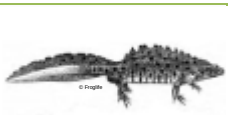


Inspection & Assessment in relation to Bats & Breeding Birds

June 2022

Greenhill,
4 'The Orchard',
Huyton,
Liverpool
L36 9UZ

National Grid Ref: SJ44179049



Document Title	Inspection & Assessment in relation to Bats & Breeding Birds
Issue	1.0
Prepared for	pHpc (peter Hamilton planning consultancy)
Prepared by	Tyrer Ecological Consultants Ltd

Surveyor	Mr. M. Pritchard ACIEEM
Author	Mr. M. Pritchard ACIEEM
Survey Date	27/05/2022
Reviewed by	Mrs. K. Wilding CEnv MIEMA ACIEEM
Review date	20/06/2022
Approved by	Mrs. K. Wilding CEnv MIEMA ACIEEM
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This report aims to provide general advice on ecological constraints associated with any development of the site and includes recommendations for further survey; it is not intended that this report should be submitted with a planning application for development of the site, unless supported by the results of further surveys and a detailed assessment of the effects of the proposed development

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Executive Summary

As part of a proposed planning application, Tyrer Ecological Consultants Ltd carried out a daytime inspection and assessment in relation to bats and breeding birds at Greenhill '4 The Orchard' in Huyton, Liverpool, during late May 2022. The survey was commissioned by pHpc (peter Hamilton planning consultancy); proposals are understood to involve the conversion and extension of an existing listed garage for residential use. See Figure 1.1 for existing site plan; see Figure 1.2 for proposed elevations.

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 section 6.0 - 7.0 in the report the Garage is determined to offer “**Low**” bat roost potential in accordance with current Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) (see Figure 8.1).

Table 7.3 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	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b

It is recommended that One dusk or dawn survey is conducted between the months of May-August with the aim to establish if the surveyed building is being used by bats for roost use and if so, identify the species, abundance, roost locations and flight lines following emergence or preceding re-entry.

The Applicant should be aware that, if during the further survey any evidence is gathered that confirms bat(s) or their roost(s) are present and would be impacted upon, then a Bat mitigation licence may be required to legally commence with the proposals following planning consent.

Breeding Birds: In relation to common birds, given the building and nearby trees offer nesting bird value, it is recommended that any extension or conversion works be carried out outside of the breeding bird season (March-September inclusive). It is recommended that works are carried out cautiously, preceded by a pre-commencement check from a suitably qualified Ecologist 48 hours or less prior to any works, to check for the breeding presence of birds. If during the pre-works site visit it is established that nesting birds are present, works should not proceed until such time as nesting behaviour has ceased and birds have moved on naturally.

Where/if active nests are 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.

Biodiversity Enhancement: General recommended ideas to enhance the site in accordance with the principles of 'Biodiversity Net Gain: Good practice principles for development' (CIEEM et. al., 2019), are presented in Appendix III.

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1.0 Introduction & Reasons for Survey

- 1.1 As part of a proposed planning application, Tyrer Ecological Consultants Ltd carried out a daytime inspection and assessment in relation to bats and breeding birds at Greenhill '4 The Orchard' in Huyton, Liverpool, during late May 2022. The survey was commissioned by pHpc (peter Hamilton planning consultancy); proposals are understood to involve the conversion and extension of an existing listed garage for residential use. See Figure 1.1 for existing site plan; see Figure 1.2 for proposed elevations.



Figure 1.1 – Existing site plan / 1533-004

- 1.2 The aim of the inspection was to ascertain if the building and any relevant nearby habitat on site were of value to bats whilst an assessment for breeding birds was also carried out.
- 1.3 If found to be suitable for bats, or field signs of use were observed, then more detailed surveys would be recommended i.e. dusk/dawn emergence/re-entry surveys during the main active season of bats which is May – August. If it is determined that bat(s) or their roost/place of rest/shelter will be subsequently affected by the works then a European Protected Species Mitigation Licence (EPSML) would be legally required to proceed with the development. If evidence indicated breeding birds may be impacted by proposals, then recommendations would be made accordingly, species pending.
- 1.4 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, may not grant permission until such time that all relevant information is gathered.

