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## **PRELIMINARY ECOLOGICAL APPRAISAL**

Heaton Road, Huddersfield  
Report Reference: BG17.281  
**September 2017**



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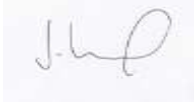


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# Contents

|     |                                                                                                |    |
|-----|------------------------------------------------------------------------------------------------|----|
| 1   | Summary.....                                                                                   | 7  |
| 2   | Introduction .....                                                                             | 8  |
| 3   | Methodology .....                                                                              | 9  |
| 3.1 | Desk Study.....                                                                                | 9  |
| 3.2 | Surveyors.....                                                                                 | 9  |
| 3.3 | Survey Conditions .....                                                                        | 9  |
| 3.4 | Field Survey .....                                                                             | 10 |
| 3.5 | Protected Species .....                                                                        | 10 |
| 3.6 | Limitations.....                                                                               | 14 |
| 3.7 | Report Lifespan.....                                                                           | 15 |
| 4   | Site Context .....                                                                             | 16 |
| 5   | Results .....                                                                                  | 18 |
| 5.1 | Desk Study.....                                                                                | 18 |
| 5.2 | Field Survey .....                                                                             | 20 |
| 5.3 | Protected Species .....                                                                        | 20 |
| 5.4 | Site Photographs.....                                                                          | 23 |
| 6   | Evaluation .....                                                                               | 28 |
| 7   | Recommendations .....                                                                          | 31 |
| 7.1 | Breeding Birds.....                                                                            | 31 |
| 7.2 | Foraging and Commuting Bats.....                                                               | 32 |
| 7.3 | Roosting Bats.....                                                                             | 32 |
|     | Appendix 1. General References.....                                                            | 33 |
|     | Appendix 2. Legislation and Guidance Sources .....                                             | 34 |
|     | Appendix 3. Legislation, Guidance and Methodology in relation to Potential<br>Constraints..... | 35 |
|     | Appendix 4. Proposed Plans .....                                                               | 42 |
|     | Appendix 5. MAGIC.....                                                                         | 43 |
|     | Appendix 6. Ecological Data Search Information.....                                            | 46 |

# 1 Summary

- 1.1 Brindle & Green were commissioned by Acumen Designers & Architects Ltd. to undertake a Preliminary Ecological Appraisal at 1 Heaton Road, Huddersfield. The purpose of this assessment was to provide an assessment of the ecological value of the site, and to identify key ecological constraints to the proposed development. The survey was undertaken on 18<sup>th</sup> September 2017.
- 1.2 The site is the subject of a planning application for the extension and alteration of the existing building, involving a change in the use of the property to a residential dwelling. Design proposals for the site are presented in Appendix 4 of this report.
- 1.3 All ecological issues relating to the building and surrounding environment were considered during the survey. A full description of the recommendations can be found within Chapter 7, below is a summary of the ecological issues recommended for further consideration as a result of our initial investigations:

| Ecological Consideration    | Recommendations (e.g. further survey, mitigation)                                                                                    | Timing                                    |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Breeding Birds              | Vegetation and Building 1 considered suitable for breeding birds – sensitive working practices necessary. See Chapter 7 for details. | Pre-construction and during construction. |
| Roosting Bats               | Low potential building should be subjected to a single emergence survey.                                                             | May - August                              |
| Foraging and Commuting bats | Retention of physical characteristics and current management of the boundary features.                                               | During and Post Construction              |

## 2 Introduction

- 2.1 Brindle & Green were commissioned by Acumen Designers & Architects Ltd to undertake a Preliminary Ecological Appraisal at 1 Heaton Road, Huddersfield. The purpose of this assessment was to provide a preliminary appraisal of the ecological value of the site and to identify key ecological constraints to the proposed development. The survey provides detail on the need for any additional, more detailed protected species surveys, and will allow the development of likely mitigation, compensation and enhancement measures to be developed.
- 2.2 The site is located to the west of the city of Huddersfield within a residential area with areas of mature woodland with associated rough grassland and standing water located immediately to the south of the application area (Figure 1). The project area consists of a coach house building (Building 1) and a three-storey residential building, containing apartments. A garden, comprising amenity grassland and ornamental shrubs, was present to the east of Building 1. Building 1 is a stone built, two-storey coach house with a pitched slate roof and a lean-to section with a sloped single pitched roof. Building 1 is the subject of a full planning application for the extension and alteration of the existing building, involving a change in the use of the property to a residential dwelling. Design proposals for the site are presented in Appendix 4 of this report.
- 2.3 The legislation relevant to protected species within the United Kingdom is summarised within Appendix 2.
- 2.4 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site. This report pertains to this information only.

## 3 Methodology

### 3.1 Desk Study

Table 1 below lists organisations and/or resources used as part of the desk study process. Data regarding any known statutory or non-statutory sites in addition to any records for protected species were requested from the following sources:

**Table 1.** Ecological Data Resources

| Consultee                                                                  | Requested Data                                                                               | Search Radius | Date Requested |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------|----------------|
| Local Ecological Records Centre<br><i>West Yorkshire Ecological Centre</i> | Protected and notable species records<br>Local, National and International Site Designations | 2km           | 18/09/2017     |
| MAGIC Maps                                                                 | National and International Site Designations<br>Granted EPS Development Licences             | 2km           | 21/09/2017     |

### 3.2 Surveyors

Survey carried out by Sam Browne BSc (Hons.) (Bat Survey Class Licence Registration Number 2016-22186-CLS-CLS) and John Harvey BA (Hons.) Assistant Ecologist.

The survey was supported by Chris Needham MSc. MCIEEM who holds a Natural England Bat Licence (2015-10292-CLS-CLS) and Great Crested Newt Licence (2015-17910-CLS-CLS).

### 3.3 Survey Conditions

The survey was undertaken at 11:00am on the 18<sup>th</sup> September 2017.

The outside temperature was recorded as 14°C, with dry, overcast conditions, with 8/8 cloud cover recorded.

## 3.4 Field Survey

The habitats on site were assessed for their suitability to support protected species following standard survey guidance (Appendix 3). It is important to assess the surrounding habitat, as in some cases the legal protection of a protected species extends to the habitat in which it occupies. Any incidental sightings of field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a Protected Species is identified, further, species specific surveys may be recommended to establish with certainty the presence and extent, or absence of a legally protected species prior to the determination of any planning approval.

## 3.5 Protected Species

### 3.5.1 Breeding Birds

The building and vegetation to be impacted from the proposed development have been the subject of a search for active or previously used bird nests, and identification of features considered conducive to breeding birds, alongside noting the activity and behaviour of birds on site during the survey. Following standard techniques, as recommended by

Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods: Breeding Bird Survey* (pages 389-393). RSPB.

### 3.5.2 Roosting Bats

3.5.2.1 Structures (Buildings and trees) on site were assessed for their suitability to support roosting bats following Collins, J (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, (3rd edition), Bat Conservation Trust, London.

