

The Holt Hotel, 285 Warrington Road, Rainhill, Prescot, Merseyside, L35 8LA

Bat Emergence Survey Report

July 2022

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Bat Emergence Survey Report**The Holt Hotel, 285 Warrington Road, Rainhill, Prescot, Merseyside, L35 8LA****for****Punch Partnerships (PML) Ltd**

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This report represents sound industry practice; reports and recommends correctly, truthfully and objectively; is appropriate given the local site conditions, scope of works proposed and resources allocated to us by the client; and avoids invalid, biased, and exaggerated statements.

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1. This report provides details from a bat survey carried out by Hampshire Ecological Services Ltd for Punch Partnerships (PML) Ltd in connection with a proposal to build a new convenience store at The Holt Hotel, 285 Warrington Road, Rainhill, Prescot, Merseyside L35 8LA (approximate Ordnance Survey Grid Reference SJ482918). The site consists of a public house with an outbuilding, carpark and beer garden. The location of the site is shown in *Figures 1 and 2* and a plan of the site is shown in *Figure 3* (see *Section 6*).
2. An ecological appraisal of the site was carried out by WYG Environmental Planning Transport Ltd in 2020 (WYG Environmental Planning Transport Ltd, 2020a). This found the public house and outbuilding to have moderate bat roost suitability. One dusk and one dawn surveys were recommended on each of the buildings. WYG then undertook the further surveys in May & June 2020, during which no bats emerged from the buildings with little foraging or commuting activity on site (WYG Environmental Planning Transport Ltd, 2020b). Due to the timelapse from the 2020 surveys, Hampshire Ecological Services were subsequently commissioned to complete a single update dusk bat emergence survey on the 22nd June 2022.
3. The ornamental planting and scattered scrub provides limited bat foraging habitat in the immediate vicinity of the buildings. This connects to a broken network of lines of hedges, tree-lines and woodland strips through the neighbouring gardens and urban green spaces, which in turn connect the site to areas of high-quality foraging habitat in the wider landscape such as nearby woodland and waterways.
4. One dusk emergence survey was carried out. Details of the dates of the surveys, weather and personnel carrying out the surveys is given in *Sections 3.1 and 3.2*.
5. No bats were seen emerging or re-entering the buildings during the dusk emergence survey on the 22nd June 2022. The full data from the survey is given in *Appendix C* and a plan showing the foraging and commuting bats (observations only) is given in *Figure 4* in *Section 6*.
6. Common pipistrelles were observed flying in the vicinity of the buildings and foraging on the site, indicating the weather was suitable for bat activity.
7. As no bats or evidence of bats was found during the initial survey and no bats were recorded emerging from the buildings in either 2020 or 2022, the works can proceed without further survey or constraints regarding bats (subject to any planning constraints).
8. Changes in lighting can affect foraging and commuting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto planted vegetation (particularly the new hedges), and security lights should operate on a timer, to avoid any negative impact on bats. Ideally any lighting installed should avoid spillage of greater than 0.1 lux (typical moonlight/ cloudy sky) onto any planted vegetation.

However, it is in a highly lit area and as such this may not be possible due to existing light spill. If this is the case any new lighting should not increase the level currently experienced and, if at all possible, should reduce any light spill due to the type of lighting used and the use of protection such as hoods and cowls. The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

9. It is a requirement under national planning policy to provide ecological enhancements to sites requiring planning permission in order to provide a net gain in biodiversity. Therefore, the following outline enhancements are proposed:
 - New hedges will be planted with the species listed in *Section 5.6.4* and undersown with Emorsgate seed mix EH1 Hedgerow mixture (or equivalent);
 - Areas of amenity grassland (lawns) will be sown with a species-rich seed mix for lawns such as Emorsgate seed mix EL1 and EG1 (or equivalent). This will increase the plant diversity on site;
 - To enhance the ecological value of the site, the landscaping should incorporate a mixture of native and non-native species of value to wildlife. Examples of suitable plant species that could be planted to encourage wildlife include those in *Tables 5.6.4.1. and 5.6.4.2;*
 - The new building will be enhanced for bats using at least two integrated bat boxes (*e.g.* a Habibat™ Bat Box, an Ibstock Enclosed Bat Box, a Schwegler Bat Tube, or similar), which provides a cavity that is incorporated into the external build structure to offer roosting space for bats. Alternatively, if this is not viable (because of the construction methods), then two woodstone style bat boxes (*e.g.* Vivara Pro WoodStone Bat Box, Beaumaris Woodstone or similar) will be erected on an undisturbed aspect of the building. These bat boxes will be erected as high as possible (ideally between 2.5m and 5m, facing south or south-east) with a clear exit path. These bat boxes will remain on site permanently (and shall be repaired or replaced as necessary);
 - Two or more swift boxes, such as Ibstock Eco-habitat or similar, will be incorporated or installed on the exterior of the new building; and
 - At least one insect box (brick, hotel or tower) will be installed. The box should be suitable for a range of invertebrates. The box will be positioned in a warm sunny spot, preferably on a south-facing wall, close to vegetation but with no vegetation in front of the holes. The boxes suggested in *Table 5.6.6.1* (especially the BeePot planter) have been chosen so that they form an attractive feature as part of the landscaping.
10. This survey data is valid for a maximum of 12 months. Bats frequently move around and adopt new roosting sites, therefore if more than 12 months elapse it may be advisable to conduct further survey work to obtain up-to-date information, thereby ensuring protected species compliance.