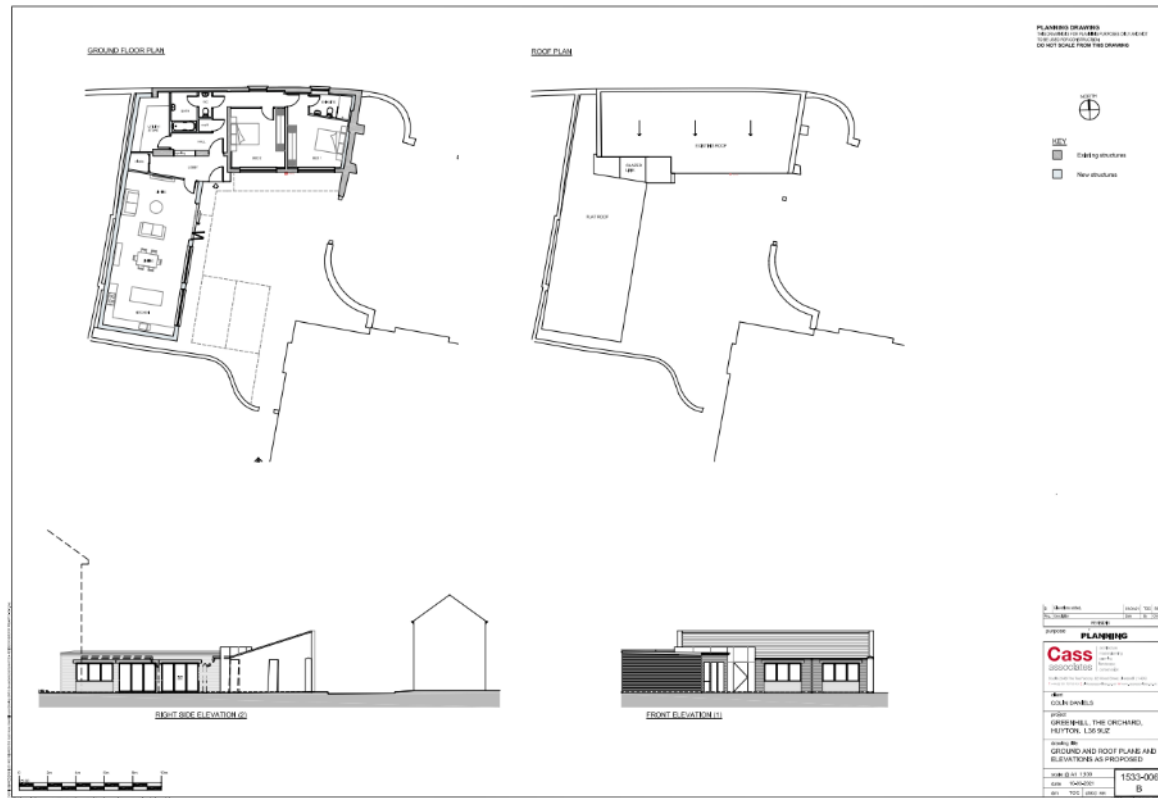


Figure 1.2 – Ground and roof plans and elevations as proposed / 1533-006 B

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 (2019) (EU Exit). When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the Regulations, that has a statutory duty as the local authority to have due regard to the provisions of the Regulations in the exercise of its functions.

Use of Buildings by Bats

- a) Summer breeding roost (May-August)
 - b) Hibernation roost (October-March)
 - c) Transitional or temporary roost (other months)
- 2.2 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 (2019) (EU Exit) (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

- 2.3 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.
- 2.4 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

- 2.5 Paragraph 180 of the National Policy Planning Framework (as revised in July 2021) states:

180. 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.

- 2.6 The Knowsley Local Plan Core Strategy (2016) stipulates:

“...the design of development will be expected to support and integrate biodiversity enhancements, flood risk mitigation, energy/resource efficiency and waste recycling requirements, to accord with Policy CS8: Green Infrastructure, Policy CS24: Managing Flood Risk and Policy CS26: Waste Management.

and in section 5.91:

“In some circumstances, adequate mitigation and/or compensation for biodiversity loss may be acceptable but incapable of being provided within the application site. In such cases where appropriate, priority will be given to equivalent off site opportunities for such mitigation or, as a last resort, compensation. Such opportunities shall be prioritised in the following order:

- Firstly sites in the immediate locality of and/or within any Core Biodiversity Area near to the application site,
- Secondly, sites in a Nature Improvement Area identified within the borough,
- Lastly, sites in a Nature Improvement Area identified outside the borough.

2.7 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).

2.8 Figure 2.1 is a process model that surmises how ecological issues should be dealt with in the context of the planning process.

