assessments. For example, the appropriate assessment of a Regional Spatial Strategy will affect policies within a Core Strategy, which will then need its own appropriate assessment, and so on.

European Protected Species

European Protected Species of animals are given protection from deliberate capture, injury, killing, disturbance or egg taking/capture. Their breeding sites or resting places are also protected from damage or destruction, which does not have to be deliberate. A number of species are listed as European Protected Species, with those most likely to be considered in planning applications being bats, dormouse, great crested newt and otter. Natural England may give a licence for actions that are otherwise illegal, subject to them being satisfied

on the three tests of no alternative, over-riding public interest, and maintenance of the species in favourable condition.

European Protected Species of plant are also listed and given protection. These species are generally very rare and unlikely to be present in proposed development sites.

Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 has been amended many times, including by the Countryside and Rights of Way Act 2000. It contains provisions for the notification and regulation of Sites of Special Scientific Interest, and for protected species.

The Regulations regulate the management of land within Sites of Special Scientific Interest, requiring land managers to have the consent of Natural England before carrying out management.

All public bodies are defined as 'S28G' bodies, which have a duty to further the nature conservation of Sites of Special Scientific Interest in the undertaking of their functions. In practice, this prevents planning applications being permitted if they would harm Sites of Special Scientific Interest, as it would be a breach of that duty.

The Act makes it an offence intentionally to kill, injure, or take any wild bird, take, damage or destroy the nest of any wild bird, while that nest is in use or being built, or take or destroy an egg of any wild bird. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young.

The Act makes it an offence intentionally to kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. Some species have lesser protection under this Act, for example white-clawed crayfish, common frog and toads are only protected from sale, and reptile species, other than smooth snake and sand lizard, are protected from intentional killing or injury, but they are not protected from disturbance and their habitat is not protected. It is also an offence intentionally to pick, uproot or destroy any wild plant listed in Schedule 8.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) dated December 2024 provides Government Policy in relation to nature conservation and planning as well as other matters.

Chapter 15 paragraph 187(d) of the NPPF says that the planning system should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity.

Paragraphs 188 and 189 relate to policy for designated sites of biodiversity or landscape importance. Local Plan policies should distinguish between the hierarchy of international, national and locally designated sites and allocate land with the least environmental or amenity value and maintain and enhance networks of habitats and green infrastructure. Further policy is within paragraph 185, where Local Planning Authorities should seek to protect and enhance biodiversity within their Local Plans by:

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

When determining planning applications Local Planning Authorities should apply the following principles (paragraph 193):

- If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused,
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other

developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to 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.

Paragraph 194 adds protection to candidate sites of European or International importance (Special Protection Areas, Special Areas of Conservation and Ramsar sites) and also to those sites identified or required as compensatory measures for adverse effects on habitats sites, potential SPA, possible SAC listed or proposed Ramsar sites.

Paragraph 195 clarifies that the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a 'habitats' site, i.e. a European site, (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government circular 'Biodiversity and Geological Conservation – Statutory Obligations and their Impact Within the Planning System' referenced ODPM 06/2005 has not been replaced and remains valid. It sets out the legislation regarding designated and undesignated sites and protected species and describes how the planning system should take account of that legislation. It does however pre-date the NERC Act 2006 (see below), which includes a level of protection for a further list of habitats and species regardless of whether they are on designated sites or elsewhere.

Natural Environment and Rural Communities (NERC) Act 2006

This Act includes a list of habitats and species of principal importance in England. Local Authorities are required to consider the needs of these habitats and species when making decisions, such as on planning application.

Local Planning Authority's planning policy

The Local Planning Authority will have policies relating to biodiversity conservation.

Species Legislation

The following table provides an overview of legislation with regard to species.

