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# Bat Scoping Report and Preliminary Ecological Appraisal

## Site Name

**24–25 East Street & 1/1a New Road**

## Client

**W Group**

## Issue Date

**8th September 2025**

## Author

**Dr Ryan Walker**

**Project No: P10916**

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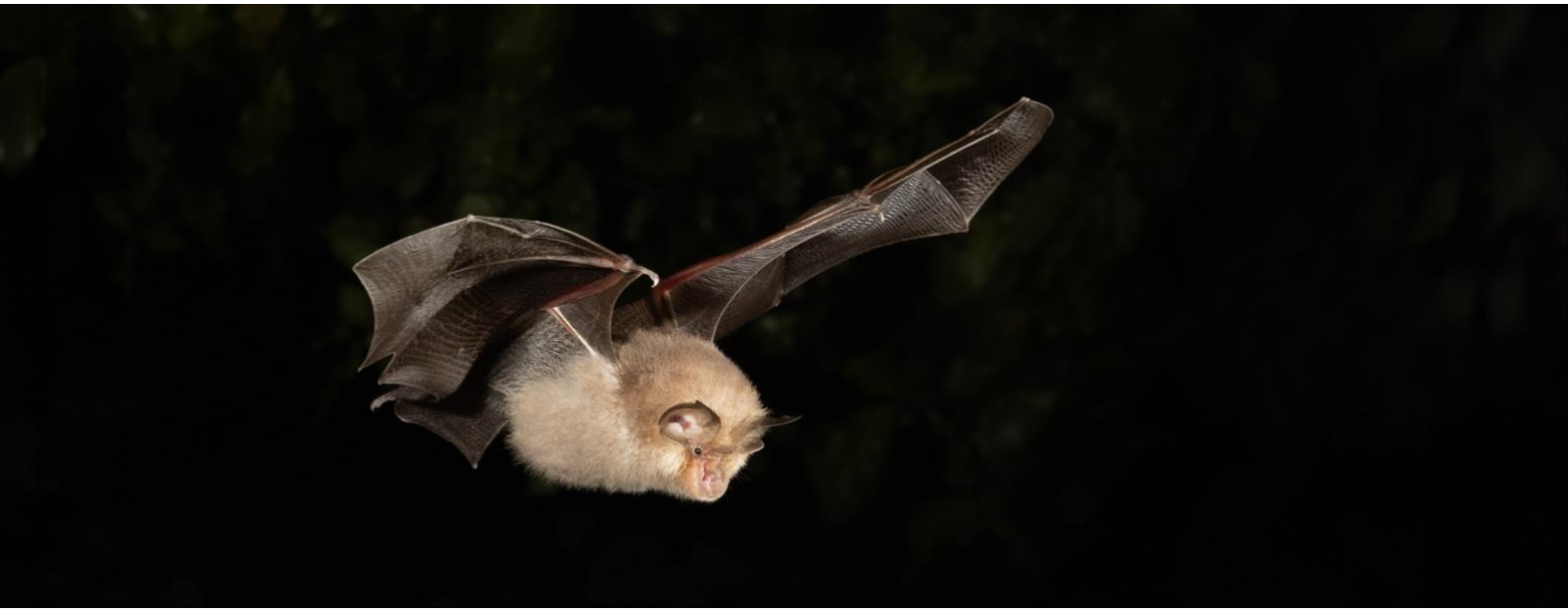

## Document Control

| Issue No | Author | Reviewer | Issue Date | Additions/alterations | Notes |
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| Original | **Ryan Walker** PhD MCIEEM, CEnv | **Kate Priestman** MCIEEM, CEnv | 08/09/2025 | N/A | |

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## About the Author

This report has been prepared by Dr Ryan Walker, a senior ecologist at The Ecology Co-op, with twenty years' experience. He has a Level 2 bat survey licence and has prepared numerous European Protected Species licenses for bats. As a Full member of the Chartered Institute for Ecology and Environmental Management (CIEEM) and as Chartered Environmental Scientist through this Society for the Environment, he is bound by their code of professional conduct.

## About the Reviewer

This report has been reviewed by Kate Priestman, who is a Principal Ecologist with over twenty years' experience. Kate has undertaken extensive survey work and reporting, encompassing a breadth of deliverables, and prepared European Protected Species licences for numerous schemes. As a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and a Chartered Environmentalist (CEnv), she is bound by CIEEM's code of professional conduct.