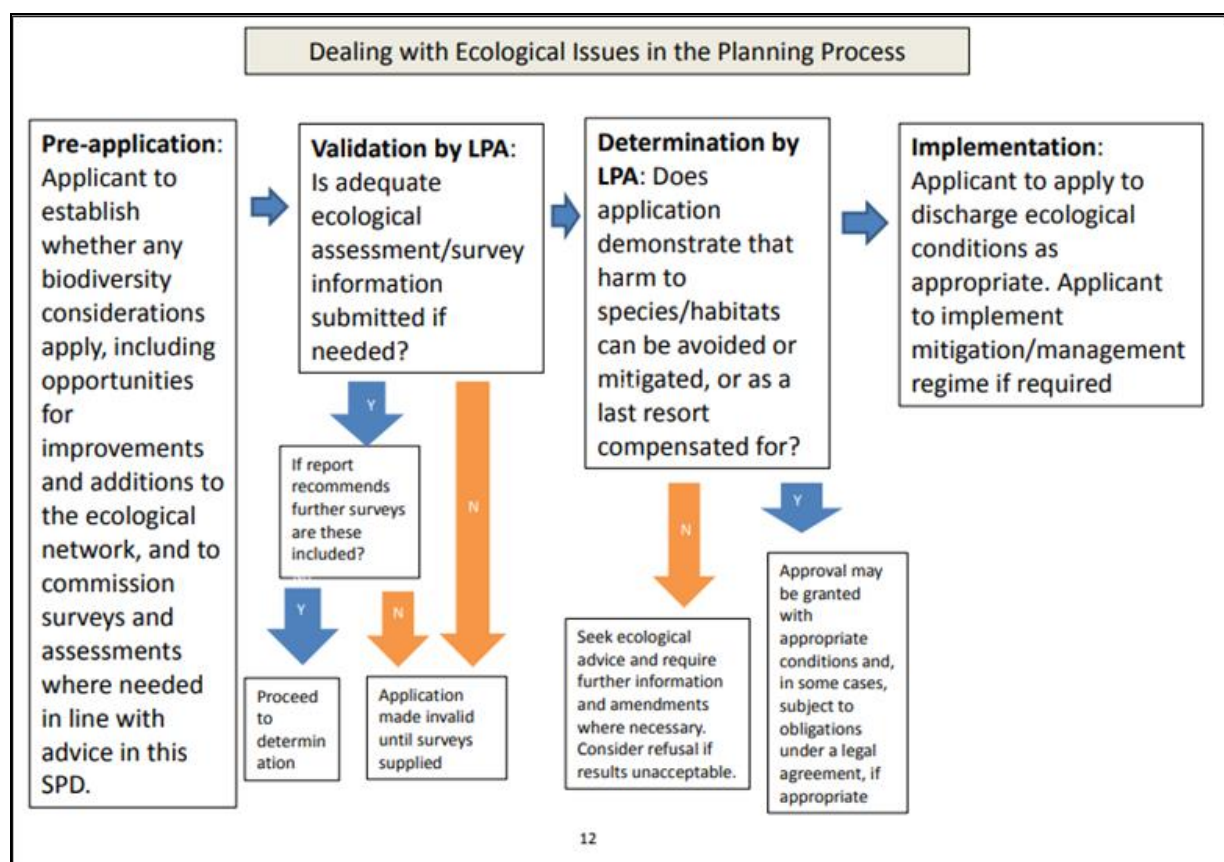


Figure 2.1 - Dealing with ecological issues in the planning process

3.0 Protected Species in Merseyside

3.1 Up to nine bat species have been recorded in Merseyside, 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 Merseyside is reflected throughout the UK.

3.2 Barn owl (*Tyto alba*) are a distinctive, widespread species of protected bird listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); they are distributed throughout the UK and will use tussock-forming grasslands, rough field margins and roadside edges for hunting purposes, whilst they typically use barns/abandoned buildings and tree

hollows for nesting or roosting use. In rare instances occupied dwellings can support owls. Additional to protection from nest destruction, Schedule 1 listed species are also protected from disturbance.

4.0 Survey Methodology

- 4.1 As part of the Inspection & Assessment for 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 2.0km 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 (EPSML) to further inform conclusions concerning such species in the context of the study site and its proposed development.
- 4.3 Satellite imagery was reviewed using sources such as Google Earth (© 2021/22) to 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 2.0-kilometre data search to include all protected species and designated sites within a 2.0km radius of the site of the former tennis courts was requested from the Local Biological Records Centre serving the area - Merseyside Biobank, as it would provide further and otherwise unobtainable information concerning protected species and their local distributions.

Field Survey

- 4.5 A diurnal inspection and assessment of the building in relation to bats and breeding birds was conducted on 27th May 2022 in clear sunshine (13°C) wind 1/12 (Beaufort scale), 35% cloud, by Mr. M. Pritchard ACIEEM, a multiple protected species licenced Ecologist of Five years (Natural England Class 1 Bat Licence: 2020-5039-CLS-CLS) who is additionally an accredited agent on the Class 2 Natural England bat licence of Mrs. K. Wilding (CLS-14227).
- 4.6 Bat Conservation Trust (BCT) - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) 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. Where examples are used in the guidelines, they are descriptive rather than prescriptive.”*
- 4.7 The bat and breeding bird survey was conducted in tandem; the site was inspected for potential places that may be of value to bats or breeding birds, and to determine if evidence of use by either group was present. An internal assessment took place with the aid of a high-powered torch for evidence of bat use, which mainly includes bat droppings and/or prey items, or the incidental presence of live or dead animals, and investigated for evidence of breeding birds which broadly involves a search for nesting materials, presence of pellets or accumulated faeces and/or dead juveniles/hatchlings.

- 4.8 External elevations were investigated with the aid of high-powered torch and close focus binoculars (where necessary) for places that can be used as a roost by bats or as a means of ingress for bats and birds leading to areas of roosting/nesting potential. These features are typically referred to as potential roost features (PRF) concerning bats. All external features were able to be surveyed without constraint.
- 4.9 The surrounding habitat was also considered in terms of general suitability for bat and bird species associated with the local habitat types.
- 4.10 Trees (around the building only) were inspected for places that may be of value to bats and to determine if evidence of use was present; this typically involves a search for potential roost features along with an investigation of those features using a high-powered torch or close focus binoculars. Potential roost features 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 Ivy with stem diameters in excess of 50mm or 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, 3rd ed. (2016): (see Figure 4.1).

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.		
Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a 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 or hibernation ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c	Habitat that could be used by small numbers of commuting bats 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 or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are 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 commuting 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 or tree 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 ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats 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 For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b 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., 2015). 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 large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Figure 4.1 - BCT guidelines extract

- 4.12 An assessment of the building was conducted when birds are outside their breeding season (this is typically March-August inclusive). Elevations 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:

These might include the following species for example:

- Starling (*Sturnus vulgaris*): Birds of Conservation Concern (BoCC) red status,

- House Sparrow (*Passer domesticus*): BoCC red status,
- House Martin (*Delichon urbica*): BoCC amber status,
- Swift (*Apus apus*): BoCC red status,
- Swallow (*Hirundo rustica*): BoCC green status but vulnerable to development.

