

# ROOSTING BAT SURVEY REPORT

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**NOVEMBER 2024**


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**Standen Phase 5 and 6,**  
Littlemoor Road,  
Clitheroe,  
BB7 1HF

U R B A N  
G R E E N



# QUALITY MANAGEMENT

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Legend: <div><div></div> Red Line Boundary</div>	0.85 <div></div> Kilometers	<div><div>N</div><div></div></div>
Client: Taylor Whippey	Issue: 01	
Project: Standen Phase 5&6	Scale @ A4 1:10,000	
Title: Site Context	Approved by: AH	Checked by: HM
Drawing Ref: UG_1451_SITE_CONTEXT	Author: CL	Date: 21/05/2024

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Deva City Office Park, Trinity Way,  
Manchester M3 7BF

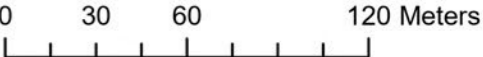
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# U R B A N G R E E N

## Legend

- Red Line Boundary
- NONE
- PRF-I
- PRF-M



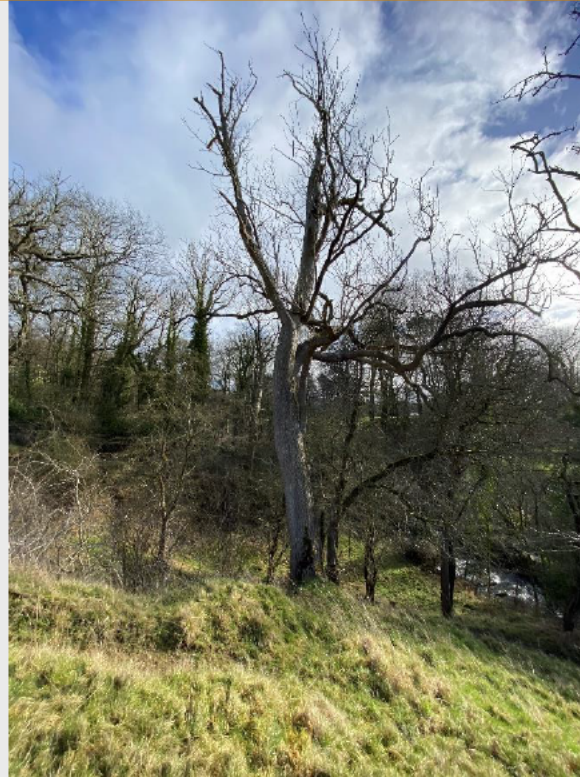
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Client: <b>Taylor Wimpey</b>		
Project: <b>Standen</b>		
Title: <b>ATI &amp; GLTA Results</b>		
Issue: <b>01</b>	Figure: <b>00</b>	
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Dwg No: <b>UG_1451_ECO_GLTA_01</b>		Revision: <b>01</b>

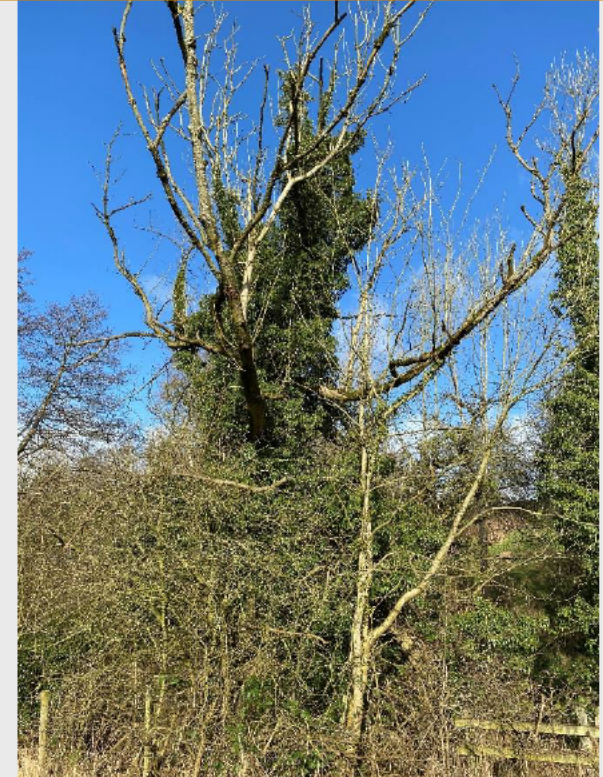
Figure 3. Photographs of the Site



Photograph 1: T4 – Dead specimen at east of site (PRF-I)



