



Bat Survey Report



Waterhouse Building, Reading School

Ridge and Partners LLP

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1 Executive Summary

Ecology by Design Ltd were commissioned by Ridge and Partners LLP, to undertake a bat survey of the Waterhouse Building and adjoining wings at Reading School, Erleigh Road, Reading, RG1 5WL.

All surveys were conducted based on standard guidance for bat surveys (Collins, J. 2016).

A preliminary roost assessment was conducted on 3rd June 2019, which identified bat droppings in several of the loft spaces (Loft numbers 4, 6 and 7). Numerous potential access features and/or roosting features were noted on many exterior aspects of the building.

Emergence and re-entry surveys were recommended before works commence and were undertaken in July, August and September 2019.

Three occasional day roosts for bats were identified during the surveys including two solitary common pipistrelle (*Pipistrellus pipistrellus*) and a solitary unidentified species of bat, likely a species of pipistrelle. All of the roosts were located on the south east of the building under raised or missing tiles, although due to the size and complexity of the building the exact roost locations could not be confirmed.

The loft voids and roof structures are being retained with only minor spot repairs to the roof expected. As there is potential for a bat roost or roosts to be destroyed and to reduce the risk of disturbing bats during the works, roof repair works to the south east of the building should be completed using a precautionary method of works and under ecological supervision. Should bats be found during the works or if significant repairs are required then the works must be registered under a Bat Mitigation Licence. Details of the working strategy are outlined in Section 5 of this report.

2 Introduction

2.1 Background and Survey Objectives

Ecology by Design Ltd were commissioned by Ridge and Partners LLP to undertake a bat survey of the Waterhouse Building at Reading School, Erleigh Road, Reading, RG1 5WL (SU 72766 72698).

The objectives of this report are:

- Identify any potentially significant ecological constraints that may affect the proposed works;
- Identify the species of bat using the surveyed area;
- Assess the levels of activity of bats utilising the site; and
- Inform mitigation measures required to ensure the favourable conservation status of bats is maintained.

2.2 Site Description

The Waterhouse Building is part of Reading School and is situated directly adjacent to the school playing field to the north with further school buildings to the south and west and houses to the east. The wider landscape is dominated by residential development to the north, east and south with a hospital to the west. The River Kennet is situated approximately 750m to the north.

2.3 Proposed Works

Ridge and Partners LLP, on behalf of their client, require Listed Building Consent for external repair works to the roof of the Waterhouse Building at Reading School. The exact extent of the works cannot be confirmed until the initial roof inspection (which requires listed building consent) has taken place and could comprise spot repairs or extend to replacing larger areas of damaged roof.

2.4 Limitations/ Constraints

The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of the surveys carried out between June and September 2019.

One of the lofts was not accessible at the time of the survey and the central loft was only accessible via a central beam running through the loft therefore, it was not possible to fully access all areas. However, these are not deemed to pose significant constraints.

The size, height and complexity of the building made the emergence surveys difficult, however all bat activity and hence roost locations are identified as accurately as possible to within a small area of 5-10 tiles. Inspection at height once listed building consent is received will enable the access features to be narrowed down to the exact feature.

Any appreciable delay in making reference to this report may necessitate a re-survey.

Weather conditions were considered suitable to conduct the surveys.

3 Methods

3.1 Desk Study

A search was made of Magic.gov.uk for European protected species mitigation (EPSM) licences granted within 2km. This dataset was last updated on 15 May 2019.

3.2 Preliminary Roost Assessment

Ecology by Design ecologists Kate Philpot and Emily Bartlett conducted a preliminary roost assessment of the buildings on the 3rd June 2019. The assessment was based on the guidance included Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, J. (ed.) 2016).

The building was inspected for potential bat use by examining internal structures for active roosts or roosting sites and suitable entry and exit points on the outside of the building, and by searching for other evidence of bat activity such as droppings, smells, sounds, carcasses or food remains. A high-powered torch was used to illuminate the dark recesses inside the building.

Equipment used included:

- LEDLenser Lamp
- 10x42mm close focusing binoculars
- 3.8m telescopic ladder
- Clulite Clu-Briter

During the survey the building was thoroughly inspected including:

- Roof structure - gaps in tiles, under and over wall plates where accessible, gaps in wooden beam structure, between roof and beams.
- Walls - gaps in walls, between beams and the walls.