4.13 Additional to the site's capacity to support common species of bird, the area was subject to an assessment for capacity to support specially protected species such as Barn owl, a species protected under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended).

4.14 The results, conclusions and recommendations are based on a number of factors i.e.

- Practical experience of surveyor,
- Knowledge of bat/bird species relevant to the site location and geographical range,
- Nature of immediate/surrounding habitat in relation to foraging/commuting,
- Condition of the building,
- Presence/absence of a loft space or cellar and reasonable practicality of use,
- Presence/absence of roost potential,
- Value of roost potential – if present.

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 Mr. Pritchard.

5.0 Limitations

5.1 The survey was conducted in May 2022 thus within the active season of bats, a time when female bats are forming in large numbers at maternity roosts, and bats are generally active during favourable weather at night. Evidence of bats is most prevalent during May-August, as such the timing of the survey was non a constraint.

5.2 The survey took place within the breeding bird season (typically March-September), therefore incidental breeding bird evidence / behaviour has a higher probability of being encountered. Suitability for breeding birds is readily identifiable all year round as often nesting material can attest to historic or recent presence of breeding birds at buildings dependent on age and other field signs.

5.3 No significant access limitations were experienced at site with access to all key areas achieved; therefore, having considered possible survey constraints, no significant issues were experienced that might adversely influence the results, conclusions, and recommendations of this report.

6.0 Desk Study Results

- 6.1 The surveyed building for which the applicant seeks consent is situated within the curtilage of Greenhill '4 The Orchard' within the Huyton Conservation area, approximately 9.0km east of Liverpool city centre. See Figure 6.1.

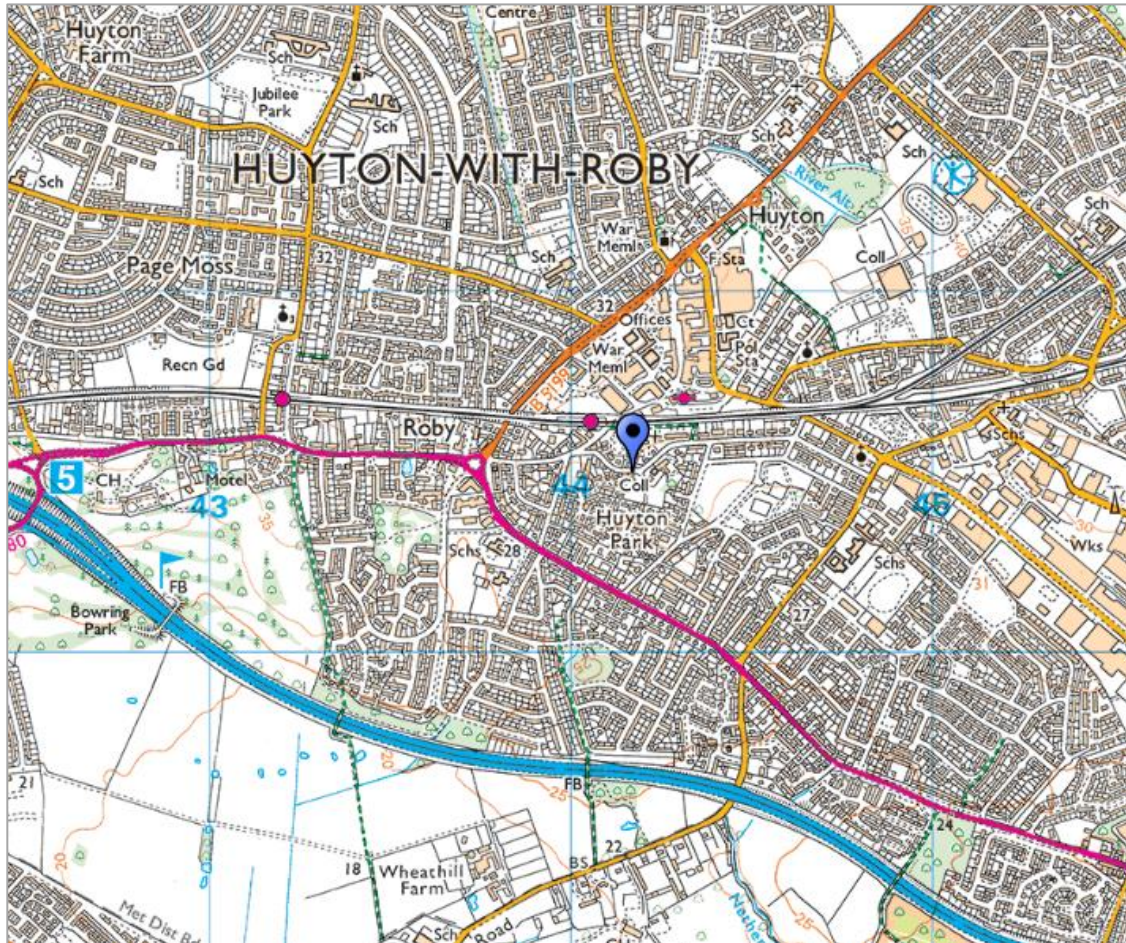


Figure 6.1 - Location of the application site within the contiguous landscape (Google Earth 2022)

