



**Stage 1 Bat Inspection Survey of trees and buildings associated with  
land adjacent to Wenny Road, Chatteris, Cambridgeshire**

**Survey Report**

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### **Notice to Interested Parties**

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

This report is only valid for release if it is on its Final Report format, Draft Reports remain invalid.

### **Document Information**

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## **0 EXECUTIVE SUMMARY**

- 0.1 On behalf of Cannon-Kirk (UK) Ltd), Cambridge Ecology Ltd was commissioned by Savills to carry out a Stage 1 bat inspection survey of trees and buildings on land adjacent to Wenny Road, Chatteris, Cambridgeshire. The surveys were required to investigate the potential presence of roosting bats, which are protected species, in the trees and two buildings, which could be affected by the potential development proposals.
- 0.2 The results of the bat inspection survey could be used to provide guidance on the need for more detailed Stage 2 bat activity surveys and whether any requirements were necessary for mitigation, to meet legal obligations, including the need to apply for European Protected Species Licences.
- 0.3 The bat surveys were led by a professional licensed and qualified ecologist, Darren Frost (Natural England Bat Survey Class Licence CL18 - Registration number CLS01438).
- 0.4 The bat inspection survey was based on the Bat Survey Good Practice Guidelines (Bat Conservation Trust 2012; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004). The survey comprised a series of comprehensive daytime, external surveys of the trees and buildings within the red line boundary of the proposed development site.
- 0.5 No actual bats were found during the surveys and no signs indicating the presence of roosting/hibernating bats were found in any of the trees and buildings.
- 0.6 However 14 of the trees surveyed were considered to contain features suitable to support roosting bats and were therefore classed as Category 1/1\* trees. The other trees in the survey area were considered to be Category 2/3 containing no obvious potential to support roosting bats.
- 0.7 The two buildings within the development site were considered to be unsuitable to support roosting bats, being devoid of suitable roosting features and exposed to high levels of disturbance.
- 0.8 Recommendations have been made comprising (i) those associated with Category 1/1\* trees, (ii) those associated with Category 2/3 trees (iii) those associated with the provision of bat roost enhancement measures that could be included as part of the proposals for the development site, (iv) scheme design and general precautionary measures to minimised potential effects on bats.
- 0.9 In terms of the Category 1/1\* trees it is recommended that Stage 2 bat activity surveys be carried out on the 14 trees, especially where they are at risk of being adversely effected by the development proposals. Once the results of these surveys are available and the presence/absence of a roost site is established, the need for further mitigation and an application for a European Protected Species licence can be determined.
- 0.10 It would be recommended that these Stage 2 bat activity surveys commence between May and August 2015. To comply with the BCT guidelines the activity survey should

comprise three site visits (involving 2 dusk and one dawn; or one dusk and two dawn) throughout the season when bats are active.



## **1 INTRODUCTION**

- 1.1 On behalf of Cannon-Kirk (UK) Ltd), Cambridge Ecology Ltd was commissioned by Savills to carry out a Stage 1 bat inspection surveys of trees and buildings on land adjacent to Wenny Road, Chatteris, Cambridgeshire. The surveys were required to investigate the potential presence of roosting bats, which are protected species, in the trees and two buildings (a stable and brick shelter), which could be affected potential development proposals. The study included a series of site visits throughout January 2015.
- 1.2 The results of a review of recent biological data (less than 10 years old) from recognised sources of ecological records had already been reported in the extended Phase 1 Habitat survey (Cambridge Ecology 2014). The results of the extended Phase 1 Habitat survey suggested that the proposed development site was suitable to support bats. Therefore a recommendation was made to initiate a Stage 1 bat inspection survey of trees and buildings within the red line boundary of the proposed development site.
- 1.3 The Stage 1 bat inspection surveys were commissioned in order to establish whether roosting bat were or had been present in any of the trees or buildings within the proposed development site adjacent to Wenny Road and to identify whether bats had the potential to be using the trees and/or buildings as roost sites.
- 1.4 Figure 1.1 shows the red line boundary of the proposed development site adjacent to Wenny Road, Chatteris.
- 1.5 The aim of the Stage 1 bat inspection surveys and this report were to:
- identify the likely presence of roosting bats in the trees and buildings within the Wenny Road development site.
  - evaluate the use of the trees and buildings by bats, including the status of any roosts if present.
  - provide information to address any constraints caused by bats at the site, including whether additional bat surveys and whether a European Protected Species (EPS) licence are required to ensure legal compliance is maintained.
  - identify appropriate mitigation measures, necessary to comply with legal requirements pertaining to protected species, and provide enhancement opportunities in relation national planning policy in terms of the National Planning Policy Framework (NPPF). The key principles in the NPPF require that *“the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and delivering net gains in biodiversity where possible.”*
  - identify appropriate biodiversity habitat creation and enhancement measures that would be included in the design of any landscaping (habitat creation plans).

### Site Location and Proposals

- 1.6 The Wenny Road development site was located approximately 1 kilometre to the south east of Chatteris town centre and was bordered to the north and west by residential properties, part of Chatteris town and the west and south by the A142 road. Chatteris lies approximately 28km north of the city of Cambridge. The centre of the site was situated at Grid Ref TL 400 856. The total area within the red-line boundary of the development site covered an area of approximately 26 hectares (ha).
- 1.7 The land beyond the A142 on the east and southern boundary of the development site and in the wider area around Chatteris was primarily intensively farmed arable land.
- 1.8 Within the survey area the habitats comprised:
- Arable land
  - Dry/Wet Ditches (with flowing water)
  - Ponds/Standing Water
  - Amenity/Improved grassland
  - Scattered Scrub
  - Scattered Trees/Parkland/Broadleaved Woodland
  - Hedgerows
  - Tall Ruderal
  - Bare ground and Buildings
- 1.9 The development site and study area were primarily used for recreational dog walking and horse grazing.
- 1.10 The development proposals for the site adjacent to Wenny Road, Chatteris, would comprise various residential properties.
- 1.11 Details of the number and layout of the scheme were not available at the time of preparing this report. However it would be expected that the results of this ecology survey (and other species specific surveys in the future) would help provide details that would influence the layout of the scheme and especially the landscaping and habitat creation.