INTRODUCTION

2.1 General

This report provides information from a bat survey carried out by Hampshire Ecological Services Ltd for Punch Partnerships (PML) Ltd in connection with a proposal to build a new convenience store at The Holt Hotel, 285 Warrington Road, Rainhill, Prescot, Merseyside L35 8LA (approximate Ordnance Survey Grid Reference SJ482918). The location of the site is shown in *Figures 1 and 2* in *Section 6*.

An ecological appraisal of the site was carried out by WYG Environmental Planning Transport Ltd in 2020 (WYG Environmental Planning Transport Ltd, 2020a). This found the public house and outbuilding to have moderate bat roost suitability. One dusk and one dawn surveys were recommended on each of the buildings. WYG then undertook the further surveys in May & June 2020, during which no bats emerged from the buildings with little foraging or commuting activity on site (WYG Environmental Planning Transport Ltd, 2020b). Due to the timelapse from the 2020 surveys, Hampshire Ecological Services were subsequently commissioned to complete a single updated bat survey (a dusk emergence survey).

2.2 Site description

The site consists of a public house with an outbuilding, carpark and beer garden. The buildings surveyed are shown on the plan in *Figure 3* in *Section 6*.

The site lies on the north side of Warrington Road, in the centre of Prescot. The immediate surroundings consist of residential housing. In the wider landscape Prescot extends in all directions joining the urban sprawl to the east and west which join Manchester to the east and Liverpool to the west. Just beyond Prescot to the north is Knowsley Safari Park leading to arable fields and grassland in the wider landscape, and to the south is a mosaic of rural housing, arable fields, grassland, woodland and waterways.

2.3 Proposed activities

This survey was carried out in connection with a proposal to carry out the following works:

- build a new convenience store on the carpark;
- demolish the outbuilding; and
- re-arrange the remaining carpark and beer garden.

2.4 Current planning status

Planning permission is being applied for at this site.

2.5 ***Objectives of the survey and report***

The survey by Hampshire Ecological Services Ltd one dusk emergence survey of the buildings. The aim was to identify if bats were present or likely to use the site for roosting.

The survey and the report writing were carried out in accordance with *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition* (Collins, 2016). Any deviations from the guidelines are justified in the relevant sections.

Additionally, all ecological surveys should be completed in line with Natural England's *Standing Advice for Local Authorities*

(<http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/advice.aspx>), which states:

- Natural England will not comment on applications that are submitted without the relevant protected species surveys if there are no other issues (i.e. in relation to SSSIs or landscape).
- Natural England will not comment on scoping surveys that recommend further surveys where these have not been undertaken and submitted with the scoping reports.

2.6 ***Structure of this report***

This report is structured as follows:

- *Section 1* contains the executive summary;
- *Section 2* contains an introduction;
- *Section 3* describes the survey methods;
- *Section 4* describes the results;
- *Section 5* evaluates the findings;
- *Section 6* contains the figures including:
 - *Figure 1* gives aerial photographs showing the site location;
 - *Figure 2* gives an Ordnance Survey map showing the location of the site;
 - *Figure 3* gives a site plan; and
 - *Figure 4* illustrates the bat activity recorded during the dusk emergence survey.
- *Section 7* lists the references;
- *Appendix A* gives information on relevant legislation;
- *Appendix B* gives information on bat ecology;
- *Appendix C* gives the data from the dusk emergence survey; and
- *Appendix D* lists the proposed seed mixes.

METHODS**3.1 Date, times and weather**

One dusk emergence survey was carried out on both buildings on the 22nd June 2022. The survey commenced at 21:26 (Sunset 21:46) and finished at 23:20. Weather conditions during the survey were 19 °C at the start and 17 °C at the end with clear skies and a light air (Beaufort scale 1).

The emergence survey commenced at least fifteen minutes before sunset and continued for at least an hour and a half after sunset (long after bats would have exited). The weather was suitable for bat emergence and foraging during all the surveys.

3.2 Personnel

The requirement for an update survey was assessed by John Poland CEnv MCIEEM CBiol MSB with the phase 2 survey led by Harold Green (Natural England Class 2 bat survey licence reference CLS-03290) assisted by the following surveyors Mr B. Richards MBiolSci, Miss K. Judson BSc (Hons.), Ms H. Taylor-Boyd, Mr D. Boyd, Ms E. Thomas, Mr H. Mulligan MBiolSci and Mr M. Smith. All surveyors are experienced in carrying out bat surveys using detectors.

This report was reviewed by John Poland CEnv MCIEEM CBiol MSB, who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), a Chartered Environmentalist (CEnv), a Chartered Biologist (CBiol) and multi-species licence holder with 20 years of experience in ecological consultancy and Victoria Russell MCIEEM who is a full member of the CIEEM and multi-species licence holder with over 23 years of experience in ecological consultancy.

All staff adhere to the Chartered Institute of Ecology and Environmental Management's (CIEEM) *Code of Professional Conduct*.

3.3 Dusk emergence survey

The dusk emergence survey followed standard survey protocol in *Bat Surveys – Good Practice Guidelines, 3rd edition* (Collins, 2016).

The dusk emergence surveys commenced at least fifteen minutes before sunset and continued for at least an hour and a half after sunset.

The surveyors were located with good views of the potential bat access points identified during the initial site visit. The timing of the visits, from early evening until after dark, was aimed at detecting active bats in the vicinity. When it was too dark for visual observation, electronic bat detectors were used to listen for the ultrasonic sounds produced by bats either flying in the vicinity or emerging from the building.

The surveyors recorded all bat activity encountered, but particular attention was focused on any bats emerging or re-entering. The results were documented by noting the time, bat species and behaviour (*e.g.* commuting, foraging, social interaction *etc.*). The surveyors were in constant contact via hand-held radios so that information could be easily exchanged regarding bat activity. The time between all surveyors' devices was synchronised so time data was recorded precisely.

