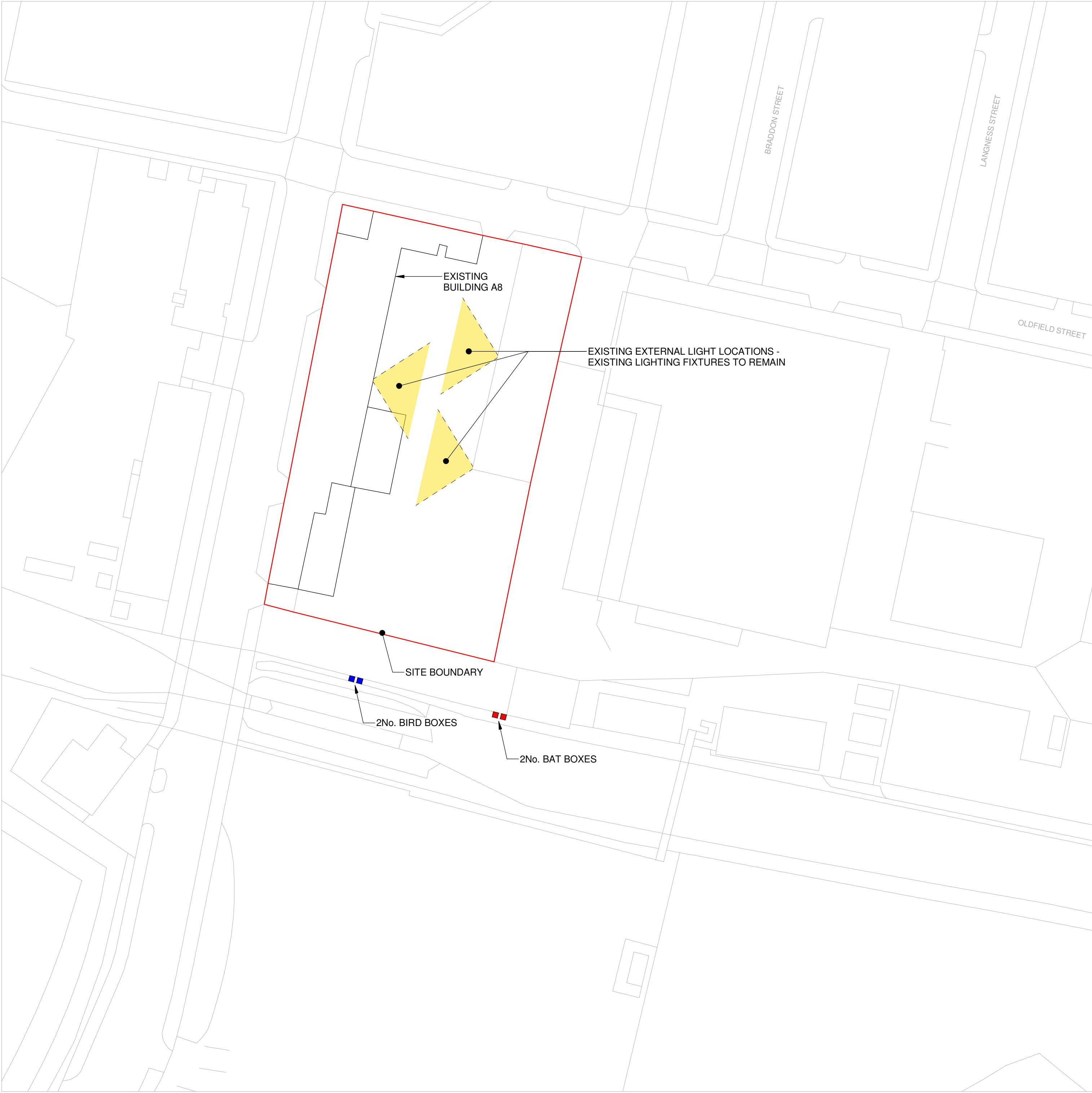
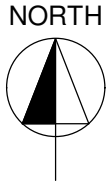
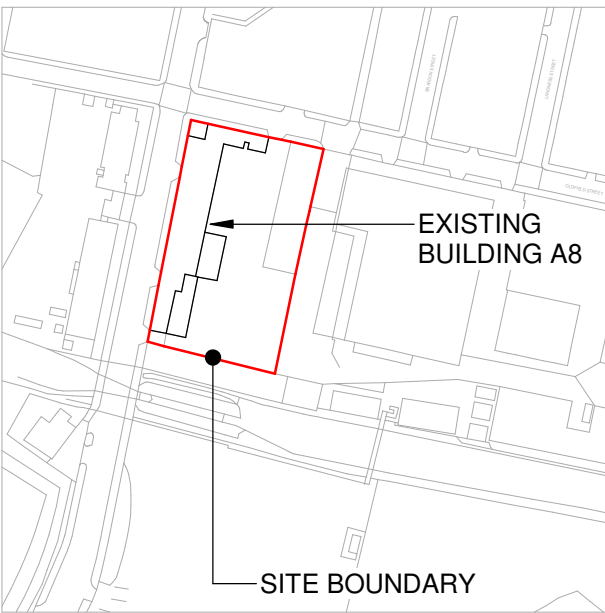
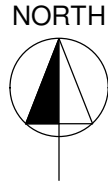




