



Preliminary Roost Feature Assessment

19, The Avenue, Huyton, Liverpool, Merseyside L36 7SD

Pamela Welsby

Status	Issue	Name	Date
Draft	1	Kayleigh Davies BSc (Hons), MSc Graduate Ecologist	17/10/2023
Draft	1.1	Jessica Sibley, BSc (Hons), MSc Graduate Ecologist	20/10/2023
Reviewed	1.2	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	01/11/2023
Final	2	Jessica Sibley, BSc (Hons), MSc Graduate Ecologist	01/11/2023

Arbtech Consultant's Contact Details:

Jessica Sibley
Graduate Ecologist
Tel: 07512307230 **Email:** Jessicasibley@arbtech.co.uk
<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Pamela Welsby to undertake a Preliminary Roost Feature Assessment (PRFA) at 19, The Avenue, Huyton, Liverpool, Merseyside L36 7SD (hereafter referred to as “the site”). The survey was required to inform a planning application for the development of a new dwelling on-site (hereafter referred to as “the proposed development”).

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 5 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Roosting bats (T03)	T03 has ivy surrounding the trunk which is mature and latticed is a PRF-M feature.	The proposed development may result in the pruning/ivy removal of this tree. This could result in damage/modification/destruction of any bat roosts present and could cause disturbance, death, or injury to bats.	In the event of any pruning/ivy removal/felling of T03: A close-up endoscope inspection of any features that could be used by roosting bats will be undertaken to determine the suitability of the features and to establish presence or likely absence of roosting bats. Further details can be found in Table 5 of this report.
Roosting bats (T01, T04)	T01 and T04 contain PRF-I features (e.g., knot holes, ivy (T01), and a small hazard beam (T04)).	The proposed development will result in the pruning of these trees on the northwestern aspects of the trees. This could result in damage/modification of any bat roosts present and could cause disturbance, death, or injury to bats.	Best practice guidelines state that trees with PRF-I features for roosting bats do not require further surveys. Instead, prior to any pruning or felling, a close-up inspection of any features that could be used by roosting bats will be undertaken to determine the presence or likely absence of roosting bats. Further details can be found in Table 5 of this report.
Roosting bats (T02, T05, G01)	The assessed areas of T02 (overhang and northwestern aspects) do not have any suitable features for roosting bats. T05 has no suitable features for roosting bats. G01 trees are unlikely to have any suitable features for roosting bats based on the maturity of the trees.	T02: Bats are very unlikely to be roosting within the overhang/sections of the tree to be pruned and as such, there are not anticipated to be any impacts on roosting bats as a result of the pruning of the northwestern overhang of this tree. T05: Bats are very unlikely to be roosting within this tree and as such, there are not anticipated to be any impacts on roosting bats as a result of the uprooting/removal of this tree. G01: These trees do not overhang into the site boundary, and will not be pruned or felled, as part of the proposed development.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat-licensed ecologist contacted for further advice.

Foraging and commuting bats	Nearby scattered trees and urban greenspaces could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of small areas of tree (exclusively overhanging limbs) but given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which is detailed in Table 5 of this report.
Nesting birds (T01:T05, G01)	The mature trees could be used by nesting birds (this likely includes common garden birds/nesting birds). There are also two bird boxes attached to two of the trees (T01 and T03).	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Any pruning of mature trees should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.
Other ecological constraints	Common rhododendron <i>Rhododendron ponticum</i> was identified on the site, which is listed as an invasive, non-native species under Schedule 9 of the Wildlife and Countryside Act 1981.	Construction could result in the spread of common rhododendron.	Common rhododendron should be dug up, including roots, and disposed of in line with appropriate controlled waste measures.

