



Bringing Together Over 30 Years of
Ecological Excellence

Tyrer Ecological Consultants Ltd, Roselands, Suite 1, 3, Cross Green, Formby, L37 4BH

Inspection & Assessment in Relation to Bats & Breeding Birds

December 2023

Ferngrove House

1 Ferngrove
Ferngrove East
Bury
BL9 7LS

National Grid Ref: SD82151145



Document Title	Inspection & Assessment in relation to Bats & Breeding Birds
Issue no.	1.0
Prepared for	Mr. B. Pond
Prepared by	Tyrer Ecological Consultants Ltd

Surveyor	Mr. B. Richards Qualifying CIEEM
Author	Mr. B. Richards Qualifying CIEEM
Survey Date	12/12/2023
Reviewed by	Mr. M. Pritchard ACIEEM
Review date	22/12/2023
Approved by	Mrs. K. Wilding CEnv MIEMA ACIEEM
Date of Issue	22/12/2023

Terms of use:

This report has been prepared by Tyrer Ecological Consultants Ltd with all reasonable skill, care and diligence within the terms of the instruction and permissions granted by the client. The results, conclusions and recommendations of this report are presented in line with the British Standard 42020:2013.

Tyrer Ecological Consultants Ltd have produced this report with all due integrity and adhere to the CIEEM Professional Code of Conduct, with the aim of upholding these objectives and the reputation of the profession.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client.

This report and contents therein are to be used only in conjunction with the Planning Application for which the report has been produced. It must not be used for any other purpose, copied, re-produced or sent to any other party other than the Local Planning Authority Department without the express permission of Tyrer Ecological Consultants Ltd. Furthermore, the data contained herein must not be copied, re-produced or sent to any other party/organisation whatsoever without the express permission of Tyrer Ecological Consultants Ltd.

Tyrer Ecological Consultants Ltd will however consider forwarding data that is collected as part of its reports to the relevant wildlife records centre.

Executive Summary

As part of a proposed planning application concerning Ferngrove House, Bury, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment in relation to bats with an inclusive inspection for breeding birds in December 2023. The survey was commissioned by Mr. B. Pond; proposals are understood to entail the demolition of an existing garage structure and the subsequent erection of a full height extension to the western elevation of an existing building.

Detailed methods, findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following **Key** points:

Bats:

Based upon the findings of the survey, covered through sections 6.0 – 7.0 of the report and supported by **Appendix I**, the building **B1** is duly categorised as pertaining to '**Moderate**' bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023). The building **B2** is categorised as pertaining to '**Negligible**' bat roost suitability.

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey ^a (structures). No further surveys required (trees).	Two separate dusk emergence survey visits ^b .	Three separate dusk emergence survey visits ^b .

*It is recommended that **two dusk emergence surveys** are conducted at **B1** within the season of bats (May – August, extending into September in some cases), in order to establish if / how the building is being used by bats, and if so, identify the species present, abundance, roost locations and flight lines around the site following emergence. A total of **one surveyor** would be required to cover the potential roosting features as described.*

Breeding Birds:

In relation to more common bird species, birds adapted to urbanisation could potentially use the building **B2** for nesting purposes.

Any demolition works on this structure should, therefore, be undertaken outside of the breeding bird season, typically March – September inclusive. For works within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing.

Biodiversity Enhancement:

As a means of enhancement and aiding the design of the scheme in keeping with local and national planning policy considering biodiversity net-gain principles, the proposals may consider incorporating wildlife friendly provisions in addition to those described. Further recommendations, regarding birds, native botanical species and invertebrates are provided within **Appendix II**.

Table of Contents

1.0 Introduction & Reasons for Survey

2.0 Protected Species & Their Requirements

3.0 Protected Species in Greater Manchester

4.0 Survey Methodology

5.0 Limitations

6.0 Desk Study Results

7.0 Field Study Results

8.0 Conclusions & Recommendations

9.0 Bibliography

Appendix I: Site Photographs

Appendix II: Biodiversity Enhancement: General Recommendations

1.0 Introduction & Reasons for Survey

- 1.1 As part of a proposed planning application concerning Ferngrove House, Bury, Tyrer Ecological Consultants Ltd carried out a daytime preliminary roost assessment in relation to bats with an inclusive inspection for breeding birds in December 2023. The survey was commissioned by Mr. B. Pond; proposals are understood to entail the demolition of an existing garage structure and the subsequent erection of a full height extension to the western elevation of an existing building. See **Figure 1.1** for a 'revised parking layout' which includes the location of the buildings **B1** and **B2** on site.