Photograph 2: T8 – Dead specimen at south of site (PRF-I)



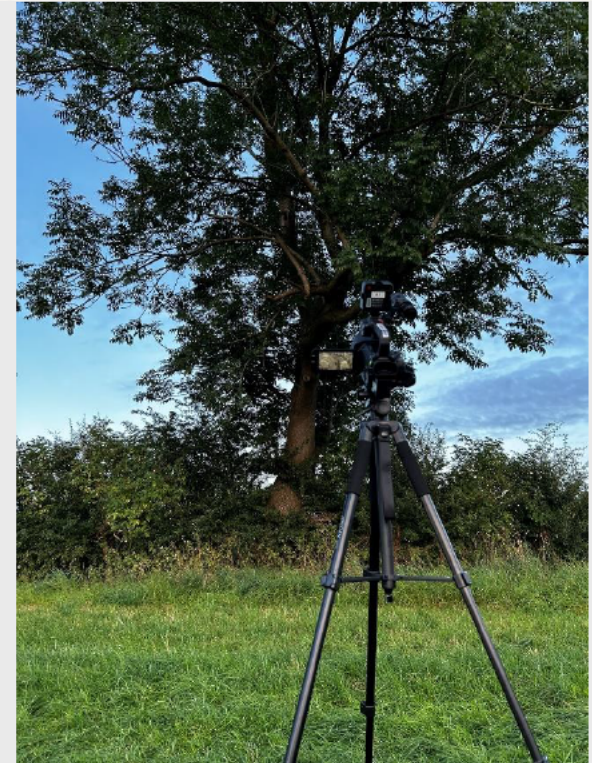
Photograph 3: T9 – representative example of tree with dense ivy cover (PRF-I)



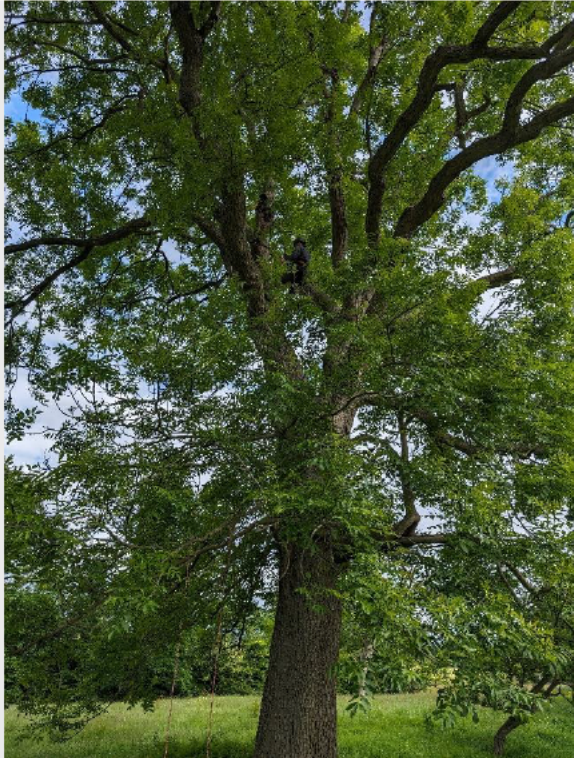
Photograph 4: T13 (PRF-I) isolated hawthorn specimen with small hollow limb



Photograph 5: T16 (PRF-I)



Photograph 6: T26 (PRF-M) with NVA during dusk emergence survey



Photograph 7: T15 (PRF-I) aerially inspected



Photograph 8: T22 (PRF-I) knot wound with small cavity

# 1 Introduction

## 1.1 Background to the Scheme

- 1.1.1.1 Taylor Wimpey is proposing the development of a residential estate in two phases, with associated hard and soft landscaping and areas of public open space (POS) at their site in Standen, Clitheroe.
- 1.1.1.2 Urban Green has been appointed to undertake various bat surveys at the site, comprising a mixture of Ground Level Tree Assessments, Aerial Tree Inspections, and dusk emergence surveys.