SITE LAYOUT - BAT / BIRD BOX LOCATIONS

1 : 500



SITE PLAN

1 : 2500



EXAMPLE OF 'IMPROVED CREVICE BAT BOX'

NPPF (2019) REQUIREMENTS STATE -

THE DEVELOPED SITE CAN BE ENHANCED FOR THE BAT SPECIES OBSERVED TO BE FORAGING & COMMUTING ACROSS THE SITE DURING THE SURVEY BY INSTALLING OF A MINIMUM OF ONE BAT BOX ON RETAINED BUILDINGS AROUND THE SITE BOUNDARIES (eg. IMPROVED CREVICE BAT BOX).

BAT BOXES SHOULD BE POSITIONED 3-5m ABOVE GROUND LEVEL FACING SOUTH OR SOUTH-WESTERLY WITH A CLEAR FLIGHT PATH TO & FROM THE ENTRANCE. BAT BOXES SHOULD ALSO BE POSITIONED AWAY FROM ANY ARTIFICIAL LIGHT SOURCES.

|                                                                                                                                   |               |                  |          |                |        |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|----------|----------------|--------|
| A                                                                                                                                 | 28.07.20      | TENDER ISSUE     | D.J.     | C.D.           | R.K.   |
| Rev                                                                                                                               | Date          | Revision details | Drawn    | CHK            | Rev    |
| © This drawing is the property of Kennedy Redford Limited and the information can only be reproduced with their prior permission. |               |                  |          |                |        |
|  Kennedy Redford<br>MANAGING VISION          |               |                  |          |                |        |
| Client                                                                                                                            |               |                  |          |                |        |
|  EVONIK<br>POWER TO CREATE                   |               |                  |          |                |        |
| Project                                                                                                                           |               |                  |          |                |        |
| EVONIK<br>CLAYTON LANE<br>MANCHESTER                                                                                              |               |                  |          |                |        |
| Title                                                                                                                             |               |                  |          |                |        |
| BIRD / BAT BOX<br>& EXTERNAL LIGHTING<br>LAYOUT                                                                                   |               |                  |          |                |        |
| Drawn                                                                                                                             | D.J.          | Checked          | C.D.     | Approved       | R.K.   |
| Date                                                                                                                              | 28.07.20      | Scale            | AS SHOWN | Drawing Status | TENDER |
| Drawing Number                                                                                                                    | 191112-27_001 |                  |          |                |        |



## **Bat Emergence and Re-entry Surveys**

**Evonik, Clayton Lane, Clayton, Manchester M11 4SR**

**Kennedy Redford Limited**

| Status   | Issue | Name                                                                           | Date       |
|----------|-------|--------------------------------------------------------------------------------|------------|
| Draft    | 1     | Louise Sawrey BSc (Hons), Consultant                                           | 26/05/2020 |
| Reviewed | 1.1   | Chris Formaggia BSc (Joint Hons) CBiol CEnv MCIEEM MRBS VR - Company Principal | 29/05/2020 |
| Draft    | 1.2   | Louise Sawrey BSc (Hons), Consultant                                           | 29/05/2020 |
| Final    | 2     | Louise Sawrey BSc (Hons), Consultant                                           | 29/05/2020 |