Protected Species	Legislation			
	Wildlife & Countryside Act, 1981	The Conservation of Habitats and Species Regulations, 2017	Natural Environment & Rural Communities (NERC) Act, 2006	Protection of Badgers Act, 1992
Plants (certain 'rare' species)	✓	✓ ²⁰	✓	
Invertebrates (certain 'rare' species)	✓	✓ ²¹	✓	
White-clawed crayfish	✓		✓	
Great crested newt, natterjack toad, pool frog	✓	✓	✓	
Other amphibians	✓ ²²		✓	
Sand lizard, smooth snake	✓	✓ ²³	✓	
Other reptiles	✓ ²⁴		✓	
Breeding birds	✓	✓	✓	
Wintering birds (certain 'rare' species)	✓	✓	✓	
Bats	✓	✓	✓	
Dormouse	✓	✓	✓	
Water vole	✓		✓	
Otter	✓	✓	✓	
Badger				✓

²⁰ Nine species present in the UK, with very specialised habitat requirements, are European Protected Species.

²¹ Fisher's estuarine moth, large blue butterfly and lesser whirlpool ram's-horn snail are European Protected Species.

²² The four other native amphibian species (smooth and palmate newts, common frog and common toad) are only protected against trade under this act.

²³ Smooth snake and sand lizard are European Protected Species.

²⁴ The four other native reptile species (common lizard, slow worm, grass snake and adder) are protected against intentional killing, injury and trade under this act.

Appendix 2

Assessment Methodology: Valuing Ecological Features and Impact Assessment

The three-stage assessment method for determining ecological value is based upon assessment matrices published in the Handbook of Biodiversity Methods²⁵. It has been updated to comply with recent changes to planning policy and legislation. The three-stage process allows the value of ecological sites, habitats and populations, and the magnitude of the impact, to be cross-tabulated to identify impact significance.

Valuing ecological sites, habitats and populations: scale and level of value

Scale	Level of value	Sites, habitats and populations
Greater than national	Very High	Statutory sites designated under international conventions or related national legislation, in particular: - Wetlands of International Importance (Ramsar sites), - Special Areas of Conservation, - Special Protection Areas.
National	High	Statutory sites designated under national legislation, for example: - Sites of Special Scientific Interest (England, Wales, Scotland), - National Nature Reserves (UK). Significant viable areas of habitats, or populations or assemblages of species of principal importance for the conservation of biodiversity in England and Wales (Section 41 species and habitats)²⁶ of such size and quality as might qualify for SSSI designation. Populations or assemblages of red-listed, rare or legally protected species, as might qualify for SSSI designation, for example: - species of conservation concern, - Red Data Book (RDB) species, - birds of conservation concern (Red List species), - nationally rare and nationally scarce species, - legally protected species.
County	Medium	Statutory sites of lower conservation value designated under national legislation, for example Local Nature Reserves (UK). Non-statutory sites designated under local legislation, for example: - County Wildlife Sites, - Local Wildlife Sites, - Roadside Nature Reserves (protected road verges). Viable areas of habitat or populations of species of principal importance for the conservation of biodiversity in England and Wales (Section 41 species and habitats)²⁷ of such size and quality as might qualify for designation at the county level. Other non-designated sites which meet the criteria for designation at this level.

²⁵ Hill, D., Fasham, M., Tucker, G., Shewry, M., Shaw, P. (eds.) (2005) *Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring*, Cambridge University Press.

²⁶ Listed under S41 of the Natural Environment and Rural Communities Act 2006 <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>.

²⁷ Listed under S41 of the Natural Environment and Rural Communities Act 2006 <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>.

District/ Borough²⁸	Lower	Sites meeting criteria for metropolitan designations. Undesignated sites or features not meeting criteria for county designation, but that are considered to enrich appreciably the habitat resource within the local district or borough, for example: • ancient woodland, • diverse, ecological valuable and cohesive hedgerow networks, • significant clusters or groups of ponds, • veteran or ancient trees. Viable areas of habitat or populations of species of principal importance for the conservation of biodiversity in England and Wales (Section 41 species and habitats)²⁹ not qualifying for designation at the county level.
Parish	Lower	Areas of habitat considered to enrich appreciably the ecological resource within the context of the local parish. Small areas of habitat or populations of species of principal importance for the conservation of biodiversity in England and Wales (Section 41 species and habitats)³⁰.
Site only	Negligible	Ecological feature or resource not meeting any of the above criteria.