During the external and internal (where possible) assessment of the structure features including suitable enclosed spaces such as slipped or missing roof tiles, gaps and cracks in brickwork, enclosed roof voids, gaps along ridge rafters, joints in roof beams and the presence of suitable soffits and fascias were recorded to evaluate the potential suitability of a structure to support roosting bats. Evidence of bat presence was also recorded including feeding remains, bat droppings and staining around potential access points. Bats often use different roosting sites at different times of the year, and the absence of evidence does not always equate to the absence/ or lower suitability of a structure to support a bat roost. The potential suitability of each structure, was

categorised following Collins J (2016), and the resulting survey effort to establish confidence in a result is summarised within Table 2

**Table 2.** Potential suitability of roosting habitat within structures (Buildings and trees) to be applied to each structure using professional judgement. Adapted from Collins J (2016)

| Category                    | Description of roosting habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Number of presence / absence surveys required                                                                                                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>No Potential</b>         | The building is wholly unsuitable for a bat roost.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | None                                                                                                                                                                                                                |
| <b>Negligible Potential</b> | Suitable cavities may exist but these are open to wind, rain or disturbance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | None                                                                                                                                                                                                                |
| <b>Low Potential</b>        | <p>This category describes a structure with one or more potential roost sites that could be used by individual bats opportunistically, that less than ideal in some way. For example, the feature may be subject to intermittent disturbance, and does not provide enough shelter, conditions* space and/or suitable surrounding habitat (e.g unlikely to support a maternity or hibernation roost).</p> <p>This category describes a tree of sufficient size and age to support roosting bats, but with no features observed from the ground, or the features only have a limited potential to support roosting bats.</p>      | <p>One survey between May and August</p> <p>Trees – No further surveys required</p>                                                                                                                                 |
| <b>Moderate Potential</b>   | <p>This category describes a structure or tree considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed)</p> <p>Features considered to have adequate potential would include cavities of appropriate dimensions that are generally free from disturbance and free from fluctuations in the weather.</p> | <p>Two surveys between May and September (with at least one survey undertaken between May and August)</p> <p>One Dusk emergence and One Dawn re-entry survey to ideally be undertaken at least two weeks apart.</p> |

|                       |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High Potential</b> | A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat. | <p>Three surveys between May and September (with at least two surveys undertaken between May and August)</p> <p>One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn.</p> <p>The surveys should ideally be undertaken at least two weeks apart.</p> |
| <b>Confirmed</b>      | This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.                                       | <p>Three surveys between May and September (with at least two surveys undertaken between May and August)</p> <p>One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn.</p> <p>The surveys should ideally be undertaken at least two weeks apart.</p> |

(\* in this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc)

3.5.2.2 If bats are discovered emerging or re-entering any structure, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information for roost characterisation can be collected to advise the planning application or EPS development licence.

### 3.5.3 Foraging and Commuting bats

Habitat features on site were assessed for their suitability to support foraging and commuting bat populations. This assessment was independent from the suitability of the site to support roosting bats, and provides information on the likeness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration. The suitability of the sites commuting and foraging habitat was assessed and evaluated against the proposed impacts to the site and Table 3 (below) to allow categorisation of the habitat.

**Table 3.** Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins J (2016)

| Category                    | Description of commuting and foraging habitat                                                                                                                                                                                                                                                                       | Survey effort to establish the value of commuting and foraging habitat**                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Negligible Potential</b> | Negligible habitat features on site likely to be used by commuting or foraging bats                                                                                                                                                                                                                                 | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Low Potential</b>        | <p>Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment.</p> <p>Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.</p> | <p><b>Transect /spot count/ timed search survey:</b><br/>One survey visit per season:<br/>Spring- April/ May<br/>Summer- June/July/ Aug<br/>Autumn – Sept/ Oct<br/>In weather conditions conducive to finding bats</p> <p><b>AND</b></p> <p><b>Static automated surveys:</b><br/>One location per transect, over a five-night period, per season:<br/>Spring- April/ May<br/>Summer- June/July/ Aug<br/>Autumn – Sept/ Oct<br/>In weather conditions conducive to finding bats</p> <p><i>Further survey may be required if surveys reveal higher activity than predicted from habitat alone</i></p> |
| <b>Moderate Potential</b>   | <p>Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens.</p> <p>Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.</p>              | <p><b>Transect /spot count/ timed search survey</b></p> <p>One survey visit per month (April to October)<br/>In weather conditions conducive to finding bats</p> <p>At least one survey should comprise dusk and pre-dawn (or dusk to</p>                                                                                                                                                                                                                                                                                                                                                           |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>dawn) within one 24-hour period.</p> <p><b>AND</b></p> <p><b>Static                      automated surveys:</b><br/>Two locations per transect, over a five-night period, per month (April to October)<br/>In weather conditions conducive to finding bats</p>                                                                                                                                                                                                                                  |
| <b>High Potential</b> | <p>Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p> | <p>Transect /spot count/ timed search survey<br/>Up to two survey visit per month (April to October)<br/>In weather conditions conducive to finding bats</p> <p>At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period.</p> <p><b>AND</b></p> <p><b>Static                      automated surveys:</b><br/>Three locations per transect, over a five-night period, per month (April to October)<br/>In weather conditions conducive to finding bats</p> |

(\* This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis).

### 3.6 Limitations

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The protected and notable species assessment provides a preliminary view of the likelihood of these species occurring on site, based upon the suitability of the habitats, know distribution of the species is the local area and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group.

### 3.7 Report Lifespan

Given the transient nature of the subject we would consider the survey results contained to be accurate for 2 years.

## 4 Site Context

### 4.1 Site Description

4.1.1 The application site can be found at: Grid Ref. SE 13150 16781. The site is located to the west of the city of Huddersfield within a residential area. The site comprised the coach house (Building 1), an area of hardstanding to the north, a two-storey building positioned in the middle of the site boundary and a garden area to the south, consisting of amenity grassland and ornamental plantings.

4.1.2 To the north of the application area, the wider environment is dominated by detached and semi-detached dwellings with associated residential gardens that support shrubs and mature trees. Gledholt Woods Local Nature Reserve is positioned approximately 50m to the south of the application boundary which supports dense mature woodland, rough meadow and standing water. The application site is well connected to this wildlife site by a network of residential gardens supporting linear features including hedgerows, fences and scattered trees. The site is located within an amalgam of roads and highways which act as a barrier to the dispersal of terrestrial species.

### 4.2 Zone of Influence

The zone of influence is used to describe the geographic extent of potential impacts of a proposed development in relation to the target species, in this case, bats and breeding birds. The design proposals indicate that the development will be contained within the existing footprint of Building 1, along with an area of amenity grassland along the southeast elevation of the building.



**Figure 1.** OS Map of the project site and surrounding area.

Red line boundary depicts application area, black area depicts surveyed building.

## 5 Results

### 5.1 Desk Study

#### 5.1.1 Designated Sites

The site was subjected to a search for designated sites within a 2km radius of the site using the online desk based resource MAGIC. The search returned a single statutory designation within the search radius of the application area. Gledholt Woods Local Nature Reserve (LNR) which is designated as such for its mosaic of mature woodland, watercourses and rough meadow.

5.1.2 Data from the West Yorkshire Ecological Centre (WYEC) was received on 4<sup>th</sup> September 2017 and has been summarised within Table 4 below. 3 designated sites were highlighted within a 2km radius of the site. (A full dataset can be made available upon request, for a map of designated sites and protected species records, please consult Appendix 6).