Figure 1.1 – Revised parking layout (© APB Consultant Building Surveyors)

- 1.2 The aim of the survey was to ascertain if the structures were of value to bats whilst an assessment for birds was also carried out. If any potential roost features (PRFs) were found to be suitable for bats or signs of use were observed where suitable habitats and / or bat records exist in the locality, then more detailed surveys would be recommended i.e. dusk emergence surveys during the main active season of bats which is May – August (extending into September).
- 1.3 If additional surveys are required following the initial site visit, this report will outline the details of those further requirements, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).
- 1.4 If it was determined that bat(s) or their roost / place of rest / shelter will be subsequently impacted by the works then a Protected Species licence would be legally required to proceed with the development.
- 1.5 If evidence indicated breeding birds may be impacted by proposals, tailored recommendations would be made accordingly, species pending.

- 1.6 As part of the local authority's planning policies and obligations to the Planning Framework, ecological surveys are generally required prior to planning permission being granted where protected / priority habitats and species are, or may be present, that could be affected by the proposals for which the application seeks consent. Where more detailed surveys are recommended by the ecologist, following an initial daytime investigation, then Local Planning Authorities (LPA), on the advice of their ecological advisors, will not grant permission until such time that all relevant information is gathered.
- 1.7 In accordance with Biodiversity Net Gain: Good practice principles for development (CIEEM et al, 2019) the site visit also aims to identify enhancement opportunities for biodiversity in line with national and local planning policy.

2.0 Protected Species & Their Requirements

Bats

- 2.1 All British bats and their **roosts are afforded full protection under the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of the Conservation of Habitats and Species Regulations (2017) (as amended). When dealing with cases where a European Protected Species (all UK bats) may be affected, a planning authority is a competent authority within the meaning of Regulation 7 of the Regulations, and therefore has a statutory duty, as the local authority, to have due regard to the provisions of the Regulations in the exercise of its functions.
- 2.2 Uses of Buildings by Bats
- a) Summer breeding roost (May – August)
 - b) Hibernation roost (October – March)
 - c) Transitional or temporary roost (other months)
- 2.3 Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance; climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

*** The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats and Species Regulations (2017) (as amended) (Regulation 43 (d) the term roost is not used but refers to “a breeding site or resting place of such an animal” and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation.*

Birds

- 2.4 All wild birds, no matter how common, their eggs, young and nests, whilst being built or occupied, are protected under both the Wildlife and Countryside Act (WCA 1981) and Natural Environment and Rural Communities Act (NERC Act 2006). Birds listed on Schedule 1 of the WCA 1981, for example barn owl (*Tyto alba*), are afforded a greater level of protection and are protected also from disturbance.
- 2.5 Any work that would damage an occupied nest, eggs or young of breeding birds must be avoided; any damage to nests that may occur as a result of the development should be outside of the main breeding bird season (March – August). On occasions, nests can become unoccupied during the breeding season, but the status of the nest(s) should be determined by a suitably experienced ecologist before any damage takes place.

Policy

- 2.6 Paragraph 180 of the National Policy Planning Framework (as revised in September 2023) states:

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

a) 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;

b) 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;

c) 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

d) 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.

- 2.7 Policy EN6/3 of the Bury Unitary Development Plan, titled 'Features of Ecological Value', echoes this national focus on preserving areas important for nature conservation, and states:

"The effect of land use changes on existing features of ecological or wildlife value will be taken into account when assessing development proposals. Any proposal should seek to retain such features and incorporate them into the development."

- 2.8 Where more detailed surveys are recommended by the Ecologist following a daytime assessment, then the Local Planning Authority, upon the advice of their ecological advisors, should not determine an application until such time that all relevant information is gathered, i.e. – until all required survey work has been completed. This is in accordance with the obligations placed upon Local Authorities in the exercise of its functions by way of its duties under the Conservation of Habitats & Species Regulations 2019 (EU Exit).

3.0 Protected Species in Greater Manchester

- 3.1 Up to eleven bat species have been recorded in Greater Manchester, most of which use built structures, notably occupied residential properties, for roosting. All bats feature on the local biodiversity action plan for the area; the most frequently encountered bat species is the common pipistrelle (*Pipistrellus pipistrellus*) which will roost in building crevices, and its abundant status in Greater Manchester is reflected throughout the UK.
- 3.2 All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected under the Wildlife & Countryside Act 1981 (as amended). Some species are, however, subject to a greater level of protection, for example the black redstart, which is listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), with nests of birds from these species being protected from disturbance as well as destruction. Records of barn owl suggest they are more prominent in the agricultural areas within Greater Manchester, where nesting, roosting and hunting habitat features are more likely encountered.

4.0 Survey Methodology

- 4.1 As part of the Inspection & Assessment in relation to Bats & Breeding Birds report, a desk-top and field-based study is conducted. Methods for both components of the appraisal are given below.