Note: there is much overlap in designations and lists of important species, and many sites, habitats and species appear on several. Where a site, habitat or species has multiple designations or levels of protection, normally the highest level would be the level at which impacts are assessed.

²⁸ Including metropolitan boroughs.

²⁹ Listed under S41 of the Natural Environment and Rural Communities Act 2006 <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>.

³⁰ Listed under S41 of the Natural Environment and Rural Communities Act 2006 <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>. Listed under S41 of the Natural Environment and Rural Communities Act 2006 <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>.

Definitions of impact magnitude

Magnitude (negative or positive)	Definition/trigger
Severe	Loss or severe degradation affecting over 75% of a site feature, habitat or population. Adverse change to, or reduced condition of, over 90% of a site feature, habitat or population, for example through disturbance or trampling.
Major	Loss or severe degradation affecting over 25% of a site feature, habitat or population. Adverse change to, or reduced condition of, over 50% of a site feature, habitat or population, for example through disturbance or trampling. For benefits, an impact equivalent in nature conservation terms to a gain of over 50% in a site feature, habitat or population.
Moderate	Loss or severe degradation affecting over 5% of a site feature, habitat or population. Adverse change to, or reduced condition of, over 10% of a site feature, habitat or population, for example through disturbance or trampling. For benefits, an impact equivalent in nature conservation terms to a gain of 10-50% in a site feature, habitat or population
Minor	Loss or severe degradation affecting up to 5% of a site feature, habitat or population. Adverse change to, or reduced condition of, 1-10% of a site feature, habitat or population, for example through disturbance or trampling. For benefits, an impact equivalent in nature conservation terms to a gain of up to 10% in a site feature, habitat or population.
Insignificant	No loss of or severe degradation to a site feature, habitat or population. Adverse change to, or reduced condition of, less than 1% of a site feature, habitat or population. No benefit to a site feature, habitat or population.

Impact significance

Value of site, habitat or population	Magnitude of impact							
	<i>Severe Negative</i>	<i>Major Negative</i>	<i>Moderate Negative</i>	<i>Minor Negative</i>	<i>Insignificant</i>	<i>Minor Positive</i>	<i>Medium Positive</i>	<i>Major Positive</i>
<i>Very High</i>	Severe Adverse	Severe Adverse	Major Adverse	Major Adverse	Neutral*	Major Beneficial	Major Beneficial	Major Beneficial
<i>National (High)</i>	Severe Adverse	Major Adverse	Major Adverse	Moderate Adverse	Neutral*	Moderate Beneficial	Major Beneficial	Major Beneficial
<i>County/Metropolitan (Medium)</i>	Major Adverse	Major Adverse	Moderate Adverse	Moderate Adverse	Neutral	Minor Beneficial	Moderate Beneficial	Major Beneficial
<i>District/Borough (Lower)</i>	Major Adverse	Moderate Adverse	Moderate Adverse	Minor Adverse	Neutral	Minor Beneficial	Moderate Beneficial	Moderate Beneficial
<i>Parish (Lower)</i>	Moderate Adverse	Moderate Adverse	Minor Adverse	Minor Adverse	Neutral	Minor Beneficial	Minor Beneficial	Moderate Beneficial
<i>Minimal/negligible</i>	Neutral	Neutral	Neutral	Neutral	Neutral	Minor Beneficial	Minor Beneficial	Moderate Beneficial

Where the impact significance falls below Minor Adverse, the term 'Neutral' is used.

*In some circumstances, some 'insignificant' impacts might fail legislative or policy tests and the impact would be greater than Neutral.