Contents

1.0 Introduction and Context.....	7
1.1 Background.....	7
1.2 Site Location and Landscape Context.....	7
1.3 Scope of the Report	7
2.0 Methodology.....	8
2.1 Desk Study.....	8
2.2 Field Survey	8
2.3 Breeding Birds and Other Incidental Observations	8
2.4 Suitability Assessment.....	8
2.5 Limitations	9
3.0 Results and Evaluation	10
3.1 Designated Sites.....	10
3.2 Historical Records.....	10
3.3 Field Survey Results	10
4.0 Conclusions, Impacts and Recommendations	16
5.0 Bibliography	20
Appendix 1: Proposed Development Plan	21
Appendix 2: Site Location Plan	22
Appendix 3: PRFA Plan	23
Appendix 4: Legislation and Planning Policy Related to Bats.....	24

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Pamela Welsby to undertake a Preliminary Roost Feature Assessment (PRFA) at 19, The Avenue, Huyton, Liverpool, Merseyside L36 7SD (hereafter referred to as “the site”). The survey was required to inform a planning application for the development of a new dwelling on-site (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting. This has been undertaken with due consideration to the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2023). No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SJ 4491 3425 and has an area of approximately 0.1ha comprising a residential dwelling, scattered trees and an urban garden with introduced shrubs. It is surrounded by residential dwellings and roads, with the Huyton Cricket and Bowling Club Green immediately to the northeast of the site, and South Alt Greenway ~460m to the west. The wider landscape comprises residential dwellings, and built-up areas with urban green spaces, scattered pockets of woodland, and water bodies. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation. To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken, including a ground level assessment of trees, to determine the presence or the suitability of any features which bats could use for roosting and to assess the suitability of the site’s bat foraging and commuting habitat.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.
- Recommendations for further surveys and mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.
- Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites with bat qualifying interests and granted EPSL records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

2.2 Field Survey

The survey was undertaken by Jessica Sibley BSc (Hons) MSc (Accredited Agent on Natural England Bat Licence Number: 2016-22843-CLS-CLS) and assisted by Kayleigh Davies BSc (Hons) MSc, Graduate Ecologist on 17/10/2023.

The PRA focussed on 11 trees which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed trees:

A visual inspection was undertaken from ground level using binoculars to identify any possible roost features.

2.3 Breeding Birds and Other Incidental Observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls.

2.4 Suitability Assessment

Trees were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 below. Roost suitability is classified based on the features present (i.e., PRF-I, PRF-M) and dictates if any further surveys required before works can proceed.

Table 1: Features of a tree that are correlated with use by bats

Classification	Feature of tree and its context
PRF-M	A tree with one or more potential roost sites that are obviously suitable for use by bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. PRF-Ms could support roosts of high conservation value such as maternity or hibernation roosts.
PRF-I	A tree containing only very limited number of roosting features which could be used sporadically by individual or small numbers of bats. PRF-Is may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators.
No suitable roost features	Unsuitable for use by bats.

2.5 Limitations

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

No Biological Records Data (BRD) was available at the time of writing this report and this should be obtained, and the report updated to enable a robust ecological impact assessment to be completed.

Some of the trees inspected lie on third party land, and access was not possible on this occasion. However, sections of the trees likely to be pruned (i.e., overhang), were inspected.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

No statutory designated sites with bat qualifying interests were identified within 2km of the site.

3.2 Historical Records

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. EPSL records for bats are summarised in Table 2.

Table 2: Granted EPSLs for bats within 2km of the site

EPSL reference	Bat species affected	Impacts allowed by licence
2018-38343-EPS-MIT	Common pipistrelle	Destruction of a resting place
2017-28690-EPS-MIT-1	Common pipistrelle and Brown long-eared	Destruction of a resting place