Desktop Study

- 4.2 Prior to a site visit a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations within 2.0 kilometres of the site boundary. To do so, the Multi Agency Geographic Information for the Countryside (MAGiC – provided by DEFRA) was accessed to gather such information; this particular interactive mapping service was also used to locate any locally granted European Protected Species Mitigation Licenses (EPSMLs) and species records to further inform conclusions concerning such species in the context of the study site and its proposed development.
- 4.3 Historic satellite imagery was reviewed using sources such as Google Earth (© 2022/23) to help establish past use of the land and determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.
- 4.4 A commercial data request to the Local Environment Records Centre serving the area – in this case Greater Manchester Local Record Centre (GMLRC) – has not been sourced and is justified through application of the following recent guidance:

1) The Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2020) states:

“It is generally expected that a desk study, including a data search, will be a key part of the ecological surveys or reports produced to inform a planning application. Freely available web-based sources of data and contextual information should always be used; in some cases, it may be acceptable to not undertake a data search with the LERC or other relevant NSS or local interest groups, for example:

*ii) Situations where the **data search would be extremely unlikely to provide information needed to inform the assessment, due to the scale and location of the proposed development**. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact. It can be very difficult to demonstrate that a data search would not have provided relevant information without obtaining and reviewing those data.*

*iii) In some cases for Preliminary Roost Assessments of buildings in **low impact / small-scale scenarios**, such as **an extension to a residential property**, loft conversions (full or partial), installation of Velux/dormer windows, single modern agricultural or similar building conversion or demolition; however, it should not be assumed that data searches are never required for such scenarios and this must be judged on a case by case basis and justified accordingly.*

- 4.5 As exemptions as made **bold** above can be applied at the site, whilst following best practice, it is considered unnecessary to conduct a commercial data request following the desk study effort and daytime assessment at this time, which offers a proportionate level of survey effort. If, however, a data search is considered necessary by the Local Authority advisory body to inform the ecological impact assessment following any further surveys recommended in this

report, a proportionate data search should be commissioned with results interpreted into the conclusions and recommendations of a re-issued / updated report.

Field Survey

- 4.6 In context with the above, a diurnal inspection and assessment of the buildings and the immediate environment in relation to bats and breeding birds was conducted on 12th December 2023 in rainy conditions (8°C), wind 1/12 (Beaufort scale), 100% cloud, by the following surveyor (see **Table 4.1**):

Table 4.1 – Site surveyor credentials

Name	Description of most relevant credentials
Mr. B. Richards Qualifying CIEEM	• Junior Ecologist with 2 years training and experience, • MBiolSci in Biological Sciences (Zoology), • Accredited agent on the Natural England Great Crested Newt: CL08 Class 1 licence (2018-34062-CLS-CLS) of Mr. M. Pritchard, • Accredited agent on the Natural England Class 2 bat license of Mrs K Wilding (CLS-14227), • Holder of a FISC Level 3 (2023).

- 4.7 Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023), states:

“The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. The questions should not be whether the guidelines were followed, but were the defined objectives of the surveys met? Where examples are used in the guidelines, they are descriptive rather than prescriptive.”

- 4.8 The site was assessed for bats; a daytime bat walkover (DBW) was undertaken to observe, assess and record any habitats or features suitable for usage by bats, either as commuting, foraging or roosting provision. Wider connectivity to other habitats was also considered during the DBW.
- 4.9 Buildings and other permanent / semi-permanent structures were subject to a preliminary roost assessment (PRA), to identify potential areas which may be of value to bats and to determine evidence of use. This typically involves a systematic search of the external aspects of any structure(s), comprising an investigation of features known to be used by bats (for example roofing material, soffits, fascia, lead flashing hanging tiles) using a high-powered torch and close-focus binoculars, where necessary. An internal assessment of the structure(s) was also carried out, with the aid of a high-powered torch and endoscope, where necessary, to identify any evidence of bat use of a structure. Field signs of bats typically comprise bat droppings, urine splashing, fur-oil staining, incidental animal presence, dead specimens and / or the presence of prey items, such as moth wings.
- 4.10 Trees (where present) would be subject to a ground level tree assessment (GLTA) using equipment such as close-focus binoculars and a high powered-torch. Potential roost features (PRFs) can include woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed lifted bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between

overlapping stems or branches, partially detached climbing species with stem diameters in excess of 50mm or pre-existing bat / bird boxes.