- 6.2 The site features a large Grade II listed Villa type building centrally (understood to not form part of the planning application); the garage is located in the north of the private property grounds.
- 6.3 The immediate habitat is represented by urbanisation in the form of housing estates with concomitant front and rear gardens in a generally wooded, residential setting. A brownfield is adjacent to the east though planning permission has been granted at it for a large apartment building which will include provision of green infrastructure and retention of a woodland; notable local sites include Huyton Park / McGoldrick Park 80 metres to the east - an urban park space which is broadleaved scattered tree and amenity grassland in character, whilst the Liverpool - Manchester railway link is located 140 metres to the north, with associative linear woodland along its length.
- 6.4 The extending habitat is consistent with the immediate, largely represented by residential housing with the inclusion of school grounds, sports/playing fields, commercial unit space, golf clubs and small urban parks. The M62 motorway is located approximately 0.7 kilometres to the south, flanked by arable grassland and grazing pasture. Several notable environs feature within 2.0km including Bowring Park Golf Club, Childwall Golf Club and Huyton Wetlands.

- 6.5 No statutorily designated sites are present within 2.0km of the application site.
- 6.6 A data search obtained via Merseyside Biobank revealed the following local wildlife sites (LWS) within 2.0km (Figure 6.2).

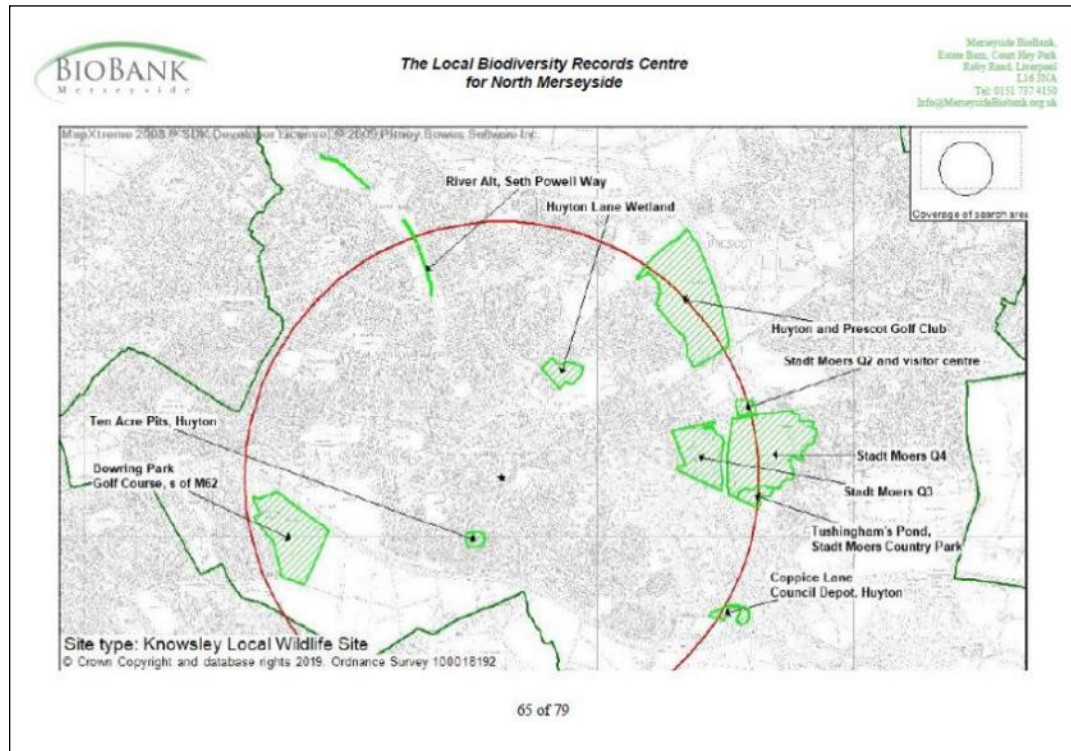


Figure 6.2 - Image shows the proximity of the site (central) to nearby local wildlife sites

- Ten Acre Pits - mature broadleaf woodland, 0.4km to the south.
 - Huyton Lane Wetland - marshland with open running water, 0.8km to the north.
 - Bowring Park Golf Club - A mix of woodland, grassland, scrub and ponds, located 1.4km to the south-west.
 - Stadt Moers Park - a wide variety of habitats including woodland, park and pasture, open water, marsh, ditch and reedbeds, 1.5km to the east.
 - Huyton & Prescott Golf Club - habitats include woodland, ponds and wetlands, 1.7km to the north-east.
 - Coppice Lane Council Depot - Developed upon.
 - River Alt - Netherley/Ditton Brook - Open running water bodies within 2.0km.
- 6.7 Site-surrounding environs can be considered as being of low-moderate value for the species for which the survey was undertaken, subject to them being present in the locality, notably bats and birds. The Common Pipistrelle (*Pipistrellus pipistrellus*) bat is the species most commonly associated with urban environments.
- 6.8 No ponds exist on site. Due to the nature and isolation of the site from all described local wildlife sites in a 2.0km buffer, otherwise named sites and other more favourable habitats in the wider area, most flightless terrestrial/semi-aquatic mammal species, amphibians

(terrestrial phase) and reptiles would struggle to colonise the site - notably this includes Water voles, Great Crested Newts, Common Lizards and Common Toads. No evidence of the named species were observed during the survey, and no habitats are present on site to support them sustainably. Any species records that exist within 2.0km are isolated from the site by significant barriers including busy roads, fencing and walls as such the aforementioned four species will not be covered in any great details further within in this report.