Appendix 3



:To be read in conjunction with landscape specifications

LEGEND - Hard landscape

Site

	Red line boundary		Land within applicant ownership (outside application boundary)
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Paving

	Paving type 1 General shared surface, exclusively pedestrian access and surface with occasional vehicular access for servicing		Paving type 2 Shared surface (Utility corridor running beneath - impermeable paving)
	Paving type 3 Tactile and visually contrasting paving line between occasional vehicular and exclusively pedestrian shared surface		Paving type 4 Permeable visually contrasting paving on vehicular part of shared surface at formal crossings
	Paving type 5 Tactile and visually contrasting paving on pedestrian part of shared surface at formal crossings		Paving type 6 Vehicle and cycle parking (Cobble stone with open gaps)
	Paving type 7 Transitional areas from public to private communal		Paving type 8 Paths associated with southern courtyard
	Paving type 9 Paths associated with southern courtyard (Utility corridor running beneath - impermeable paving)		Paving type 10 Paths associated with northern courtyard
	Paving type 11 High Street and Fulton Lane frontage (Matching existing, following Hertsmere guidance)		Paving type 12 Play surface for high impact areas
	Paving type 13 Stopping alone trails for informal movement - flush to 300mm high		Paving type 14 Lightweight gravel fill
	Paving type 15 Tree root protection grille		

Planting

	Layered planting		Layered planting on mounds
	Extended existing boundary hedgerow		Existing hedgerow
	Multifunctional SuDS depression area		Densely planted SuDS depression/raingarden
	Planting type 1 Private gardens with hedges		Planting type 2 Climber planting along retained car park western frontage - Planted in ground
	Planting type 3 Climber planting along retained car park eastern frontage - Planted in planters		Mound outline
	SuDS depression outline		

Trees

	Tree type 1 40-45 cm girth - single stem		Tree type 2 30-35 cm girth tree - single stem
	Tree type 3 20-25 cm girth tree - single stem		Tree type 4 2.0-2.5 m high tree - multi stem
	Tree type 5 15-20 cm girth tree - single stem		Tree type 6 2.0 m high tree - multi stem
	Shrub type 1 1.0 - 1.8 m high		Tree type 7 Existing category B tree
	Tree type 6 Existing category A tree		Tree type 8 Existing category C tree
	Tree type 8 Existing category C tree		Tree type 7 Existing category B tree

Structure & Furniture

	Edge type 1 Raised planters along eastern car park frontage - 1000mm high x 1000mm deep x width as shown in plan		Edge type 2 Flush planters with brick edge - High street extension 3000mm/4680mm wide x 1600mm/4600mm deep
	Edge type 3 Raised brick planters - High street extension 500mm high		Edge type 4 Raised brick planters - High street extension 500mm high
	Edge type 5 Brick edge along main paths in private communal courtyards		Existing wall Existing wall along the western boundary
	Wall type 1 Retaining wall at retained car park access to lower deck and south-western corner		Balustrade type 1 Balustrades along Steps type 1 and 2
	Balustrade type 2 Balustrade to retained ramp to CLP underground parking		Steps type 1 Steps adjacent to Block D
	Steps type 2 Steps up to the existing substation - Concrete steps		Steps type 3 Steps up to the mound in the southern courtyard
	Steps type 4 Steps to the southern entrance of the retained car park		Furniture type 1 Retractable bollards to control service access
	Furniture type 2 Bench		Furniture type 3 Shedfield cycle stands
	Play type 1 Formal play element		

Appendix 4

Guidelines for assessing potential suitability of proposed development sites for bats

Source: Collins J (ed) (2023) Bat Surveys for Professional Ecologists Good Practice Guidelines. Bat Conservation Trust

Potential Suitability	Roosting habitats in structures	Potential flight paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels)	No habitat features on site likely to be used by any commuting or foraging bats at any time of year (i.e. no habitats that provide continuous lines of shade / protection for flight lines or generate / shelter insect populations available to foraging bats.
Negligible³¹	No obvious habitat features on site likely to be used by roosting bats; however a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight paths or by foraging bats; however a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ³² , and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool / stable hibernation site but could be used by individual bats ³³).	Habitat that could be used by small numbers of bats as flight paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ⁴⁵ and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ⁴⁵ and surrounding habitat. These structures have the potential to support high conservation status roosts e.g. maternity or classic cool / stable hibernation site.	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.