Evidence searched for included:

- The presence of free hanging bats and bats within gaps, crevices.
- Bat droppings, urine stains, rub marks, scratch marks, in wall holes, timber joints, windows, rafters and beams and across the floor.
- Feeding remains scattered around the building, on wooden beams, along the ridgeline and on top of stored materials.

3.3 Roost Surveys

The surveys were undertaken by Ecology by Design ecologists Kate Philpot, Ben Gardner (2015-17038-CLS-CLS), James Howsam, Emily Power (2017-32544-CLS-CLS) and Beth England assisted by Miguel Alvarez, Dr Amanda Lloyd (2016-23252-CLS-CLS), Karl Lofthouse (2015-15163-CLS-CLS), Steve Allen (2015-11941-CLS-CLS), Raven Herald, , Jan-Piet Stuursma, Stacey Waring, Glyn Brown and Tony Wells. The bat emergence/re-entry surveys were conducted on 17th July, 18th July, 8th August, 9th September, 25th September and 26th September 2019.

The surveys were based on the guidance included in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, J. (ed.) 2016). Bat Detectors utilized included Elekon Batlogger M detectors to record any bats emerging from or re-entering the building.

The emergence surveys commenced approximately 15 minutes before sunset and lasted up to 2 hours after sunset. The re-entry surveys commenced 1.5 hours before sunrise and finished at sunrise.

Fourteen surveyor locations around the building were identified (see map in Appendix 2) to cover all potential roosting features. A total of six visits were undertaken with seven surveyors to ensure each location was surveyed three times.

3.4 Site/ Species Valuation for Roosting Bats

Based upon the framework for valuing bats in Ecological Impact Assessment designed by Wray *et al.* (2010), the sites' roosts are categorised and valued from 'District, Local or Parish' to 'County' level. These different bat roosts can be assigned to a geographic frame of reference as detailed in Appendix 3. The valuation of roosts reflects the importance of bats.

4 Results

4.1 Desk Study

Nine granted European Protected Species Mitigation Licences for bats have been granted within 2km of the site, as detailed in Table 1 below.

Table 1. Records of EPSM licences for bats within 2km of the site (MAGIC)

Species	Year	Roost Type	Distance (km)	Direction
Common pipistrelle, soprano pipistrelle	2014	Non-maternity	0.4	S
Common pipistrelle	2016	Non-maternity	0.7	W
Common pipistrelle	2010	Non-maternity	0.7	SE
Common pipistrelle and brown long-eared bat	2010	Maternity	1.2	SE
Common pipistrelle	2013	Non-maternity	1.3	NW
Common pipistrelle, soprano pipistrelle	2014	Non-maternity	1.4	SE
Common pipistrelle, soprano pipistrelle	2012	Non-maternity	1.4	SE
Daubenton's bat	2017	Non-maternity	1.5	NW
Common pipistrelle	2017	Non-maternity	1.8	W

4.2 Preliminary Roost Assessment

4.2.1 External Inspection

A very large school building constructed in the 1870's of red brick with no cavity wall. The wings of the building are two to three storeys high while the central section (loft number 4 on map in Appendix 2) is the equivalent of a four-storey structure. There is a very complex roof structure with multiple pitched roofs of clay tiles and dormer windows to the north and south. There are multiple gable ends to the north and south along with gable ends in the east and west. There are sixteen chimneys on the roof structure along with a tower in the north with a conical clay tiled roof and a turret in the centre with hanging tiles around the base and a conical lead clad roof. There is some lead flashing around the base of the chimneys

and the turret (see Photos 1 to 5 in Appendix 1). There are no soffits or fascia boards on the building, which is generally in good condition and well maintained, albeit the roof structure requires patch repair.

A number of potential access features and/or roosting features were noted on all elevations of the building including:

- A gap at the apex of the gable end to the east and west;
- Missing or raised roof tiles to the north and south;
- Missing or raised hanging tiles to the north and south;
- Air vents on several of the chimneys;
- An opening into a loft void with no mesh to south (loft 5 in Appendix 2); and
- A gap around the access hatch on the north elevation of loft void number 4 (see Appendix 2).

4.2.2 Internal Inspection

A total of thirteen loft spaces are present within the main Waterhouse Building structure which are subject to repair works. One loft space (loft 13) was inaccessible during the survey but the remaining twelve loft spaces were fully inspected.

