



173-175 Friar St &
27-32 Market Place,
Reading

Bat Survey Report

Prepared by
CSA Environmental

on behalf of
Savills

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EXECUTIVE SUMMARY

Re-development is proposed of 173-175 Friar St and 27-32 Market Place, Reading, for which planning permission will be sought.

CSA Environmental was instructed by Savills to undertake inspections and surveys of the buildings on-site in order to assess their potential to support roosting bats, and to confirm the presence or likely absence of any bat roosts.

Structures at 173-175 Friar Street have 'Negligible' potential to support roosting bats and therefore proposed works can proceed in this location without further safeguards in respect of bats.

Structures at 27-32 Market Place were found to have 'Low' given its construction but being located in an urbanised location. However, following precautionary further survey work confirmed the presence of a minimum of seven individual common pipistrelle bats roosting. No roosts of greater importance (e.g. maternity) were identified.

The proposed works would result in the loss of a single individual common pipistrelle roost and potential disturbance of a further six common pipistrelle roosts within the roof of 27-32 Market Place. As such, a mitigation strategy is set out herein, which would be implemented under the auspices of a suitable licencing regime administered by Natural England once the necessary permissions are obtained.

Recommendations have also been provided for ecological enhancement with respect to bats that would be delivered as part of the proposed development.

1.0 INTRODUCTION

- 1.1 This report has been prepared by CSA Environmental on behalf of Savills. It sets out the findings of bat survey work undertaken at 173-175 Friar St and 27-32 Market Place, Reading (hereafter referred to as 'the Site').
- 1.2 The Site is located around central grid reference SU 71670 73504, in the centre of Reading. The Site comprises a complex of buildings previously under retail and office uses.
- 1.3 Redevelopment of the Site for residential, retail and leisure uses. An initial inspection of the buildings at the Site was carried out in November 2017 and updated in August. Further nocturnal survey work was carried out between May and July 2018, updated in August and September 2020.
- 1.4 The purpose of these surveys was to confirm the presence or likely absence of roosting bats associated with the structures at the site, characterise the type and importance of any roosts, and set out any mitigation necessary for the works to be carried out lawfully and in line with planning policy.
- 1.5 The content of this report has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2015; 2016).

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

2.1 All species of British bats are legally protected under part 3 (section 41) of the Conservation of Habitats and Species Regulations 2010. These Regulations make it an offence to:

- Deliberately capture, injure, kill or capture a bat;
- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young;
- Damage or destroy a breeding site or resting place used by bats; or
- Be in possession of, transport, sell, exchange or offer to sell/exchange a bat (dead or alive) or any part of a bat.

2.2 All bats and their roosts in England, Scotland and Wales were originally protected under the Wildlife & Countryside Act 1981. Subsequent amendments to the legislation for England and Wales has removed bats from most of the provisions of the Act, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place that a bat uses for shelter or protection.

2.3 Disturbance of bats is covered by both the 2010 Regulations and the 1981 Act, with the magnitude of disturbance critical. Disturbance that impairs survival or successful reproduction would be covered by the Regulations with no legal defence existing. Less significant acts of disturbance may only be covered by the Wildlife & Countryside Act 1981, which includes some legal defences that may be applied in certain circumstances.

2.4 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Conservation of Habitats and Species Regulations the offence of damaging or destroying a breeding site or resting place of bats is not subject to any legal defence, i.e. an offence will have been committed even if the damage or destruction occurs accidentally.

Licensing

2.5 Where development is proposed that would result in an offence under the Habitats and Species Regulations a European Protected Species (EPS) licence needs to be granted by Natural England to permit an act that would otherwise be unlawful. This provides for a specific derogation from the legislation, to prevent a legal infringement occurring. To obtain an EPS licence for development it must be demonstrated that the purpose of the act to be licensed is for:

- *“preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53(2)(e)).*

2.6 In addition Natural England will not grant an EPS licence unless they are satisfied that:

- *“There is no satisfactory alternative” (Regulation 53(9)(a)); and*
- *“The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range” (Regulation 53(9)(b)).*

3.0 METHODOLOGY

Desktop study

- 3.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) data base was interrogated with respect of local records of European Protected Species Licences (bats), habitats and designated sites within the local area salient to the bat survey work carried out.