## Report Summary

| | |
|---|---|
| **Purpose** | The Ecology Co-op was commissioned by W Group to undertake a Bat Scoping Assessment and Preliminary Ecological Appraisal at 24–25 East Street & 1/1a New Road, further to a proposal to undertake mostly extensive internal works to convert the buildings for residential use. |
| **Context** | This site is situated within a heavily urbanised environment, within a town centre. |
| **Key findings** | The buildings were assessed as having negligible suitability to support roosting bats. Habitat within the zone of influence of the proposals and habitat fringing the site is considered to be of low potential value to bats for foraging purposes. The flat roof areas of the building have the potential to support nesting gull species. |
| **Recommendations** | Mitigation to protect nesting gulls is detailed. |
| **Further survey requirements** | No further ecological surveying is recommended for this site. |

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# 1 INTRODUCTION

## 1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake a bat scoping assessment and Preliminary Ecological Appraisal of 24–25 East Street & 1/1a New Road by W Group. This report presents the findings of a walkover survey and building inspection for roosting bats, undertaken by Dr Ryan Walker, a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and Natural England Level 2 bat survey class licence holder, on 11th August 2025. Whilst this report has maintained a focus on assessing potential impacts upon roosting bats and bat activity within the proposal's zone of influence, it has also considered the potential for any other protected/notable species and/or habitats to be adversely affected.

The proposal for the site comprises mostly internal modifications to turn a number of town centre buildings used for multiple purposes into residential units. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment are provided, if necessary. Where appropriate, measures to avoid, mitigate and/or compensate for significant adverse effects are outlined.

This report is intended to inform the client and the appropriate planning authority of the potential impacts that this development proposal may have upon roosting bats as well as identifying potential impacts to commuting routes and foraging habitat of value. Where bat roosting potential or physical evidence of bats has been identified, further survey effort will be required in order to complete an impact assessment to inform a planning application.

## 1.2 Background

The site is located at 24–25 East Street & 1/1a New Road, Shoreham by Sea BN43 5ZD. The central grid reference for the site is TQ 21657 05074.

The site comprises of a terrace of buildings upon the corner of a busy town centre street. The site is fringed on all sides by other shops, residential properties and businesses within an urbanised environment. There is a church and church yard to the northwest of the site. The site is within 100m of the coastline.
Figure **1**, below shows the location of the site. The proposed development comprises repairs, renovations and re-roofing (see