## 2 METHODS

### Bat roost inspection survey (daytime search)

- 2.1 For the purpose of this report the red line boundary of the proposed development site will be referred to as the development site and the area covered by the bat inspection survey will be referred as the survey area.
- 2.2 The area for the bat inspection survey comprised the red line boundary of the development site, plus an area up to 50m beyond the site boundary to the east and south (where access was possible). Due to the size and nature of the development the 50m area was chosen as the maximum potential zone of influence. The area beyond the development site to the north and west was not included in the survey because it comprised entirely of a built environment with residential properties and roads, and therefore of very limited ecological value, in addition access to these private areas was not possible.
- 2.3 A Stage 1 bat inspection survey was carried out on the trees and the two buildings within the proposed development site adjacent to Wenny Road, Chatteris. The location of trees and two buildings that were searched as part of the survey are shown in Figure 2.1.
- 2.4 The aim of the inspection surveys would be to:
- determine whether bats are, have been or considered likely to be using the trees buildings within the proposed development site, as roost sites. This would include evaluating the number of bats present, the species involved, and the location of roost and access points.
  - provide advice on the implications if roosting bats are found at the site or the presence of bat roosts is considered likely, or trees and buildings had potential to support roosting bats.
- 2.5 The survey visits were conducted between the 9<sup>th</sup> and 22<sup>nd</sup> January 2015, led by a professional licensed and qualified ecologist, Darren Frost (Natural England Bat Survey Class Licence CL18 - Registration number CLS01438) and supported by Maurice Webber (Natural England Bat Survey Class Licence CL18 - Registration number CLS01438), with experience in bat inspection surveys and knowledge of bat ecology.
- 2.6 During the surveys, the weather was predominantly dry and sunny, with light to moderate winds, temperature 4-8°C. Therefore the weather was considered suitable to carry out bat inspection surveys. In the previous few days, the weather had been cooler and not generally suitable for bat activity.
- 2.7 The bat inspection survey was based on the Bat Survey Good Practice Guidelines (Bat Conservation Trust 2012; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004). The survey comprised a series of comprehensive daytime, external surveys of the trees and two buildings (stable and brick shelter) within the development site where access was safe and achievable.

- 2.8 The search entailed looking for evidence of bats or their roosts including; droppings and urine staining, fur staining and scratch marks, and live or dead bats. Binoculars, mirrors, endoscope, ladder and a powerful torch (one million candlepower) were used to aid searches of the trees and buildings.

#### Trees

- 2.9 The exterior of the trees was surveyed from ground level to identify gaps and crevices through which bats could gain access and to identify features on the exterior of the trees which could themselves provide potential roost sites.
- 2.10 Where possible the inside of the trees and crevices (where these were reachable within 2-3m of the ground), were searched for bats and evidence of bats. All ledges and surfaces were checked for use by roosting bats. The area around these features, were searched for bat droppings, feeding remains, scratch marks and fur and urine staining.
- 2.11 All trees classed as Category 1\*/1 (BCT 2012) and therefore with features capable of supporting roosting bats were recorded and plotted on a map for future reference.

#### Buildings

The exterior of the buildings was surveyed to identify gaps and crevices through which bats could gain access and to identify features on the exterior of the walls which could themselves provide potential roost sites (for example, cracks in the brickwork and woodwork of the walls, underneath wooden cladding or hanging tiles on the roof).

- 2.12 Where possible the inside of the buildings was searched for bats and evidence of bats. All beams and wooden frameworks were checked for mortise joints and other gaps which could be used by roosting bats. The area around these features, including the walls, ledges and floors was searched for bat droppings, feeding remains, scratch marks and fur and urine staining.
- 2.13 All buildings with potential to support roosting bats were recorded and plotted on a map for future reference.
- 2.14 Photographs were taken to authenticate any evidence of bat species and record the character of the site (trees/buildings).
- 2.15 If structures were found showing evidence of bats, these would be assessed to determine the type of bat roost considered to be present (Bat Conservation Trust, 2012): The types of bat roost considered were as follows:
- Maternity or Nursery Roost
  - Hibernation Roost
  - Daytime Summer Roost
  - Night Roost
  - Feeding Roost
  - Transitional Roost

2.16 Based on the characteristics of the buildings and features being inspected and the surrounding habitat, an assessment of their suitability to roosting bats was made. This involved the consideration of the following factors:

- Light levels.
- Temperature regime and protection from the weather.
- Access to the interior of the building and other roost sites.
- Potential roost sites.
- Building construction.
- Habitat context.

### 3 RESULTS

#### Bat Inspection Survey

- 3.1 At the time of the survey no actual bats or signs indicating the presence of roosting bats were found during the searches made of the trees and buildings within the survey area.
- 3.2 Of the trees surveyed, 14 were considered to have features suitable to potentially support roosting bats and were therefore given Category 1\*/1 status as defined by the BCT survey guidelines (BCT 2012).
- 3.3 The suitable features included cracks, splits and crevices in major tree limbs, hollow cavities and holes created by woodpeckers and/or as a result of diseased parts of the tree.
- 3.4 Tables 3.1 to 3.4 provide a description of the 14 Category 1\*/1 trees considered to have potential to support roosting bats.
- 3.5 Figure 3.1 shows the location of the 14 Category 1\*/1 trees within the survey area. Examples of features suitable to potentially support roosting bats on these 14 trees are shown in the Photographs section.
- 3.6 Some other trees also contained some features, such as holes and crevices but were rejected as potential roost sites because the features were not considered to provide conditions suitable to support roosting bats. These trees are classed as Category 2/3 status as defined by the BCT survey guidelines (BCT 2012). Therefore those trees that are not classed as Category 1\*/1\* are by default classed as Category 2/3.
- 3.7 The two buildings ( stable and brick shelter) within the survey area were not considered unsuitable to support roosting bats because they lacked suitable features, were not weather proof, being drafty and cold; and were exposed to high levels of disturbance, e.g. signs that fires had been started inside the brick shelter were evident.
- 3.8 An old abandoned ice house was discovered outside the western boundary of the proposed development site, amongst a residential area. Access to this site was not possible at the time of the survey. The ice house had been filled in many years ago and the entrance had subsequently been blocked for safety reasons and a residential development had been established around the entire site, historically (1970's) it had supported roosting bats (M. Webber pers. comm.).