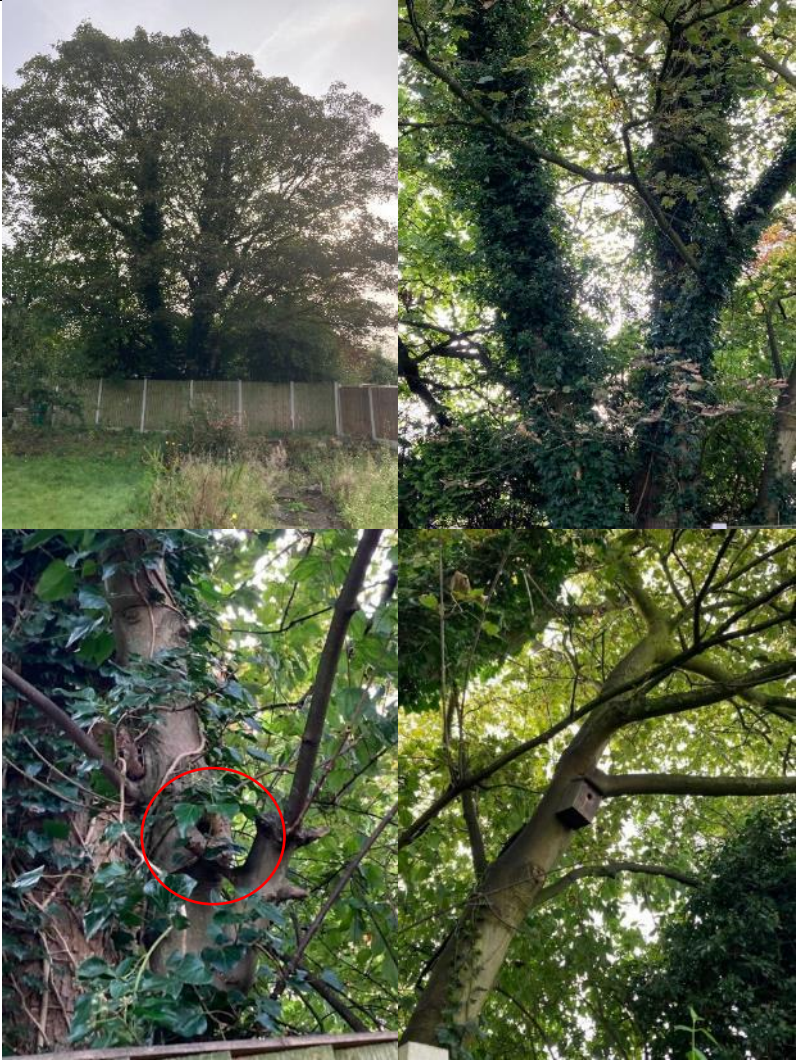
3.3 Field Survey Results

The weather conditions recorded at the time of the survey are shown in Table 4. The results of the field survey are detailed in Table 5 and illustrated in Appendix 3.

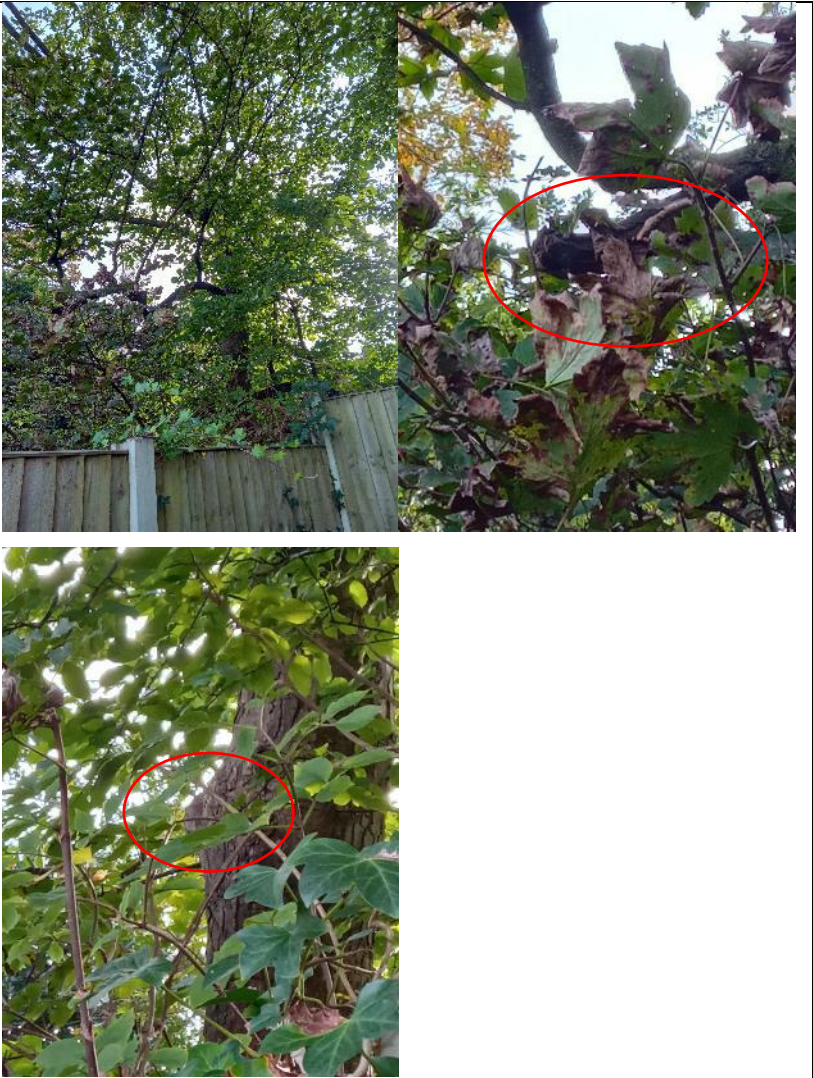
Table 3: Weather conditions during the survey