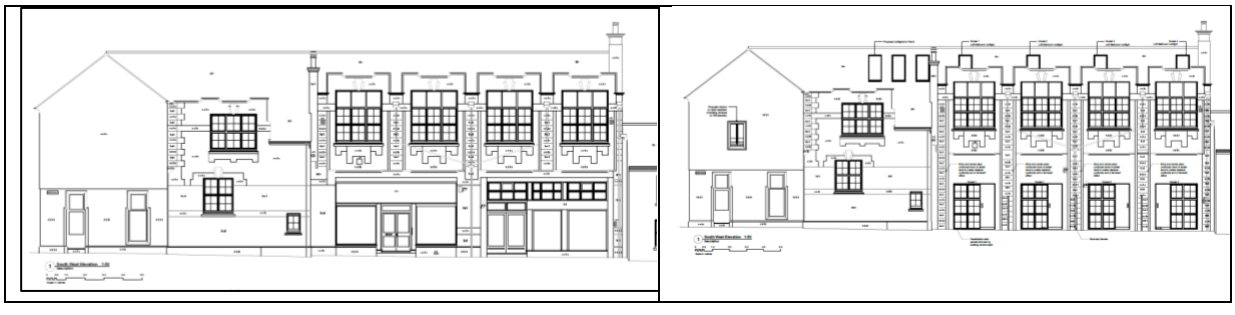

**Figure 2**).

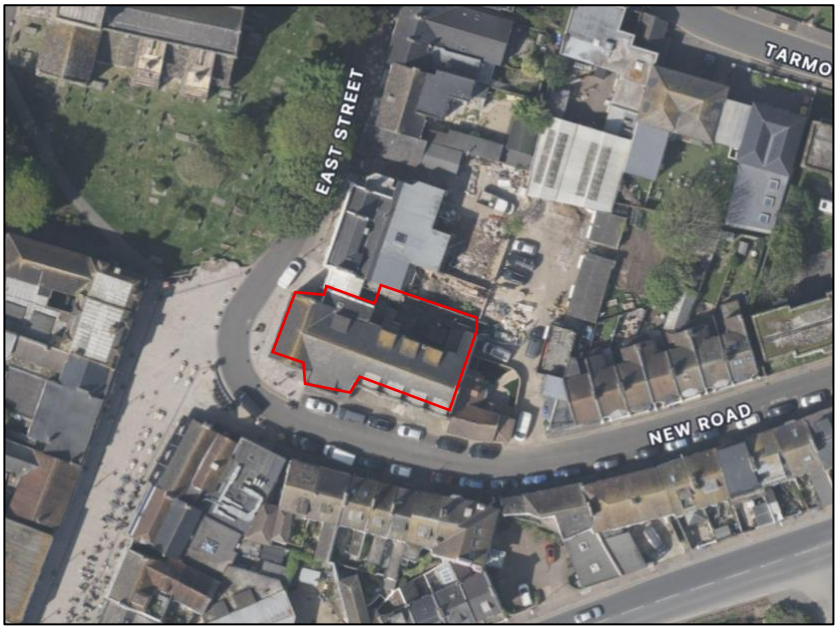


**Figure 1.** Aerial image showing the location of the site within red circle. Image produced courtesy of Google maps (map data ©2025 Google).

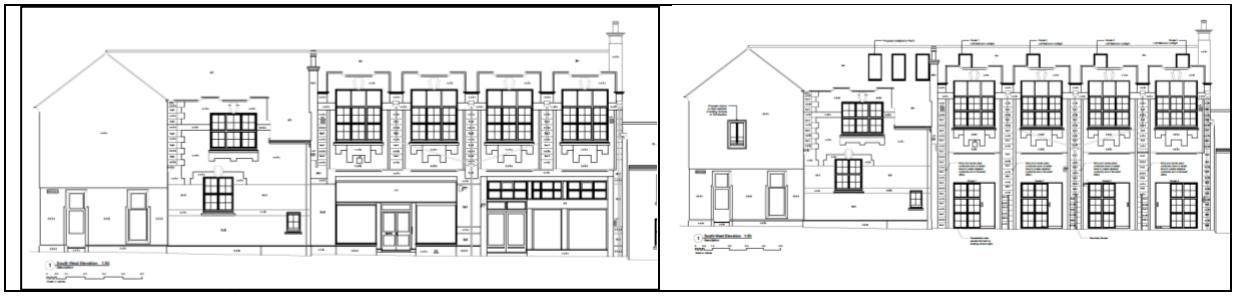

**Figure 2.** (left) existing southwest elevation. (right) proposed southwest elevation. Images produced by Willow Architects.

## 1.3 Policy and Legislation

Legal protection applying to all bat species in the UK and any other species relevant to this appraisal, is outlined in Appendix 1 of this report.

The results of this survey will be used to determine the need for further surveys, impact avoidance measures and/or an appropriate mitigation/compensation strategy to ensure compliance with UK wildlife legislation, policy and best practice.

# 2 METHODOLOGY

The methodologies used for this survey are in accordance with the bat survey guidelines produced by the Bat Conservation Trust[1]. Where there has been any deviation from the guidelines due to any site-specific constraints or other circumstances, reasoning and justification has been provided. This survey has also considered the

[1] Collins, J.(ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London..

Guidelines for Preliminary Ecological Appraisal produced by CIEEM[2], where the potential for impacts to protected/notable species, other than bats, has been identified.

## 2.1 Desk Study

A search of on-line mapping resources has been undertaken to characterise the local context of the site with respect to semi-natural habitats and linear features of value to foraging and commuting bats.

The MAGIC website resource (www.magic.gov.uk) has been used to identify the location of designated sites for nature conservation within 2km and European Protected Species (EPS) licences granted within a 1km radius of the survey site. Priority habitats and ancient woodland, upon the site and within the proposal's zone of influence, have also been identified due to their ecological value and potential to act as important foraging resources for bats.

Priority habitats and ancient woodland are classified as habitats of principal importance. Habitats of principal importance are listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006[3], which places a duty on Local Planning Authorities to have due regard to biodiversity.

## 2.2 Field Survey

### 2.2.1 Roosting Potential

Bats can use a wide range of features for roosting purposes including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy and loose bark.

A detailed building inspection was carried out, looking for potential access points and Potential Roosting Features (PRFs) that bats could use and any evidence indicating the presence of bats using the building, such as rub marks, feeding remains, staining or droppings. This included a ground-based external inspection and internal inspection of PRFs, such as enclosed loft spaces or roof voids or basements, where safe access was possible. A high-powered torch was used for the internal and external assessment.

Access to the southern section of roof void was unable to be attained given that the access hatch was above an active food preparation area in the café.

The suitability of each feature, or group of features, to support roosting bats has been assessed as either negligible, low, moderate, or high, in accordance with best practice guidance[1] (see Table 1) Any evidence confirming the presence of bats was clearly recorded including photos and samples taken (e.g. droppings), where appropriate. Further surveys have been recommended in accordance with best practice guidance and the surveyor's professional judgement, where evidence of a bat roost or PRFs have been identified that would be adversely impacted by the proposal and where precautionary mitigation alone cannot ensure that bats would not be potentially disturbed or harmed.