**Table 4.** Summary of Designated Sites with a 2km radius of the application site

| Site Name                 | Grid Ref   | Status | Approximate distance from the project site |
|---------------------------|------------|--------|--------------------------------------------|
| Gledholt Woods            | SE 132 166 | LNR    | 50m S                                      |
| Grimescar Wood            | SE 131 190 | LWS    | 2km N                                      |
| Huddersfield Narrow Canal | SE 100 151 | LWS    | 800m S                                     |
| Sir John Ramsden Canal    | SE 155 185 | LWS    | 2km E                                      |

#### 5.1.2 Protected Species Assessment

Data Supplied by WYEC also included records of protected species, the data was filtered to include protected species of interest, in this case, bat records are considered as most significant. 89 records of bat species were returned which included 32 records of roosts within the search radius. A summary of the closest or most relevant records can be seen in Table 5 below.

Magic Maps highlighted 5 granted EPS licences within the 2km search radius, and all licences granted for the destruction of a common pipistrelle (*Pipistrellus pipistrellus*) roost. The nearest record is approximately 1.4km to the north-west of the application site. The dates the licenses were granted range from 2011 to 2015.

**Table 5.** Summary of relevant protected and BAP species records

| Species                                                    | Grid reference | Date        | Description                                                                                                                                                                                                 |
|------------------------------------------------------------|----------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Grey Wagtail<br>( <i>Motacilla cinerea</i> )               | SE 130 160     | 1970 - 2015 | 4 records of Grey Wagtail were returned, the nearest record was 820m SE                                                                                                                                     |
| Peregrine falcon<br>( <i>Falco peregrinus</i> )            | SE 147 169     | 2015        | A single record of Peregrine falcon recorded 1.6km E.                                                                                                                                                       |
| Vesper Bat                                                 | SE 133 166     | 1905 - 2007 | 16 records of Vesper bat were returned, all of which were all records of roosts. The nearest and most significant was approximately 600m SW of the application area and contained 12 counts of individuals. |
| Pipistrelle species<br>( <i>Pipistrellus</i> sp.)          | SE 125 629     | 2004 – 2007 | 7 records of pipistrelle species were returned, 4 of which were roost records. The nearest and most significant was approximately 800m SW and contained 45 counts of individuals.                           |
| Common pipistrelle<br>( <i>Pipistrellus pipistrellus</i> ) | SE 133 166     | 1905 – 2016 | 56 records of Common pipistrelle were returned, of which 19 were roost records. The nearest was approximately 200m SW and the most significant contained 8 – 10 individuals.                                |
| Soprano pipistrelle<br>( <i>Pipistrellus pygmaeus</i> )    | SE 133 167     | 2012 – 2014 | 2 records were returned, the closest and most significant was approximately 200m SW and included a single count                                                                                             |
| <i>Myotis</i> sp.                                          | SE 139 172     | 2006 - 2012 | 3 records were returned, all of which were activity records. The closest was approximately 900m NE                                                                                                          |
| <i>Nyctalus</i> sp.                                        | SE 133 167     | 2003 - 2015 | 6 records of <i>Nyctalus</i> species were returned, 3 of Noctule bat ( <i>Nyctalus noctula</i> ) and 3 of Leisler's bat ( <i>Nyctalus leisleri</i> ). The nearest record was                                |

|                                                  |            |      |                                               |
|--------------------------------------------------|------------|------|-----------------------------------------------|
|                                                  |            |      | approximately 200m SW and was a field record. |
| Brown long-eared bat ( <i>Plecotus auritus</i> ) | SE 119 176 | 2003 | Single field record, approximately 1.5km NW   |

## 5.2 Field Survey

The redline application boundary for the proposed extension was restricted to within the current footprint of Building 1, and a small area of amenity grassland to the south-east of the building (Appendix 4). The proposed development will negatively impact a small area of ornamental planting to the south of the application area. The impact of the redevelopment on protected species which may be present with associated habitats such as gardens, trees and shrubs in close proximity of the works have been considered.

## 5.3 Protected Species

### 5.3.1 Breeding Birds

5.3.1.1 There was evidence to suggest that breeding birds had previously occupied the building during the external and internal inspection of the building. An unused bird's nest was discovered in the beams on the first-floor section of Building 1. Furthermore, the southern and eastern elevations of the building were densely clad with ivy (*Hedera helix*) which is deemed as suitable habitat for breeding and nesting birds. No birds were seen entering the building or vegetation, using the ivy as nesting habitat or to collect nesting material.

5.3.1.2 Mature ornamental shrubs were recorded within the garden section of the site, and within flowerbeds in close proximity to Building 1. A number of common garden birds were recorded within the garden during the building appraisal including blackbird (*Turdus merula*) and house sparrow (*Passer domesticus*).

### 5.3.2 Foraging and Commuting Bats

Gledholt Woods LNR is positioned approximately 50m to the south of the application boundary which supports areas of standing water, mature woodland and rough meadow. A desk study assessment of the habitat pertaining to the woodland revealed features which may be conducive to support both roosting, and foraging and commuting bat populations. The application area intersects the corridor between Gledholt Woods and the wider environment and therefore

can be considered as suitable habitat for commuting bat species. Furthermore, elements of the habitat within the application boundary may be suitable for foraging bats such as the sheltered garden area which supports ornamental plantings.

### 5.3.3 Roosting Bats

Building 1 was assessed to have low potential to support roosting bats. The building offered several potential roosting features capable of supporting low numbers of opportunistic roosting bats. These include, but are not limited to, a large fissure on the north-eastern facing elevation of the building where tension had exposed gaps between stones in the external wall. A cavity wall was discovered on the south-western elevation. Access into the cavity was provided by cracks caused by tree roots on the south-western elevation and through an entrance point in the interior of the building (Figure 12).

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>External Walls Considerations:</b> <i>age / storey height of building / building material / enclosed building / wall space / gable ends / suitable cavities free from weather / any evidence found / photographs taken around all the building</i></p> <p>The internal / external building assessment was focussed on Building 1 (Figure 1) which is positioned within the south-western end of the application site. The building was intermittently being used as a car garage at the time of survey and was otherwise undisturbed. The assessed building was two-storeys in height and featured a single-storey lean to on the northern-eastern elevation which was used as a car port. The building was open sided on the north-eastern elevation which leaves the building exposed with continuous access into the building's interior.</p> <p>The external walls of the building were stone in construction and were found to support an unfilled cavity. Access into the cavity was found on the south-western elevation of the building where tree roots had forced open gaps between the stone blocks. There was also a large fissure found on the northern elevation (Figure 5) which provides access into an internal cavity.</p> <p>Attached to the building was a perimeter stone wall, marking the western boundary to the application site. A large fissure was found in this wall (Figure 8) which led into an internal cavity.</p> <p>No evidence of roosting bats was found on the external walls of Building 1.</p> |
| <p><b>External Roof Considerations:</b> <i>shape / roof material / gable ends / roof ridge / suitable cavities free from weather / any evidence found / photographs taken around all the roof</i></p> <p>The southern section of the building supported a pitched roof which was constructed using slate material. The roof structure featured many gaps which provided access either into the interior of the building or into crevices within the gaps.</p> <p>Gaps were recorded at the eaves on the north-eastern elevation of the building where tiles had lifted (Figure 2). The north-eastern elevation of the roof structure featured a sloped dormer window, tiles on top of the dormer window were found to provide gaps</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

where they had lifted. Roof felt lining the sides of the dormer window was also lifting exposing a suitable sized gap (Figure 3). Furthermore, gaps were observed underneath the ridge tiles on the second-storey section of the building where the tiles had lifted.