Lofts 1 to 3 and 5 to 12 (see map in Appendix 2) are all of a similar construction with fibreglass wool insulation lining the floor with some boards to allow access around the loft. There is tightly fitted sarking boards and a layer of traditional woven horsehair insulation between the sarking and tiles. There are exposed rafters and roof beams within the lofts voids which are mostly separated by single skin red brick or lath and plaster walls. Loft 4 forms part of the central structure which has a very large loft void with many exposed beams and rafters, there were a few scattered old bat droppings. The loft also has tightly fitted sarking over woven horsehair insulation. The floor of the loft is a pitched structure with fibreglass wool insulation. In the centre of the loft is the base of the central roof turret which is formed of single skin wooden boards (see Photos 10 to 17 in Appendix 1).

Loft void 1 had a gap at the apex of the gable end to the east with evidence of birds within the loft. There is access between loft 1 and loft 2. Loft 2 had light ingress however at this location was mesh. Loft 3 had no light ingress and mouse droppings were recorded in the loft void which was relatively clean. Loft four had significant amounts of bird droppings along with disused bird nests and dead pigeons. There were a few scattered bat droppings around the loft and a gap was recorded around an access hatch to the north. Loft 5 had a hole at the apex to the south with no mesh and a rook's nests was noted within the loft. There is access between loft 5 and loft 6. Loft 6 had a small door with light ingress around the edge and a small cluster of less than twenty bat droppings. Loft 7 had some light ingress with a couple of bat droppings characteristic of pipistrelle bat species. Loft 8 had boarding over the gable ends with four holes in which

were meshed and was well sealed apart from an air vent to the east which is thought to adjoin a chimney breast. Lots of birds dropping were noted within the loft void. Loft 9 had a small door with light ingress. Lofts 10 and 11 had no light ingress and were well sealed. Loft 11 was of a more modern construction due to repairs following a fire. Loft 12 had gaps at the eaves, a decorative ventilation hole and lots of pigeon droppings. None of the loft voids are in active use for storage or other purposes and appeared to have very little disturbance. No bats or evidence of bats was recorded within lofts 1, 2, 3, 5, 8, 9, 10, 11 or 12. Bat droppings were recorded within lofts 4, 6 and 7 although these appear to be old.

4.3 Roost Surveys

The survey timings and weather conditions for the dusk emergence and pre-dawn re-entry surveys are detailed in Table 2 below.

Table 2. Survey weather conditions

Date	Sunset/Sunrise	Start	End	Weather
17 th July 2019	21:13	20:54	22:43	23–20°C, Cloud ¹ 7/8, 1 Beaufort ²
18 th July 2019	05:08	03:32	05:08	18–18°C, Cloud 8/8, 0 Beaufort
8 th August 2019	20:40	20:25	22:10	21–20°C, Cloud 7/8, 1 Beaufort
9 th September 2019	19:33	19:18	21:03	13–12°C, Cloud 8/8, 1 Beaufort
25 th September 2019	18:56	18:40	20:26	21–20°C, Cloud 7/8, 1 Beaufort
26 th September 2019	06:56	05:26	06:56	16–17°C, Cloud 8/8, 2 Beaufort

4.3.1 Dusk emergence 17th July 2019

No bats were recorded emerging from the building during this bat survey. Low level bat activity was recorded during the survey including continuous foraging common pipistrelle (*Pipistrellus pipistrellus*) between 21:25 and 21:50, two soprano pipistrelle (*Pipistrellus pygmaeus*) passes and two noctule (*Nyctalus noctula*) passes.

¹ Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

² The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

4.3.2 Dawn re-entry 18th July 2019

No bats were recorded re-entering the building during the survey. Bat activity levels were generally low with most surveyors recording only a few passes during the survey including four soprano pipistrelle passes with social calls, three common pipistrelle and two noctule passes. At one surveyor location common pipistrelle foraging activity was recorded constantly between 3:35 and 4:23.

4.3.3 Dusk emergence 8th August 2019

No bats were recorded emerging from the building during the survey. Moderate levels of bat activity were recorded including common pipistrelle foraging continuously from 21:11 to 22:07. Three passes of foraging soprano pipistrelle were also recorded along with one foraging noctule pass.

4.3.4 Dusk emergence 9th September 2019

Two common pipistrelle bats were recorded emerging from the south east of the building, one from area A and one from area B (see map in Appendix 2 and Photos 6, 7 and 9 in Appendix 1). Although the exact roosting features could not be confirmed, due to the size and complexity of the building, there are multiple lifted and missing tiles in these areas. Foraging common pipistrelle activity was recorded between 19:56 and 20:05 along with one soprano pipistrelle pass and three noctule passes.