- 4.11 Criteria for roost assessment are based upon the determinants given in the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023): (see **Figures 4.1 – 4.3** overleaf).
- 4.12 The site and any built structure(s) on site were inspected for evidence of nesting and suitability for relevant species. Bird species observed and heard were recorded on site, and a search was made for nest material, or areas suitable for nesting – this can take the form of searching structures, woody vegetation, semi-aquatic vegetation such as reeds and / or ground flora. Elevations of any buildings or structures on site were inspected for evidence of birds that show a high dependency upon built structures, many of which are in a state of decline. These might include the following species for example (list non-extensive):
- **Starling** (*Sturnus vulgaris*): Birds of Conservation Concern (BoCC) red status
 - **House sparrow** (*Passer domesticus*): BoCC red status
 - **House martin** (*Delichon urbica*): BoCC red status
 - **Swift** (*Apus apus*): BoCC red status
- 4.13 Additional to the site's capacity to support generally common species for breeding, the area was also subject to an assessment for wider capacity to support species with extra protection under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended) and other priority species.
- 4.14 The results, conclusions and recommendations are based on a number of factors i.e.
- Practical experience of the surveyor,
 - Knowledge of bat / bird species relevant to the site location and geographical range,
 - Nature of the immediate / surrounding habitat in relation to foraging / commuting opportunities,
 - Presence / absence of roost potential,
 - Value and types of roost potential, if present (i.e. – maternity, hibernation, transitional).
- 4.15 The results, conclusions and recommendations of this report have been assessed by Mrs. K. Wilding, the Director of Tyrer Ecological Consultants Ltd, and her assessment is consistent with that of the surveyor Mr. B. Richards.

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	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 the 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 the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	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 ^b 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 hibernating bats ^c).	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. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b 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 ^b 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. Site is close to and connected to known roosts.

a 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).

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

c 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 Delaval 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, urban or otherwise.

Figure 4.1 – BCT guidelines extract

Table 4.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.	
Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Figure 4.2 – BCT extract on tree roost suitability criteria

Table 6.2. Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.	
Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Figure 4.3 – BCT extract on tree roost categorisation criteria

5.0 Limitations

- 5.1 The survey was conducted in December, outside of both the active bat season and the breeding bird season; whilst sub-optimal, survey timing is not considered a constraint in this instance as evidence of both of these species is evident all year round and suitability can be assessed by a competent surveyor at any time of the year.
- 5.2 The loft space of the residential structure **B1** on site has been converted within the last 5 years, and no access was possible to a probable void between the vaulted ceiling and the roofing material. The roof was, however, able to be viewed from ground level relative to its likely potential to offer roosting potential, and as such this is not considered a significant constraint.
- 5.3 In considering all potential survey constraints, whilst access issues were encountered, no significant limitations were experienced that might adversely influence the results, conclusions, and recommendations of this report.

6.0 Desk Study Results

- 6.1 The site of the proposed works (referred to in-part as “the application site” and “the site”) is situated to the east of Ferngrove in Bury, approximately 1.8km south-west of the town centre (see **Figure 6.1** below).



Figure 6.1 – Location of the red line boundary within the landscape (© Google Earth Pro 2022/23)

- 6.2 In a historical context, Ferngrove House has been present on site since around the late 1800s as verified by historical OS Maps, though recent works have been carried out to the property involving a loft conversion and subsequent change of use, as per the Bury Council ‘View and comment on planning applications and appeals’ online function, with associated bat assessment report.
- 6.3 The immediate habitat is entirely sub-urban in nature, with residential development forming much of the surrounding land space, with detached, semi-detached and terraced properties all present, with associated amenity garden space. To the west of the site is located the M66 motorway, with linear belts of woodland flanking this feature, as well as other smaller roadways in the immediacy. Other greenspace is limited to sports and recreational facilities to the west, as well as scattered trees which are sparsely dotted around the landscape.
- 6.4 The extending environment is partially similar to the immediate, with the area to the west of the site constituting residential and commercial development typical of the urbanised area of Bury, with banks of housing interspersed with retail parks and other amenities. To the north-east of the site is positioned expanses of agricultural land as well as a United Utilities Waterworks to the north-east which once provided a large expanse of open grassland but is now covered almost entirely in gravel. Topping Fold is located to the south-east of the site, with areas of open grassland as well as broadleaved woodland and open water provision.

- 6.5 As discussed, linear features do exist which could feasibly provide commuting routes, particularly for airborne species such as bats and birds, with those considered most likely to exist in proximity to the site being the common pipistrelle bat, commonly associated with roosting in built structures and notably occupied residential properties, as well as birds adapted to urbanisation, for example house sparrow and / or starling.

NB: *Where quality habitat is present close to buildings then the percentage use of those buildings, by bats, increases given that roost opportunities are available and vice versa.*

Designated sites

- 6.6 There is a single statutory designated site for nature conservation within 2.0km of the site (see **Table 6.1** for details and **Figure 6.2** overleaf for a visual aid).

Table 6.1 – Statutory designation type and reason for designation within 2.0km buffer

Site name	Designation type	Interest features
Chesham Woods (0.5 kilometres north-west)	Local Nature Reserve (LNR)	A 15.5 ha site, for which the Natural England citation states: <i>“There are six small woods in this reserve, three are semi-natural and the rest are part of the semi-ornamental ground of demolished large houses. Dry stone walls are an important feature of the site. The Main habitats include broad leaved semi-natural woodland, broad leaved semi-natural plantation, scrub, improved grassland, amenity grassland, neutral grassland and an orchard.”</i>

- 6.7 The site lies outside of the Impact Risk Zone (IRZ) for designated sites in the wider landscape, with the closest being located at a distance 6.2km from the site; as such, it is considered highly unlikely that Natural England (NE) need be consulted in respect of the scheme.
- 6.8 The above site is also designated in a non-statutory sense as a Site of Biological Importance (SBI), though the proposals are unlikely to impact upon the site or its designation features by way of spatial separation, being buffered by a busy motorway as well as expanses of residential development.