## 1.2 Site Context

- 1.2.1.1 The site is located at National Grid SD 74382 40702 and comprises a total area of approximately 17.2ha (see Figure 1).
- 1.2.1.2 The site is located on the rural-urban fringe of Clitheroe town, which is present approximately 1km north of the site. An un-named tributary of Pendleton Brook (a tributary of Mearley Brook which flows into the River Ribble) is present on site running north to south-west through the centre of the site.
- 1.2.1.3 Pendleton Brook borders the south of the site running from east to west. The River Ribble is located approximately 1.5km west of the site, with Mearley Brook present approximately 350m west of the site. Residential properties are located to the north, north-west and west of the site with arable grassland present on all other aspects. Areas of woodland are present within the wider area to the south of the site. The A59 is present approximately 600m east of the site.

## 1.3 Purpose of this Report

- 1.3.1.1 This report has been produced to document the methods, results and conclusions of various bat surveys completed at the site. The objective of the surveys includes an assessment of existing and documented trees within the survey area, inspecting their suitability for roosting bats, following guidance set out in Collins (2023).
- 1.3.1.2 Relevant UK legislation outlining the protection afforded to bats is detailed in Appendix 1.

## 2 Ecology Background

### 2.1 Previous Ecological Surveys

2.1.1.1 A suite of ecological surveys has been conducted on site since 2022 by Urban Green. These surveys/reports include:

- Preliminary Ecological Appraisal
- Barn owl surveys
- Bat surveys
- Breeding Bird Surveys
- Invertebrate surveys
- Kingfisher surveys
- Otter surveys
- Reptile surveys
- Water vole surveys
- White-clawed crayfish surveys

### 2.2 Biological Records

2.2.1.1 A desk search was conducted as part of the PEA (Urban Green, 2022) and the following records of bats were returned.

2.2.1.2 Nine records of bats were returned within the data search, including records of common pipistrelle, unidentified pipistrelle species (*Pipistrellus* sp.), as well as a record of an unidentified bat species (*Chiroptera* sp.).

2.2.1.3 Six records were related to roosts, with one record relating to an unidentified pipistrelle maternity roost. The closest record was located approximately 450m west of the site from 2015 and was related to a common pipistrelle roost.

2.2.1.4 Two records were related to field signs, and both were attributed to common pipistrelle. The closest record was located approximately 1.4km west of the site.

### 2.3 Site Context

2.3.1.1 The site forms a series of agricultural fields of varying management, that are dissected by hedgerows, blocks of woodland, and a watercourse.

2.3.1.2 Pendleton Brook bounds the south of the site, which has tree lined banks and flows past the site from the east, where it flows through a large area of woodland.

2.3.1.3 The surrounding landscape comprises swathes of agricultural land, similar to the site, particularly to the south.

2.3.1.4 Therefore, there is a range of optimal habitats for bats to utilise for both foraging and commuting opportunities on site and is well connected to the surrounding environment.

## 2.4 Preliminary Roost Assessment (Urban Green, 2022)

- 2.4.1.1 A Preliminary Roost Assessment was conducted as part of the Preliminary Ecological Appraisal carried out by Urban Geen in 2022.
- 2.4.1.2 In summary, the following trees were assessed as having bat roosting potential:
  - Two trees were assessed as having **High** bat roost potential.
  - Six trees were assessed as having **Moderate** bat roost potential.
  - Sixteen trees were assessed as having **Low** bat roost potential.

## 2.5 Bat Surveys (Urban Green, 2023)

- 2.5.1.1 Three dusk emergence/dawn re-entry surveys were completed at Building 1. Bat activity was found to be fairly consistent between the two dusk emergence surveys undertaken on site, with a low number of common pipistrelle (*Pipistrellus pipistrellus*) observed to be foraging around the building and associated hedgerow with trees. The dawn re-entry survey returned little activity throughout. No roosting activity was recorded in relation to Building 1 and the structure was assessed as not supporting a bat roost.
- 2.5.1.2 Ten transect surveys and five static deployment periods were completed on site. These activity surveys found that the site is an important foraging and commuting resource for local bat populations, particularly the southern boundary of the site associated with the woodland and tree-lined watercourse, as well as the central block of woodland through the site.
- 2.5.1.3 Further survey work in relation to T4 and T5 was recommended due to Health and Safety issues encountered on site during the survey attempts.