³¹ Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage due to one attribute, but it is unlikely that they actually would due to another attribute.

³² For example, in terms of temperature, humidity, height above ground level, light levels, or levels of disturbance

³³ Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al 2016 and Jansen et al 2022). Common pipistrelle swarming has been observed in the UK (Bell 2022 and Tomlinson 2020) and winter hibernation of numbers of this species has been detected at Seaton Delavel Hall in Northumberland (National Trust 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape.

Appendix 5

Local Sites Map 1

Search Information

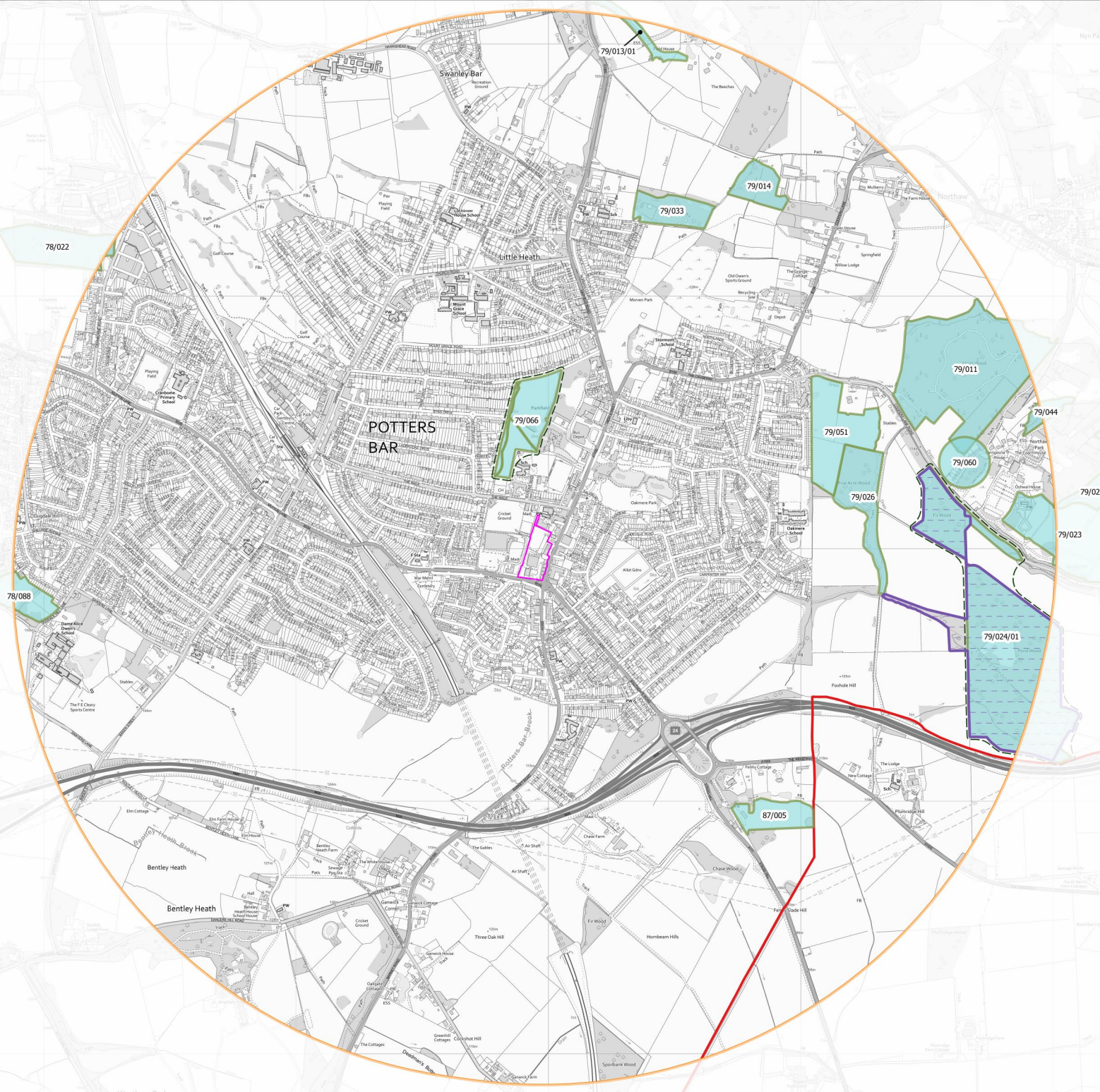
-  Search boundary
-  Search area

Local Sites

-  Local Wildlife Sites
-  HMWT Nature Reserves

Administrative Area

-  Herts County Boundary



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National Sites Map 1

Search Information

-  Search boundary
-  Search area

National Sites

Statutory Sites

-  LNR
-  Ancient Woodland Inventory

Administrative Area

-  Herts County Boundary



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Hertfordshire Ecological Network Mapping

Introduction

A project was carried out in 2011-2013 producing a new Hertfordshire habitat inventory with latest available data and then using these data to generate potential habitat network maps. Potential habitat network maps identify how our habitats are spatially related to each other and where the highest priorities are for expanding them and linking them together. This strategic approach ensures that efforts can be targeted to where they are of most potential benefit. It also ensures that the right combination of habitats are created in the right places, reflecting the historical context and physical factors and minimising unintended consequences of locking out the potential to restore functioning networks of one habitat for the sake of another.

The Hertfordshire Ecological Network mapping project was managed by a steering group that included representatives of the County Council and DEFRA bodies and the guidance document (below) has been approved by the Hertfordshire Local Nature Partnership Planning Task Group that includes representatives from Herts Ecology, the County Council, District Councils and landowners.

For more detail on the project, please visit <https://bit.ly/2tR5jYw>