Habitats

- 6.9 An online search of MAGiC Maps identified the following priority habitats within a 2.0km search radius (see **Table 6.2**).

Table 6.2 – Priority habitats located within 2.0km buffer

Habitat Type	Designation
Ancient and semi-natural woodland	Ancient woodland
Deciduous woodland	Priority Habitat Inventory
Good quality semi-improved grassland	Priority Habitat Inventory
Lowland fens	Priority Habitat Inventory
Lowland heathland	Priority Habitat Inventory
Traditional orchard	Priority Habitat Inventory

Notable species records

- 6.10 An online search of MAGiC maps revealed that two European Protected Species Mitigation Licence (EPSML) in relation to bats have been granted within a 2.0 kilometres radius of the application site (see **Table 6.3** below for details and **Figure 6.2** overleaf for a visual aid).

Table 6.3 – EPSML data records from MAGiC Maps

Licence Number	Distance from site	Context (where relevant)
EPSM2010-2617	1.7km south-east	Common pipistrelle (CP); destruction of Day roost
EPSM2012-4607	1.9km west	CP; destruction of Day roost

- 6.11 Tyrer Ecological Consultants Ltd have previous and ongoing projects involving bats within the 2.0 kilometre area surrounding the site – as such, the following biological data (see **Table 6.2** below) is readily available to the Ecologist from the company database – all data has been previously submitted to the LERC serving the area, which, in this case, is GMLRC.

Table 6.2 – LERC submitted biological data records collected by Tyrer Ecological Consultants Ltd

Year	Distance from site	Context (where relevant)
2019	1.0km north-east	x4 CP; activity record
2021	0.4km north-west	x2 CP; activity record
	0.8km west	x10 CP; Satellite roosts

- 6.12 The site lies within multiple layers of bird interest on MAGiC Maps (2023), being within the 'Grassland Assemblage Farmland Birds '2' layer', with curlew (*Numenius arquata*), grey partridge (*Perdix perdix*) and lapwing (*Vanellus vanellus*) all having been recorded within the search range as indicated by their respective layers overlapping the site.

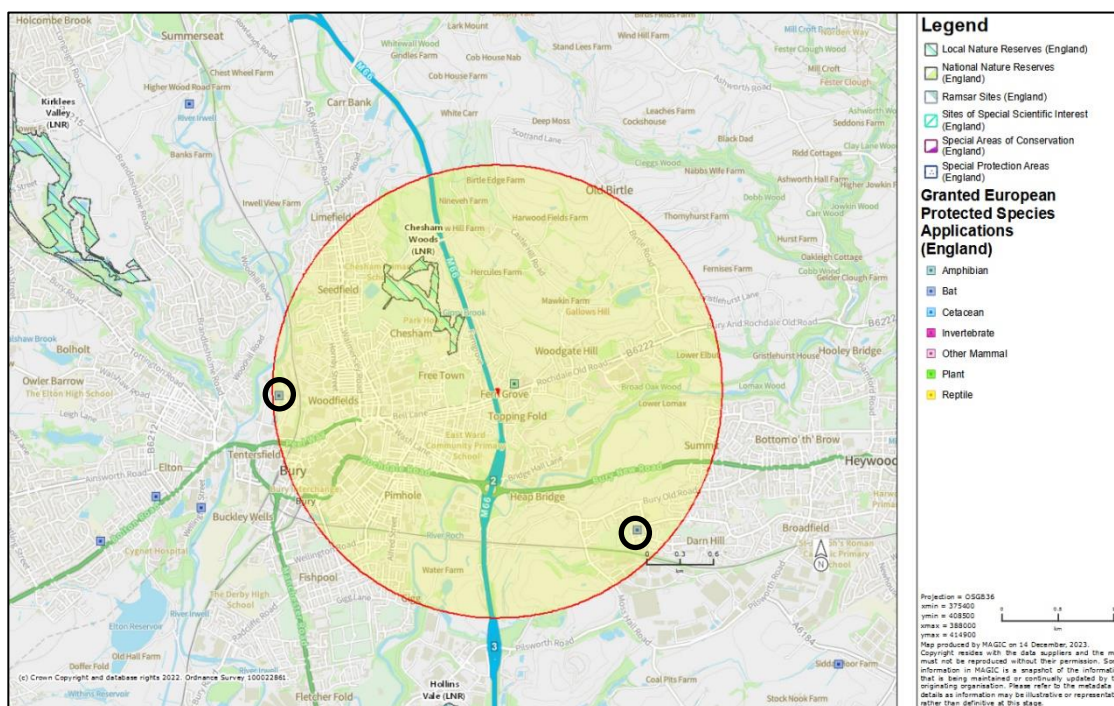


Figure 6.2 – EPSML and designated site data for the area within 2.0 kilometres of the application site, with granted bat EPSMLs circled in black (MAGiC Maps 2023)