- 6.9 The desktop study found two results for EPSML's granted within a 3.0km radius of the application site, the nearest of which is located 2.2km to the north, which affects the non-breeding roost(s) of two species of bat - Common Pipistrelle and Brown long-eared (*Plecotus auritus*).
- 6.10 The data search to include all species and designated sites within a 2.0km radius of the application site, via Merseyside Biobank produced invaluable information to aid the appraisal - key findings are interpreted below.
- Dunnock (*Prunella modularis*), House Sparrow (*Passer domesticus*) and Song Thrush (*Turdus philomelos*) records found within 250 metres.

7.0 Field Study Results

Bats

- 7.1 The garage is directly attached to the northern dry-stone wall which is a dated linear built feature over 2.0 metres high forming the boundary. Used for storage of furniture and bulky items associated with the Villa on site, the garage is a x3 compartmented, linear, one-storied red brick construct with a slate, mono-pitched roof including abutment to the north edge. The south-facing frontage has two timber sliding doors with overhead beams and chequered glazing panels all in poor condition; there are also windows, a dim lantern fixture and part of the frontage has a timber fascia in poor condition. Both side gable ends are bare brick/stone though are partly-covered in climbing Ivy; the rear elevation which is facing The Orchard has blocked over windows and minor cracks in mortar. Aesthetically, the building was in a neglected, deteriorating state with a visibly damaged roof.
- 7.2 Internally there are no loft spaces or mezzanine upper floors; all x3 compartments are segregated by intact brick partition walls, the roof is upheld atop steel cross beams, the western-most compartment is partially open to the elements with a large gaping hole in the roof where slates are missing. Conditions inside are consistently cold, partially illuminated, heavily cluttered, restrictive and densely cobwebbed. Given the nature of the interior, it is considered that this structure does not meet the roosting preferences of loft-dwelling bats such as the brown long-eared (*Plecotus auritus*). This is a species that prefers unrestrictive loft spaces for roost use with available space to fly freely and that offers consistent thermal qualities. Furthermore, no evidence of this species was located during the appraisal.
- 7.3 In respect to crevice dwelling bats such as *Pipistrellus* sp., the roof is underlined eclectically, a mix of bare slate, ramshackle material (including plastic bin bags / polystyrene), and ragged sheets of bitumen underfelt. Underling of any type will typically improve a buildings value to bats, notably for crevice-dwelling bats, whereby the bats roost between various linings and roof cover where external opportunities exists. On the flip-side, an absence of roof linings can lower a structures value in the same respect, therefore the building offers mixed value. There were no holes or crevices in the walls which were bare. No evidence of bats was observed inside and there was no reason to suspect any bats have gained entry inside at any stage with no droppings, prey items, urine splatters, or staining identified, however, this is frequently the case due to the crevice-dwelling nature of many bat species and absence of evidence should not always be relied upon to determine no impacts to bats.

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.*

- 7.4 Externally the building offers limited potential roost features; the front fascia sags loosely on a south-facing elevation and the crevice below it is too wide to offer a valuable roost feature; no holes or gaps were noted to the gable elevations and there are no cavities or holes in the brickwork or stone. The site is situated within a wooded area with overhanging trees likely to be used by foraging / commuting bats and given the damage at the roof and availability of internal access via open doors and damaged roof, there are minor value features at roof level given the presence of underlining material.
- 7.5 No holes / cavities / ingress opportunities (such as cracks) were noted in the adjoining stretches of dry-stone wall along The Orchard, and there is no reason to suspect a bat roost in the walls.
- 7.6 No particular trees were identified during preliminary roost assessment to have bat roost potential, given an absence of suitable roost features found (typically including holes, splits, cracks, fissures, collaring etc.). No evidence of bats was found at any trees. All trees present on site and in the immediacy should be considered valuable to bats in a local context in that they likely provide valuable foraging/commuting habitat.

Breeding Birds

- 7.7 In relation to Schedule 1 (WCA) specially protected bird species such as Barn owl, no evidence was found to suggest any form of site use or historic nesting, and the setting offers no real feeding value to this species. The same appraisal applies to any other Sch.1 listed species at this site.
- 7.8 In relation to more common bird species, no direct evidence of nesting birds was located inside the building or to its exterior. However, the garage is capable of being used for nesting given the access availability, presence of Ivy on gable ends and the nearby trees. Works could pose risk of disturbance, damage, nest abandonment to breeding birds, where present, if timed insensitively.

8.0 Conclusions & Recommendations

Bats

- 8.1 Based upon the findings of the survey covered through section 6.0 - 7.0 in the report the Garage is determined to offer “**Low**” bat roost potential in accordance with current Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) (see Figure 8.1).

Table 7.3 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	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^a	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b

Figure 8.1 - BCT extract on Moderate roost potential requirements

- 8.2 It is recommended that One dusk or dawn survey is conducted between the months of May-August with the aim to establish if the surveyed building is being used by bats for roost use and if so, identify the species, abundance, roost locations and flight lines following emergence or preceding re-entry.
- 8.3 The Applicant should be aware that, if during the further survey any evidence is gathered that confirms bat(s) or their roost(s) are present and would be impacted upon, then a Bat mitigation licence may be required to legally commence with the proposals following planning consent.
- 8.4 Natural England provides information and guidance about licensing for Bats 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 2019 (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.”