Date:	17/10/2023
Temperature	7°C
Humidity	93%
Cloud Cover	20%
Wind	3mph
Rain	None

Table 4: PRFA Results

Feature	Description	Photographs
Bat foraging and commuting habitat	On the site, the urban garden has scattered trees, included a young oak and some introduced shrubs and managed grassland that could also be used by foraging and commuting bats. The connecting and nearby areas have pockets of woodland, large urban green spaces, and urban gardens that can all support commuting and foraging bats.	
T01	T01 is located at (Grid reference): SJ 44362 91241, and is a mature sycamore tree <i>Acer pseudoplatanus</i>, which is ~10m high. It is located outside the southeastern boundary of the site, with a wooden fence separating it from the site. There is ivy <i>Hedera helix</i> present around the trunk of the tree, which is immature and unlatticed, but could in itself be a PRF-I roosting feature for bats or obscure suitable features (pictured across). There is also a shallow knot hole present on the northwestern aspect of the tree on the trunk of the tree (pictured across), which looks to be small and shallow, and is a PRF-I roosting feature for roosting bats. An existing bird box is also present on the northwestern aspect of the tree (pictured across). The northwestern aspect of the T01 will likely be pruned as part of the proposed development. Condition Assessment: Using the UK Habitat Classification (UK Hab) assessment sheet for ‘Individual trees’, the tree passed all six criteria: (A-F), and as a result is in ‘good’ condition.	

T02	T02 is located at (Grid reference): SJ 44365 91246, and is a mature cherry tree <i>Prunus sp.</i>, at ~7m tall, located outside the southeastern boundary of the site, separated from the site by a fence. There is no evidence of any PRF-Is or PRF-Ms around this tree, or on any of the overhanging branches (northwestern aspect). T02 may have features on the southwestern aspect of the tree, but these will not directly be impacted by the proposed development as they do not overhang and therefore will not be directly impacted by the pruning of the overhang on the northwestern aspect of the tree. Condition Assessment: Using the UK Habitat Classification (UK Hab) assessment sheet for 'Individual trees', the tree passed five criteria: (A-D, and F), and failed criteria: E (presence of deadwood, cavities, ivy or loose bark), and as a result is in 'good' condition.	
T03	T03 is located at (Grid reference): SJ 44356 91241 and is a tree trunk covered in ivy and surrounded by hawthorn <i>Crataegus monogyna</i>. T03 is ~4m tall and is also outside the southeastern boundary of the site, separated from the site by a fence. The limbs and branches of the tree look to have been pruned therefore only a section of the trunk remains, and species identification was not possible. The ivy around the trunk looks to be mature and latticed and could be a PRF-M roosting feature in itself. There is also a bird box present on the northern side of the trunk (pictured across). For the northwestern aspect of T03, the ivy may be removed as part of the proposed works. Condition Assessment: A full condition assessment using the UK Habitat Classification (UK Hab) assessment sheet for 'Individual trees' could not be undertaken for T03, due to its lack of branches and the lack of visibility of the tree by surrounding ivy.	