7.0 Field Study Results

Bats

- 7.1 The first, and larger, of the two structures present on site (**B1**) is a 2.5 storey, pebble-dashed, residential property covered by a pitched slate roof, with approximate maximum dimensions of 12m x 10m x 6m (length x width x height). The structure features components such as timber doors and windows, a timber fascia in part, concrete lintels, plastic capping to the western gable, Velux windows to the roof, lead flashing and hanging slates to the western elevation. In respect of its condition, the surveyor is not qualified to assess structural state; however, the aesthetic condition of the building was adjudged to be generally good, with the roof, brickwork and fascia appearing to be tight, though some deterioration was noted to the hanging slates and associated lead flashing.
- 7.2 Internally, the uppermost floor has been built into the loft space and now exists with a vaulted ceiling, with a presumed void above this with a maximum apex height of 1m. The atmospheric conditions of the void were unable to be assessed by the surveyor.
- 7.3 Based on the above, the void is considered unsuitable for the breeding purposes of loft-dwelling bat species such as the brown long-eared bat; these species require open loft spaces with room for free flight in which to raise their young. Whilst the lack of access to void meant that the surveyor was not able to check for evidence of these species, the surrounding landscape is generally inhospitable, with an absence of suitable woodland or favourable foraging habitat in the immediacy.
- 7.4 It is unknown whether an underfelt is present beneath the roofing materials; where present, underfelt or other such roof lining typically improves a buildings value to bats, notably for crevice-dwelling bats of the *Pipistrellus* genus, whereby the bats roost between the lining and the roof cover material provided external opportunities exist. No evidence of this species group was encountered by the surveyor, though as discussed no access was possible to the presumed void.
- NB:** *The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.*
- 7.5 Externally, the roof itself is entirely tight fitting, with no obvious PRFs as is to be expected given that works were completed within the last 5 years. The structure is rendered up to the fascia and, as such, no entry points were identified at this feature. There are, however, a number of PRFs on the western elevation of the building, beneath lifted / missing hanging slates, at the roof verge where there is potential access to the roof void as well as beneath lifted lead flashing. These gaps appear to be progressive and could well extend to potential roosting locations between the slates and the material beneath. See **Appendix I** for examples.
- 7.6 Based on the above presence of PRFs as well as the discussed suitable habitats in the immediate and wider landscape, which are linked to the site via linear commuting features, the structure B1 is duly categorised as pertaining to '**Moderate**' bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).
- 7.7 The second structure on site (**B2**) is a single storey, metal-built garage currently used for storage of a multitude of items, covered by a flat metal roof and with estimated maximum dimensions of 6.5m x 6m x 2m. The structure features large doors to the southern elevation and is considered to be in an average aesthetic condition, with some deterioration noted to parts of the buildings external wall.

- 7.8 Internally, the space was cool, draughty and dark, with the roof sat upon timbers in good condition, and no suitable internal roosting locations identified. The external aspect also holds no features of roosting suitability, with a distinct absence of PRFs for either loft- or crevice-dwelling bats.
- 7.9 Based on the above, the structure **B2** is duly categorised as pertaining to '**Negligible**' bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).
- 7.10 No trees were located on site; though features to the west of the site should be considered of value to commuting and foraging bats, whereby they act as landmarks for navigation and foci around which invertebrate prey species gather.

Breeding Birds

- 7.11 In relation to WCA Schedule 1 specially protected bird species such as barn owl, no evidence was found to suggest any usage of the site, and given the nature of the surrounding habitats the presence of this, as well as other Sch.1 species, is considered highly unlikely.
- 7.12 Regarding other, more common bird species, the structure **B2** provides a potentially suitable nesting platform for those adapted to urban areas, such as house sparrow or starling, typically during the breeding bird season (typically March – August inclusive, extending into September species / weather dependent). No direct evidence of nesting was identified by the surveyor, though many urban bird species are opportunists and can take advantage of any suitable nesting platforms during the breeding bird season as above.

8.0 Conclusions & Recommendations

Bats

- 8.1 Based upon the findings of the survey, covered through sections 6.0 – 7.0 of the report and supported by **Appendix I**, **B1** is duly categorised as pertaining to ‘**Moderate**’ bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023). **B2** is categorised as pertaining to ‘**Negligible**’ bat roost suitability.

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey ^a (structures). No further surveys required (trees).	Two separate dusk emergence survey visits ^b .	Three separate dusk emergence survey visits ^b .