#### General Habitats

- 3.9 The habitats within the survey area were considered to provide a range of features suitable to support roosting and foraging bats and commuting routes across the site.
- 3.10 The presence of mature trees containing features suitable for roosting bats were present. In addition the mature trees, hedgerows, linear tree planting, tall ruderal, waterbodies (such as ponds and ditches with flowing water) and semi-improved

grassland habitat provided good foraging opportunities for bats. The grassland areas and woodland edges in particular would be expected to provide foraging opportunities for bats as these would likely support a variety of insect species.

- 3.11 Most bat species utilise linear features and use preferred flight routes. The matrix of habitats and linear features such as the hedgerows and site boundaries would be expected to provide suitable foraging opportunities and sheltered commuting links between potential roost site and foraging areas.
- 3.12 In addition to the features observed, the biological record search as part of the initial ecology investigation, indicated the presence of two species of bats (Brown Long-eared bat and Common Pipistrelle in 2009 and 2012 respectively) in close proximity to the survey area (within 100m at 32 Wenny Road), although no actual roost sites were recorded (Cambridge Ecology 2014).
- 3.13 To the north and west the land was dominated by the residential areas of Chatteris town and therefore provided relatively poor habitat for bats. To the east and south was arable land used for crop production. There were few significant sections of hedgerow and most were fragmented and isolated, they did not form any recognisable network linking different habitats. Field boundaries were often marked by farm tracks, minor road and drainage/irrigation ditches. There were few arable field margins and conservation headlands. Foraging habitat for bats and commuting routes between potential foraging areas and roost sites were therefore limited.

#### **Observations of other ecological features**

- 3.14 At the time of the survey no nesting birds were found associated with the buildings or trees inspected during the bat survey. This was to be expected given that the inspection survey was carried out outside of the birds' breeding season. There were however, signs indicating that birds had been nesting in the trees surveyed for bats, including old birds' nests.

#### **Survey Constraints**

- 3.15 It was considered that the inspection surveys provided a robust and valid indication of the potential of the trees and buildings surveyed to support roosting bats. The inspection survey was considered to have been carried out methodically and all accessible areas searched thoroughly to locate signs indicating the presence of bats.
- 3.16 It should be noted that the absence of certain protected species, such as bats would not preclude their presence on a site. There would always be a risk that protected species were over-looked, either owing to the timing (both time of day and time of year) of the survey, the scarcity of the species at the site or the ability of protected species to move to new sites periodically and therefore move into an area after the survey had been carried out.

Table 3.1: Results of the Stage 1 Bat Inspection of trees on land adjacent to Wenny Road, Chatteris, Cambridgeshire

No	Feature	Tree Identification Code			
		1	2	3	4
1	Tree Type	Beech	Oak	Oak	Oak
2	Age/Trunk size (dia)	1m	1m	1m	Triple trunk 2m
3	Aspect (isolated/in a woodland)	Along strip of woodland	At end of strip of woodland	Isolated	Isolated
4	Surrounding habitat type	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees
5	Presence of natural holes	Yes	Yes	Yes	No
6	Presence of woodpecker holes	Yes	Yes	Yes	Yes
7	Presence of cracks/splits in major limbs	No	Yes	Yes	Yes
8	Presence of loose bark	No	Yes	Yes	Yes
9	Presence of Ivy clad trunks and/or limbs	No	Yes	No	No
10	Presence of hollows/cavities	Yes	Yes	Yes	Yes
11	Presence of epicormic growth	No	No	No	No
12	Presence of bat or bird boxes	No	No	No	No
13	Evidence of work or disturbance to tree	No	No	No	No
14	Overall condition of tree	Diseased	Some sign of disease	Good	Good
15	Light sources nearby illuminating tree	None	None	None	None
16	Bats found	No	No	No	No
17	Signs of bats	No	No	No	No
18	Suitability for roosting bats	Yes	Yes	Yes	Yes
19	Comments	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required



Table 3.2: Results of the Stage 1 Bat Inspection of trees on land adjacent to Wenny Road, Chatteris, Cambridgeshire

No	Feature	Tree Identification Code			
		5	6	7	8
1	Tree Type	Ash	Ash	Oak	Oak
2	Age/Trunk size (dia)	1m	1m	0.5m	1m
3	Aspect (isolated/in a woodland)	Isolated	Isolated	Along strip of woodland	Along strip of woodland
4	Surrounding habitat type	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees
5	Presence of natural holes	Yes	Yes	Yes	Yes
6	Presence of woodpecker holes	Yes	Yes	No	Yes
7	Presence of cracks/splits in major limbs	Yes	Yes	Yes	Yes
8	Presence of loose bark	Yes	Yes	Yes	No
9	Presence of Ivy clad trunks and/or limbs	No	Yes	No	No
10	Presence of hollows/cavities	Yes	Yes	Yes	Yes
11	Presence of epicormic growth	No	No	No	No
12	Presence of bat or bird boxes	No	No	No	No
13	Evidence of work or disturbance to tree	No	No	No	No
14	Overall condition of tree	Good	Good	Good	Good
15	Bats found	No	No	No	No
16	Signs of bats	No	No	No	No
17	Suitability for roosting bats	Yes	Yes	Yes	Yes
18	Comments	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required

Table 3.3: Results of the Stage 1 Bat Inspection of trees on land adjacent to Wenny Road, Chatteris, Cambridgeshire

No	Feature	Tree Identification Code			
		9	10	11	12
1	Tree Type	Oak	Oak	Oak	Oak
2	Age/Trunk size (dia)	1.5m	0.5m	1m	1m
3	Aspect (isolated/in a woodland)	Isolated	Along strip of woodland	Along hedgerow	Along hedgerow
4	Surrounding habitat type	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees
5	Presence of natural holes	Yes	Yes	Yes	Yes
6	Presence of woodpecker holes	Yes	No	Yes	Yes
7	Presence of cracks/splits in major limbs	Yes	Yes	Yes	Yes
8	Presence of loose bark	Yes	No	Yes	No
9	Presence of Ivy clad trunks and/or limbs	No	No	No	No
10	Presence of hollows/cavities	Yes	Yes	Yes	Yes
11	Presence of epicormic growth	Yes	No	No	No
12	Presence of bat or bird boxes	No	No	No	No
13	Evidence of work or disturbance to tree	No	No	No	No
14	Overall condition of tree	Good	Good	Good	Good
15	Bats found	No	No	No	No
16	Signs of bats	No	No	No	No
17	Suitability for roosting bats	Yes	Yes	Yes	Yes
18	Comments	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required