- 8.5 Where more detailed bat surveys are recommended, following an initial daytime survey, then Local 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 2019 (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.

- 8.6 No further surveys are recommended in relation to bats or dry-stone walls.
- 8.7 No further surveys are recommended in relation to bats and trees; however, all trees present on site should be considered valuable to bats in a local context in that they likely provide valuable foraging/commuting habitat. Any tree loss should be suitably offset through adequate landscaping or replanting, typically at 2:1 ratio using native seed bearing species.

Breeding Birds

- 8.8 No impacts are applicable in relation to any Sch.1 (WCA) specially protected bird species such as Barn owls, and no further surveys or recommendations are necessary in relation to specially protected birds at this time.
- 8.9 In relation to common birds, given the building and nearby trees offer nesting bird value, it is recommended that any extension or conversion works be carried out outside of the breeding bird season (March-September inclusive). It is recommended that works are carried out cautiously, preceded by a pre-commencement check from a suitably qualified Ecologist 48 hours or less prior to any works, to check for the breeding presence of birds. If during the pre-works site visit it is established that nesting birds are present, works should not proceed until such time as nesting behaviour has ceased and birds have moved on naturally.
- 8.10 Where/if active nests are 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.

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."*

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.*

- 8.11 General recommended ideas to enhance the site in accordance with the principles of 'Biodiversity Net Gain: Good practice principles for development' (CIEEM et. al., 2019), are presented in Appendix III.

9.0 Bibliography

- **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
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- **GOV.UK**. 2021. Wild Birds. Licence to Kill or Take for public health and safety (GL41). Available on the world wide web at [Wild birds: licence to kill or take for public health or safety \(GL41\) - GOV.UK \(www.gov.uk\)](http://www.gov.uk).
- **Magic Maps Application**, 2022. 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.

Appendix I: Site Photographs



Plate 1 – The garage along the wall in the north of the site, front, south facing aspect



Plate 2 – The garage along the wall in the north of the site, rear, north facing aspect