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[2] CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition.* Chartered Institute of Ecology and Environmental Management, Winchester.
[3] HM Government (2006). Natural Environment and Rural Communities Act 2006. Available online at: https://www.legislation.gov.uk/ukpga/2006/16/section/41.

**Table 1.** Guidelines for assessing suitability of structures (buildings and trees etc) to support bat roosts

| Suitability | Description of roosting habitats |
|---|---|
| None | No habitat features on the structure likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels). |
| Negligible | A structure that does not have any obvious habitat features that are likely to be used by roosting bats. However, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion. |
| Low | A structure that has one or more potential roosting features that could support individual roosting bats opportunistically. These features however lack the space, shelter or appropriate conditions, to support larger numbers of bats (such as a maternity roost). |
| Moderate | A structure with one or more potential roost sites that could be used by bats due to their size, shelter and suitable conditions for roosting, but are unlikely to support a roost of high conservation significance. |
| High | A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potential for longer periods of time due to their size, shelter, protection and conditions. |

### 2.2.2 Hibernation Potential

The structure and its associated features were assessed for its suitability to be used by hibernating bats. The assessment was carried out in accordance with guidelines produced by BatAbility[4] and the bat survey guidelines produced by the Bat Conservation Trust[1]. To determine the potential for features to support hibernating bats the following aspects were considered:

- the suitability of features to support roosting bats or to allow access for roosting bats;
- the temperature and humidity conditions likely to be present within the feature during the winter period and the suitability in this respect for it to be used by bats for hibernating;
- the surrounding habitat, in terms of its potential for use by bats outside of the hibernation period for commuting and/or foraging purposes; and
- the presence of known roosts within the structure, or adjacent structures, or surrounding area during the active season.

The potential for use by hibernating bats for each feature, or group of features was assessed as either negligible, low, moderate, or high, in accordance with best practice. Further surveys are recommended where appropriate, considering the feasibility of a hibernation survey for certain PRFs.

### 2.2.3 Foraging and Commuting Potential

The habitats surrounding the site and within the wider landscape were broadly assessed for their potential to support foraging and commuting bats, and were categorised as negligible, low, moderate or high potential suitability in line with published guidance[1].

[4] Middleton. N. (2019). *Assessing Sites for Hibernation Potential. A Practical Approach, including a Proposed Method & Supporting Notes. Version' Draft/V2.2019*. BatAbility.

## 2.3 Other Protected and/or Notable Species

Any birds identified, or evidence of nesting birds discovered during the site visit, were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern[5] and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981), such as barn owl *Tyto alba* and swallow *Hirundo rustica*.

Whilst this survey has focussed on bats and no specific searches were made with respect to other protected/notable species, any evidence of such species that was encountered during the site visit was also recorded.

# 3 RESULTS/OBSERVATIONS

## 3.1 Desk Study and Granted EPS Licences

All statutory designated areas within 2km of the site are shown in Table 2 and Figure 3. This site does not include bats as a designated feature.

**Table 2.** Designated sites within 2km of 24–25 East Street & 1/1a New Road.

| Site name | Designation | Features listed on citation | Proximity to the site |
|---|---|---|---|
| Adur Estuary | Site of Special Scientific Interest (SSSI) | The Adur Estuary, together with Rye Harbour further to the east, represent the only significant areas of saltmarsh between Chichester and Pagham Harbours in West Sussex, and Sandwich Bay in Kent. The estuarine plant communities are unusual. The large area of intertidal mudflats within the estuary are important for a variety of wading birds. The intertidal mudflats of the Adur Estuary support a number of wading birds, particularly redshank, dunlin and ringed plover. The number of ringed plover regularly exceed 1% of the total British population, making the estuary of national importance for this species. The estuary embankment near the car park supports a large colony of viviparous lizards. | 200m |

[5] Stanbury, A., Eaton, M., Aebischer, N., Balmer, N., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). Birds of Conservation Concern 5: the status of bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man. British Birds 114, pp 723-747.