Bat detectors are used so that surveyors can identify most bat species in the field, using the heterodyne output in combination with bat shape, flight pattern and behaviour. Surveyors were equipped with Echo Meter TouchTM detectors for real-time analysis and BatBox DuetTM detectors connected to solid-state recorders (Edirol Roland-05) to record bat calls for later sonogram analysis using BatSoundTM computer software (should it be required). Frequency-division, whereby the ultrasound is divided by 10 into an audible range, has a considerable advantage over time-expansion for survey work as it allows recordings to be taken in real time. This ensures that all bat activity is recorded.

Queried recordings were later replayed and analysed through BatSoundTM software to ensure that any activity accidentally missed during the survey was recorded and times and location calculated. The species of bat was confirmed at this stage where possible. Bat detector surveys provide one of the most effective methods of identifying bat species and activity patterns. However, it is not always possible to identify bats down to species level, even with subsequent sound analysis.

4.1 *Dusk emergence survey*

No bats were observed emerging from or re-entering either of the buildings.

Common pipistrelles were recorded flying in the vicinity of the buildings and on the site indicating the weather was suitable for bat activity. The full data from the dusk emergence survey is given in *Appendix C* and a plan illustrating the bat activity (observations only) during the survey is given in *Figure 4* in *Section 6*.

4.2 *Commuting and foraging habitat*

The ornamental planting and scattered scrub provides limited bat foraging habitat in the immediate vicinity of the buildings. This connects to a broken network of lines of hedges, tree-lines and woodland strips through the neighbouring gardens and urban green spaces, which in turn connect the site to areas of high-quality foraging habitat in the wider landscape such as nearby woodland and waterways.

Bats follow linear landscape features such as lines of trees, hedges, buildings and waterways in order to commute from their roost sites to their feeding grounds. Likewise they use these features to navigate between feeding areas and alternative roosts.

5 ***INTERPRETATION AND EVALUATION***

5.1 ***Constraints***

5.1.1 *Constraints on survey data*

The survey was carried out at a suitable time of year in suitable weather conditions. No constraints are considered to have occurred.

5.1.2 *Constraints on the mitigation, compensation and enhancement measures*

There is a limit to the amount of enhancement measures that are possible (and reasonable) on such a small site in a built-up area. In addition, there are no trees on site that would be suitable for bird and/or bat boxes to be attached.

As the buildings have been surveyed and had no bats emerging and/or re-entering them, no mitigation or compensation measures are needed.

5.2 ***Potential impacts of the proposed development on bat roosts***

5.2.1 *Commuting and foraging bats*

The ornamental planting and scattered scrub provides limited bat foraging habitat in the immediate vicinity of the buildings. This connects to a broken network of lines of hedges, tree-lines and woodland strips through the neighbouring gardens and urban green spaces, which in turn connect the site to areas of high-quality foraging habitat in the wider landscape such as nearby woodland and waterways. Woodland and waterways provide high-quality foraging habitat for a number of different species of bat. The connectivity around the edges of the site (the shrubs) will be retained or enhanced and as such no impact to commuting and foraging bats (and hence bat populations in the local area) is anticipated.

Changes in lighting can affect foraging and roosting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto retained vegetation, and security lights should operate on a timer, to avoid any negative impact on bats.

Any lighting installed should avoid spillage of greater than 0.1 lux (typical moonlight/ cloudy sky) onto any retained vegetation. However, it is in a highly lit area and as such this may not be possible due to existing light spill. If this is the case any new lighting should not increase the level currently experienced and, if at all possible, should reduce any light spill due to the type of lighting used and the use of protection such as hoods and cowls.

The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

5.2.2 *Building*

No bats or evidence of bats was found during the initial survey and no bats were recorded emerging from the buildings during the 2020 surveys by WYG Environmental Planning Transport Ltd in 2020 (WYG Environmental Planning Transport Ltd, 2020a & b). In addition, no bats were recorded emerging from the buildings in 2022. Therefore, the proposed works can continue without further survey or constraints regarding bats (subject to any planning constraints).

Enhancement measures will be required to be incorporated into the building and/ or wider site to comply with national and local planning policy that requires a net gain in biodiversity. The proposed enhancement measures are given in *Section 5.6*.

5.3 *Alternative roosting potential*

There are buildings nearby that could provide alternative roosting for bats (see *Figure 1* in *Section 6*).

5.4 *Survey report expiry*

This survey data is valid for a maximum of 12 months. Bats frequently move around and adopt new roosting sites, therefore if more than 12 months elapse it may be advisable to conduct further survey work to obtain up-to-date information to advise work, thereby ensuring protected species compliance.

Given the mobility of bats, it is recommended that a walkover of the site to update the survey information is undertaken prior to the development commencing if this does not occur before the end of July 2023.

5.5 *Further survey*

No further surveys are proposed.

5.6 *Outline mitigation, compensation and enhancement measures*

5.6.1 *General*

From the 20th July 2021, the Government published the revised National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2021). The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in February 2019. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

It also states "*opportunities to incorporate biodiversity in and around developments should be encouraged*" as part of the consideration for "*presumption in favour of sustainable development*".

The updated National Planning Policy Framework (NPPF) also states (paragraph 170) that:

“Planning Policies and decisions should contribute to and enhance the natural and local environment by... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”

The updated Planning Policy Guidance (PPG) for the Natural Environment, updated in July 2019 states (paragraph 020) that:

“Net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand.”