No evidence of roosting bats was found on the external roof of Building 1.

***Soffit and Fascia Board Considerations: in place / suitable cavities / any evidence found / photographs taken***

Stone soffits were present on the gable ends of Building 1. These soffits were partially obscured by dense ivy, however the visible areas were found to be well sealed and did not provide any suitable gaps or crevices suitable for bat species. The single-storey lean-to section on the north-eastern elevation was designed without soffits or fascia boards and the visible areas of the lining material were found to be well sealed.

No evidence of roosting bats was found on the soffits or fascia boards of Building 1.

***Interior Considerations: use of building / wall space / suitable cavities / is there a suitable cellar / any evidence found / photographs taken***

The lower ground section was used as a garage / car port and was only intermittently used by the owners. The second-floor section was unused and was left undisturbed and uncluttered (Figure 11).

The ceiling of the lower section was found to be damaged where the plaster had fallen away, exposing timber slats (Figure 9). Access into the cavity between the ceiling and the second-floor was provided by these gaps. Cavity walls were present within the south-western building elevation (Figure 12). The extent of the cavity is unknown and access into the cavity is provided via the building interior and through cracks and gaps in the external stonework.

A bird's nest was observed between two metal beams on the first-floor level (Figure 10). It was not possible to determine the bird species or whether the nest had been abandoned.

No evidence of roosting bats was found within the interior of Building 1.

***Interior Roof Considerations: roof space e.g. loft / lighting / use of roof space / ability to find bat dropping in interior space / material of roof support / if wooden what size / suitable joints in wooden beams / water proof lining / suitable cavities / photographs taken***

The roof structure was made of machine-cut timber beams, which supported a roof of slate tile construction (Figure 11). The roof structure was unlined throughout and as a result was very exposed, offering limited gaps or cavities suitable for roosting bat species. Where gaps of a suitable size were found they were heavily cobwebbed, a feature not conducive to the presence of roosting bats.

Slate roof tiles featured several gaps where access into the interior of the roof void was available (Figure 13).

No evidence of roosting bats was found within the interior roof of Building 1.

***Category and Reason for that Category***

**Low Potential** – Building 1 supported roosting features which could potentially be utilised by bats opportunistically. The interior and exterior areas of the building contained features suitable for roosting bats, most notably the large fissure found on the north-eastern elevation and the cavity wall in the south-western elevation.

## 5.4 Site Photographs

Photographs were taken to provide evidence of the survey findings and support the classification of a buildings potential to support protected species.

|                                                                                                                                                                                                                          |                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <p><b>North-eastern Elevation</b></p> <p><i>Figure 1:</i></p> <p>North-eastern aspect of Building 1. The open side provides access into the interior of the first floor</p>                                              |    |
| <p><i>Figure 2:</i></p> <p>Slate tiles at the eaves, positioned on top of the first floor lean to are slipping which may provide some areas of access underneath the tiles and into the interior of the second floor</p> |   |
| <p><i>Figure 3:</i></p> <p>The roof structure supported a sloping dormer window. Gaps were observed underneath slate tiles on top of the dormer window and on the sides where felt was peeling off.</p>                  |  |

*Figure 4:*

Ridge tiles were lifted and provided access underneath.



*Figure 5:*

Cracks and gaps were noted on the north-eastern facing elevation where tension had pulled stonework and exposed gaps where mortar had fallen away.



### **South-eastern Elevation**

*Figure 6:*

The building featured a single-storey lean-to section with a small outbuilding attached to the south-eastern elevation.



*Figure 7:*

A large gap was observed between the small extension on the south-eastern elevation and the main building section. This gap had the potential to provide access into the interior of the building.



## **Walls**

*Figure 8:*

An assessment of the garden walls attached to the north-western section of the building found a large crack which led into a large cavity within the wall.



## **Internal Assessment:**

*Figure 9:*

The ceiling on the first floor was in a poor state of repair and held gaps leading to the second floor and provided access to voids within the ceiling structure.



*Figure 10:*

A bird's nest was observed on the first-floor section between the metal beams. It was not possible to determine the bird species or whether the nest had been abandoned.



*Figure 11:*

The second-storey section of Building 1 was found to support a structure of machine-cut timber beams, supporting an unlined, flat slate roof. The roof void was uncluttered.



*Figure 12:*

A large cavity wall was present within the south-western facing wall. The extent of the cavity is unknown. Access into the cavity is provided from the building interior and through cracks and gaps in the south-western facing elevation.



*Figure 13:*

The slate roof was found to have gaps throughout the structure which provide access into the interior of the building.



**Surrounding habitat:**

*Figure 14:*

The surrounding environment outside of the application site boundary largely comprised of mature woodland and garden areas supporting mature trees, hedgerows and grassland.



## 6 Evaluation

### 6.1 Development Proposals

The site is the subject of a full planning application for the extension and alteration of the existing building, involving a change in the use of the property to a residential dwelling. Design proposals for the site are presented in Appendix 4 of this report.

### 6.2 Desk Study Impacts

Direct impacts on nearby designated sites as a result of the proposed development are considered unlikely. Magic maps revealed 5 granted EPS licences within 2km of the application area, the nearest of which was found 1.4km to the north-west. The nearest and only designated site within the search radius is the LNR, Gledholt Woods which is located approximately 50m to the south of the application area. The woodland is designated as such for its mosaic of mature woodland, watercourses and rough meadow. The proposed development involves minimal vegetation removal in the south of the application area and hardstanding is the dominant habitat type onsite. The habitat found onsite is considered to be of low value. On the basis that the extent of the development is to be contained within the application boundary, the likelihood of indirect impacts is considered to be low.

### 6.3 Breeding Birds

6.3.1 All wild birds, their eggs and nests are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure, or take any wild bird whilst nesting, or take, damage or destroy the nest of any such bird while in use or being built. In addition, species listed on Schedule 1 of the Wildlife and Countryside Act 1981 or their dependant young are afforded additional protection from disturbance whilst they are at their nests.

6.3.2 A bird's nest was discovered within the rafters of the lower floor of Building 1, suggest that birds have recently, or are currently breeding within the building. The survey found further internal features in the building which may be suitable for nesting or breeding birds such as exposed rafters where the ceiling had fallen away on the lower floor section.

6.3.3 The vegetation within the garden area and ivy cladding covering Building 1 were both considered suitable to support nesting birds and both are planned for removal to facilitate development of a terrace extension to Building 1. Any clearance works proposed on site should be well researched in order to prevent direct or indirect impacts on individual birds, their young, eggs and habitats. Chapter 7 provides recommendations relating to the need for further survey; aimed at clarifying the value of the habitats for birds on site before assessing impact.

#### 6.4 **Bats**

6.4.1 All bat species are protected under the Wildlife and Countryside Act (1981) and Habitat Regulations (2010) making it an offence to, intentionally kill, injure, or take any species of bat, intentionally or recklessly disturb bats, intentionally or recklessly damage destroy or obstruct access to bat roosts.