4.3.5 Dusk emergence 25th September 2019

A single bat was recorded emerging from the south east of the building at area C however, no bat calls were detected therefore it was not possible to identify the species of bat. There are a number of lifted hanging tiles in this area (see Photo 8 in Appendix 1) however the exact roosting feature could not be confirmed. Moderate levels of bat activity were recorded with constant foraging common pipistrelle (between 19:11 and 19:53) and soprano pipistrelle (between 19:26 and 20:23) activity. Two noctule bat passes were also noted during the survey.

4.3.6 Dawn re-entry 26th September 2019

No bats were recorded re-entering the building during the survey. Moderate levels of bat activity were recorded during the dawn survey with one commuting noctule, two commuting soprano pipistrelle passes and constant foraging activity from common pipistrelle from 6:15 to 6:42.

4.4 Roost Assessment and Valuation

Table 3 details the assessment of each identified roost on the site, taking into account associated roosts on the same site and categorised to determine their geographic value (scores based on Appendix 3).

Table 3. Scoring Values for potential bat roosts

Building	Location	Species	Species Value	Approx. number of bats	Roosts/ potential roosts	Geographic Frame of Reference
Waterhouse Building	South east of building, probably under lifted tile near ridge	Common pipistrelle	Common	1	Occasional day roost	'District, local or parish'
Waterhouse Building	South east of building, probably under lifted tile to east of chimney	Common pipistrelle	Common	1	Occasional day roost	'District, local or parish'
Waterhouse Building	South east of building, probably under lifted tile at base of chimney	Unidentified (likely pipistrelle)	N/A	1	Occasional day roost	Potentially up to 'County'

Two solitary common pipistrelle bats were recorded emerging from separate locations on the south east of the building on the 9th September, one emerged from near the ridge of the roof (area A on Map in Appendix 2) and another emerged to the east of the chimney (area B on Map in Appendix 2). A further unidentified bat emerged from the base of the chimney on the south east of the building (area C on Map in Appendix 2) on the 25th September. The bats emerged from under raised or missing tiles in these areas however, due to the size and complexity of the building along with lighting around the site, it was not possible to confirm the exact roosting features during the surveys.

The two common pipistrelle occasional day roost are of importance at a 'District, local or parish' level. The occasional day roost for the unidentified bat could be of importance at a 'County' level if the species of bat is a rarer species of bat (Wray *et al.*, 2010), but this is unclear and based on the species recorded throughout the surveys the bat is likely to also be a pipistrelle.

Bat droppings were recorded within loft voids 4, 6 and 7. The droppings appeared old and, due to conditions within the loft voids, could have been in situ for some time. It is considered likely that these droppings are from historic exploratory flight.

Under UK legislation (refer to Section 6), bats and their roosts are protected from damage, destruction or disturbance.

5 Potential Impacts and Recommendations

The repair works to the roof on the south east of the building are expected to involve minor spot repair works to replace tiles and should therefore be completed using a precautionary method of works and under the supervision of a licensed ecologist. It is unclear if any repairs are required to the areas where bats were noted, this will be confirmed once the roof is inspected at height and listed building consent is granted. Should any bats be found during any of the roof repairs, all works in this area should cease and a European Protected Species Mitigation Licence will need to be applied for from Natural England. If following the initial inspection, it is established that the repair works are of a larger scale than anticipated then the works will need registered under a Bat Mitigation Licence. Due to the timescales involved in the repair work the more sensitive areas will be inspected first allowing enough time in the work programme should bats pose a larger constraint and a licence be required.

Works to the central section and west wing of the building can proceed without ecological supervision as no bat roosts were identified in these sections of the building.

5.1 Impacts

5.1.1 Impact in the Absence of Mitigation

In the absence of mitigation, the roof repair works could result in the destruction of up to three separate occasional day roosts, two roosts for small numbers of common pipistrelle and a roost of an unidentified species of bat on the south east of the building. These roosts are considered to be of 'District, local or parish' while the occasional day roost of the unidentified bat species could be of importance at a 'County' level but most likely is also a single pipistrelle.

5.1.2 Short-term impacts: Disturbance

Without implementation of mitigation, general short-term impacts on bats by this development could result in:

- Disturbance from works such as noise, light and impeding flight paths;
- Increase in human presence; and
- Changes in the roof design.