**Arbtech Consultant's Contact details:**

Louise Sawrey BSc (Hons)  
Consultant

Tel: 07748275573 Email: [louise@arbtech.co.uk](mailto:louise@arbtech.co.uk)

Arbtech Consulting Ltd  
<https://arbtech.co.uk>

**Limitations and Copyright**

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

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

## Executive summary

Arbtech were commissioned by Kennedy Redford Limited to undertake Bat Emergence and Re-entry Surveys at Evonik, Clayton Lane, Clayton, Manchester M11 4SR. The survey was completed on 21<sup>st</sup> May 2020. The aim of the assessment was to confirm the presence/likely-absence of a bat roost and to provide a current status on all survey features. This includes providing evidence for species, numbers and levels of activity, to identify any entrance and egress points, and to gain an understanding of the activity of bats using the site in the local landscape.

The development proposals are for the demolition and alterations to existing buildings, alterations to service yard and access and construction of new modular security building and storage shed. A planning application has been submitted to Manchester City Council [Ref: 126420/FO/2020].

## Recommendations

The survey confirmed that there is a probable absence of bat roosts in the subject building. No bats emerged from the building and there was a low level of bat activity observed throughout the site.

**Contents**

|                                                            |    |
|------------------------------------------------------------|----|
| <b>1.0 Introduction and Context</b>                        | 5  |
| 1.1 Background                                             | 5  |
| 1.2 Site Context                                           | 5  |
| 1.3 Scope of the report                                    | 5  |
| 1.4 Project Description                                    | 5  |
| <b>2.0 Methodology</b>                                     | 6  |
| 2.1 Desk Study methodology                                 | 6  |
| 2.2 Site Survey methodology                                | 6  |
| 2.3 Surveyors                                              | 7  |
| 2.4 Limitations                                            | 7  |
| <b>3.0 Results and Evaluation</b>                          | 8  |
| 3.1 Survey Results                                         | 8  |
| <b>4.0 Conclusions, Impacts and Recommendations</b>        | 10 |
| 4.1 Informative guidelines                                 | 10 |
| 4.2 Evaluation                                             | 11 |
| <b>5.0 Bibliography</b>                                    | 13 |
| Appendix 1: Survey Plan                                    | 14 |
| Appendix 2: Proposed Site Plan                             | 15 |
| Appendix 3 Legislation and Planning Policy related to bats | 16 |

## 1.0 Introduction and Context

### 1.1 Background

Arbtech were commissioned by Kennedy Redford Limited to undertake Bat Emergence and Re-entry Surveys at Evonik, Clayton Lane, Clayton, Manchester M11 4SR. The survey was completed on 21<sup>st</sup> May 2020. The assessment is informed by the Bat Conservation Trust publication, *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

This survey was completed following recommendations made in the Preliminary Ecological Appraisal including Roost Assessment report (Arbtech Consulting Ltd. March 2020).

### 1.2 Site Context

The site is located at National Grid Reference SJ 87952 98340 and has an area of approximately 0.5ha. The site consists of multiple buildings with hard standing surface.

### 1.3 Scope of the report

This report provides a description of the bat activity observed and recorded during the survey. The aim of the assessment was to characterise any roosts present including species, number of individuals, number and location of roost access points, and to gain an understanding of how bats use the site.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform mitigation and enhancements. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve planning permission, and statutory consent to comply with wildlife legislation.

To achieve the aims of the assessment, the following steps have been taken:

- Field survey(s) has been undertaken, including an external survey and internal inspection.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on the requirements of a European protected species mitigation licence (EPSML) application if appropriate.

A survey plan is presented in Appendix 1 showing the location of each surveyor and the bat activity observed and recorded during each survey, proposed plans in Appendix 2 and a summary of relevant legislation is presented in Appendix 3.