Figure 8.1 – BCT extract on ‘Moderate’ suitability criteria

- 8.2 Given the nature of the works and the areas set to be impacted (i.e. the entirety of the western elevation), further surveys **must** be carried out at **B1** to allow for a full impact assessment to be concluded.
- 8.3 Whilst consideration has been given to the previous ecological reporting at the site, which deemed the structure to pertain to ‘**Negligible**’ bat roost suitability in accordance with 2016 BCT guidelines, it is determined that the structure has deteriorated in key areas sufficiently to incur significant changes in the bat roost suitability of the structure.
- 8.4 It is recommended that **two dusk emergence surveys** are conducted at the site within the season of bats (May – August, extending into September in some cases), in order to establish if / how the building is being used by bats, and if so, identify the species present, abundance, roost locations and flight lines around the site following emergence. A total of **one surveyor** would be required to cover the potential roosting features as described.
- 8.5 The applicant should be aware that, if during further surveys, evidence is gathered that confirms bat(s) or their roost(s) are found on site and will be impacted upon, then a Protected Species licence may be required to legally commence with the proposals.
- 8.6 Natural England provides information and guidance about licensing and the following extract is included in that guidance:

“If you intend to apply for a licence for development, you are advised to seek the guidance of a consultant ecologist. Natural England's view is that a licence is needed if the consultant ecologist, based on survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably likely to result in an offence under the Conservation of Habitats & Species Regulations 2017 (as amended).”

If the consultant Ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If European protected species are found, cease the work until you have assessed

whether you can proceed without committing an offence. A licence should be applied for if an offence/s is unavoidable, and the work should not commence until a licence is obtained.

The application should be completed by the developer and a consultant ecologist. The ecologist will need to be able to demonstrate to the satisfaction of Natural England that they have the relevant skills and knowledge of the species concerned.

- 8.7 Where more detailed bat surveys are recommended by the Ecologist, following an initial daytime investigation, then Local Planning Authorities, on the advice of their ecological advisors, may not determine the application until such time that all relevant information is gathered, i.e., by conducting dusk / dawn surveys. The advice that is provided by the ecological advisors is also in accordance with the obligations placed upon Local Authorities by way of its duties under the Conservation of Habitats & Species Regulations 2017 (as amended). Therefore, it would be prudent to make enquiries to the relevant departmental Planning Officer before submitting a Planning Application that includes an ecological survey report that recommends more detailed surveys.
- 8.8 Installation of overly harsh artificial lighting as part of any development that exceeds current levels may have a negative impact upon foraging / commuting bats in the landscape, subject to their presence, particularly if increased light spillage occurs in areas of that are currently free from illumination, particularly including tree lines and hedgerows. A bat-sensitive lighting plan is therefore recommended in order to avoid potential impacts to bats that may use the surrounding treelines. Several options to consider have been listed below, though the reader is referred to the Bat Conservation Trust's 'Bats and Artificial Lighting at Night' guidelines (August 2023) for further information.

Appropriate luminaire specifications: Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion-sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.

- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

Breeding Birds

- 8.9 No impacts are applicable in relation to any Sch.1 (WCA) specially protected bird species such as barn owl, and no further surveys or recommendations are necessary in relation to specially protected birds.
- 8.10 In relation to more common bird species, birds adapted to urbanisation could potentially use the building **B2** for nesting purposes. Any demolition works on this structure should, therefore, be undertaken outside of the breeding bird season, typically March – September inclusive. For works within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing.

Point 3.24 of the British Standards Publication 42020:2013 defines a professional ecologist as: *“a person who has, through relevant education, training or experience, gained recognised qualifications and expertise in the field of ecology and environmental management.”*

- 8.11 Where / if active nests are / have been located by the Ecologist, then any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, this can be aided, for example, via implementation of appropriate buffer zone(s) around the nest site (typically 5 – 10 metres) in which no disturbance is permitted until the nest is no longer in use. This would have to be coordinated through the expert judgement of the professional ecologist and species pending.

NB: *All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected from destruction, damage and disturbance under the Wildlife & Countryside Act 1981 (as amended). It is a punishable offence to interfere in any way with an active nest.*

Biodiversity Enhancement

- 8.12 As a means of enhancement and aiding the design of the scheme in keeping with local and national planning policy considering biodiversity net-gain principles, the proposals may consider incorporating wildlife friendly provisions in addition to those described. Further recommendations, regarding birds, native botanical species and invertebrates are provided within **Appendix II**.