**Table 3.4: Results of the Stage 1 Bat Inspection of trees on land adjacent to Wenny Road, Chatteris, Cambridgeshire**

No	Feature	Tree Identification Code	
		13	14
1	Tree Type	Ash	Ash
2	Age/Trunk size (dia)	0.25m	0.5m
3	Aspect (isolated/in a woodland)	Along hedgerow	Along hedgerow
4	Surrounding habitat type	Horse grazing pasture/grassland scattered and belt of trees	Horse grazing pasture/grassland scattered and belt of trees
5	Presence of natural holes	Yes	Yes
6	Presence of woodpecker holes	No	Yes
7	Presence of cracks/splits in major limbs	No	Yes
8	Presence of loose bark	No	Yes
9	Presence of Ivy clad trunks and/or limbs	No	No
10	Presence of hollows/cavities	Yes	Yes
11	Presence of epicormic growth	No	No
12	Presence of bat or bird boxes	No	No
13	Evidence of work or disturbance to tree	No	No
14	Overall condition of tree	Good	Diseased
15	Bats found	No	No
16	Signs of bats	No	No
17	Suitability for roosting bats	Yes	Yes
18	Comments	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required	Category 1*/1 tree: High potential for presence of roosting bats, further investigation required

Table 3.5: Results of the Stage 1 Bat Inspection of buildings on land adjacent to Wenny Road, Chatteris, Cambridgeshire

No	Feature	Stable	Brick Hut
1	<b>Building Type</b>	Single storey stables, 3 compartment building. Wooden construction.	Small single storey brick built building.
2	<b>Age</b>	30 years	80+ years
3	<b>Aspect</b>	East - West	North - South
4	<b>Wall Construction</b>	Single thickness wooden cladding with no cavities.	Single thickness brick wall with no cavities.
5	<b>Form of Roof</b>	Sloping roof with corrugated metal sheets	Flat concrete roof thin.
6	<b>Hanging Tiles Weather boards Cladding</b>	No hanging tiles. No weather boards Unlined single thickness, cladding.	No hanging tiles. No weather boards. No cladding.
7	<b>Nature of Eaves -Soffits boxed</b>	None	None
8	<b>Lead flashing Condition</b>	None	None
9	<b>Gaps under eaves, windows, tiles, lead flashing</b>	Gaps into building via open fronted entrances. There were gaps between corrugated roof sheets and eaves.  There was no lead flashing.  No suitable gaps for roosting bats found.	Gaps into building via open door way. The door was absent. A number of very small non glazed windows were situated around the sides of the building.  There was no lead flashing.  No suitable gaps for roosting bats found.
10	<b>Presence and type of roof lining</b>	None	None
11	<b>Presence and type of roof insulation</b>	None	None
12	<b>Presence of water tank covered/uncovered</b>	None	None

Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire

No	Feature	Stable	Brick Hut
13	<b>Structure of roof</b>  <b>Truss type</b>  <b>Material</b>  <b>Condition</b>	Basic wooden roof truss structure. No interlocking roof joints. Wooden ridge board present. Some gaps in roof allowing access into building.  Poor condition exposed to the ingress of water.	The comprised a single concrete slab situated on top of the four sides of the building. Small gaps around the joints were sealed and gaps covered cobwebs.  Good condition.
14	<b>Evidence of work or disturbance to building fabric</b>	Building used as a horse stable and haw store.	Building used for recreational purposes by local youths. Signs that fires had been lit inside the building.
15	<b>Light sources nearby illuminating building</b>	None	None
16	<b>Condition of building: good disrepair, derelict</b> <b>Weather proof y/n</b>	Building in poor condition, not entirely weather proof and drafty. There were gaps in wooden wall cladding.	Building in good condition, weather proof but drafty.
17	<b>Bats found</b>	No	No
18	<b>Signs of bats</b>	None	None
19	<b>Suitability for roosting bats</b>	Low. There were no suitable, sheltered weather proof roosting features inside the building.	Low. There were no suitable, crevices or other features inside the building.
20	<b>Comments</b>	Building considered to be of negligible suitable for roosting bats. No further bat surveys necessary	Building considered to be of negligible suitable for roosting bats. No further bat surveys necessary

## 4 RECOMMENDATIONS

- 4.1 As a result of the Stage 1 bat inspection surveys a number of recommendations can be made that would be appropriate and proportionate to the level of potential bat activity present within the survey area.
- 4.2 These recommendations can be categorised into four main types, comprising (i) those associated with Category 1/1\* trees, (ii) those associated with Category 2/3 trees (iii) those associated with the provision of bat roost enhancement measures that could be included as part of the proposals for the development site, (iv) scheme design and general precautionary measures to minimise potential effects on bats.
- 4.3 In terms of the Category 1/1\* trees it is recommended that Stage 2 bat activity surveys be carried out on the 14 trees, especially where the trees are at risk of being adversely affected by the development proposals. These surveys should be carried out based on Bat Conservation Trust Bat surveys – ‘Good Practice Guidelines’ (BCT 2012). Once the results of these surveys are available and the presence/absence of a roost site is established, the need for further mitigation and an application for a European Protected Species licence can be determined.
- 4.4 It would be recommended that these Stage 2 bat activity surveys commence between May and August 2015. To comply with the BCT guidelines the activity survey should comprise three site visits (involving 2 dusk and one dawn; or one dusk and two dawn) throughout the season when bats are active.
- 4.5 As a precaution trees that have been considered as Category 2/3 status, the following measures are recommended:
- avoid disturbance to trees where possible, although trees may be felled provided appropriate reasonable avoidance measures are implemented.
  - prior to clearance/construction works commencing give tool-box talks relating to bats, to site personnel. All appropriate site personnel should also be informed of their legal obligations, responsibilities and what to do in the event that a bat or bat roost is found on site.
  - an emergency action plan should be created and used during the construction work in the event that a protected species, such as a roosting bat is found. In the unlikely event that roosting bats were encountered at any stage of the development, work must stop and advice be sought. For immediate advice contact Cambridge Ecology 01954 231239. In this event, further advice can be given on how to proceed with the development whilst ensuring that population of roosting bats at the site is maintained.
  - an Ecological Clerk of Works may be employed periodically to oversee the clearance/construction works to provide advice, guidance and on-site support, to address any unforeseen ecological issues that may arise. As with all ecological surveys and the nature of wildlife, the behaviour and dwellings of bats can change periodically.
- 4.6 Bat enhancement measures could be installed as part of the development proposal. For instance:

- bat boxes suitable for roosting bats may be incorporated into buildings and installed on trees (see Photographs 37-38). This enhancement opportunity would deliver a net gain in biodiversity and therefore meet the terms of the NPPF. The installation of bat boxes may be necessary as mitigation for any potential loss of roost sites. The need for these features and mitigation or enhancement would be established based on the findings of Stage 2 bat activity surveys discussed previously.
  - habitat creation, maintenance and management measures suitable to benefit roosting/foraging bats would be possible as part of a landscaping design for the site.
  - the production of an ecological management plan should be prepared to detail habitat creation, maintenance and management measures required to successfully deliver measures suitable to for roosting/foraging bats.
- 4.7 The bat could be monitored periodically (e.g. annually) by a licensed ecologist and the information gathered would have the potential to be used for research and education purposes. Further help and advice can be given with the supply and installation of boxes within the development when required.
- 4.8 In terms of scheme design and general precautionary measures the following measures are recommended:
- increased light levels have the potential to deter certain species of bats from using habitats for roosting, commuting and foraging. Therefore the scheme design should ensure lighting is kept to a minimum (comparable to that currently present), particularly in areas where bat roosts may be considered to be present.
  - a further equivalent Stage 1 bat inspection surveys would be required to update the results provided in this report and inform the development proposals in the future., especially if the development proposals were to be delayed for 12 months or more. This measure would take account of the ability for wildlife to periodically move to new locations.
- 4.9 Finally it is recognised that in addition to the potential for roosting bats the presence of nesting birds has also been confirmed. Therefore, it is recommended that all site clearance works, especially that involving buildings, vegetation and trees, be undertaken outside of the breeding bird season (March to August inclusive). If this is not possible all vegetation and buildings that are cleared during the breeding season must be checked for nesting birds by an experienced ornithologist acting as an Ecological Clerk of Works.

## 5 KEY POINTS AND FINDINGS

- 5.1 In January 2015 Stage 1 bat inspection surveys were carried out on trees and buildings within the survey area on land adjacent to Wenny Road, Chatteris.
- 5.2 The surveys were carried out by professional, qualified and licensed ecologists, with experience in bat inspection surveys and knowledge of bat ecology. The surveys were based on BCT (2012) Bat surveys – Good Practice Guidelines. The surveys comprised a comprehensive daytime, external and internal (where possible) survey of the trees and buildings.
- 5.3 The information gathered from the Stage 1 bat inspection surveys was considered to provide a robust and valid indication of the potential for bats to be present in the trees and buildings searched.
- 5.4 No actual bats were found during the surveys and no signs indicating the presence of roosting/hibernating bats were found in any of the trees and buildings.
- 5.5 Of all the trees surveyed 14 were considered to contain features suitable to support roosting bats and were therefore classed as Category 1/1\* trees. The other trees in the survey area were considered to be Category 2/3 containing no obvious potential to support roosting bats.
- 5.6 The two buildings were considered to be unsuitable to support roosting bats, being devoid of suitable roosting features and exposed to high levels of disturbance.
- 5.7 Previous records from 2009 and 2012 indicated that bats had been recorded within 100m of the survey area and the presence of an old ice house on an adjacent residential area was also identified.
- 5.8 The habitats within the survey area were considered to provide a range of features suitable to support roosting and foraging bats and commuting routes across the site.
- 5.9 In combination, the habitats present, the records of bats in close proximity to the survey area and features identified as potential roost site indicated that there was a possibility of roosting bats being present within the development site.
- 5.10 Based on the findings of the Stage 1 bat inspection surveys, a number of recommendations have been made that would be practical, proportionate and precautionary to address the potential presence of bats within the proposed development site.
- 5.11 Stage 2 bat activity surveys would be necessary on the 14 Category 1/1\* trees where features suitable to support roosting bats were found and which could be affected by the development proposals at the site. These surveys would involve a series of emergence/re-entry surveys when optimum bats activity would recommence in 2015 usually between May and August.
- 5.12 The results of these Stage 2 bat activity surveys would determine the need to apply for a European Protected Species Licence in order to enable the development



proposal to proceed within the legislation pertaining to wildlife. The results would also help establish the actual mitigation necessary to minimise any potential adverse effects on bats and highlight which measures could be included as enhancements rather than mitigation.

- 5.13 A number of general precautionary measures have been recommended that should be included as part of the clearance/construction programme, that would be expected to help reduce the risk of potential adverse effects on bats and contravention of wildlife legislation.
- 5.14 To meet the policy requirements of the NPPF a number of biodiversity enhancement opportunities have been recommended that may be incorporated into the development scheme that would be expected to result in conservation gain for both bats. These could be focused on the provision of new roost features in the form of bat boxes and bat bricks and habitat creation, maintenance and management measures.
- 5.15 It should also be recognised that signs (old birds' nests) of various bird species having used the trees as nest sites were found. All nesting birds are protected by law and therefore measures should be implemented to avoid disturbance, damage or destruction to any nesting birds that may be present during the maintenance programme. To avoid delays to the work programme or contravention of the wildlife legislation pertaining to nesting birds, demolition and vegetation clearance works should either take place outside the birds' breeding season (March-September inclusive) or include measures to ensure breeding birds remain unaffected by the building activities.

## 6 BIBLIOGRAPHY

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7 FIGURES

Figure 1.1: Plan showing the red line boundary of the proposed development site and the boundary of the Stage 1 Bat Inspection Survey.