##### 6.4.2 **Foraging and Commuting Bats**

The application boundary is situated approximately 50m from the Local Nature Reserve, Gledholt Woods, which supports mature woodland, waterbodies and areas of rough meadow. Despite the distinct lack of suitable linear features and continuous foraging habitat found onsite, the application site sits on a corridor between the woodland and the wider environment and therefore there is a probability the application area may be used by commuting bats to access areas of the wider environment. Furthermore, the garden area which features sheltered areas of ornamental shrubs is considered as suitable habitat for foraging bats. The proposed plans depict a minimal amount of vegetation removal onsite and the development of the building will unlikely change the physical characteristics for commuting bats. The impact upon commuting and foraging bat populations from the development can therefore be considered as negligible. Chapter 7 sets out important guidance on measures to avoid disturbance to bat commuting lines species and suggests measures to support their conservation status.

##### 6.4.3 **Roosting bats**

Building 1 was assessed to have low potential to support roosting bat species due to number of potential roosting features discovered on the exterior and interior of the building. The exterior features include gaps in the roof tiles and

ridge tiles which provide access into the interior of the building, large cracks and crevices caused by tension on the north-eastern and south-western facing elevations of the building. The interior of the building features a cavity wall in the south-western facing elevation, which is accessible from the interior. The disturbance, alteration or partial demolition of this building could therefore potentially cause injury or death to any roosting individuals and long-term loss of roosting habitat. The recommendations section of this report sets out important guidance on measures to avoid impacts on this species group and measures to support its conservation status through ecological enhancement.

## 7 Recommendations

As with all development sites; efforts should be made to support National and Local Biodiversity Action Plans, and seek opportunities to incorporate ecological enhancement schemes within the proposed development. Such site enhancements should be viewed positively in light of the NPPF (2012) which seeks biodiversity enhancements and net gain through the planning process.

### 7.1 Breeding Birds

| Breeding Birds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Timing                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Recommendations</b></p> <p>Buildings and vegetation on site have been identified as being suitable for use by breeding birds. Given their protection, development must be sympathetic to the value of this habitat and potential impacts on breeding birds, their eggs, nests and young. The breeding bird season is generally accepted as being between March and September.</p> <p>Developers should consider and implement the options most appropriate to their scheme;</p> <ul style="list-style-type: none"> <li>a) Renovation works should be undertaken outside of the breeding bird season, between the months of October and February where possible.</li> <li>b) If works are to be undertaken during the breeding bird season, ornamental shrubs can be netted to prevent birds nesting, and reduce the chance of impacts for this species. This process should be undertaken by a suitably qualified ecologist and the netting should be checked and monitored by an ecologist during its use.</li> <li>c) Any vegetation proposed for removal between the months of March and September should be subjected to a search for active birds' nests 24 hours prior to commencement of works. This should confirm whether all or some clearance is achievable.</li> </ul> | <p>Work should be conducted outside of the breeding bird season between March and September inclusive.</p> <p>If removal during March to September is unavoidable, works will require supervision as per option b) and c)</p> |
| <p><b>Enhancement Prescriptions</b></p> <p>The integration of a 1SP Schwegler sparrow terrace within / on the south-eastern elevation of the building should encouraged. The bird box should be positioned at least two metres above the ground.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>During / Post construction</p>                                                                                                                                                                                             |

## 7.2 Foraging and Commuting Bats

| Foraging and commuting bats                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Timing                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                              |
| <p>Considering the close proximity of Gledholt Woods to the application area, it cannot be confirmed that some of the features onsite will not be used by bat species as commuting corridors linking the LNR with the wider environment. As a result, the features found onsite are considered to be of low ecological value.</p> <p>However, the physical characteristics and current management of the boundary features should be maintained where possible to prevent disturbance to any frequently used commuting lines.</p> <p>The extent of disturbance should be reduced where possible by employing a sensitive lighting scheme during construction works, and artificial security lighting should not be installed post construction.</p> | During and Post Construction |
| Enhancement Prescriptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              |
| N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |

## 7.3 Roosting Bats

| Roosting Bats                                                                                                                                                                                                             | Timing                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Recommendations                                                                                                                                                                                                           |                                                                                                       |
| <p>Building 1 was assessed to have low suitability to support roosting bats.</p> <p>A single dusk emergence or dawn re-entry survey is required to determine the presence/likely absence of bats within the building.</p> | One dusk emergence or dawn re-entry survey to be undertaken during the activity season, May – August. |
| Enhancement Prescriptions                                                                                                                                                                                                 |                                                                                                       |
| In light of the need for additional surveys, enhancement prescriptions would be set out within a Bat Emergence Survey Report as a separate document.                                                                      |                                                                                                       |

## Appendix 1. General References

Bat Conservation Trust's 'Good Practice Survey Guidelines' (Rev 2012).

Bell, S. McGillivray, D. (2006) *Environmental Law*. 6<sup>th</sup> ed. Oxford University Press.

Byron, H (2000) *Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes*. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy.

Collins, J (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, (3<sup>rd</sup> edition), Bat Conservation Trust, London

Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods: Breeding Bird Survey* (pages 389-393). RSPB.

Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*.

Mitchell-Jones A.J. McLeish, A.P. (2004) *Bat Workers Manual* (3<sup>rd</sup> Edition). Joint Nature Conservation Committee.

Mitchell-Jones A.J. *Bat Mitigation Guidelines* 2004. English Nature.

Sutherland, W.J. (1996) *Ecological Census Techniques*. Cambridge University Press.

Treweek, J. (1999) *Ecological Impact Assessment*. Blackwell Science.

Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

## Appendix 2. Legislation and Guidance Sources

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2010 (as amended)
- Department for Communities and Local Government. National Planning Policy Framework. March 2012
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- National Parks and Access to the Countryside Act 1949
- The Protection of Badgers Act 1992
- Land Drainage Act 1991
- The Countryside and Rights of Way Act 2000
- The Natural Environment and Rural Communities Act 2006
- The United Kingdom Biodiversity Action Plan 2006
- Hedgerow Regulations 1997
- Town and Country Planning Act 1990
- Local Biodiversity Action Plan (LBAP).

## Appendix 3. Legislation, Guidance and Methodology in relation to Potential Constraints

### Legislation, Guidance and Methodology

#### **Birds**

All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

The bird breeding season is typically accepted to start in February and continue through until August, however breeding birds can be found all year round depending on the given species and climatic conditions.

A site's habitat composition, locality, association to designated sites as well as current usage and management are all considered in the decision as to whether further bird related surveys are required. In addition, surveys may be recommended based on incidental bird records collected during a Preliminary Ecological Appraisal, species identified within an ecological data search or target species listed within a local biodiversity action plan.

Bird surveys are carried out in accordance with:

Gilbert G, Gibbons DW, Evans J. (1998) *Bird Monitoring Methods*. RSPB.

#### **Survey Timing**

Breeding Bird surveys (BBS): Four visits, evenly spaced between mid-April and mid-June. The standard BBS methodology may require amendment based on climate and weather conditions, the complexity of habitats within a site, the perceived ecological interest of a site and the extent of the survey area.

Wintering Bird surveys (WBS): Four visits, evenly spaced between October and February. The standard WBS methodology may require amendment based on climate and weather conditions, the complexity of habitats within a site, the perceived ecological interest of a site and the extent of the survey area.