## 3 Methods

### 3.1 Ground Level Tree Assessment

- 3.1.1.1 An updated Ground Level Tree Assessment was conducted by Urban Green in 2024, updating the roosting suitability assessment categories from the original PEA (Urban Green, 2022) with the most recent Bat Conservation Trust (BCT) guidelines, 4th edition (Collins, 2023).
- 3.1.1.2 The survey involves a detailed inspection of trees from the ground to compile information about the tree, PRFs (or lack of), and any evidence of bats.
- 3.1.1.3 The inspection was conducted systematically and consistently around all parts of the tree (from all angles, both up close to the trunk and further away, where access permitted).
- 3.1.1.4 Binoculars were also used to focus in on features higher up the trunk and on upper canopy limbs when required.
- 3.1.1.5 During a GLTA, the suitability of trees and PRFs can be categorised according to the categories outlined in Table 1.

**Table 1. Suitability of trees for roosting bats (adapted from Collins, 2023)**

Category of Suitability	Further Survey Requirements
NONE	Either no PRFs in the tree or highly unlikely to be any
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony

### 3.2 Aerial Tree Inspection

- 3.2.1.1 An ATI was carried out on site between the 12<sup>th</sup> and 13<sup>th</sup> June 2024. It was completed by Ryan Knight of Knight Sky Ecology, who holds a level 2 Natural England Class Licence in relation to bats (2015-12611-CLS-CLS) and Jake Healy of Urban Green.
- 3.2.1.2 The ATI methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 4th edition (Collins, 2023).
- 3.2.1.3 The survey involves a detailed inspection of Potential Roosting Features (PRFs) within previously identified trees from within the tree to compile information about the tree, PRFs (or lack of), and any evidence of bats.
- 3.2.1.4 The inspection was conducted utilising aerial tree climbing equipment which allowed surveyors to safely assess features from within the canopy, following approved methods laid out within Technical Guide 1: Tree Climbing & Aerial Rescue (Arboricultural Association, 2021).
- 3.2.1.5 All surveyors were fully trained in tree climbing and aerial rescue techniques and held the necessary qualifications.
- 3.2.1.6 Inspections were aided through the use of endoscope and torchlight.

- 3.2.1.7 During an ATI, the suitability of trees and PRFs can be categorised according to the categories outlined in Table 1.

### 3.3 Dusk Emergence Survey

- 3.3.1.1 Dusk emergence surveys were carried out on a series of nights in 2024 under optimal survey conditions. A combination of surveyors, Echo Meter Touch USB-C devices and infra-red cameras were deployed across the site to cover each Potential Roosting Feature (PRF) recorded as part of the GLTA exercise (see Appendix 2), where deemed appropriate/necessary.
- 3.3.1.2 The surveys started 15 minutes before sunset and lasted 1 hour 45 minutes.
- 3.3.1.3 Infrared camera footage was subsequently reviewed after the survey to establish the presence of any bats emerging from PRFs.
- 3.3.1.4 The emergence methodology is based on information contained in the Bat Conservation Trust (BCT) guidelines, 4<sup>th</sup> edition (Collins, 2023).
- 3.3.1.5 Details of the surveys conducted can be found in Table 2.

**Table 2. Dusk emergence survey details**

Date	Trees Assessed	Survey Timings	Weather Conditions
27/06/2024	T7, T8, T22, & T29	Start: 21:30 Sunset: 21:45 End: 23:15	Temperature: 14°C Cloud cover: 8/8 oktas Wind speed: 4 Beaufort Rain: Intermittent bouts of light rain
18/07/2024	T25 & T26	Start: 21:13 Sunset: 21:28 End: 22:58	Temperature: 19°C Cloud cover: 8/8 oktas Wind speed: 1 Beaufort Rain: None
14/09/2024	T26	Start: 20:25 Sunset: 20:40 End: 22:10	Temperature: 16°C Cloud cover: 2/8 oktas Wind speed: 3 Beaufort Rain: None

### 3.4 Constraints to the Survey

- 3.4.1.1 The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

### 3.5 Lifespan for Report

- 3.5.1.1 In accordance with CIEEMs Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of **18 months** from the date of survey (i.e. until December 2025 ). After this date, this assessment should be reviewed by an ecologist to determine whether any update surveys are required.