T04	T04 is located at (Grid reference): SJ 44369 91249, and is a mature sycamore tree, which is ~8m tall. It is located outside the southeastern boundary of the site, separated from the site by a fence. There is a small hazard beam on the northern aspect of the tree which looks to be a suitable PRF-I for roosting bats (pictured across). There is also a knot hole on the northeastern aspect of the tree which could not be thoroughly inspected but may be a suitable PRF-I for bats based on its small size (pictured across). The northwestern aspect of the T04 will likely be pruned as part of the proposed development. Condition Assessment: Using the UK Habitat Classification (UK Hab) assessment sheet for 'Individual trees', the tree passed all six criteria: (A-F), and as a result is in 'good' condition.	
-----	--	--

T05	T05 is located at (Grid reference): SJ 44358 91252, and is a young oak tree <i>Quercus sp.</i>, which is ~1.5m tall. T11 contains no suitable roosting features for bats and is negligible for roosting bats. T05 may be removed (i.e., uprooted), as part of the proposed works. Condition Assessment: Using the UK Habitat Classification (UK Hab) assessment sheet for 'Individual trees', the tree passed four criteria: (A, B, D, and F), and failed criteria: (C and E), and as a result is in 'moderate' condition.	
G01	G01 is a small group of young goat willow <i>Salix caprea</i> and sycamore trees located outside the northeastern boundary of the site, separated by a fence. Grid reference: SJ 44359 91259. All these trees are young trees, at ~2.5m tall with thin trunks and branches. These trees are likely too immature to provide suitable bat roosting features. They are therefore likely negligible for roosting bats. There is no overhang from these trees into the site, therefore, it is unlikely any possible roost features will be impacted, if present. Condition Assessment: Using the UK Habitat Classification (UK Hab) assessment sheet for 'Individual trees', the group of trees passed three criteria: (A, D and F), and failed criteria: (B, C, and E), and as a result this group of trees is in 'moderate' condition.	

B1 - breeding birds and other incidental observations	There are two bird boxes, one located on T01 and one on T03 (pictured across). These bird boxes may be used by nesting birds. Furthermore, there are opportunities for nesting birds associated with the mature trees surveyed.	 The image consists of two side-by-side photographs. The left photograph shows a tree trunk with a small, dark, rectangular bird box attached to it. The right photograph shows a dense thicket of green leaves and branches, with a similar bird box visible in the background.
--	--	---

4.0 Conclusions, Impacts and Recommendations

Taking the desk study and field survey results into account, Table 5 presents an evaluation of the value of the site for bats and also details any other ecological constraints identified such as nesting birds in relation to the proposed development which will comprise pruning of trees outside the southern boundary of the site, and the felling of one tree within the site boundary.

Table 5: Evaluation of the site for bats and any other ecological constraints

Tree	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Roosting bats (T03)	T03 has ivy surrounding the trunk which is mature and latticed is a PRF-M feature.	The proposed development may result in the pruning/ivy removal of this tree. This could result in damage/modification/destruction of any bat roosts present and could cause disturbance, death, or injury to bats.	In the event of any pruning/ivy removal/felling of T03: A close-up endoscope inspection of any features that could be used by roosting bats will be undertaken to determine the suitability of the features and to establish presence or likely absence of roosting bats. This may require a qualified climbing team or a Mobile Elevated Work Platform (MEWP) to access the features. There is no seasonal constraint to this type of survey. If bat roosts are confirmed in the tree or where features cannot be fully inspected or access to the tree is impeded, bat emergence or re-entry surveys may be required with the use of infra-red cameras as an aid. If bat roosts are confirmed an EPSL application to Natural England will be required. The EPSL application requires that surveys have been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.	To be confirmed upon completion of the surveys.
Roosting bats (T01, T04)	T01 and T04 contain PRF-I features (e.g., knot holes, ivy (T01), and a small hazard beam (T04)).	The proposed development will result in the pruning of these trees on the northwestern aspects of the trees. This could result in damage/modification of any bat roosts present and could cause disturbance, death, or injury to bats.	Best practice guidelines state that trees with PRF-I features for roosting bats do not require further surveys. Instead, prior to any pruning or felling, a close-up inspection of any features that could be used by roosting bats will be undertaken to determine the presence or likely absence of roosting bats. This may require a qualified climbing team or a Mobile Elevated Work Platform (MEWP) to access the features.	The installation of two bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be installed on the new building. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