5.1.3 Long-term impacts: Roost Loss

The roof repair works could result in the loss of three occasional day roosts which are currently used by individual common pipistrelle bats and a solitary unidentified bat.

5.1.4 Post-development interference impacts

The building is currently in use as part of the school and its use will continue unchanged following the roof repairs therefore, it is not anticipated that levels of lighting or human activity will increase.

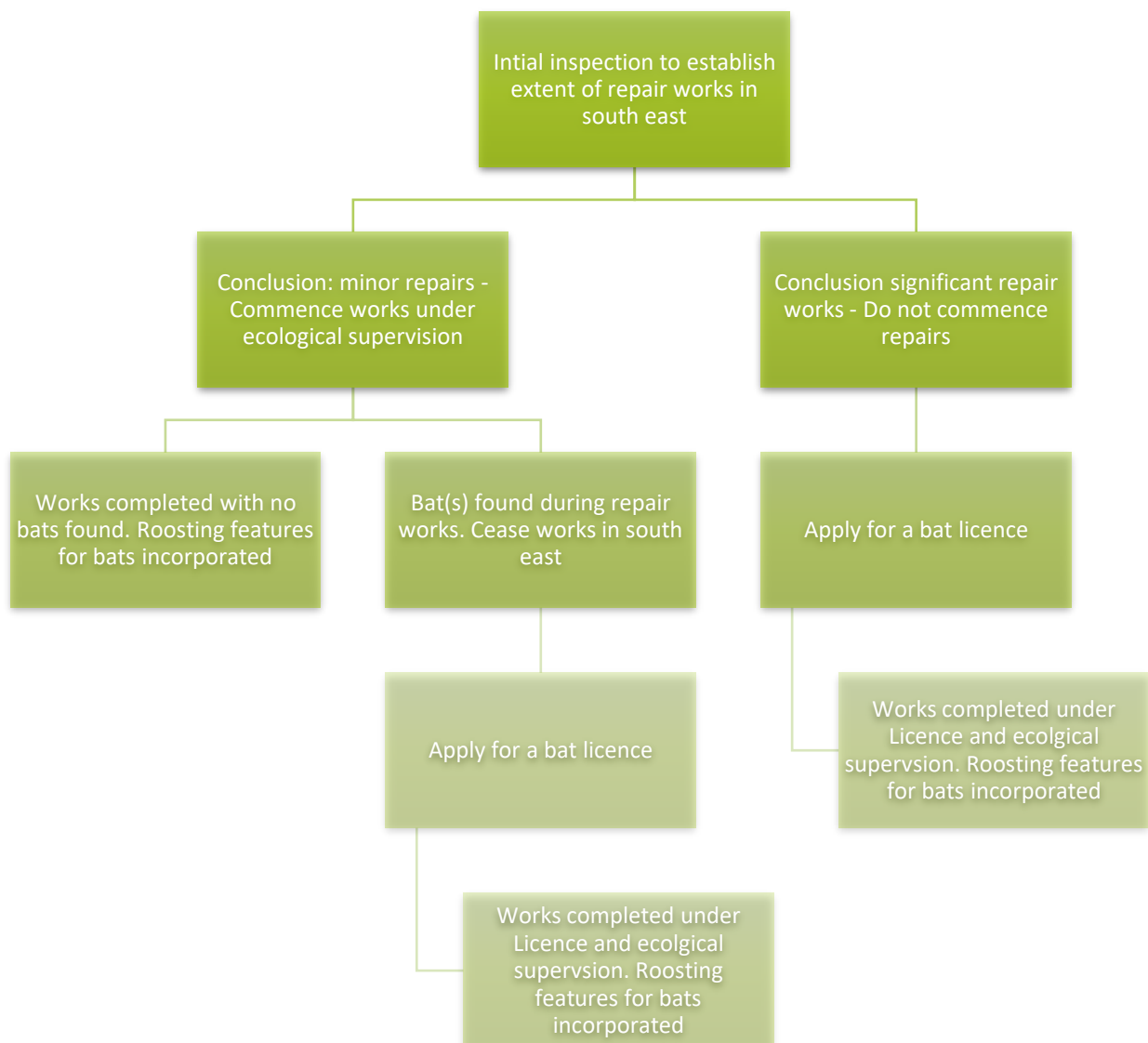
5.1.5 Predicted scale of impact

It is considered that, in the long-term, the nature and magnitude of the potential loss of roosting opportunities arising from the works to the building would be a low, negative impact of 'District, local or parish'.