## 4 Results

### 4.1 Ground Level Tree Assessment

- 4.1.1.1 A total of 29 trees were assessed as part of the GLTA.
- 4.1.1.2 Fourteen of the trees were able to be fully assessed from ground level, with many of the PRFs previously identified comprising dense ivy growth around the tree stems, with no other PRFs present, as such these trees were assessed as PRF-I/NONE.
- 4.1.1.3 Five trees were found to support PRFs that typically lend themselves to be features for only individuals or small numbers of bats, such as pruning wounds and rolled bark. As such, these trees were assessed as PRF-I, however, dusk emergence surveys were conducted as a precaution (see Section 5.5) based on professional judgement.
- 4.1.1.4 The ten remaining trees were found to support PRFs typically associated with supporting higher numbers of bats, such as knot wounds, tear outs, and woodpecker holes and as such were further survey work was deemed necessary to confidently assess the roosting potential (see Section 5.4).

### 4.2 Aerial Tree Inspections

- 4.2.1.1 Ten trees (T2, T14, T15, T16, T17, T21, T24, T26, T27, and T28,) underwent further survey through aerial inspection.
- 4.2.1.2 Of these ten trees, three were assessed as NONE, six were assessed as PRF-I, and one was assessed as PRF-M.
- 4.2.1.3 During the aerial inspections, the PRFs subject to further inspection recorded no signs of bats (e.g. live individuals, droppings, staining etc.).

### 4.3 Dusk Emergence Surveys

- 4.3.1.1 Following the Aerial Tree Inspection surveys, further survey works was required for six trees (T7, T8, T22, T25, T26, and T29).
- 4.3.1.2 As T26 was assessed as PRF-M, two further emergence surveys were completed as per the good practice BCT guidelines.
- 4.3.1.3 Trees T7, T8, T22, T25, and T26 were assessed as PRF-I as part of the GLTA exercise and it was further ascertained that one precautionary dusk emergence survey was required to conclude the presence/likely absence of roosting bats. Notwithstanding this, no bat roosts were recorded as part of the dusk emergence surveys and therefore bat roosts are assessed as likely absent from these trees.
- 4.3.1.4 During the emergence surveys, bat activity (of varying levels), was recorded at each tree. Common pipistrelle and, to a lesser extent, soprano pipistrelle were regularly recorded commuting and foraging on site, with rarer observations of noctule (*Nyctalus noctula*) and *Myotis* sp.

## 4.4 Summary

4.4.1.1 A summary of the key findings across the three survey types are stated below:

- Six trees were assessed as 'NONE' with respect to bat roosting potential. No suitable features for bats were present (see Table 3);
- Twenty-two trees were assessed as 'PRF-I' (i.e.: features present were suitable to support a single or very low number of individual bats, such as ivy). These are typically utilised as 'day roosts' or 'transitional roosts', with no maternity or hibernation roosting potential;
- One tree was assessed as 'PRF-M' (i.e. features present that were suitable to support a large number of bats). This tree can support maternity and hibernation bat roosts; and
- No bat roosts were identified during the dusk emergence surveys.

**Table 3. GLTA & ATI Summary**

Tree References	Category of Suitability
T3, T6, T18, T21, T24, T28	NONE
T1, T2, T4, T5, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T19, T20, T22, T23, T25, T27, T29	PRF-I
T26	PRF-M

4.4.1.2 No live bats, signs of bats (staining, droppings etc.) emergences, or re-entries were recorded during any of the various surveys completed on site and it is therefore thought that roosting bats are likely absent.

## 5 Recommendations

### 5.1 Proposed Development

- 5.1.1.1 Taylor Wimpey is proposing the development of a residential estate in two phases, with associated hard and soft landscaping and areas of public open space (POS) at their site in Standen, Clitheroe.