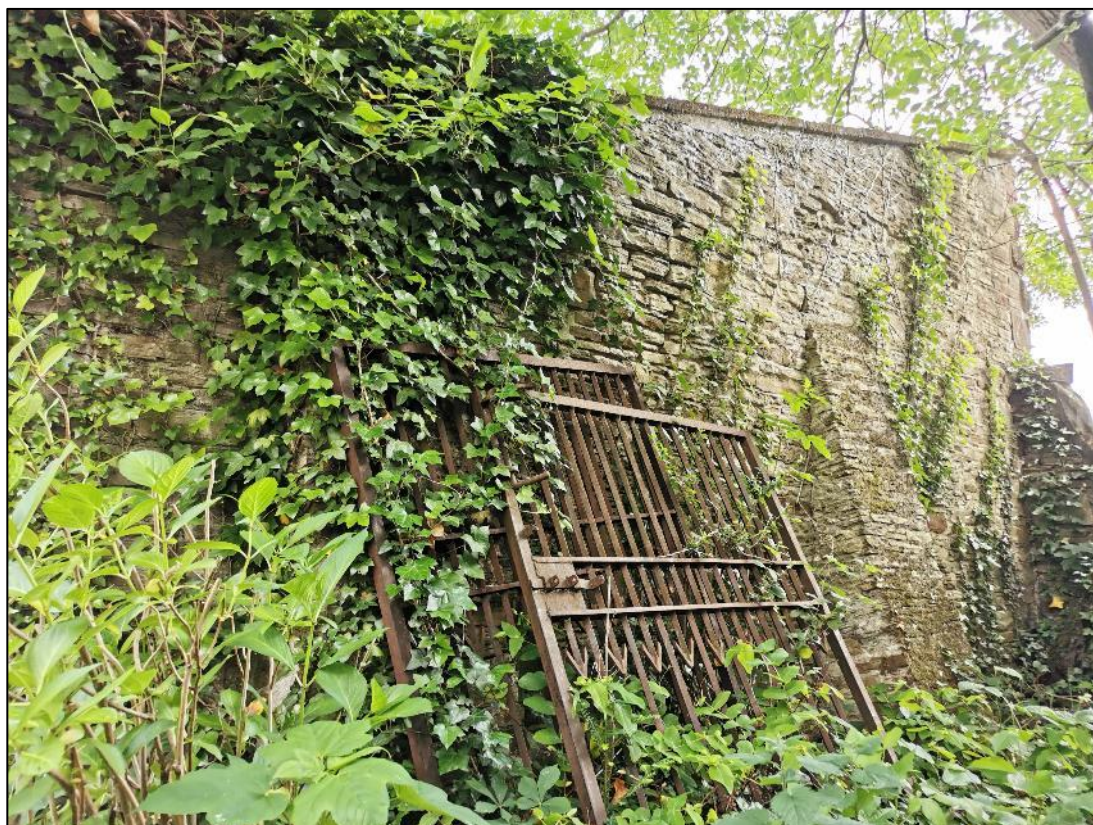


Plate 3 – The garage east facing gable elevation



Plate 4 – The garage west facing gable elevation



Plate 5 – Closer view of the front of the garage



Plate 6 – Closer view of the front of the garage alternative



Plate 7 – Closer view of the front of the garage alternative



Plate 8 – Interior; western-most compartment, note hole in the roof



Plate 9 – Interior; central compartment



Plate 10 – Interior; eastern compartment

Appendix II: Biodiversity Enhancement: General Recommendations

Native Planting and/or Landscaping - recommended species

The below species have been assessed against the local soil and habitat types and are deemed suitable for the site. All plant material should comply with the minimum requirements in BS 3936-1: 1992 Specification for trees and shrubs and BS 3936-4: 2007 Specification for forest trees and BS 8545: 2014 Trees from Nursery to Independence in the Landscape. Any plant material, which in the opinion of the appointed Landscape Architect, does not meet the requirements of the Specification, or is unsuitable, or defective in any other way, will be rejected. The minimum specified sizes in the plant schedule will be strictly enforced. The contractor should replace all plants rejected at own cost.

	Common Name	Scientific Name	Planting Preference
Ferns	Male Fern	<i>Dryopteris filix-mas</i>	Semi-shade or shaded
	Soft Shied-fern	<i>Polystichum setiferum</i>	Semi-shade or shaded
	Maidenhair Fern	<i>Adiantum capillus-veneris</i>	Suitable for rockeries / walled gardens
	Royal Fern	<i>Osmunda regalis</i>	Full sun in moist-damp areas
Herbaceous plants	Bloody Crane's-bill	<i>Geranium sanguineum</i>	Dry soils - suitable for rockeries
	Columbine	<i>Aquilegia vulgaris</i>	Semi-shade or open areas
	English Bluebell	<i>Hyacinthoides non-scripta</i>	Moist soils in semi-shade or open areas
	Giant Bellflower	<i>Campanula latifolia</i>	Semi-shade or open areas
	Greater Knapweed	<i>Centaurea scabiosa</i>	Dry-moist soils. Suitable for borders
	Greater Woodrush	<i>Luzula sylvatica</i>	Moist soils in semi-shade or open areas
	Meadow Crane's-bill	<i>Geranium pratense</i>	Humid-moist soils. Suitable for borders
	Musk Mallow	<i>Malva moschata</i>	Dry-moist soils. Suitable for borders and rockeries
	Sea Campion	<i>Silene uniflora</i>	Dry soils - suitable for rockeries
	Stinking Hellebore	<i>Helleborus foetidus</i>	Semi-shade or open areas
Climbers	Honeysuckle	<i>Lonicera periclymenum</i>	Dry-moist soils
	Hops	<i>Humulus lupulus</i>	Dry-moist soils
	Ivy	<i>Hedera helix</i>	Dry-moist soils
	Sweet-briar	<i>Rosa rubiginosa</i>	Dry-moist soils
Woody Shrubs	Blackthorn	<i>Prunus spinosa</i>	-
	Dogwood	<i>Cornus sanguinea</i>	-
	Guelder Rose	<i>Viburnum opulus</i>	-
	Hawthorn	<i>Crataegus monogyna</i>	-
	Hazel	<i>Corylus avellana</i>	-
	Holly	<i>Ilex aquifolium</i>	-
Trees	Alder Buckthorn	<i>Frangula alnus</i>	-
	Osier	<i>Salix viminalis</i>	-
	Pedunculate Oak	<i>Quercus robur</i>	-
	Purple Willow	<i>Salix purpurea</i>	-
	Rowan	<i>Sorbus aucuparia</i>	-
	Silver Birch	<i>Betula pendula</i>	-
	Wild Cherry	<i>Prunus avium</i>	-
Aquatic/marginal plants	Common Water-crowfoot	<i>Ranunculus aquatilis</i>	Ponds
	Marsh Marigold	<i>Caltha palustris</i>	Marginal vegetation
	Ragged Robin	<i>Silene flos-cucculi</i>	Marginal vegetation
	Water Mint	<i>Mentha aquatica</i>	Marginal vegetation
	Water-violet	<i>Hottonia palustris</i>	Ponds
	White Water-lily	<i>Nymphaea alba</i>	Ponds

Enhancement for Bats



- Beaumaris woodstone bat box

This bat box is made entirely from Woodstone, a robust material comprising concrete and wood fibres. The Beaumaris box has a single narrow cavity which makes it suitable for crevice roosting bats such as the Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Brandt's bat and Whiskered bat. The interior of the box has a rough surface for bats to cling to and the front of the box features a subtle but attractive imprint of a bat in flight.

Suitable for attaching to external walls and available in two sizes: the Midi and the Maxi.

For more information see www.nhbs.com/beaumaris-woodstone-bat-box.



- Cardinal bat box

The Cardinal Bat Box incorporates three separate chambers with laddered entrance holes to each direction.

Nesting Birds



-2h Schwelger robin box

This traditional design has proved to be highly effective in attracting Robins as well as other small wood/garden 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.

For more information - www.nhbs.com/2h-schwegler-robin-box

Enhancement for Invertebrates

- Custom Invertebrate hotels



e.g.

E.g. - www.amazon.co.uk/Large-Wooden-Insect-Hotel-House/

Alternatively, bug hotels can be created easily using raw materials on site.



Custom insect hotel using existing materials on site

- National Trust Bee Log

<https://shop.nationaltrust.org.uk/national-trust-bee-log-wicken-fen-collection>



- Bee Bricks

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.