### 1.4 Project Description

The development proposals are for the demolition and alterations to existing buildings, alterations to service yard and access and construction of new modular security building and storage shed. A planning application has been submitted to Manchester City Council [Ref: 126420/FO/2020].

## 2.0 Methodology

### 2.1 Desk Study methodology

The desk study included a 2km radius review of statutory and non-statutory designated sites, biodiversity action plan (BAP) priority habitats and granted EPSML records for bats held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

Existing bat records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release.

### 2.2 Site Survey methodology

The survey methods were informed by the recommendations presented in the Preliminary Ecological Appraisal including Roost Assessment (Arbtech Consulting Ltd March 2020). This survey identified the following survey requirements in line with best practice:

*Table 1: Recommended surveys*

| Ecological Factor | Survey assessment conclusions (with justification)                                                                                                                                                                                                                                                     | Foreseen impacts                                                                                                                                                            | Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bats</b>       | <p>B1 and B2c have negligible habitat value for roosting bats.</p> <p>B2/B2a/B2b have “low habitat value” (Collins definition, 2016) to support crevice-dwelling bats, due to the raised tiles.</p> <p>The nearby treeline and canal would provide bats with foraging and commuting opportunities.</p> | <p>As the proposals include the part demolition of the buildings, any bat roosts present would be destroyed. This could result in death, injury or disturbance of bats.</p> | <p>B1 and B2c – No further surveys required.</p> <p>B2/B2a/B2b - One bat emergence or re-entry survey is required during the active bat season (May – September) to confirm presence or likely-absence of a bat roost in the buildings. The survey must be completed during the optimal survey period mid-May to August inclusive.</p> <p>The survey can be either a dusk emergence or dawn re-entry survey.</p> <p>Four surveyors are required to provide full coverage of the buildings.</p> <p>If bat roosts are confirmed in the building two additional survey will be required to inform a European protected species mitigation Licence application to Natural England once planning permission has been granted. At least one of the additional surveys will need to be completed during the peak survey period.</p> |

The surveys involved surveyors positioned around the building ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the building identified as providing suitable access points to bat roosts. The location of each surveyor during each survey is shown in Appendix 1. Each surveyor was assigned an area of the building to observe for the duration of the survey. Surveyors used heterodyne and frequency division bat detectors, and Wildlife Acoustics EM3+ and Echo Meter Touch detectors connected to iPads. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required. The Echo Meter Touch includes an auto ID function for bat species, however this is not 100% accurate and further post-survey sound analysis is often required to confirm species that could not be identified by the auto ID software during the survey. Surveyors also used head torches, survey record sheets and pens/pencils for recording all activity observed during the surveys. Each

surveyor was also provided with a hand-held radio for communication between surveyors to assist with confirming ambiguous bat activity e.g. a bat emergence or a bat passing over the building.

In accordance with the latest bat survey guidelines (Collins, J. 2016) dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility. Dawn re-entry surveys commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

Surveys were completed during optimal weather conditions i.e. when temperatures were above 10°C, with no rain or strong winds, as these adverse weather conditions can impact upon bat emergence and foraging behaviour.

### ***2.3 Surveyors***

The lead surveyor is Louise Sawrey (Natural England Protected Species Licence Numbers: Bats - 2019-43813-CLS-CLS) and was assisted by experienced surveyors with several years of bat survey experience. Four surveyors were used to provide sufficient cover of the building during the survey. The designated position of each surveyor during each survey is detailed in the tables in Section 3.1 below and shown on the plan in Appendix 1.

### ***2.4 Limitations***

This survey follows best practice guidance to confirm presence/likely-absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the building and the site as a whole by bats, at all times cannot be established based on this information.

There were no specific limitations to the survey.

### 3.0 Results and Evaluation

#### 3.1 Survey Results

The results of the survey are provided in the table below.