Species Specific Surveys: Certain species owing to their migration patterns, habitat requirements, nocturnal habits and other ecological behaviours should be surveyed as per their given methodologies stated within Gilbert, G. et al (1998).

### **Roosting Bats**

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended).

It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Areas of concern; can be encountered in many types of structure and care should therefore be taken when undertaking maintenance or demolition of suitable structures and trees.

Site assessments of buildings, commuting and foraging habitat and trees are undertaken in accordance with:

Collins, J (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines, (3<sup>rd</sup> edition), Bat Conservation Trust, London

Preliminary Ecological Surveys look for evidence of bat presence such as feeding remains, bat droppings, roosting individuals and staining around potential access points.

The suitability of site features were also assessed because absence of bat evidence, is not confirmation of a negative result. Within buildings these features include suitable enclosed spaces such as slipped or missing roof tiles, gaps and cracks in brickwork, enclosed roof voids, accessibility into wall spaces, gaps along ridge rafters, joints in roof beams and the presence of suitable soffits and fascias.

Within tree features searched for include; natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, hollows, and dense cover of ivy over the tree.

If evidence is found, or a building supports features conducive to supporting roosting bats then further presence / absence bat surveys and/or roost characterisation surveys are recommended.

### **Survey Timing:**

Preliminary Ecological Appraisals can be undertaken throughout the year.

Presence /absence surveys and roost characterisation surveys are undertaken during the bat activity season between **May and September** (Specific timings are

relative to the suitability of a structure for supporting protected species and weather dependent)

Bat Activity Transect surveys are carried out between **April and October** (weather dependent)

Hibernation surveys are carried out from **November to March**.

Guideline for assessing the suitability of a structure to support roosting habitat (Buildings and Trees), amended from Collins, J (2016).

| Category                    | Description of roosting habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Number of presence / absence surveys required                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>No Potential</b>         | The building is wholly unsuitable for a bat roost.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | None                                                                                                                                                                           |
| <b>Negligible Potential</b> | Suitable cavities may exist but these are open to wind, rain or disturbance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                           |
| <b>Low Potential</b>        | <p>This category describes a structure with one or more potential roost sites that could be used by individual bats opportunistically, that less than ideal in some way. For example, the feature may be subject to intermittent disturbance, and does not provide enough shelter, conditions* space and/or suitable surrounding habitat (e.g unlikely to support a maternity or hibernation roost).</p> <p>This category described a tree of sufficient size and age to support roosting bats, but with no features observed from the ground, or the features only have a limited potential to support roosting bats.</p> | <p>One survey between May and August</p> <p>Trees – No further surveys required</p>                                                                                            |
| <b>Moderate Potential</b>   | This category describes a structure or tree considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species                                                                                                                                                                                                                                                                     | <p>Two surveys between May and September (with at least one survey undertaken between May and August)</p> <p>One Dusk emergence and One Dawn re-entry survey to be ideally</p> |

|                       |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                       |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | conservation status, which is established after presence is confirmed)<br><br>Features considered to have adequate potential would include cavities of appropriate dimensions that are generally free from disturbance and free from fluctuations in the weather.        | undertaken at least two weeks apart.                                                                                                                                                                                                                                                                  |
| <b>High Potential</b> | A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat. | Three surveys between May and September (with at least two surveys undertaken between May and August)<br><br>One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn.<br><br>The surveys should ideally be undertaken at least two weeks apart. |
| <b>Confirmed</b>      | This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.                                       | Three surveys between May and September (with at least two surveys undertaken between May and August)<br><br>One Dusk emergence and One Dawn re-entry survey to be undertaken. The third survey can be either Dusk or Dawn.<br><br>The surveys should be undertaken at least two weeks apart.         |

(\* in this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc)

If bats are discovered emerging or re-entering any structure, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information for roost characterisation can be collected to advise the planning application or EPS development licence.

#### **Foraging and Commuting bats**

Habitat features on site were assessed for their suitability to support foraging and commuting bat populations. This assessment was independent from the suitability of the site to support roosting bats, and provides information on the likeness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration..

Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins J (2016)

| Category                    | Description of commuting and foraging habitat                                                                                                                                                                                                                                                                       | Survey effort to establish the value of commuting and foraging habitat**                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Negligible Potential</b> | Negligible habitat features on site likely to be used by commuting or foraging bats                                                                                                                                                                                                                                 | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Low Potential</b>        | <p>Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment.</p> <p>Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.</p> | <p><b>Transect /spot count/ timed search survey:</b><br/>One survey visit per season:<br/>Spring- April/ May<br/>Summer- June/July/ Aug<br/>Autumn – Sept/ Oct<br/>In weather conditions conducive to finding bats</p> <p><b>AND</b></p> <p><b>Static automated surveys:</b><br/>One location per transect, over a five-night period, per season:<br/>Spring- April/ May<br/>Summer- June/July/ Aug<br/>Autumn – Sept/ Oct<br/>In weather conditions conducive to finding bats</p> <p><i>Further survey may be required if surveys reveal higher activity than predicted from habitat alone</i></p> |
| <b>Moderate Potential</b>   | <p>Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens.</p> <p>Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.</p>              | <p><b>Transect /spot count/ timed search survey</b></p> <p>One survey visit per month (April to October)<br/>In weather conditions conducive to finding bats</p> <p>At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period.</p>                                                                                                                                                                                                                                                                                                                          |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p><b>AND</b></p> <p><b>Static automated surveys:</b><br/>Two locations per transect, over a five-night period, per month (April to October)<br/>In weather conditions conducive to finding bats</p>                                                                                                                                                                                                                                                                         |
| <b>High Potential</b> | <p>Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p> | <p>Transect /spot count/timed search survey<br/>Up to two survey visit per month (April to October)<br/>In weather conditions conducive to finding bats</p> <p>At least one survey should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period.</p> <p><b>AND</b></p> <p><b>Static automated surveys:</b><br/>Three locations per transect, over a five-night period, per month (April to October)<br/>In weather conditions conducive to finding bats</p> |

(\* This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis).

### **Invasive non-native weeds**

Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*) are examples of invasive non-native weeds classified under Part II of Schedule 9 of the Wildlife and Countryside act 1981. Any person who causes these species to grow or spread in the wild by dumping or other means is guilty of an offence. The plant and the soil these species are found growing in are classified as waste material and should be treated as such.

A simple walk over survey of the site to determine if these species are present was carried out during the Preliminary Ecological Appraisal. A full list of Schedule 9 species can be found at

[http://www.plantlife.org.uk/our\\_work/campaigns/inns/invasive\\_non-native\\_plants\\_and\\_the\\_law/schedule9\\_england\\_wales/](http://www.plantlife.org.uk/our_work/campaigns/inns/invasive_non-native_plants_and_the_law/schedule9_england_wales/)

### **Ecological Enhancement**

In March 2012 the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - *opportunities to incorporate biodiversity in and around developments should be encouraged.*

Usually when reviewing how ecological enhancements can be implemented the Local Biodiversity Action Plan for the area is considered.