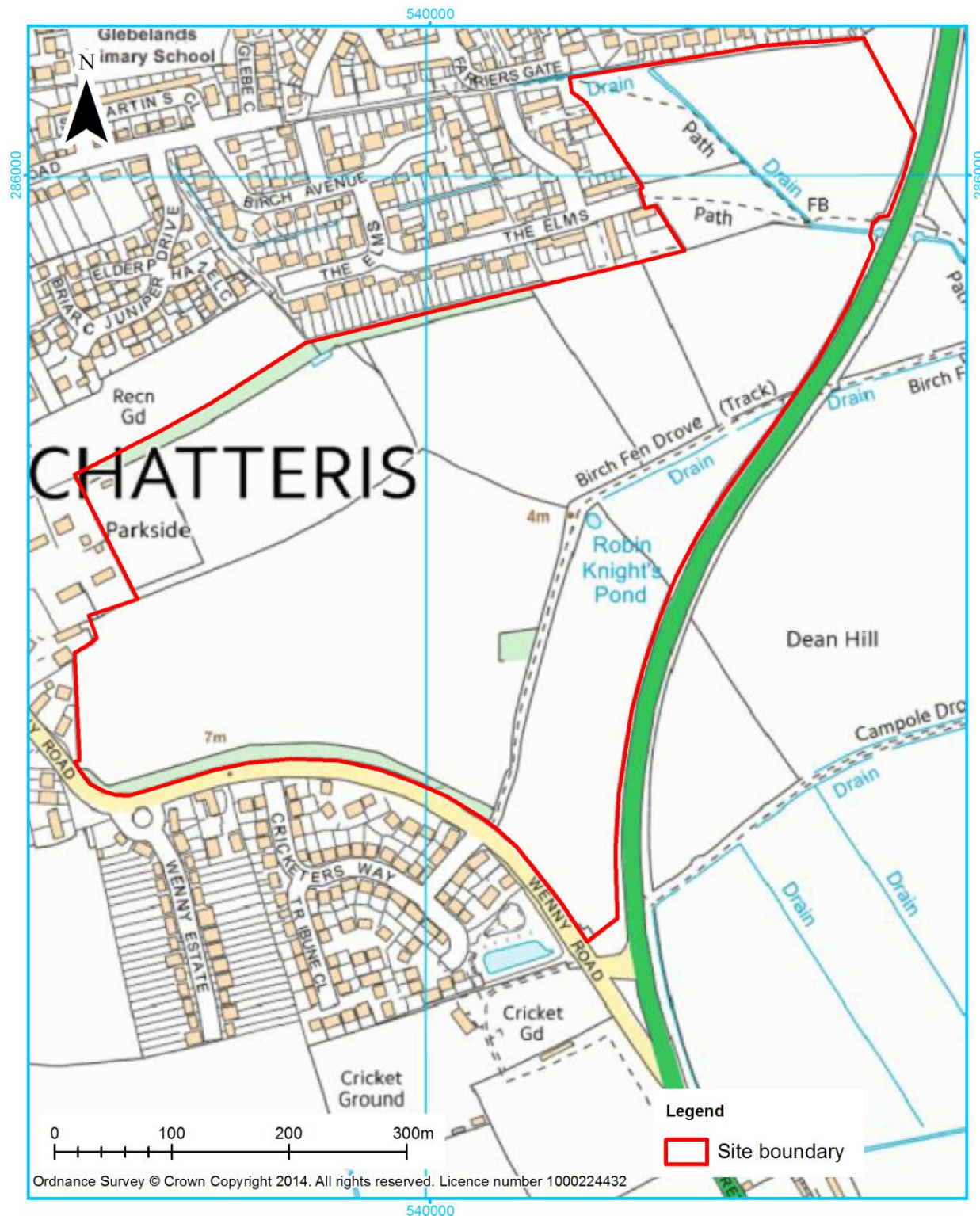


Figure 2.1: Plan showing the location of trees and buildings that were searched as part of the Stage 1 Bat Inspection Survey