5.2 Outline of Strategy

Figure 1 below outlines the strategy for repair works to the roof in the south east.

Figure 1 Outline of Strategy



5.3 Precautionary Method of Works

As the exact nature and scale of the repairs, cannot be fully established until an initial inspection is undertaken by the roof repair contractors at height, works should be undertaken using a precautionary method of works and under an ecological watching brief. The following steps will be undertaken:

- Prior to works commencing, all staff on site will be made aware of this mitigation, and of the level of legal protection afforded to bats through provision of an on-site 'Toolbox Talk';
- Scaffolding/ access at height will be erected so that it is possible to inspect features as thoroughly as possible.
- Upon conclusion of the inspection the ecologist will provide a watching brief during works to the pertinent aspects of the building.
- If any bats are found, works on this section of the roof will cease and a Bat Mitigation Licence will be applied for.
- Upon completion of these activities the remaining works can progress without the ecologist.

5.4 Roost Creation

5.4.1 Raised Tiles

Ten tiles will be installed to create roosts for crevice dwelling bat species, such as the common pipistrelle. These raised tiles will create a number of potential crevice roosts on the exterior of the roof structure by using mortar at the bottom of the tile to create a gap of 20mm under the tile. Six of the access tiles will be created in the area in the south east of the building where roosts have been identified and will compensate for the loss of potential roosts. An access tile will be created on each elevation of the three roof structures (lofts 6, 7 and 8). A further four tiles access features will be created to provide additional roosting opportunities for bats as an enhancement.

Should any areas of the horsehair insulation require replacing then bitumen 1F roofing membrane should be used to avoid causing harm to bats. At no time should modern membranes be utilised.

5.5 Site Design

5.5.1 Sensitive use of lighting

Increased levels of artificial light can cause disturbance to bats. Though several bat species can take advantage of artificial lighting systems for foraging, feeding off the insects they attract, other species avoid them as foraging within an illuminated area increases the risk of predation by nocturnal birds of prey or even domestic cats. If lighting is intensive and widespread, particularly lighting from lamps, which emit UV light (such as mercury vapour), it can deter some bats from utilising the site and in some instances can

act as a barrier across commuting lines. Research has also shown that certain types of artificial lighting (namely mercury vapour lamps) have been proven to disturb the emergence patterns of bats when they are placed within the vicinity of entrances to a bat roost.

It is not anticipated that any new lighting will be installed following the repair works however, should lighting be altered or installed it should be implemented sensitively. Lighting should be directional so that surrounding vegetation and potential and existing bat roosts within the roof structure are not affected. Lighting should be sensor activated where possible. Only the minimum light levels required to meet health and safety standards will be used within the works area.

5.6 Bat Mitigation Licence

Should a bat or bats be found during the repair works or should the works to the south east section be identified as requiring significant repairs, then a Bat Mitigation Licence will be required before the works can be undertaken. Bats and their roost sites are fully protected by UK and European law (see Section 6) and the destruction, modification or disturbance of the bat roosts would require a Bat Mitigation Licence issued by Natural England to be able to undertake works that would normally be considered illegal.

Once listed building consent is issued a Bat Mitigation Licence from Natural England can be applied for. The licence application includes an application form, method statement and associated appendices produced by an ecologist. A licence once submitted takes a minimum of 35 working days to be considered by Natural England (often longer), at which time, if accepted a licence is issued enabling work to proceed following an agreed method.

The Local Authority must consider the likelihood of a Natural England licence being granted and in doing so consider the three tests. The Local Authority will consider the 'Imperative Reasons of over-riding public interest' (IROPI), the 'no satisfactory alternative' and the 'favourable conservation status test' (see Section 6). The first two are likely to be considered by the planning officer and the third by the local authority ecologist, who must satisfy themselves that "the action will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".

Once the licence has been approved by Natural England the works can proceed following the method statement and under an ecological watching brief.

- Prior to works commencing, all staff on site will be made aware of the mitigation, and of the level of legal protection afforded to bats through provision of an on-site 'Toolbox Talk';
- The licensed ecologist will inspect the roof and any potential access features;
- Roost features and the surrounding area will be soft stripped under ecological supervision; and
- The licensed ecologist will advise on the creation of new roosting features.