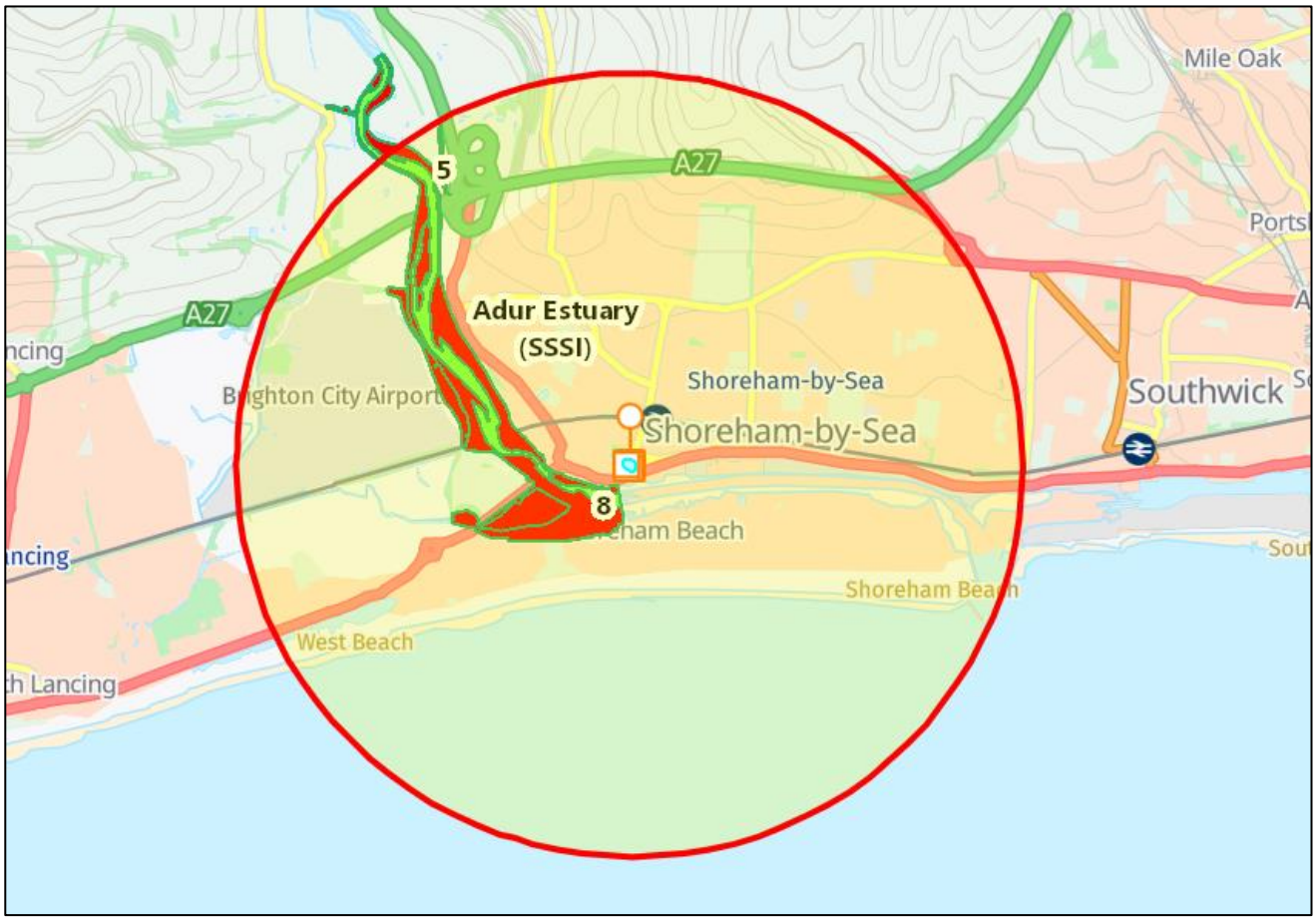



**Figure 3.** Designated sites within a radius of 2km of the application site. Images produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0)

There are no areas of ancient and semi-natural woodland located within 2km of the site boundary. There are no EPS licences granted for mitigation projects concerning bats within 1km of the site shown on the Magic Maps website.

## 3.2 Site Context and Surrounding Habitats

This site is located in an urban location, there is an area of green space with the church yard to the northwest of the site (Figure 1), however this area is isolated and fringed on all sides by heavily urbanised environments for many hundreds of metres. The local landscape provides negligible potential foraging habitat for bats.

## 3.3 Inspection for Bats

### 3.3.1 Roost Potential

Table 3 (below) states in detail the potential roosting features supported by the buildings within the site and their potential to support roosting bats. The terrace of buildings is roughly split into three sections: the parts of the white building shown in Photo 2, showing the current entrance; the two-storey blue and pebble dash building (Photo 3) and the red brick section of the buildings (Photos 1 & 4; Figure 2).