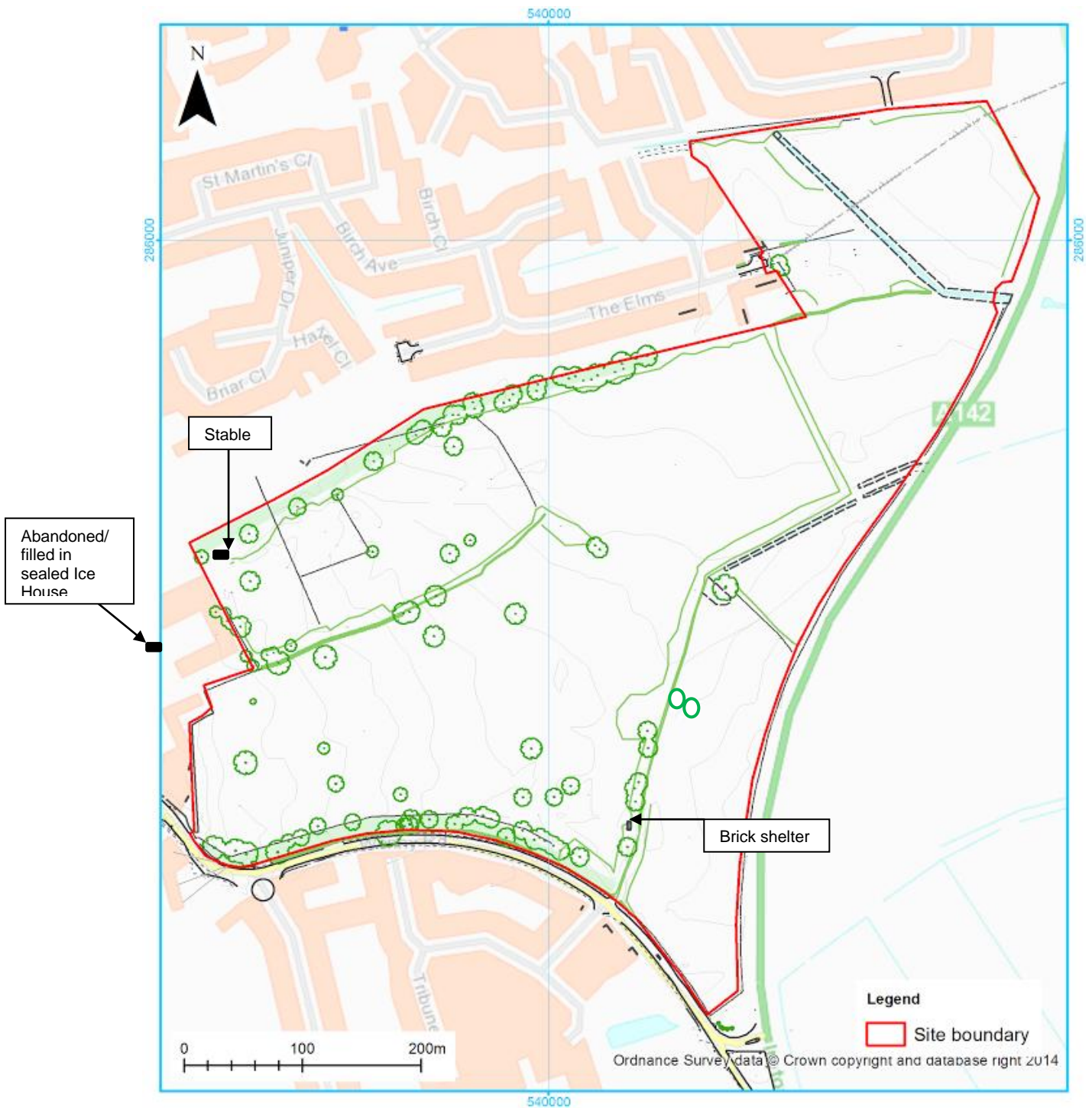
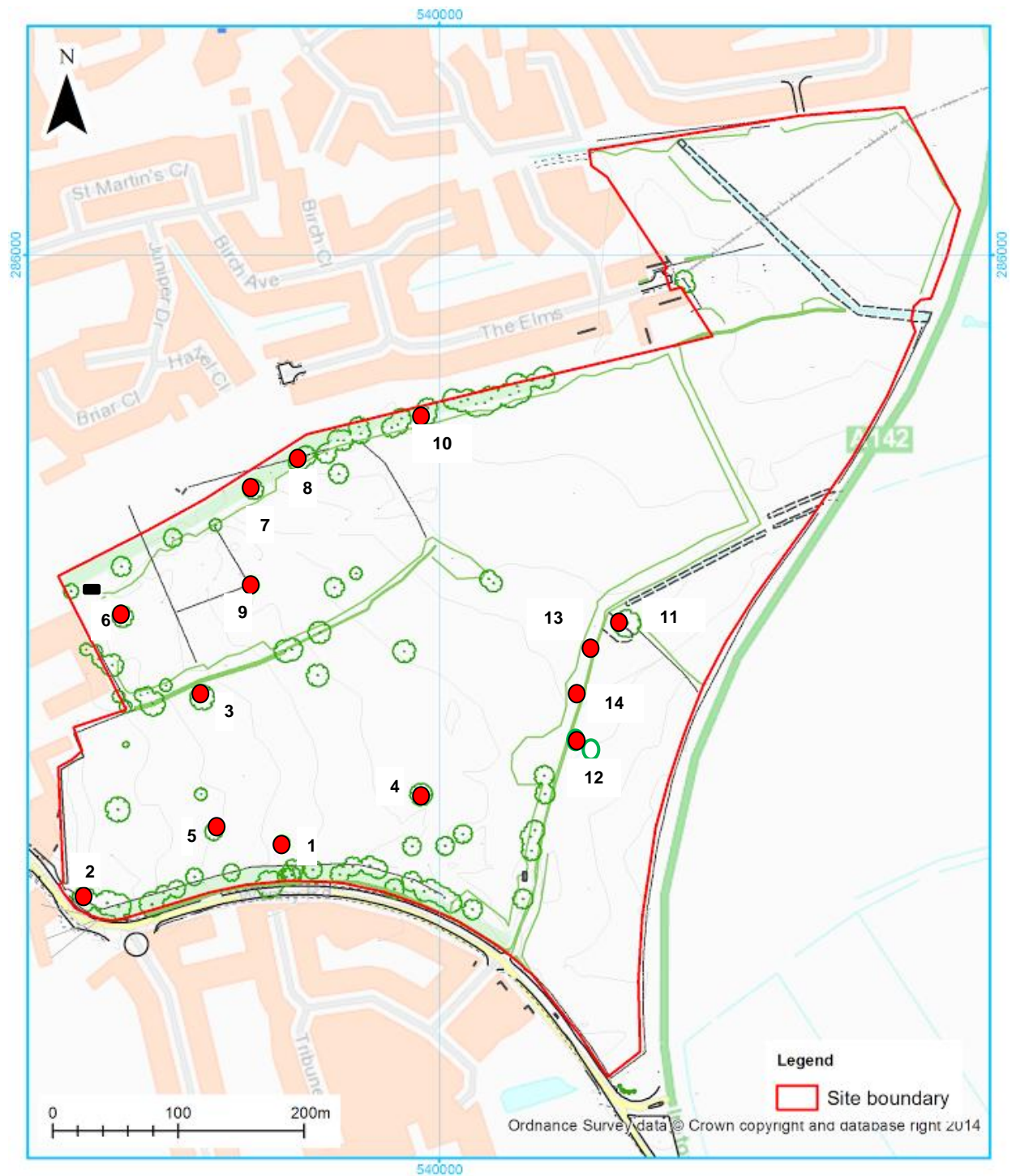








Figure 3.1: Plan showing the location of the trees (Category1\* and 1) considered to have potential to support roosting bats



**8 PHOTOGRAPHS**

Photo No.	Photograph	Description
1		Tree No 1 suitable to support roosting bats and considered Category 1/1* status
2		Tree No 2 suitable to support roosting bats and considered Category 1/1* status






<p>3</p>		<p>Tree No 3 suitable to support roosting bats and considered Category 1/1* status</p>
<p>4</p>		<p>Tree No 4 suitable to support roosting bats and considered Category 1/1* status</p>
<p>5</p>		<p>Tree No 4 suitable to support roosting bats and considered Category 1/1* status</p>



Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire

6		Tree No 5 suitable to support roosting bats and considered Category 1/1* status
7		Tree No 5 suitable to support roosting bats and considered Category 1/1* status
8		Tree No 6 suitable to support roosting bats and considered Category 1/1* status



9		Tree No 7 suitable to support roosting bats and considered Category 1/1* status
10		Tree No 8 suitable to support roosting bats and considered Category 1/1* status
11		Tree No 9 suitable to support roosting bats and considered Category 1/1* status