The updated PPG provides examples of how biodiversity net gain can be achieved. Measures suggested include “creating new habitats” and “enhancing existing habitats”.

It is proposed that the enhancements to provide biodiversity net gain will also be in the form of the following:

- sensitive lighting (for bats and other wildlife);
- new bat roost provision;
- planting to enhance the site for bats (and other wildlife);
- new bird nesting provision; and
- insect boxes.

These enhancements are detailed in the following sections.

All proposed enhancement measures are subject to supplied plans.

5.6.2 Lighting

Changes in lighting can affect foraging and roosting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto new roost exit points (see *Section 5.6.3*) and retained or planted vegetation and any lighting installed should avoid spillage of greater than 0.1 lux (typical moonlight/ cloudy sky) near to or directly onto the new roost entrances and vegetation so that light disturbance is not a problem. However, it is in a highly lit area and as such this may not be possible due to existing light spill. If this is the case any new lighting should not increase the level currently experienced and, if at all possible, should reduce any light spill due to the type of lighting used and the use of protection such as hoods and cowls. This is because lighting can impact bat populations directly by disturbing roosts and reducing their foraging area, or indirectly by severing commuting routes from roosts. Therefore, the following (modified from *Bats and lighting in the UK* (ILP 2018)) should be undertaken:

- **Aim of light** The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. This lit area must avoid being directed at, or close to, any retained vegetation. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats, as well as people and other wildlife.

For any security lighting, the following should also apply:

- **Power** It is rarely necessary to use a lamp of greater than 2000 lumens (150W) in security lights. The use of a higher power is not as effective for the intended function and will be more disturbing for bats.
- **Movement sensors** Many security lights are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed.
- **Timers** If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'.
- **Alternatives** The requirement for security lighting in each instance should be carefully considered and only used where absolutely necessary to deter crime.

The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

5.6.3 *New bat roost locations*

The new building will be enhanced for bats using at least two integrated bat boxes (*e.g.* a Habibat™ Bat Box, an Ibstock Enclosed Bat Box, a Schwegler Bat Tube, or similar), which provides a cavity that is incorporated into the external build structure to offer roosting space for bats. Alternatively, if this is not viable (because of the construction methods), then two woodstone style bat boxes (*e.g.* Vivara Pro WoodStone Bat Box, Beaumaris Woodstone or similar) will be erected on an undisturbed aspect of the building. These bat boxes will be erected as high as possible (ideally between 2.5m and 5m, facing south or south-east) with a clear exit path. These bat boxes will remain on site permanently (and shall be repaired or replaced as necessary).

5.6.4 *Planting*

New hedges will be planted around the edges of the site. These will consist of a mixture of native species such as *Acer campestre* (Field Maple), *Carpinus betulus* (Hornbeam), *Cornus sanguinea* (Dogwood), *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Fagus sylvatica* (Beech), *Fraxinus excelsior* (Ash), *Prunus spinosa* (Blackthorn), *Quercus robur* (Pedunculate Oak), *Viburnum lantana* (Wayfaring-tree) and *Viburnum opulus* (Guelder-rose). These species will provide a mixture of leaf shapes and colours through the seasons. In addition, the hedges will contain *Ilex aquifolium* (Holly) and *Taxus baccata* (Yew) to provide an evergreen component for the winter months, and to provide a contrast to the colours of the other plants during the spring, summer and autumn.

All new hedges will be under-sown with Emorsgate seed mix EH1 Hedgerow mixture (or equivalent). This will provide cover for wildlife such as hedgehogs as well as providing an attractive feature while the new hedges become established.

Areas of amenity grassland (verges and lawns) will be sown with a species-rich seed mix for lawns such as Emorsgate seed mix EL1 and EG1 (or equivalent). This will increase the plant diversity on site.

The seed mix EL1 will be sown mainly around the edges of lawns and on verges, where it can be mown less frequently without interfering with the amenity value of the grassland. The seed mix EG1, as a purely grass mix, will be sown in the centre of the grassland.

Details of the species present in the proposed seed mixes are given in *Appendix D*.

Plants that attract insects are generally helpful and trees, shrubs and flowering plants can provide cover for wildlife. Therefore, to enhance the ecological value of the site, the landscaping should incorporate a mixture of native and non-native species of value to wildlife. This mixture will be planted to encourage a diversity of insects, which in turn will attract different species. Flowers that bloom throughout the year, including both annuals and herbaceous perennials, are beneficial. Night-flowering blossoms attract night-flying insects, which in turn provide prey for bats. Examples of suitable plant species that could be planted to encourage wildlife include those in *Tables 5.6.4.1.* and *5.6.4.2.* Approximate flowering periods are listed in the tables.

Table 5.6.4.1. Native and non-native species that could be incorporated into the landscaping.