Table 2: Survey results

|                                                             |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Date</b>                                                 |                          | 21/05/2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Start and End Times</b>                                  |                          | 20:55 – 22:40<br>Sunset: 21:13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Weather Conditions</b>                                   |                          | <div> <div> <b>Start:</b><br/> Temp: 20°C<br/> Relative Humidity: 45%<br/> Cloud Cover: 100%<br/> Wind: 2mph<br/> Rain: None </div> <div> <b>End:</b><br/> Temp: 18°C<br/> Relative Humidity: 55%<br/> Cloud Cover: 100%<br/> Wind: 3mph<br/> Rain: None </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Surveyor (position)</b><br><b>As shown in Appendix 1</b> |                          | <p><b>Louise Sawrey</b> - Natural England Protected Species Licence Numbers: Bats - 2019-43813-CLS-CLS (Position 1 – observing the western elevation and roof structure of B2/B2a)</p> <p><b>Robert Hughes</b> - One year of experience carrying out bat emergence and re-entry surveys (Position 2 – observing the southeast elevation and roof structure of B2a/B2b)</p> <p><b>Steve Dickson</b> - One year of experience carrying out bat emergence and re-entry surveys (Position 3 – observing the southern and western elevation and roof structure of B2a/B2b)</p> <p><b>Emma Gray</b> - One year of experience carrying out bat emergence and re-entry surveys (Position 4 – observing the northern and western elevation and roof structure of B2)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Building Reference</b>                                   | <b>Surveyor Position</b> | <b>Notes/observations:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| B2                                                          | 1                        | <p><b>No bats were seen emerging from the building.</b></p> <p>The first bat activity was constant activity and foraging activity by a common pipistrelle at 21:33 until 21:37. The bat flew from the northern direction, foraged around the car park/reception on the northern site boundary and then flew west.</p> <p>A pass by a common pipistrelle at 21: 39. The bat was observed flying from the northern direction and heading south.</p> <p>A pass by a common pipistrelle at 21:40. The bat was observed flying from the western direction, heading east and then flying back into the western direction.</p> <p>A pass by a common pipistrelle at 21:42. The bat was observed flying from the southwestern direction and heading north towards the trees.</p> <p>A pass by a common pipistrelle at 21:48. The bat was observed flying from the western direction, heading east and then heading north towards the trees.</p> <p>A common pipistrelle was heard but not seen at 21:52.</p> <p>A common pipistrelle was observed foraging and commuting around the car park on site then heading into the southwestern direction.</p> <p>A common pipistrelle at 22:08 was observed passing from the northern direction and heading southwest.</p> <p>The bat activity observed during the survey was likely to be the same common pipistrelle.</p> |

|         |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B2a/B2b | 2 | <p><b>No bats were seen emerging from the building.</b></p> <p>The first bat activity heard was a common pipistrelle at 21:38. The Bat was heard but then seen. The direction of the bat call sounded like it from the northern direction.</p> <p>A common pipistrelle was observed at 22:07, which came from the northern direction and headed southwest.</p> <p>Distant foraging activity was heard at 21:34 until 21:36.</p>                                                                                                                                                                                              |
| B2a/B2b | 3 | <p><b>No bats were seen emerging from the building.</b></p> <p>A common pipistrelle was observed flying from the southern direction and headed north east over B2.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| B2      | 4 | <p><b>No bats were seen emerging from the building.</b></p> <p>The first bat activity recorded was a distant pass by at common pipistrelle at 21:24. The direction of the bat call sounded like it came from the trees to the northeast.</p> <p>A pass by a common pipistrelle at 21:30. The bat flew from the northern direction and headed southwest.</p> <p>A pass by a common pipistrelle at 21:32. The bat flew from southwestern direction and headed northeast towards the trees.</p> <p>A pass by a common pipistrelle at 21:45. The bat flew from the northeastern direction by the trees and headed southwest.</p> |

## 4.0 Conclusions, Impacts and Recommendations

### 4.1 Informative guidelines

When bat roosts are present, the bat surveys undertaken at a site facilitate the characterisation of the roost type. This allows for appropriate mitigation and compensation to be designed to inform a European protected species mitigation licence (EPSML) application to Natural England.