			In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	to and from the entrance, away from artificial light. The bat boxes will be a specification suitable for crevice/void-dwelling bats, such as: • Habibat Bat Box • Beaumaris Bat Box • NHBS Improved Cavity Bat Box • Vivara Pro Woodstone Bat Box • Eco bat box Or a similar alternative brand.
Roosting bats (T02, T05, G01)	The assessed areas of T02 (overhang and northwestern aspects) do not have any suitable features for roosting bats. T05 has no suitable features for roosting bats. G01 trees are unlikely to have any suitable features for roosting bats based on the maturity of the trees.	T02: Bats are very unlikely to be roosting within the overhang/sections of the tree to be pruned and as such, there are not anticipated to be any impacts on roosting bats as a result of the pruning of the northwestern overhang of this tree. T05: Bats are very unlikely to be roosting within this tree and as such, there are not anticipated to be any impacts on roosting bats as a result of the uprooting/removal of this tree. G01: These trees do not overhang into the site boundary, and will not be pruned or felled, as part of the proposed development.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	See above.
Foraging and commuting bats	Nearby scattered trees and urban greenspaces could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will result in the loss of small areas of tree (exclusively overhanging limbs) but given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Light spill on to retained sections of tree should be avoided. • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native tree, shrub and hedgerows to increase foraging opportunities.

			• Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	
Nesting birds (T01:T05, G01)	The mature trees could be used by nesting birds (this likely includes common garden birds/nesting birds). There are also two bird boxes attached to two of the trees (T01 and T03).	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Any pruning of mature trees should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of a minimum of one additional bird box on the new building will provide additional nesting habitat for birds e.g. • Vivara Pro WoodStone Swift Nest Box • House Sparrow Terrace FSC Nest Box • Swallow Nest Bowl Or a similar alternative brand.

				General purpose bird boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Other ecological constraints	Common rhododendron <i>Rhododendron ponticum</i> was identified on the site, which is listed as an invasive, non-native species under Schedule 9 of the Wildlife and Countryside Act 1981.	Construction could result in the spread of common rhododendron.	Common rhododendron should be dug up, including roots, and disposed of in line with appropriate controlled waste measures.	N/A