9.0 Bibliography

- **Bat Conservation Trust (BCT)**, 2023. *Bats and Artificial Lighting at Night, Guidance Note GN08/23*. Available from: <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>
- **CIEEM et al**, 2019. *Biodiversity Net Gain: Good practice principles for development*. Available from: www.cieem.net/data/files/Publications/Biodiversity_Net_Gain_Principles.pdf
- **CIEEM**, 2016. *Guidelines for Ecological Impact Assessment in the UK and Ireland*, 2nd edition. Available from: www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- **CIEEM**. 2020. *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK*. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK
- **CIEEM**, 2017. *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Available from: www.cieem.net/data/files/Publications/Guidelines_for_Preliminary_Ecological_Appraisal_Jan2018_1.pdf
- **Collins, J** (ed.) 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition). The Bat Conservation Trust, London.
- **Communities & Local Government (C&LG)**, 2018. *National Planning Policy Framework*. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/60777/2116950.pdf
- **Gunnell, K. Grant, G. and Williams, C.** 2012. 'Landscape and urban design for bats and biodiversity'. Bat Conservation Trust.
- **Magic Maps Application**, 2023. Available from: www.natureonthemap.naturalengland.org.uk/MagicMap.aspx
- **Mitchell-Jones, A.J. and McLeish, A.P.** (Eds) (2004). *Bat Workers' Manual*, Joint Nature Conservation Committee, Peterborough.
- **Reason, P.F. and Wray, S.** (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.

Appendix I: Site Photographs



Plate 1 – *The southern elevation of B1 on site*



Plate 2 – *The western aspect of the structure, note hanging slates*



Plate 3 – *Lifted hanging slate on western elevation and potential access into roof void at roof verge*



Plate 4 – *Additional lifted hanging tile on western elevation*



Plate 5 – *Lifted lead flashing on western elevation*



Plate 6 – *Further area of lifted lead flashing on western elevation*



Plate 7 – *Lifted and missing hanging slates on western elevation*



Plate 8 – *Vaulted ceiling within B1*



Plate 9 – Southern elevation of B2 'garage'



Plate 10 – Northern and western aspects of B2



Plate 11 – *Internal character of B2*



Plate 12 – *Woodland in vicinity of site*

Appendix II: Biodiversity Enhancement: General Recommendations

Breeding Birds – House Sparrow

The sparrow terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population is now half of what it previously was in 1980 and this is widely attributed to habitat destruction and lack of suitable nesting spaces. House sparrows are social birds and like to nest in company, therefore, this terrace provides ideal nesting opportunities for three families. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of buildings.



Breeding Birds – Starling

Starling populations have declined dramatically in recent years and are now on the Red List of birds of high conservation concern. Loss of habitat is one of the major pressures on this species and household renovations and new buildings offer much fewer nesting sites than have previously been available. Providing these birds with a safe and secure habitat and nesting environment is a great way to help ensure their future survival.

This Vivara Pro WoodStone® Starling Nest Box has a 45mm diameter entrance hole which makes it ideal for starlings. It should be sited on an external wall or tree at a height of at least 1.5m using an aluminium nail or screw and wall plug (not included). Site near to vegetation if possible as this will provide additional protection and cover.



Breeding Birds – Other

This traditional design has proved to be highly effective in attracting Robins, as well as other small species such as Black Redstart, Spotted Flycatcher and Wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in Ivy, Honeysuckle or other climbing plants.



Invertebrates - Bee bricks

The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used. Available in a choice of four colours: white grey, dark grey, yellow and red.



Specification:

- * Material: Concrete
- * Origin: Cornwall, UK
- * Dimensions: W 215mm x D 105mm x H 65mm
- * Weight: 2.9kg
- * Colours: White grey, yellow, dark grey and red

Native Planting and/or Landscaping

New feature landscaping should incorporate native woody plants as opposed to non-native species that are of significantly less benefit to biodiversity. Species such as Blackthorn (*Prunus spinosa*), Honeysuckle (*Lonicera periclymenum*), Rowan (*Sorbus aucuparia*), Guelder-rose (*Viburnum opulus*) and Hawthorn (*Crataegus monogyna*) are native and will provide a valuable resource for a myriad of wildlife as opposed to non-native, exotic species which are generally much less effective, particularly to pollinator groups including bees, butterflies and moths.

Suitable Trees	Suitable Woody Shrubs
English Oak (<i>Quercus robur</i>)	Hawthorn (<i>Crataegus monogyna</i>)
Rowan (<i>Sorbus aucuparia</i>)	Honeysuckle (<i>Lonicera periclymenum</i>)
Wild Service Tree (<i>Sorbus torminalis</i>)	Guelder Rose (<i>Viburnum opulus</i>)
Silver Birch (<i>Betula pendula</i>)	Elder (<i>Sambucus nigra</i>)
Ash (<i>Fraxinus excelsior</i>)	Wild Privet (<i>Ligustrum vulgare</i>)
Goat Willow (<i>Salix capraea</i>)	Blackthorn (<i>Prunus spinosa</i>)
Beech (<i>Fagus sylvatica</i>)	
Wild Cherry (<i>Prunus avium</i>)	