The definitions of bat roost types are provided below, taken from the *Bat Mitigation Guidelines* (English Nature, 2004) and the Bat Conservation Trust publication, *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

**Day roost:** a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

**Night roost:** a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

**Feeding roost:** a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

**Transitional / occasional roost:** used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

**Swarming site:** where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites

**Mating sites:** sites where mating takes place from later summer and can continue through winter.

**Maternity roost:** where female bats give birth and raise their young to independence.

**Hibernation roost:** where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as 'hibernation confirmed'.

**Satellite roost:** an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

**Other:** roost types are interchangeable and not always easy to classify according to the nuances of certain species.

The surveys undertaken to date in and around B1 provide sufficient information to inform a planning application. A European protected species mitigation licence (EPSML) **will not be required** to enable the proposed works to be lawfully undertaken. Appropriate justification for this assessment is provided in Section 3 of this report.

## 4.2 Evaluation

The following recommendations are provided taking the desk-based assessment and site survey results into account.

Table 5: Evaluation of the building on site.

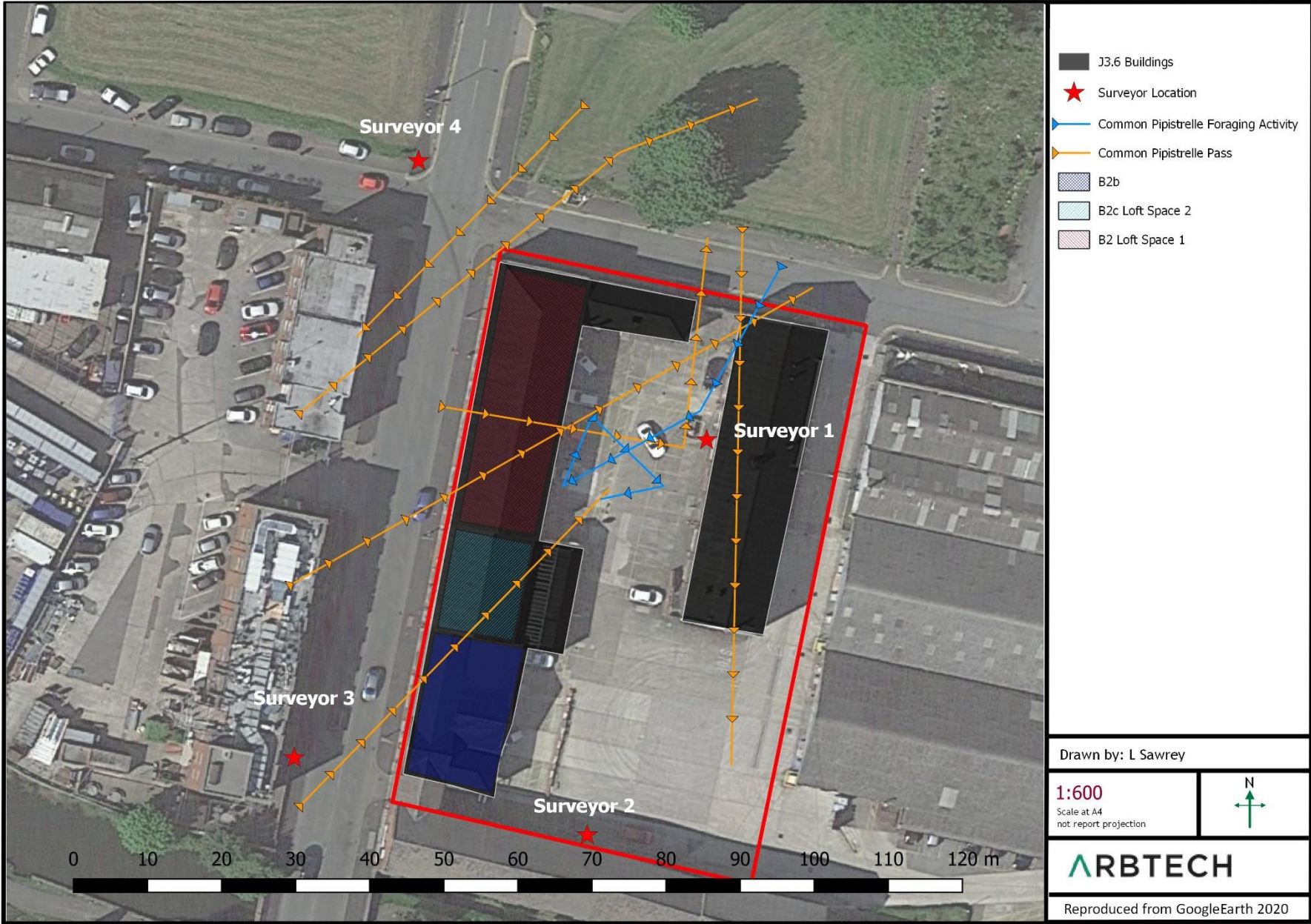
| Ref | Survey conclusions                                                                                                                                                                             | Foreseen impacts | Recommendations / Mitigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Enhancements<br>The Local Planning Authority has a duty to ask for enhancements under the NPPF (2019)                                                                                                                                                                                                                                                                                                                                                                                      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1  | The survey confirmed that there is a probable absence of bat roosts in the building. No bats emerged from the building and there was a low level of bat activity observed throughout the site. | None.            | <p>In the highly unlikely event that bats are unexpectedly found during any stage of the development, work should stop immediately, and Arbtech must be contacted to seek further advice.</p> <p>Due to the foraging activity by common pipistrelles around the site, if any new lighting is to be installed on site, lighting on site should be controlled (where possible). The low-level lighting generated from building windows is unlikely to have a disruptive effect on commuting bats as long as it does not shine onto commuting routes.</p> <p>Low impact lighting strategies will be adopted from the guidance outlined in the new Bats and Lighting Publication produced by the Institution of Lighting Professionals and the Bat Conservation Trust "Guidance Note 08/18 Bats and artificial lighting in the UK Bats and the Built Environment series"<br/>publication:<a href="http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting">http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting</a></p> <p>The lighting on the site will:</p> <ul style="list-style-type: none"> <li>• Use narrow spectrum light sources to lower the range of species affected by lighting.