For new buildings guidance such as in the following will be used:

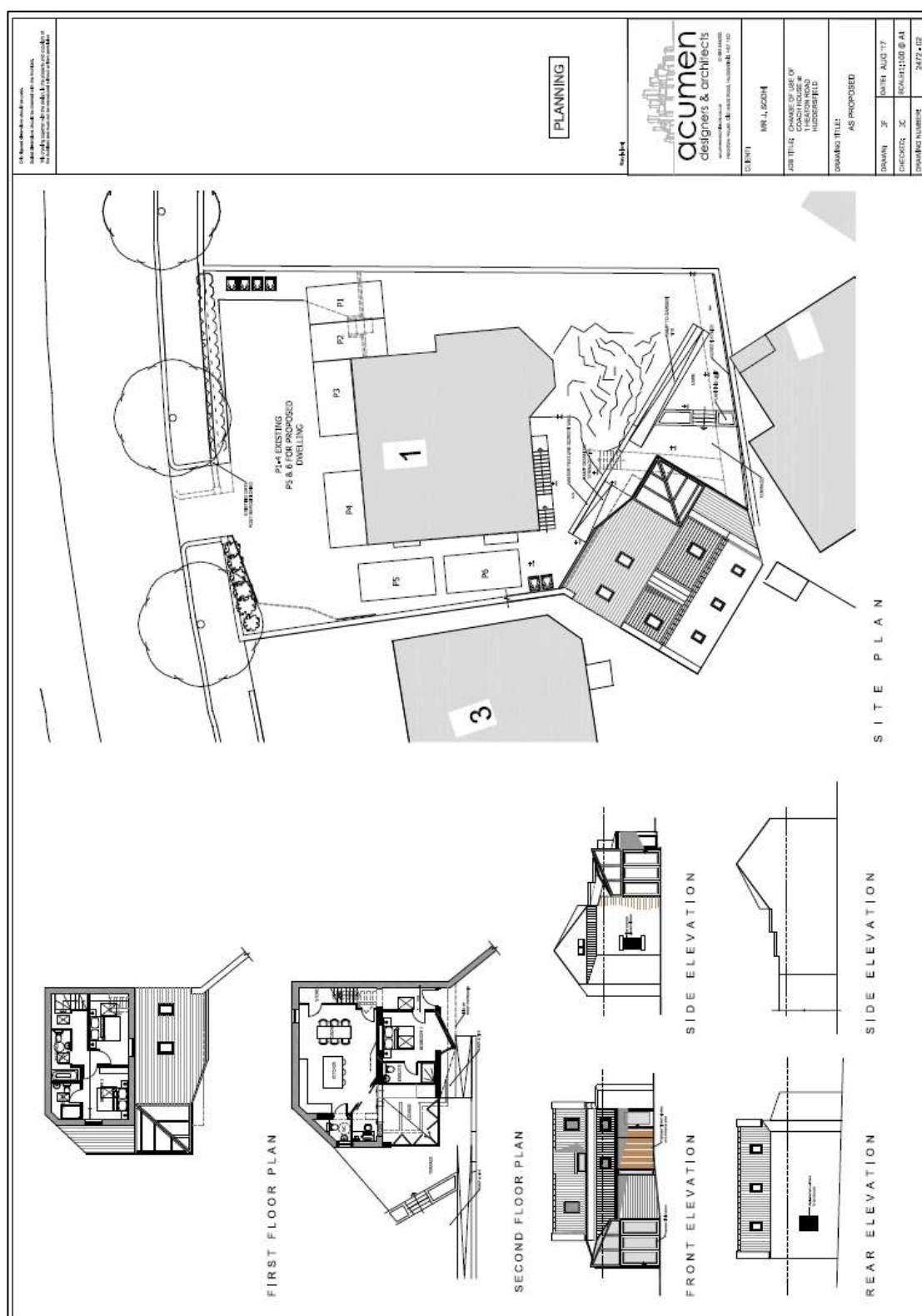
Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build*. Riba Publishing.

### **Designated Protected Areas**

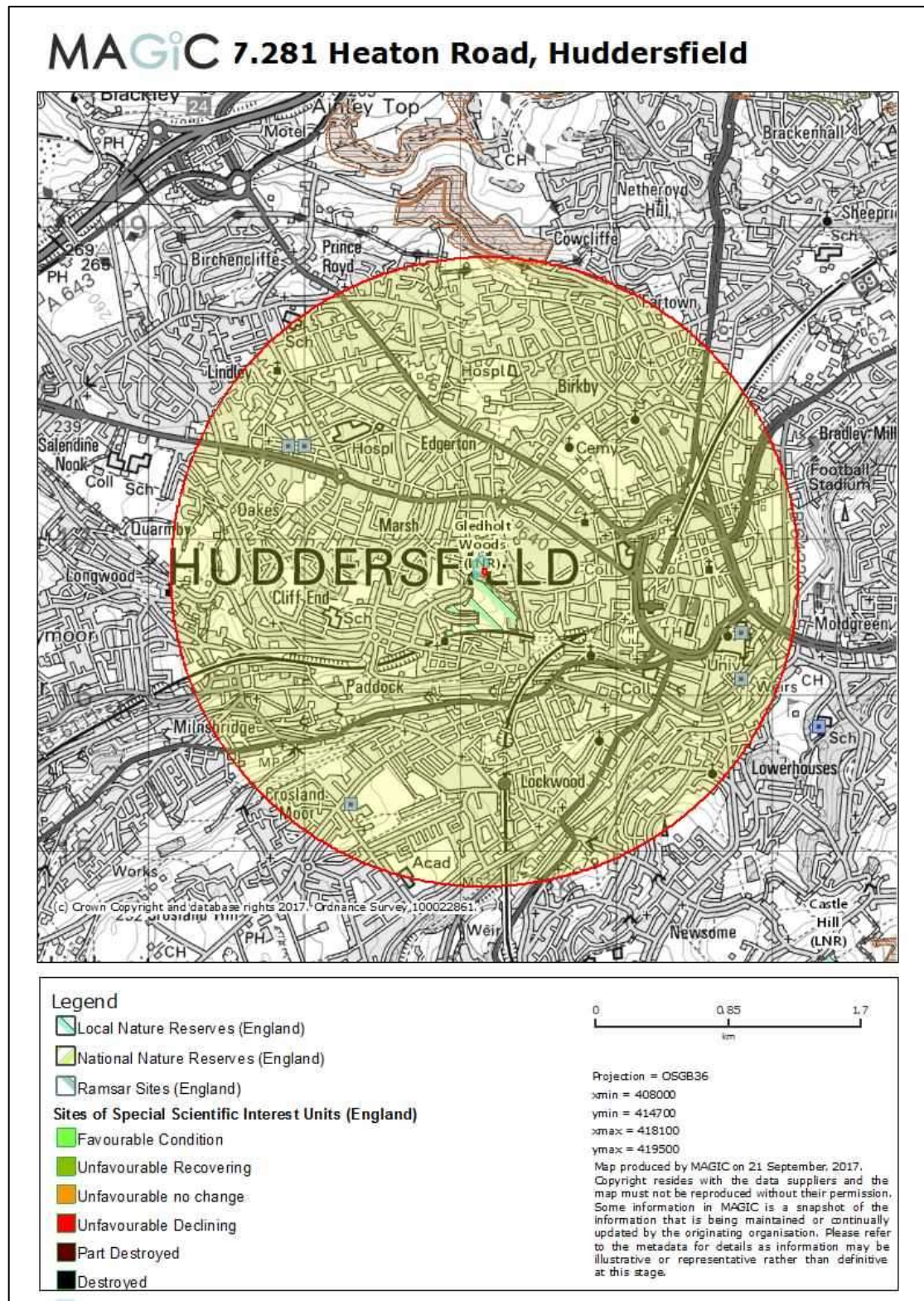
Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives.