12		Tree No 9 suitable to support roosting bats and considered Category 1/1* status
13		Tree No 10 suitable to support roosting bats and considered Category 1/1* status
14		Tree No 10 suitable to support roosting bats and considered Category 1/1* status




Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire

15		Tree No 11 suitable to support roosting bats and considered Category 1/1* status
16		Tree No 11 suitable to support roosting bats and considered Category 1/1* status
17		Tree No 12 suitable to support roosting bats and considered Category 1/1* status






<p>18</p>		<p>Tree No 12 suitable to support roosting bats and considered Category 1/1* status</p>
<p>19</p>		<p>Tree No 13 suitable to support roosting bats and considered Category 1/1* status</p>
<p>20</p>		<p>Tree No 14 suitable to support roosting bats and considered Category 1/1* status</p>

**Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire**




<p><b>21</b></p>		<p>Stable no considered suitable for use by roosting bats</p>
<p><b>22</b></p>		<p>Stable no considered suitable for use by roosting bats</p>
<p><b>23</b></p>		<p>Brick shelter not considered suitable for use by roosting bats</p>



Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire




24		Brick shelter not considered suitable for use by roosting bats
25		Water filled ditch beneficial to foraging bats
26		Understorey habitat within deciduous woodland belts potential foraging habitat for bats with good invertebrate populations

**Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire**

<p><b>27</b></p>		<p>Tall ruderal habitat suitable for foraging bats</p>
<p><b>28</b></p>		<p>Roadside of the A142 creating a partial barrier to safe passage to and from the development site on the eastern boundary</p>
<p><b>29</b></p>		<p>Improved grassland suitable for foraging bats</p>






Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire

<p>30</p>		<p>Scattered trees, improved grassland tall ruderal and parkland suitable for foraging bats</p>
<p>31</p>		<p>Mature trees in deciduous woodland belt habitat potential for foraging and commuting bats</p>
<p>32</p>		<p>Scattered trees, improved grassland tall ruderal and parkland suitable for foraging bats</p>



**Bat Inspection Survey of trees and buildings on land adjacent to Wenny Road, Chatteris Cambridgeshire**

<p><b>33</b></p>		<p>Arable land not suitable for foraging bats</p>
<p><b>34</b></p>		<p>Hedgerows commuting routes for bats</p>
<p><b>35</b></p>		<p>Birch Fen Drove footpath with hedgerows providing commuting routes for bats</p>

<p>36</p>		<p>Birch Fen Drove footpath with hedgerows providing commuting routes for bats</p>
<p>37</p>		<p>Example of bat boxes for exterior use on trees or buildings.</p>
<p>38</p>		<p>Design of Bat Bricks/tubes for installation in suitable locations on buildings enhancement of the site for roosting bats.</p>

## 9 LEGISLATION

- 9.1 The information set out within this report does not constitute a legal opinion on the relevant legislation. The opinion of a legal professional should be sought if further advice is required.
- 9.2 The information below is intended only as guidance to the legislation relating to these species. The relevant legislation themselves should be referred to for the correct legal wording.
- 9.3 Full details of the legislation can be found at:  
[www.legislation.gov.uk/uksi/2010/490/contents/made](http://www.legislation.gov.uk/uksi/2010/490/contents/made),  
[www.legislation.gov.uk/uksi/2007/1843/contents/made](http://www.legislation.gov.uk/uksi/2007/1843/contents/made)  
[www.legislation.gov.uk/uksi/2009/6/contents/made](http://www.legislation.gov.uk/uksi/2009/6/contents/made)
- 9.4 It remains the client's responsibility to maintain legal compliance relating to national and international wildlife legislation.

### Bat legislation

- 9.5 All British bat species are fully protected under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). It is an offence to:
- Deliberately capture, injure, kill, or disturb bats anywhere,
  - Intentionally or recklessly obstruct access to their roosts, or
  - Damage or destroy a roost.
- 9.6 Roosts are protected even if no bats are present. If convicted of an offence the penalties can be severe, including a fine of up to £5000 (per bat!) and/or six months in prison and confiscation of vehicles and equipment used.
- 9.7 Some bat species, including Barbastelle, Bechstein's, Brown Long-eared, Common Pipistrelle (Wales only), Greater and Lesser horseshoe, Noctule, and Soprano Pipistrelle, are also priority species under the UK Biodiversity Action Plan.
- 9.8 A roost is defined as 'any structure which a bat uses for shelter or protection'. As bats tend to re-use the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of survey.
- 9.9 In addition, Greater Horseshoe, Lesser Horseshoe, Barbastelle and Bechstein's bat are also listed in Annex II of the EC Habitats Directive, which effectively requires that the best of these species' roosting and foraging sites are designated as Special Areas of Conservation (SACs).
- 9.10 The following bat species are listed as being of principal importance for the conservation of biodiversity in England, in Section 74 (known as the UK BAP Priority Habitats/Species) of the Countryside and Rights of Way Act 2000: Bechstein's (*Myotis bechsteinii*), Greater Mouse-eared (*Myotis myotis*), Greater Horseshoe (*Rhinolophus*

*ferrumequinum*), Lesser Horseshoe (*R. hipposideros*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Brown Long-eared (*Plecotus auritus*) and Noctule (*Nyctalus noctula*).

- 9.11 All bats are listed as being of principal importance for the conservation of biodiversity in England, in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- 9.12 Exemptions can be granted from the protection afforded to bats under the Habitat Regulations, by means of an EPS (European Protected Species) Habitats Regulations licence obtained from Natural England.
- 9.13 An 'EPS Habitats Regulations Licence' may be required for:
- Demolition of a building known to be used by bats prior to development of a site
  - Conversion of barns or other buildings to be used by bats
  - Removal of trees known be used by bats as well as tree pruning
  - Significant alterations to roof voids known to be used by bats
  - Road building or widening
  - Bridge strengthening
- 9.14 There are three tests that must be satisfied before a licence can be issued to permit otherwise prohibited acts;
- Regulation 44(2)(e), for the purpose of 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; subject to Natural England being satisfied that the applications additionally meets:
  - Regulation 44(3)(a) and there is no satisfactory alternative; and
  - Regulation 44(3)(b) that the action authorised will not be detrimental to the maintenance of the species concerned at favourable conservation status in their natural range.
- 9.15 A European Protected Species Licence may be required before the commencement of any development that might impact on bats and their roosts.