</li> <li>• Use light sources that emit minimal ultra-violet light.</li> <li>• Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue short wavelength content they should be of a warm / neutral colour temperature &lt;4,200 kelvin.</li> <li>• Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.</li> <li>• Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only.</li> </ul> | <p>The developed site can be enhanced for the bat species observed to be foraging and commuting across the site during the survey by installing of a minimum of one bat box on retained buildings around the site boundaries e.g. Improved Crevice Bat Box</p> <p>Bat boxes should be positioned 3-5m above ground level facing south or south-westerly with a clear flight path to and from the entrance. Bat boxes should also be positioned away from any artificial light sources.</p> |

|  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  |  |  | <ul style="list-style-type: none"> <li>• External lighting will be positioned below the eaves, be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.</li> <li>• Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.</li> </ul> <p>All of the above will ensure that the developed site will not be affected by any external lighting ensuring their long-term use for commuting.</p> |  |
|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

### 5.0 Bibliography

- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3<sup>rd</sup> edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2020) accessed on 26/05/2020.
- Magic database (2020) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 26/05/2020.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Arbtech Consulting Ltd. March 2020 – Preliminary Ecological Appraisal including Roost Assessment.
- National Planning Policy Framework (2019) - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

Appendix 1: Survey Plan





## Appendix 3 Legislation and Planning Policy related to bats

### LEGAL PROTECTION

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

#### **Regulation 43: Protection of certain wild animals - offences**

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

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

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

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

Bats are also protected under the *Wildlife and Countryside Act 1981 (as amended 01.04.1996)* through their inclusion on *Schedule 5*. Under this Act, they are additionally protected from:

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

### NATIONAL PLANNING POLICY (ENGLAND)

#### **National Planning Policy Framework 2017**

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

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

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

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

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

**Effect on development works:**

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

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

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

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

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

- ***include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;***
- scientific and educational purposes,
- ringing or marking
- conserving wild animals

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