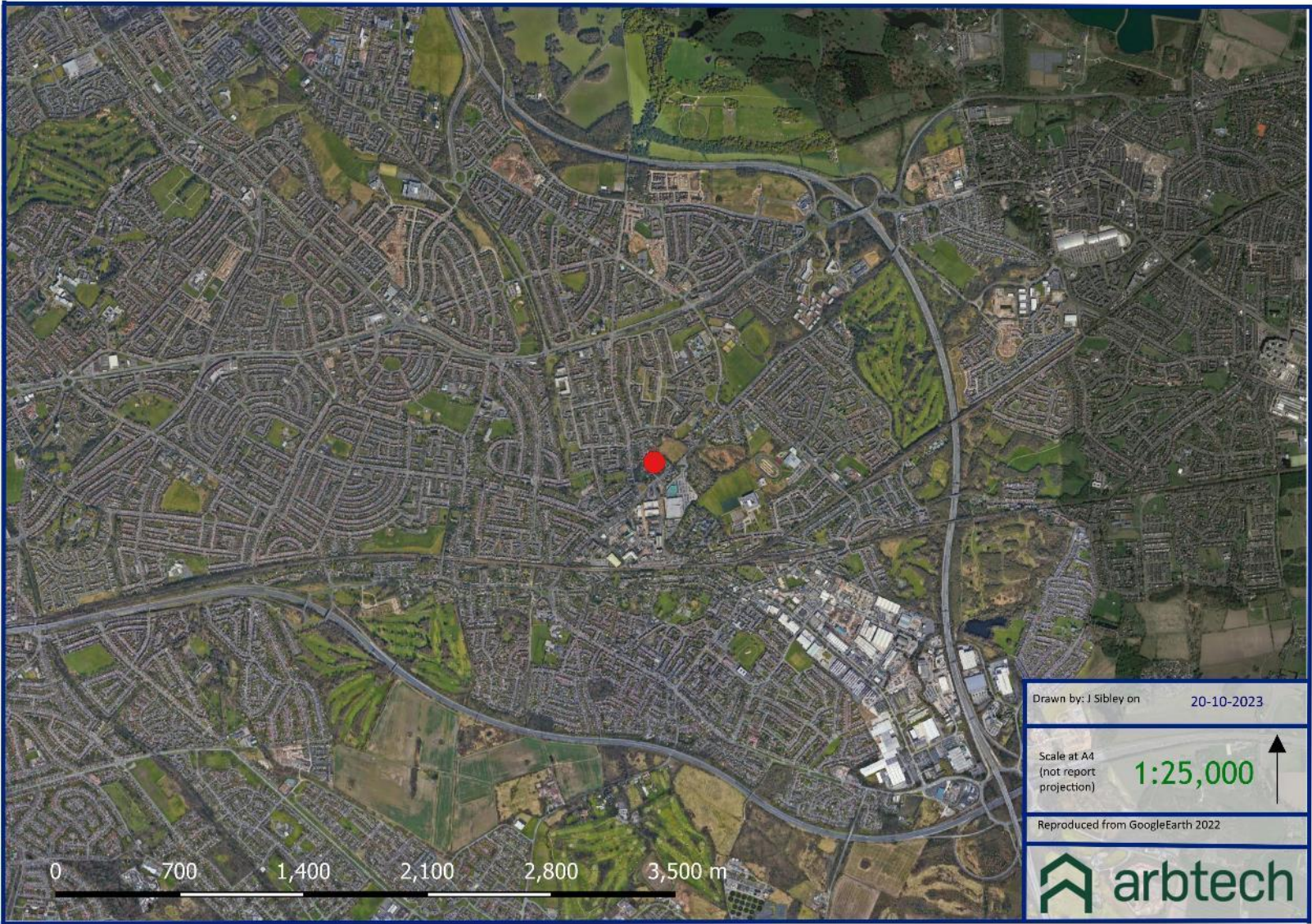
5.0 Bibliography

- Collins, J. (2023). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 4th edition, Bat Conservation Trust, London.
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected? <http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Google Earth. Accessed on 17/10/2023.
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting.
- Knowsley Council (2016). Knowsley Local Plan Core Strategy. <https://www.knowsley.gov.uk/residents/building-and-planning/planning-policy/adopted-documents>
- Magic Database. <http://www.magic.gov.uk/MagicMap.aspx> Accessed on 17/10/2023.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Natural England Designated Sites View. <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> Accessed on 17/10/2023.
- Wray, S., Wells, D., Long, E., Mitchell-Jones, T (2010) Valuing Bats in Ecological Impact Assessment. IEEM In-Practice. Number 70 (December 2010). Pp. 23-25.

Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: PRFA Plan



Appendix 4: Legislation and Planning Policy Related to Bats

LEGAL PROTECTION

All species of bat are fully protected under *The Conservation of Habitats and Species Regulations 2017* (as amended) through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

- (a) Deliberately captures, injures or kills any wild animal of a European protected species,
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely —

- (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) To affect significantly the local distribution or abundance of the species to which they belong.

Bats are also protected under the *Wildlife and Countryside Act 1981* (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANNING POLICY

Knowsley Local Plan Core Strategy (January 2016)

The Knowsley Local Plan Core Strategy can be viewed here: <https://www.knowsley.gov.uk/residents/building-and-planning/planning-policy/adopted-documents>

The following planning policies have implications for developers in relation to bats:

- **Policy CS2: Development Principles** – New development in Knowsley and the preparation of subsequent stages of the Local Plan will be expected to support the following development principles:

Principle 4: Recognise environmental limits, protect and enhance environmental assets, enhance local character and promote quality of place by:

- a) Understanding and respecting the character and distinctiveness of places and landscapes;
- b) Protecting and enhancing the historic environment;
- c) Promoting good quality design and ensuring that development respects its setting taking into account relevant design requirements, and best practice;
- d) Maximising opportunities for the regeneration of previously developed land, including derelict or unsightly areas to improve the image of Knowsley and use land resources efficiently;
- e) Mitigating potential negative impacts of traffic growth and road traffic on highway safety, air quality, noise and health;
- f) Supporting policies relating to Green Infrastructure and the greening of towns and cities;
- g) Maintaining or enhancing the tranquillity of open countryside and rural areas;
- h) Maintaining or enhancing the quantity and quality of biodiversity and habitats, including potential impacts on nationally and internationally important sites for biodiversity;
- i) Addressing any issues of unstable land, resulting from Knowsley's legacy of minerals extraction; and

- j) Minimising negative impact upon flood risk, air quality, water quality, land quality, soil quality, and noise or vibration levels and ensuring any negative impacts are appropriately mitigated. Development that will have an unacceptable impact upon any of the above will only be permitted where the benefits of the proposal clearly outweigh the harm.
- **Policy CS8: Green Infrastructure** - Maintenance and Enhancement of Knowsley's Existing Green Infrastructure
 - 1. Knowsley's existing Green Infrastructure and its beneficial functions will be protected, managed and/or enhanced, primarily to:
 - a) Ensure more attractive and cleaner residential neighbourhoods;
 - b) Sustain and promote biodiversity (including designated sites, priority habitats and protected and endangered species) in accordance with importance and contribution to ecological networks;
 - c) Preserve the character and function of historic environments and valued landscapes;
 - d) Mitigate the effects of climate change and flood risk;
 - e) Mitigate air, water and noise pollution;
 - f) Provide local opportunities for sport, recreation and allotments; and
 - g) Provide sustainable transport linkages between residential neighbourhoods and easy access to employment and services.
 - 2. To achieve the above, planning powers and other interventions will be used to:
 - a) Protect and enhance strategically important areas of greenspace;
 - b) Ensure an appropriate quantity and improved quality of locally important open spaces, including outdoor sports provision (and ancillary facilities of appropriate scale);
 - c) Promote effective movement of wildlife through a network of strategic green links, by protecting, maintaining and improving existing and new open spaces, water courses (including water quality) and biodiversity assets;
 - d) Protect, enhance and/or introduce biodiversity into existing areas of Green Infrastructure, through integration into the design of new development and public realm projects;
 - e) Improve accessibility for communities to greenspace offering leisure and recreation opportunities;
 - f) Protect and where possible improve green paths and cycleways linking residential areas, existing strategic areas of greenspace, employment locations, local community services and leisure facilities;
 - g) Work in partnership with other districts and relevant bodies at a landscape scale to minimise the impact of development upon Knowsley's existing Page 82 Knowsley Local Plan: Core Strategy January 2016 biodiversity and geological assets, and sustain the protection afforded to internationally important sites, including supporting habitat, for biodiversity outside of the borough; and
 - h) Deliver new integrated and functional Green Infrastructure that helps to mitigate and adapt to climate change, such as sustainable drainage systems, carbon capture and storage, soft landscaping and green roofs.

3. Site allocations for greenspace will be identified in the Local Plan: Site Allocations and Development Policies document, with further guidance set out in the Developer Contributions Supplementary Planning Document or future Supplementary Planning Document as appropriate.

Approach to Green Infrastructure and New Development

New development must be served by Green Infrastructure to meet the needs of residents and the local environment, in a manner which will:

- a) Contribute to the creation of a high quality residential environment;
- b) Provide access to high quality open space for leisure and recreational purposes;
- c) Seek to protect, maintain and where possible enhance biodiversity within and around new developments according to their designation and significance to provide space for nature; and
- d) Provide adequate mitigation and/or, as a last resort, compensation for Green Infrastructure or biodiversity loss, in circumstances where harm resulting from the development is otherwise unavoidable.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

1. include preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
2. scientific and educational purposes;

3. ringing or marking; and,
4. conserving wild animals.

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.