**Table 3.** Assessment of PRFs

| Building section | Description of features | Assessment of suitability[6] |
|---|---|---|
| White, entrance section to the building complex. | This section of the building appears to be constructed of painted stone. All external aspects are in good condition and there appears to be no external features within the section of the building comprising part of the complex that could be considered potentially suitable for supporting crevice roosting bats (Photo 1), such as the pipistrelle species. There are no accessible roof voids within this section of the building complex. Most of the internal aspects support a stairwell. The plans suggest that very little of the external aspects of this building will be impacted by the works. | Negligible bat roost suitability |
| Central building; blue with pebble dash and slate tiled roof. | This building supports no features within the external aspects that could be considered potentially suitable for crevice roosting bats. The roof supports well-fitting slate tiles (Photos 2 & 3). It is proposed that four velux windows will be integrated within this roof. All other external aspects of this section of the building complex appear to be remaining unchanged. There are no accessible roof voids within this section of the buildings (Phots 5 & 6). | Negligible bat roost suitability |
| Red brick section of the building | This section of the building complex is comprised of red brick and render in places. It appears to have a flat roof (Photos 1 & 4). The building section supports no features within the external aspects that could be considered potentially suitable for crevice roosting bats. All external aspects of this section of the building complex appear to be remaining unchanged. There are no accessible roof voids within this section of the buildings. This section of the building supports a small concrete yard to the north (Photo 4). | Negligible bat roost suitability |

Overall, the bat roost suitability at this site is assessed as negligible, considering the condition of the buildings and context within poor, noisy and well-lit local environment, supporting limited vegetation and poor potential foraging habitat for bats. There are no trees or other vegetation within the site.

### 3.3.2 Hibernation Potential

There are no potential roosting features within the site. It is considered that the site supports a negligible potential to support a hibernation roost.

## 3.4 Other Protected and/or Notable Species

There are no other habitats, with exception of buildings and concrete hard standing within the site. The site has no potential to support other statutory protected species, with the possible exception of the flat roof supporting nesting features that could be used by gulls.

## 3.5 Survey Limitations

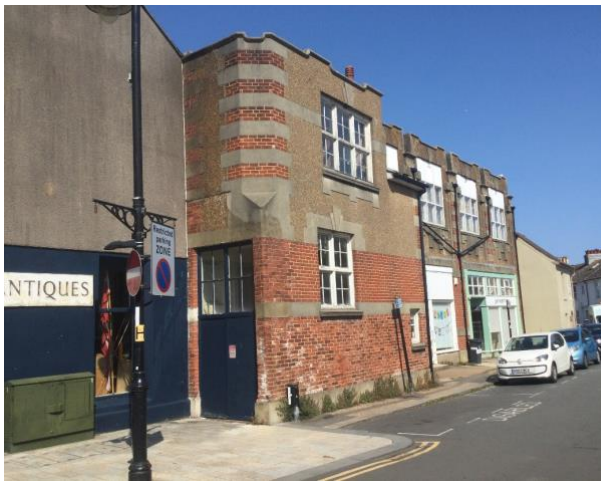
An initial site assessment such as this is only able to act like a ‘snapshot’ to record any flora or fauna that is

[6] Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)*. Bat Conservation Trust, London.

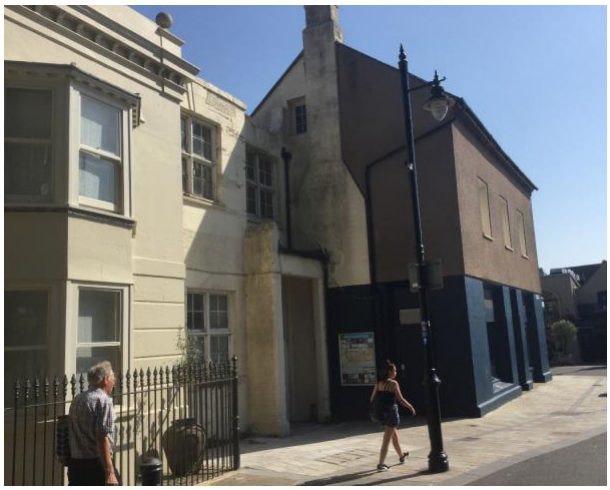
present at the time of the survey. It is therefore possible that some species may not have been present during the survey, but may be evident at other times of the year. Bats will commonly roost in small inaccessible crevices, such as spaces underneath ridge tiles that are impossible to inspect during a scoping assessment. For this reason, habitats and features are assessed for their potential to support bats, even where no direct evidence (such as droppings) has been identified.

It is assumed that the site may support roof voids, given the shape and style of the roofs, in particular the central section of the site. However, no void was accessible and all seemed to be sealed. Typical void roosting species of bat, such as the long-eared species are particularly light sensitive and need woodland as foraging habitat. It was assumed that the local environment is unsuitable for these species of bat, making it unlikely that they could be using the site.