### 5.2 Impact Assessment

- 5.2.1.1 The associated Arboricultural Impact Assessment (Urban Green, 2024) details that most of the trees on site are to be retained as part of the proposals. Table 4 summarises the retention status of the trees assessed within this report.

**Table 4. Tree removal status**

Tree References	Retention status
T1, T2, T3, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T19, T20, T21, T24, T25, T26, T27, T28	Retained
T4, T5, T18, T22, T23, T29	Removed

#### 5.2.2 Direct Impacts

- 5.2.2.1 In regard direct impacts as a result of the project proposals, five trees assessed as PRF-I are to be removed to facilitate the development.
- 5.2.2.2 Following the best practice guidance it is recommended that all trees due for removal are felled in a timely manner and any trees assessed as PRF-I are felled following a Precautionary Method of Works (PMoWs) document. This document should include the requirement for pre felling checks and follow the principles detailed in the Bat Mitigation Guidelines (Reason & Wray, 2023).

#### 5.2.3 Indirect Impacts

- 5.2.3.1 There is a risk that retained trees are subject to indirect impacts during both the construction and operational phases of the proposed development, if suitable mitigation is not implemented.
- 5.2.3.2 Therefore, it is recommended that the PMoWs document includes mitigation measures addressing potential impacts as a result of lighting and noise. And should follow the protocols outlined in the Institute of Lighting Professionals Guidance Note 08/23: 'Bats and Artificial Lighting at Night'.

## 6 Other Considerations

- 6.1.1.1 During the dusk emergence survey carried out on the 14<sup>th</sup> September 2024, a single barn owl (*Tyto alba*) was recorded flying in a westerly direction through the site, carrying prey in its talons. The bird was observed flying into the barn building within the northwestern extent of the site at 20:42 and was not seen again for the remainder of the survey.
- 6.1.1.2 A suite of barn owl vantage point surveys were conducted by Urban Green in 2023 and barn owl activity was found to be limited during the surveys and the barn structure was assessed as not being in use by breeding barn owls at the time of the survey work.
- 6.1.1.3 The mitigation measures detailed in the associated barn owl report (Urban Green, 2023) are though to still be relevant and appropriate and should be followed.
- 6.1.1.4 Specifically these are:
- Demolition should be sensitively undertaken during the least likely breeding period (typically taken to be October to December) and should be conducted under the supervision of a suitably qualified ecologist.
  - It is recommended that two barn owl boxes are erected on site and considered within the design. Boxes are to be installed prior to the demolition of the barn or any tree removal and should either be affixed to retained trees within the development or pole mounted and be positioned in sensitively selected locations within the site.

## 7 References

Institution of Lighting Professionals (2023). Guidance Note o8/23: Bats and artificial lighting at Night in the UK.

CIEEM (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM.

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4<sup>th</sup> edition). The Bat Conservation Trust, London.

Institution of Lighting Professionals (2023). Guidance Note o8/23: Bats and artificial lighting at Night in the UK.

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Urban Green (2022). Preliminary Ecological Appraisal. UG\_1451\_ECO\_PEA\_o1

Urban Green (2023). Bat Survey Report. UG\_1451\_ECO\_BSR\_o1.

Urban Green (2024). Arboricultural Impact Assessment. UG\_1451\_ARB\_AIA\_o1\_FINAL

## Appendix 1 – Relevant Legislation

### Bats

All species of bat are listed on Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and Schedule 2 of *The Conservation of Habitats and Species Regulations 2017*, making them *European Protected Species*. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb any such animal, including in particular any disturbance which is likely to:
  - impair its ability to survive, breed, or rear or nurture their young;
  - impair its ability to hibernate or migrate.
  - affect significantly the local distribution or abundance of that species; or
- damage or destroy a breeding site or resting place of any such animal; or
- intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*)
- Lesser horseshoe bat (*Rhinolophus hipposideros*)
- Bechstein's bat (*Myotis bechsteinii*)
- Barbastelle (*Barbastella barbastellus*)
- Greater mouse-eared bat (*Myotis myotis*)