How to interpret the maps

The guidance below is based on an advisory document, produced by the Hertfordshire Local Nature Partnership Planning Task Group, which is available here: <https://bit.ly/2MNDhUu>

The guidance below is based around identifying appropriate actions and principles to apply to the different areas on the map. For any development proposal the first stage is to identify how the different features within the dataset are distributed across the proposed development area. This will involve viewing the map component of the dataset and interrogating the associated data table for each of the map features within and around the proposed site. For ease of use, the map component of the dataset is colour-coded by the overarching categories in the first column of the data table.

Determining Strategic Significance from the HEN maps

In line with emerging guidance from Herts & Middlesex Wildlife Trust's Planning and Biodiversity Manager and Herts County Council, the HEN maps have been suggested as a suitable basis for determining Strategic Significance for Biodiversity Net Gain calculations, in the interim until the Local Nature Recovery Strategy and Nature Recovery Network map for Herts are published. Strategic scores can be applied based on the HEN map categories, where:

HEN Category	HEN Category Description	Strategic Significance Category	Multiplier
1	Existing S41 NERC Act Habitat	High	1.15
2	Existing habitat not currently qualifying under S41 NERC Act	High	1.15
3a	No known habitats present (high priority for habitat creation)	High	1.15
3b	No known habitats present (medium priority for habitat creation)	Medium	1.1
3c	No known habitats present (lower priority for habitat creation)	Low	1

For **small-scale developments** (as defined in guidance for using the Defra Statutory biodiversity metric calculation tool), strategic scores can be applied based on the HEN map categories as follows:

HEN Category	HEN Category Description	Strategic Significance Category	Multiplier
1	Existing S41 NERC Act Habitat	High	1.15
2	Existing habitat not currently qualifying under S41 NERC Act	High	1.15
3a	No known habitats present (high priority for habitat creation)	High	1.15
3b	No known habitats present (medium priority for habitat creation)	Low	1
3c	No known habitats present (lower priority for habitat creation)	Low	1

Green areas on the map (values of 1 in the first column of the data table)