Species	Common Name	Approximate flowering period
<i>Achillea millefolium</i>	Yarrow	Early summer
<i>Aubretia</i> species	Aubretia	Spring to early summer
<i>Berberis darwinii</i>	Darwin's Barberry	Spring
<i>Iberis sempervirens</i>	Candytuft	Summer to autumn
<i>Centaurea montana</i>	Cornflower	Spring to summer
<i>Centaurea scabiosa</i>	Knapweed	Summer to autumn
<i>Centranthus ruber</i>	Red valerian	Summer to autumn
<i>Cornus sanguinea</i>	Dogwood	Summer
<i>Dianthus barbatus</i>	Sweet William	Summer
<i>Echinacea</i> species	Echinacea	Summer to autumn
<i>Erysimum</i> species	Wallflowers	Spring to early summer
<i>Glebionis segetum</i>	Corn marigold	Spring to summer
<i>Hebe</i> species	Hebes	Summer to autumn
<i>Hedera helix</i>	Ivy	Autumn
<i>Hesperis matronalis</i>	Dame's-violet	Spring to summer
<i>Hyacinthoides non-scripta</i>	English Bluebell	Spring
<i>Hylotelephium spectabile</i>	Ice plant 'Pink lady'	Early autumn
<i>Hypericum</i> species	St John's wort	Spring
<i>Ilex aquifolium</i>	Holly	Spring to summer
<i>Jasminum officinale</i>	Common White Jasmine	Summer to autumn
<i>Lavandula angustifolia</i>	Garden Lavender	Summer
<i>Leucanthemum vulgare</i>	Ox-eye daisy	Summer
<i>Limnanthes douglasii</i>	Poached egg plant	Summer
<i>Lonicera caprifolium</i>	Perfoliate Honeysuckle	Summer
<i>Lonicera etrusca</i>	Italian Honeysuckle	Summer to autumn
<i>Lonicera japonica</i>	Japanese Honeysuckle	Spring

<i>Lonicera periclymenum</i>	Honeysuckle	Summer to autumn
<i>Lunaria annua</i>	Honesty	Spring
<i>Malus domestica</i>	Apple	Spring
<i>Malus sylvestris</i>	Crab Apple	Spring
<i>Malva species</i>	Mallow	Summer to autumn
<i>Matthiola longipetala</i>	Night-scented stock	Summer
<i>Myosotis sylvatica</i>	Wood forget-me-not	Spring
<i>Nicotiana species</i>	Tobacco plant	Summer
<i>Oenothera species</i>	Evening primroses	Summer to autumn
<i>Papaver rhoeas</i>	Corn poppy	Summer
<i>Phacelia species</i>	Phacelia	Summer to autumn
<i>Primula vulgaris</i>	Primrose	Spring
<i>Rosa species</i>	Rose	Summer
<i>Rubus fruticosus</i> agg.	Bramble	Spring to summer
<i>Saponaria officinalis</i>	Soapwort	Summer
<i>Saxifraga fortunei</i>	Cherry pie	Summer to autumn
<i>Scabiosa species</i>	Scabious	Summer
<i>Silene dioica</i>	Red campion	Spring
<i>Silene noctiflora</i>	Night-scented Catchfly	Summer to autumn
<i>Silene vulgaris</i>	Bladder Campion	Summer
<i>Verbena species</i>	Vervain	Summer to autumn
<i>Viburnum lantana</i>	Wayfaring-tree	Spring to summer
<i>Viburnum opulus</i>	Guelder-rose	Summer

Table 5.6.4.2. Examples of suitable garden herbs that could be planted in and around the site to encourage wildlife.

Species	Common Name	Approximate flowering period
<i>Angelica species</i>	Angelica	Summer to autumn
<i>Borago officinalis</i>	Borage	Spring to early autumn
<i>Calendula officinalis</i>	English marigolds	Summer to autumn
<i>Foeniculum vulgare</i>	Fennel	Summer to early autumn
<i>Hesperis matronalis</i>	Dame's-violet, often sold as Sweet Rocket	Spring to summer
<i>Hyssopus officinalis</i>	Hyssop	Summer to early autumn
<i>Matthiola bicornis</i>	Night-scented Stock	Spring to autumn
<i>Melissa officinalis</i>	Lemon balm	Summer
<i>Monarda species</i>	Bergamot	Summer to early autumn
<i>Nicotiana species</i>	Tobacco-plant	Spring to autumn
<i>Oenothera species</i>	Evening-primroses	Summer
<i>Origanum vulgare</i>	Marjoram	Summer
<i>Rosmarinus officinalis</i>	Rosemary	Spring

<i>Saponaria officinalis</i>	Soapwort	Summer to autumn
<i>Silene noctiflora</i>	Night-scented Catchfly	Summer to autumn
<i>Silene vulgaris</i>	Bladder Campion	Spring to summer
<i>Tanacetum parthenium</i>	Feverfew	Summer to early autumn
<i>Thymus</i> species	Thyme	Summer

5.6.5 *Birds*

The site will be enhanced for birds. Two swift boxes will be built into or attached to the walls of the new building to provide new nest sites. These should be positioned out of direct sunlight (below eaves on the north elevation), away from windows and in a straight line. They should be in an open area so that it is less accessible to predators and birds are not obstructed as they leave the nest.

5.6.6 *Insects*

At least one insect box (brick, hotel or tower) should be installed in the garden or incorporated into the new building. This should be in a sunny location close to vegetation. Bee-friendly and insect friendly plants should be located nearby so that the bees and insects using the boxes have food. Lavender, honeysuckle and buddleia are all pollinator-friendly plants. The boxes suggested in *Table 5.6.6.1* (especially the BeePot planter) have been chosen so that they form an attractive feature as part of the landscaping. Solitary bees are non-aggressive and as such are suitable for gardens with pets and children.

Table 5.6.6.1. Examples of insect boxes that could be erected on site.