European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats supports. Laws stipulate that SSSIs, SPAs and SACs have to be maintained in a 'favourable condition' which requires efforts to preventing any potential impacts to these sites.

Information of Designated Protected Areas is received through Ecological Data Searches and Magic Map searches.



## Appendix 5. MAGIC



Site Check Report Report generated on Thu Sep 21 2017  
 You selected the location: Centroid Grid Ref: SE131187  
 The following features have been found in your search area:

#### Ancient Woodland (England)

|            |                            |
|------------|----------------------------|
| Wood Name  | GRIMESCAR WOOD             |
| Theme Name | Ancient Replanted Woodland |
| Theme ID   | 110030                     |
| Area (Ha)  | 8.28529                    |

|            |                            |
|------------|----------------------------|
| Wood Name  | GRIMESCAR WOOD             |
| Theme Name | Ancient Replanted Woodland |
| Theme ID   | 110030                     |
| Area (Ha)  | 15.952947                  |

#### Granted European Protected Species Applications (England)

|                                                   |                   |
|---------------------------------------------------|-------------------|
| Case reference of granted application             | 2014-1010-EPS-MIT |
| Species group to which licence relates            | Bat               |
| Species on the licence                            | C-PP              |
| Site county of licence                            | West Yorkshire    |
| Licence Start Date                                | 08/04/2014        |
| Licence End Date                                  | 30/09/2015        |
| Does licence impact on a breeding site            | N                 |
| Does licence allow damage of breeding site        | N                 |
| Does licence allow damage of a resting place      | Y                 |
| Does licence allow destruction of breeding site   | N                 |
| Does licence allow destruction of a resting place | Y                 |
| Does licence impact on a hibernation site         | Unknown           |
| NERC agreement reference                          | Unknown           |

|                                                   |                  |
|---------------------------------------------------|------------------|
| Case reference of granted application             | 2014-858-EPS-MIT |
| Species group to which licence relates            | Bat              |
| Species on the licence                            | C-PP             |
| Site county of licence                            | West Yorkshire   |
| Licence Start Date                                | 13/10/2014       |
| Licence End Date                                  | 13/10/2014       |
| Does licence impact on a breeding site            | N                |
| Does licence allow damage of breeding site        | N                |
| Does licence allow damage of a resting place      | N                |
| Does licence allow destruction of breeding site   | N                |
| Does licence allow destruction of a resting place | Y                |
| Does licence impact on a hibernation site         | Unknown          |
| NERC agreement reference                          | Unknown          |

|                                                   |                 |
|---------------------------------------------------|-----------------|
| Case reference of granted application             | EPISM2012-8282  |
| Species group to which licence relates            | Bat             |
| Species on the licence                            | C-PP            |
| Site county of licence                            | South Yorkshire |
| Licence Start Date                                | 02/01/2013      |
| Licence End Date                                  | 01/12/2014      |
| Does licence impact on a breeding site            | N               |
| Does licence allow damage of breeding site        |                 |
| Does licence allow damage of a resting place      |                 |
| Does licence allow destruction of breeding site   | N               |
| Does licence allow destruction of a resting place | Y               |
| Does licence impact on a hibernation site         | Unknown         |
| NERC agreement reference                          | Unknown         |

|                                                   |                |
|---------------------------------------------------|----------------|
| Case reference of granted application             | EPISM2011-3178 |
| Species group to which licence relates            | Bat            |
| Species on the licence                            | C-PP           |
| Site county of licence                            | West Yorkshire |
| Licence Start Date                                | 15/08/2011     |
| Licence End Date                                  | 31/08/2013     |
| Does licence impact on a breeding site            | N              |
| Does licence allow damage of breeding site        |                |
| Does licence allow damage of a resting place      |                |
| Does licence allow destruction of breeding site   | N              |
| Does licence allow destruction of a resting place | Y              |
| Does licence impact on a hibernation site         | Unknown        |
| NERC agreement reference                          | Unknown        |

|                                        |                |
|----------------------------------------|----------------|
| Case reference of granted application  | EPISM2009-1162 |
| Species group to which licence relates | Bat            |
| Species on the licence                 | C-PP           |
| Site county of licence                 | West Yorkshire |
| Licence Start Date                     | 18/09/2009     |

|                                                               |                                                                                                                                                                         |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| License End Date                                              | 17/09/2011                                                                                                                                                              |
| Does license impact on a breeding site                        | N                                                                                                                                                                       |
| Does license allow damage of breeding site                    |                                                                                                                                                                         |
| Does license allow damage of a resting place                  |                                                                                                                                                                         |
| Does license allow destruction of a breeding site             | N                                                                                                                                                                       |
| Does license allow destruction of a resting place             | Y                                                                                                                                                                       |
| Does license impact on a hibernation site                     | Unknown                                                                                                                                                                 |
| NERC agreement reference                                      | Unknown                                                                                                                                                                 |
| Local Nature Reserves (England) - points                      |                                                                                                                                                                         |
| Reference                                                     | 1421558                                                                                                                                                                 |
| Name                                                          | GLEDHOLT WOODS                                                                                                                                                          |
| Hectares                                                      | 9.44                                                                                                                                                                    |
| Hyperlink                                                     | <a href="http://www.inr.naturalengland.org.uk/special/inr/details.asp?themeid=1421558">http://www.inr.naturalengland.org.uk/special/inr/details.asp?themeid=1421558</a> |
| Local Nature Reserves (England)                               |                                                                                                                                                                         |
| Reference                                                     | 1421558                                                                                                                                                                 |
| Name                                                          | GLEDHOLT WOODS                                                                                                                                                          |
| Hectares                                                      | 9.44                                                                                                                                                                    |
| Hyperlink                                                     | <a href="http://www.inr.naturalengland.org.uk/special/inr/details.asp?themeid=1421558">http://www.inr.naturalengland.org.uk/special/inr/details.asp?themeid=1421558</a> |
| Areas of Outstanding Natural Beauty (England)                 |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| National Nature Reserves (England) - points                   |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| National Nature Reserves (England)                            |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Ramsar Sites (England) - points                               |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Ramsar Sites (England)                                        |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Sites of Special Scientific Interest Units (England) - points |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Sites of Special Scientific Interest Units (England)          |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Sites of Special Scientific Interest (England) - points       |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Sites of Special Scientific Interest (England)                |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Special Areas of Conservation (England) - points              |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Special Areas of Conservation (England)                       |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Special Protection Areas (England) - points                   |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Special Protection Areas (England)                            |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Biosphere Reserves (England) - points                         |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |
| Biosphere Reserves (England)                                  |                                                                                                                                                                         |
| No Features found                                             |                                                                                                                                                                         |

## Appendix 6. Ecological Data Search Information

A Summary map of the data search can be seen below, a full copy of the data search can be provided upon request.