5.7 Monitoring

No monitoring is required for the loss of three occasional day roosts (Mitchell-Jones, 2004).

5.8 Conclusion

Adopting the measures outlined above will ensure the favourable conservation status of bats is maintained within the site and local area.

6 Legislation and Policy

6.1 Bats

Bats and their roost sites are protected by UK and European legislation.

Bats and their roost sites are protected by UK and European legislation.

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

Additionally, the Conservation of Habitats and Species Regulations 2017 make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding site or a resting place of a bat; and
- Keep, transport, sell or exchange or offer for sale or exchange alive or dead bat or any part of a bat.

6.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was updated in February 2019 thereby replacing the older version of July 2018. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:

Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and

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.

When determining planning applications, local planning authorities should apply the following principles:

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. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

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; and

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.

The following should be given the same protection as habitats sites:

- *potential Special Protection Areas and possible Special Areas of Conservation;*
- *listed or proposed Ramsar sites; and*
- *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

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.

6.3 Local Planning Policy

The following relevant policy is contained within the Reading Borough Local Development Framework: Core Strategy which was adopted in January 2008.

CS36: Biodiversity and Geology

- Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.
- On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that: -

- The need for development clearly outweighs the need to protect the value of the site; and
- Appropriate compensation, impact minimisation, mitigation and compensation are provided.

7 References

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

Mitchell-Jones, A. J. (2004) *Bat Mitigation Guidelines* version January 2004, English Nature, Peterborough.

Reading Borough Council (2008) *Reading Borough Local Development Framework: Core Strategy*.

Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2010) *Valuing Bats in Ecological Impact Assessment*, In Practice, December, pp.23-26.

Appendix 1 - Photographs



Photo 1 – Northern elevation of the Waterhouse Building



Photo 2 – Southern elevation of the Waterhouse Building



Photo 3 – Central tower with multiple lifted/missing hanging tiles



Photo 4 – Northern elevation of the Waterhouse Building



Photo 5 – South west elevation of the Waterhouse Building



Photo 6 – Locations of potential roosts on southern elevation



Photo 7 – Potential bat roosting location A



Photo 8 – Potential bat roosting location C



Photo 9 – Potential bat roosting location B

	
Photo 10 – Internal photo of loft void	Photo 11 - Internal photo of loft void showing hole into loft space and evidence of bird nesting
	
Photo 12 – Bat droppings recorded in loft void	Photo 13 – Internal photo of loft void
	
Photo 14 – Access hatch in Loft 4	Photo 15 - Internal photo of loft void



Photo 16 - Internal photo of loft void



Photo 17 – Internal photo of central loft void
(Loft 4)

Appendix 2 – Survey Plan

Next page



Legend

- Bat emergence location
- Surveyor location

Project: Waterhouse
Building, Reading
School

Client: Ridge and Partners
LLP

**Drawing
Title:** Bat Survey Plan



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Appendix 3 – Valuing Bat Roosts (Wray *et al.* 2010)

Geographic frame of reference	Roost types
District, Local or Parish	Feeding perches (common species) Individual bats (common species) Small numbers of non-breeding bats (common species) Mating sites (common species)
County	Maternity sites (common species) Small numbers of hibernating bats (common and rarer species) Feeding perches (rarer/rarest species) Individual bats (rarer/rarest species) Small numbers of non-breeding bats (rarer/rarest species)
Regional	Mating sites (rarer/rarest species) including well- used swarming sites Maternity sites (rarer species) Hibernation sites (rarest species) Significant hibernation sites for rarer/rarest species or all species assemblages
National/UK	Maternity sites (rarest species) Sites meeting SSSI guidelines
International	SAC sites

Appendix 4 – Categorising Bats by Distribution and Rarity (Wray *et al.* 2010)

Rarity within range	In England
Rarest (population under 10,000)	Greater horseshoe, Bechstein's, alcahoh, greater mouse-eared, barbastelle and grey long- eared
Rarer (population 10,000 – 100,000)	lesser horseshoe, whiskered, Brandt's, Daubenton's, Natterer's, Leisler's, Noctule, Nathusius' pipistrelle and serotine
Common (population over 100,000)	common pipistrelle, soprano pipistrelle and brown long- eared

Appendix 5 – Precautionary Method of Works Map

See next page.



Legend

- Sensitive area of works
- Bat emergence location

Project: Waterhouse Building, Reading School

Client: Ridge and Partners LLP

Drawing Title: Precautionary Method of Works Map



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