Type	Species	No.	Height	Additional information
	Solitary bees	2	>1m from the ground	The Bee Brick should be positioned in a warm sunny spot, in a south-facing wall, with no vegetation in front of the holes
	Solitary bees	2	>1m from the ground	The BeePot should be positioned in a warm sunny spot, preferably on a south-facing wall, with no vegetation in front of the holes
	Butterflies, solitary bees, lacewings and ladybirds	2	>1m from the ground	The different sections of the Insect Tower have been designed to provide a habitat for a variety of insect species. Suitable for mounting on buildings, trees or fences.
	Solitary bees and a range of other insects	2	Between 0.75m and 1.5m above ground	The selected canes and the holes are the optimum size for solitary bees but other insects may overwinter in the nester.
	A wide range of insects	2	Between 0.75m and 1.5m above ground	Adding natural materials such as drilled canes, hollow stems or bark in the triangular spaces will encourage more insects to the hotel.
	A wide range of insects	2	>1m from the ground	Best placed near vegetation. Provides plenty of nooks and crannies for insects such as ladybirds, earwigs and lacewings.

5.7 ***Requirement for Habitats Regulations licence***

A bat European Protected Species (EPS) licence or Bat Mitigation Class Licence (formerly Bat Low Impact Class Licence, if qualifying) site registration from Natural England is not necessary before work commences on the outbuilding or public house. In the unlikely event that bats are found during the works, work will stop and a bat licence will be applied for. This permits activities that may otherwise be offences under the *Conservation of Habitats & Species Regulations 2017*, such as the destruction of roost sites.

Evidence is required from emergence/ re-entry surveys during the bat active season between May and September in order to gather enough information about bat populations (including species, numbers and status of roost sites) to support a bat licence application.

Survey data supporting licence applications must be up-to-date *i.e.* have been conducted within the current or most recent optimal survey season (May to September). Therefore, if surveys show bats are present and licensable work is delayed until, during or after the next survey season, updated survey(s) will be required to support an application.

Natural England takes a minimum of 30-60 working days to process licence applications following receipt of all the relevant documentation. This includes an application form, a Reasoned Statement and a Method Statement. This includes a detailed mitigation strategy to eliminate or reduce impacts on bats.

It is not possible to apply for a licence until full planning permission has been granted and any conditions relating to wildlife fulfilled, although Local Planning Authorities usually request the information prior to determining a planning application request. Additional time will be required where any revisions to a proposed mitigation strategy are necessary to obtain the licence.

Figure 1. Aerial photographs showing the location of the site.



Figure 2. An Ordnance Survey map showing the site location, as indicated by the red arrow.



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Figure 3. Plan of the site with the buildings surveyed highlighted in red.