- These patches contain habitats listed within S41 of the NERC Act and should be avoided by development and protected by the development management system.
- Adjacent or surrounding development should provide for the enhancement of these habitats through ongoing positive conservation management. The data table identifies the habitat type that must be maintained.
- Development causing significant harm to these patches should normally be refused. Where there is unavoidable harm in the context of overriding public interest, the mitigation hierarchy should be applied. Depending on the circumstances, all other areas on the map could potentially be candidate areas for applying appropriate compensation measures. The same actions described for restoring and creating habitats to enhance ecological networks equally apply to compensation measures. NB a simple 1:1 ratio of compensation for habitat area damaged is unlikely to be enough due to the poor success rate and risks involved in creating new habitats to the same standard as those lost. In reality the ratio is likely to be much higher, in some cases up to a 1:10 ratio of harm to compensation area. Other habitat types are considered irreplaceable (eg. ancient woodland) and can never be adequately compensated if lost.

Purple areas on the map (values of 2 in the first column of the data table)

- These patches contain habitats not currently qualifying under S41 of the NERC Act but with high potential to do so. Whilst not receiving the same level of statutory and policy-based protection as the green areas, they should nonetheless be avoided by development and protected by the development management system where reasonable to do so. This is because they are important components of ecological networks and it is much quicker, less risky and more cost-effective to restore these habitats than to create new ones elsewhere.
- Enhancements to the ecological network can be carried out through restoring these habitat patches to the most appropriate S41 NERC Act habitat type. This would be provided through a combination of one-off capital works and ongoing positive conservation management. The data table specifies the target habitat type most appropriate to restore these patches to.

Orange/yellow/cream areas on the map (values of 3a, 3b and 3c in the first column of the data table)

- These patches contain no mapped existing habitats of any significance. Therefore, in the context of the ecological networks dataset, these areas are suitable for appropriate development.
- These areas also form the potential for new habitat corridors to be created to improve ecological network integrity. The dataset identifies the relative priorities for habitat creation to form corridors and other links (eg. habitat 'stepping stones') between existing habitat patches. Orange areas are predicted to be of higher priority than yellow, which are predicted to be of higher priority than cream (values of 3a > 3b > 3c respectively in the first column of the data table). These relative priorities should be taken into account in the design of masterplans, by focusing habitat corridors primarily on the orange areas and then yellow and then cream, as appropriate. Development proposals containing large areas of orange on the map will need to plan the most sensitively and produce the greatest enhancements to the ecological network. The dataset simply predicts relative priority for habitat creation, not necessarily realistic sizes of such projects. Whilst it will normally be unlikely that whole areas coloured in orange on the map would be allocated for creating habitat, it is expected that where orange areas on the map exist, development should aim to provide ecologically functioning corridors from one end of their land to the other.
- There are no hard and fast rules for determining the scale of habitat corridors because it depends on the context and also the scale of development (with larger developments able to contribute the most). However, corridors should be of a scale to allow them to properly function ecologically. For example, a simple Green Infrastructure corridor consisting of a footpath with only a small verge of habitat is unlikely to function ecologically. As a general principle, the wider, larger and more continuous the corridor, the more it will contribute to the integrity of the ecological network.
- Opportunities for habitat creation projects to comprehensively link up existing habitats within and around the development envelope should be designed into the masterplan. This should be done at the earliest possible stage in the process, normally at the same time as other infrastructure, in order to ensure that contributions are both meaningful and cost-effective. If habitat corridors are designed into the masterplan as an afterthought, good opportunities will be missed and habitat creation projects are likely to be less appropriate and less cost-effective. Worst case scenario would be total and permanent severance of a network. It is highly recommended that expert ecological advice is sought in the earliest stages in the design of a masterplan.
- The dataset identifies the most appropriate predicted habitat types to focus on in any given area on the map. Habitat recommendations are found in the Target habitat type column of the table. Where more than one habitat type is recommended, it may be appropriate to focus on just one of

them or to try and combine all habitat recommendations into the habitat corridor being created. It is strongly recommended that expert ecological advice is sought in cases where more than one habitat type is recommended or where a soil test contra-indicates the recommended habitat type.