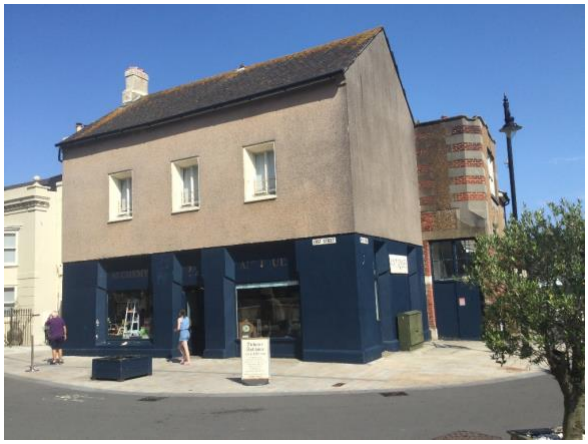
## 3.6 Photographs



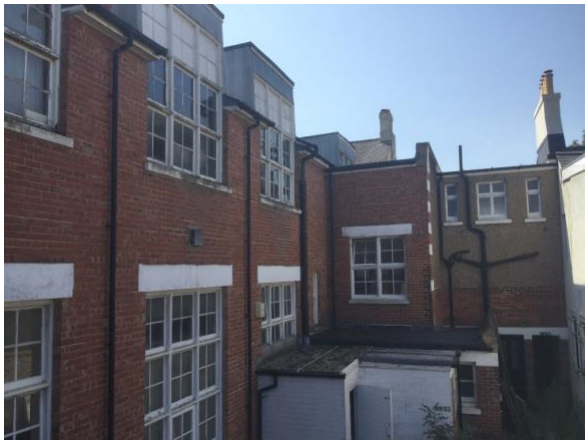

**Photograph 1.** The southern facing external elevation of the site, facing the street.



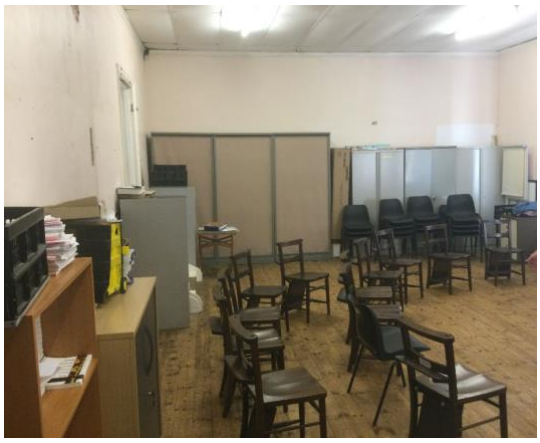
**Photograph 2.** View of the site from the southwest corner of the site, facing the street.



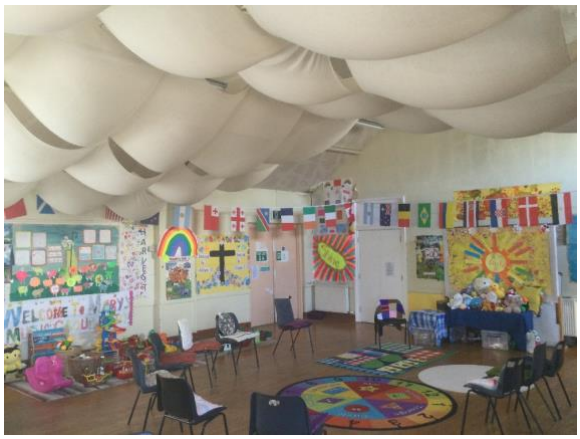
**Photograph 3.** View of the site from the southwest corner of the site, facing the street.



**Photograph 4.** The north facing elevation of the site.



**Photograph 5.** The internal aspects of the building within the central section of the site.



**Photograph 6.** The internal aspects of the building within the central section of the site.

# 4 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

## 4.1 Designated Sites

The site is situated within a heavily urbanised environment. It is unlikely that the proposed development will have any impact upon the SSSI 200m from the site.

## 4.2 Bats

### 4.2.1 Roost Potential

In accordance with the Bat Conservation Trust guidelines, the overall suitability of the buildings within the site to support bats is rated as negligible. Therefore, in accordance with the guidelines no further bat surveying is required to be undertaken.

### 4.2.2 Hibernation Potential

The buildings within the site were assessed as having negligible hibernation potential for bats. There no further surveys with regard to hibernating bats are required.

### 4.2.3 Foraging and Commuting Suitability

The nature of the local environment would suggest that the site supports a negligible potential to support foraging bats. Given that the site is already in a well-lit, heavily urbanised environment an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust would probably make little positive impact to the site (summarised in Appendix 2).

## 4.3 Other Protected and/or Notable Species

There is the potential that the flat roof areas could be used by nesting gulls. However much of the external fabric of the buildings will remain unchanged by the proposed works. However, if an active nest is identified, a minimum exclusion zone for all works within 5m radius of the nest must be established to protect it from disturbance until the young have fledged.