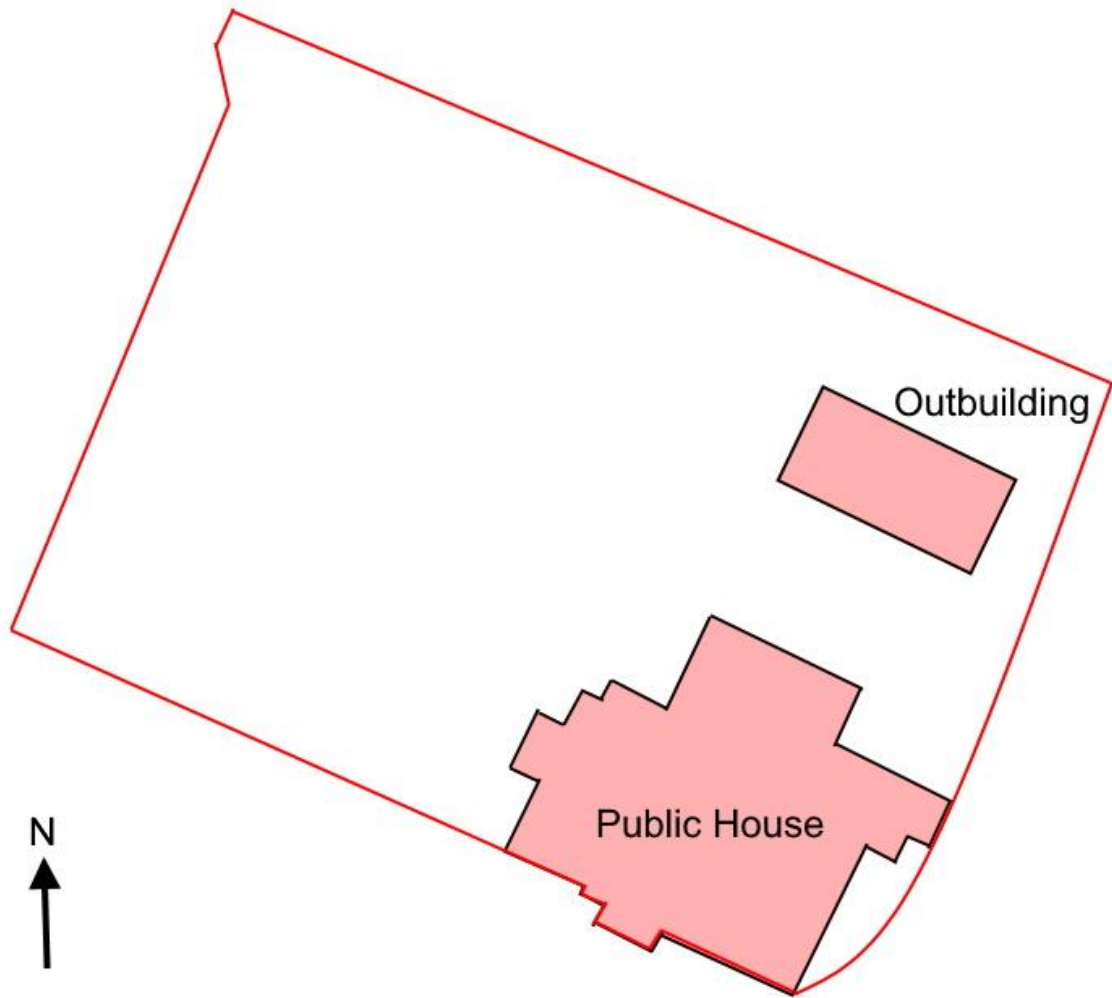
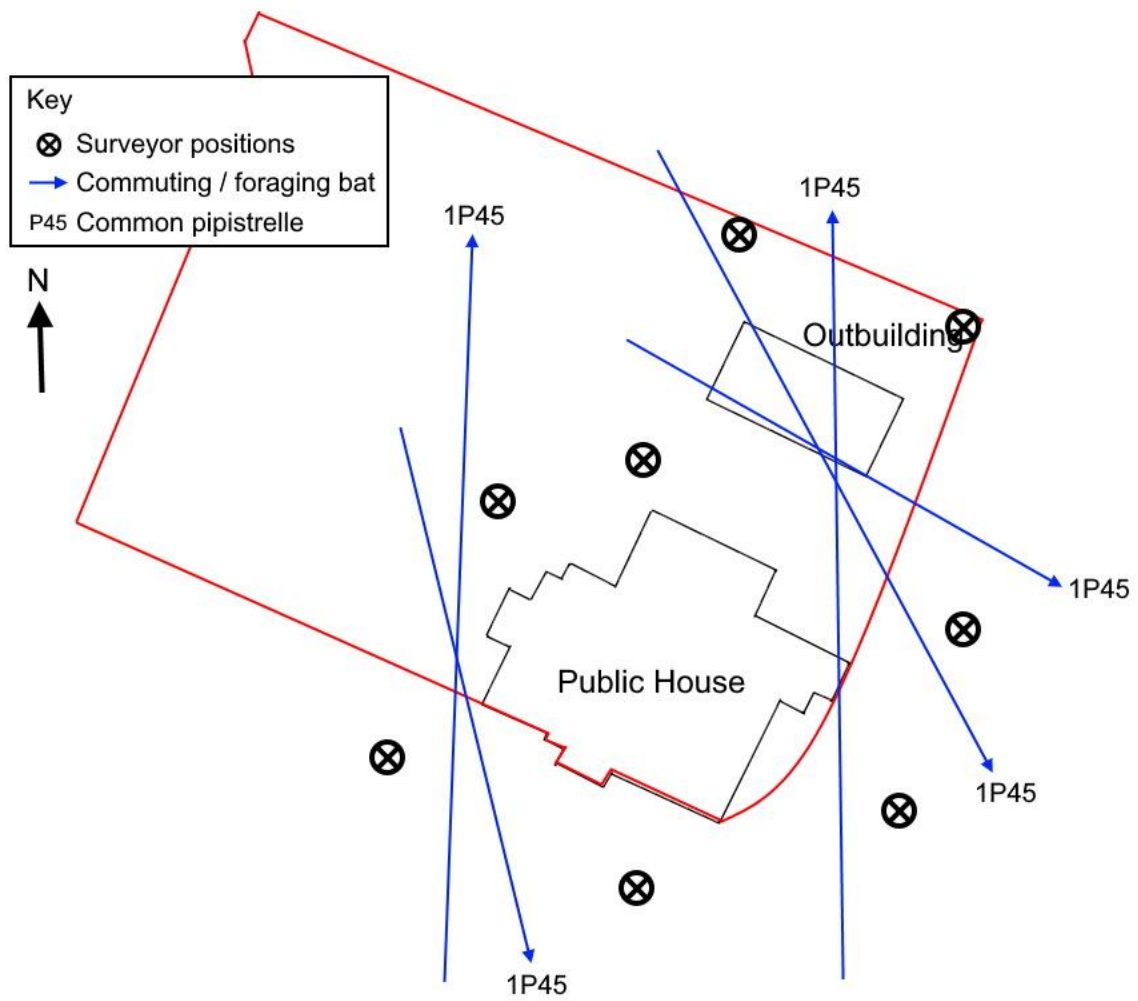


Figure 4. Plan showing bat activity (observations only) for the dusk emergence survey carried out on the 22nd June 2022. Arrows show direction of flight (where known).



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8.1 *Legal context*

All species of British bat are protected by the *Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European Protected Species listed on the *Conservation of Habitats & Species Regulations 2017*. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat (in such a way as to be likely to significantly affect: (i) the ability of a significant group of bats to survive, breed or rear/nurture their young; or (ii) the local distribution or abundance of the species concerned);
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present (bats tend to reuse the same roost).

Where it is necessary to carry out an action that could result in an offence under the *Conservation of Habitats & Species Regulations 2017* it is possible to apply for a European Protected Species (EPS) licence from Natural England. Licences are only issued where Natural England are satisfied that three derogation tests are met. These are: that the activity is for **imperative reasons of overriding public interest**; that there must be **no satisfactory alternative**; and that **favourable conservation status of the species must be maintained**.

Consideration of these three derogation tests was previously left to Natural England as part of their deliberations on whether to grant a licence for the development activity after a planning consent has been issued. However, the regulations now require that **all** public bodies, i.e. **Local Planning Authorities** (LPAs), have regard to the requirements of the European Habitats Directive when carrying out their functions. As a result, LPAs **must** address the three derogation tests when considering a planning application that could impact upon any European Protected Species (EPS).

8.2 *National planning context*

8.2.1 *General*

Surveys should be completed in line with Natural England's *Standing Advice for Local Authorities* (<http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/default.aspx>), which states:

- Natural England will not comment on applications that are submitted without the relevant protected species surveys if there are no other issues (*i.e.* in relation to SSSIs or landscape).
- Natural England will not comment on scoping surveys that recommend further surveys where these have not been undertaken and submitted with the scoping reports.

In addition to the above, *Section 40* of the *Natural Environment and Rural Communities Act (2006)* imposes a new duty on all public authorities to have regard for biodiversity.

8.2.2 *National Planning Policy Framework (NPPF)*

From the 20th July 2021, the Government published the revised National Planning Policy Framework. The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in June 2019. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- an economic objective;
- a social objective; and
- an environmental objective.

The environmental objective is to "*contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy*".

Planning policies and decisions should contribute to and enhance the natural and local environment by "*protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*" and "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*".

If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted.

Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

It states that "*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*".

It should be noted that the "*presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site*".

The NPPF also encourages "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*" and aims to "*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity*". This applies to non-statutory designated sites including Sites of Importance for Nature Conservation (SINCs) and equivalent county wildlife sites.

Early engagement with all necessary stakeholders, including expert bodies, is encouraged by the NPPF.

Bats use different roosting sites throughout the year according to their life cycle requirements.

Hibernation during the winter months requires roosting sites that are cool and humid. As conditions improve through the spring, bats become increasingly active and tend to use transitional roosting sites. During the summer months, females give birth in maternity roosts. Maternity roosts tend to be warm and temperature-stable, which aids rapid development of the young, which are weaned in late summer. In the autumn, adult bats congregate in mating roosts and also use transitional roosting sites. Autumn is the time when both adults and juveniles have to build up fat reserves in preparation for hibernation through the winter months.

Bats also use roosts during the night as feeding perches. Species that catch large prey items such as moths (*e.g.* brown long-eared bat) often enter buildings to hang up and eat their prey before emerging again to forage. Such feeding perches tend to be obvious from scatterings of bat droppings with moth wings, which the bats discard.

Bats are at their most vulnerable during the summer in their maternity roosts, when disturbance can jeopardise their breeding success. Bats give birth to only one pup per year and young do not breed until the second or third year after birth. This means that if maternity colonies are disturbed there can be serious implications for the conservation status of populations.

Bats are also vulnerable during the winter hibernation period, when disturbance can reduce their chance of survival through the winter at a time when food is in short supply.

This is why there are often only narrow timeframes for bat survey and mitigation work.

APPENDIX C: DUSK EMERGENCE SURVEY DATA

Date	22/06/2022		
Temperature	19°C at start and 17°C at end		
Weather	Dry with clear skies and a light air (Beaufort scale 1)		
Ecologists	Mr. B. Richards, Miss. K. Judson, Ms. H. Taylor-Boyd, Mr. D. Boyd, Ms. E. Thomas, Mr. H. Mulligan, Mr. M. Smith, Mr. H. Green		
Time	Number	Species	Observation
21:26	-	-	Ecologists commenced observations
21:46	-	-	Sunset
22:10	1	Common pipistrelle	Commuting from south to north over eastern elevation of main building
22:10	1	Common pipistrelle	Commuting from north-west to east over outbuilding
22:23	1	Common pipistrelle	Commuting from north to south over carpark
22:32	1	Common pipistrelle	Commuting from south to north over carpark
22:40	1	Common pipistrelle	Commuting from north to east between main building and outbuilding
23:20	-	-	Ecologists ceased observations

APPENDIX D: SEED MIX COMPOSITION

EH1	
Species	Common Name
Wild Flowers	
<i>Alliaria petiolate</i>	Garlic Mustard
<i>Arctium minus</i>	Lesser Burdock
<i>Centaurea nigra</i>	Common Knapweed
<i>Chaerophyllum temulum</i>	Rough Chervil
<i>Galium album</i>	Hedge Bedstraw
<i>Geum urbanum</i>	Wood Avens
<i>Lathyrus sylvestris</i>	Narrow-leaved Everlasting-pea
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Primula veris</i>	Cowslip
<i>Prunella vulgaris</i>	Selfheal
<i>Saponaria officinalis</i>	Soapwort
<i>Silene dioica</i>	Red Campion
<i>Silene latifolia</i>	White Campion
<i>Silene vulgaris</i>	Bladder Campion
<i>Torilis japonica</i>	Upright Hedge-parsley
Grasses	
<i>Agrostis capillaris</i>	Common Bent
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Brachypodium sylvaticum</i>	False Brome
<i>Cynosurus cristatus</i>	Crested Dogtail
<i>Deschampsia cespitosa</i>	Tufted Hair-grass
<i>Festuca rubra</i>	Slender-creeping Red-fescue
<i>Poa nemoralis</i>	Wood Meadow-grass
EL1	
Species	Common Name
Flowering Species	
<i>Galium verum</i>	Lady's Bedstraw
<i>Leontodon hispidus</i>	Rough Hawkbit
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Lotus corniculatus</i>	Birdsfoot Trefoil
<i>Primula veris</i>	Cowslip
<i>Prunella vulgaris</i>	Selfheal
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Trifolium pratense</i>	Wild Red Clover
Grasses	
<i>Agrostis capillaris</i>	Common Bent

<i>Cynosurus cristatus</i>	Crested Dogtail
<i>Festuca rubra</i>	Slender-creeping Red-fescue
<i>Phleum bertolonii</i>	Smaller Cat's-tail
EG1	
Species	Common Name
<i>Agrostis capillaris</i>	Common Bent
<i>Cynosurus cristatus</i>	Crested Dogtail
<i>Festuca rubra</i>	Slender-creeping Red-fescue
<i>Phleum bertolonii</i>	Smaller Cat's-tail
<i>Poa pratensis</i>	Smooth-stalked Meadow-grass