## 4.4 Biodiversity Enhancement Opportunities

The proposed development represents an opportunity for habitat enhancement to benefit biodiversity. Any planting scheme should include native shrub species and flowering species known to encourage insect diversity. Such enhancement measures are in line with the recommendations of the NPPF and as such would be considered favourably when determining the planning application.

**If any bats or other protected species are found during the development, work should be stopped immediately, and an ecologist must be contacted for advice.**

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.

# APPENDIX 1 – Wildlife Legislation and National Planning Policy

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to bats.

All bat species in the UK are included in Schedule II of the Habitats Regulations 2017, which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("The EC Habitats Directive"). As such all bat species in the UK are defined as 'European Protected Species (EPS).

Four species of bat (Bechstein's bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus*, greater and lesser horseshoe bats, *Rhinolophus ferrumequinum* and *R. hipposideros*) are also listed on Annex IV of the EC Habitats Directive. This requires the designation of a series of sites which contain important populations of these species as Special Areas of Conservation (SACs).

All species of British bat are also fully protected under the Wildlife and Countryside Act (1981), as amended, through inclusion in Schedule V.

All species of bat are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Section 41 of the NERC Act lists the habitats and species of principle importance. This places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of habitats and species of principal importance for the conservation of biodiversity in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers.

Under the above legislation it is an offence to:

- kill, injure or take any individual bat of any species;
- possess any part of an individual bat, either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by bats for shelter, rest, protection, or breeding;
- intentionally or recklessly disturb these species whilst using any place of shelter or protection; or
- deliberately disturb bats in such a way as to be likely to impair their ability to:
    - survive, to breed or reproduce, to rear or nurture their young; to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;
- keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

It is also an offence to set and use articles capable of catching, injuring, or killing bats (for example a trap or poison), or knowingly cause or permit such an action. There is also protection under Schedule 6 of The Wildlife and Countryside Act 1981 (as amended) relating specifically to trapping and direct pursuit of bats.

A European Protected Species Licence (EPSL) in relation to bats is required from Natural England for any work that would result in an otherwise unlawful activity (e.g. damage to a bat roost). A license can only be issued to permit otherwise prohibited acts if Natural England are satisfied that all the following three tests are met:

- the proposal is for 'preserving public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment';
- there is no satisfactory alternative; and
- the action authorised by the license will not be detrimental to the maintenance of bat populations at a favourable conservation status in their natural range.

A bat roost is defined by the Bat Conservation Trust's Bat Surveys—Good Practice Guidelines 3rd Edition as "the resting place of a bat". In general, the word roost is interpreted as "any structure or place, which any wild bat uses for shelter or protection."

Bats tend to re-use the same roosts; therefore, legal opinion is guided by recent case law precedents, that a roost is protected, whether or not the bats are present at the time. This includes summer roosts used for resting during the day and/or breeding; or winter roosts, used for hibernating.

# APPENDIX 2 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust[7] should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

**Avoid lighting key habitats and features altogether**

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

**Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations**

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;
- creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths,

[7] Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting. https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;

- dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

**Demonstrate compliance with illuminance limits and buffers**

- *Design and pre-planning phase*; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking;* as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

**Lighting Fixture Specifications**

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- Lighting spectra: peak wavelength >550nm
- Colour temperature: <2700K (warm)
- Reduction in light intensity
- Minimal UV emitted
- Upward light ratio of 0% and good optical control

**Further reading:**

Buglife (2011) A review of the impact of artificial light on invertebrates.

Royal Commission on Environmental Pollution (2009) Artificial light in the environment. HMSO, London. Available at: https://www.gov.uk/government/publications/artificial-light-in-the-environment

Rich, C., Longcore, T., Eds. (2005) Ecological Consequences of Artificial Night Lighting. Island Press. ISBN 9781559631297.

CPRE (2014) Shedding Light: A survey of local authority approaches to lighting in England. Available at: http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light

Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available at: https://www.gov.uk/guidance/light-pollution

Institution of Lighting Professionals (2021) Guidance Notes for the Reduction of Obtrusive Light GN01:2011. Available at: https://www.theilp.org.uk/resources/free-resources/

Voigt, C.C., Azam, C., Dekker, J., Ferguson, J., Fritze, M., Gazaryan, S., Hölker, F., Jones, G., Leader, N., Lewanzik, D. and Limpens, H., 2018. *Guidelines for consideration of bats in lighting projects*. Unep/Eurobats. Available at: https://cdn.bats.org.uk/uploads/pdf/Resources/EUROBATSguidelines8_lightpollution.pdf?v=1542109376