Field Survey

Building Inspection

- 3.2 A detailed external and internal inspection of all buildings on-site was completed 01 and 14 November 2017 by Alexandra Cole ACIEEM 2016-25563-CLS-CLS and Tom Clemence ACIEEM 2017-28795-CLS-CLS. This was updated on 25 August 2020 by Jamie Woollam MCIEEM 2015-10908-CLS-CLS. The surveys involved the use of high-powered torches, binoculars and a ladder as appropriate, with the aim of identifying the potential for these structures to support roosting bats.
- 3.3 External inspection focused on identifying potential bat access points to the interior of each structure and any external features that could potentially be used by crevice-dwelling species. Particular attention was paid to window sills, window panes, weatherboarding, and pitch/ridge tiles; as evidence is typically found in these locations.
- 3.4 Internal inspection involved a systematic search for bats or any evidence of their activity, in particular droppings and/or feeding remains.
- 3.5 Following inspection, the structures were categorised in terms of their bat roost potential ('High', 'Moderate', 'Low' or 'Negligible'), based on the criteria set out in the Bat Conservation Trust (BCT) guidelines (2016).
- 3.6 Note that a structure's bat roost potential is influenced by its age and construction, thermal stability, lighting, levels of human activity and proximity to foraging habitat - particularly woodland, parkland and wetland. The degree of bat roost potential is used to determine whether or not further nocturnal survey(s) would be appropriate, and if so, the level of survey effort required.

Limitations

- 3.7 The basement of 173-175 Friar Street was not accessible at the time of surveys due to the presence of asbestos. A small structure/room located on the roof of the building was not accessible via the loft hatch on the third floor or from the roof due to access points being blocked off. The exterior of this structure/room was well sealed with a flat bitumen felt roof

which did not appear to have a void. Given the suitability of the rest of the building it is not considered that a lack of access to these areas would severely impact the outcome of the survey.

- 3.8 The first, second and third floors and the roof void of 32 Market Place were not accessible at the time of surveys due to access points being blocked off. However, the ground floor was inspected internally and the building was accessed from the exterior for inspection. Given the suitability of the rest of the building it is not considered that a lack of access to these areas would severely impact the outcome of the survey.
- 3.9 Prior to the survey, evidence of bats may have been removed/obscured as pigeons and associated guano had recently been cleared from the roof void of 29-31 Market Place with chicken wire placed on windows to exclude pigeons. Further survey recommendations have been made on the basis of the suitability of this building for bats rather the presence/absence of bat evidence (which may or may not have resulted from recent pigeon removal).

Dusk Emergence/Pre-dawn Re-entry Survey

- 3.10 Two dusk emergence (21 May and 03 July 2018) and a single pre-dawn re-entry (12 June 2018) surveys were undertaken to confirm the presence/likely absence of roosting bats in association with 27-32 Market Place. These surveys were updated again on 26 August 2020 (pre-dawn re-entry), 07 September 2020 (emergence) and 28 September 2020 (emergence).
- 3.11 The positions of the surveyors during the survey are illustrated on the Bat Emergence Re-entry Survey Plan in Appendix A.
- 3.12 The dusk emergence/pre-dawn re-entry surveys were undertaken for approximately 1.5 hours following British Summer Time (BST) sunset and 1.5 hours prior to BST sunrise respectively, with due consideration for the BCT good practice guidelines. The surveys were carried out by Alexandra Cole, Tom Clemence, Jamie Woollam and Kate Kibble in suitable weather conditions, as summarised in the table in Appendix B.
- 3.13 During the survey, the surveyors watched for any bats entering parts of the building or using key flight lines, equipped with Elekon Batlogger M bat detectors. A note was made of all bat passes, along with the time, species and any information regarding behaviour, including direction of flight, and activity e.g. foraging/commuting.

Limitations

- 3.14 Due to the location of the building and its complex roof structure, visibility of the roof and associated potential roosting locations was limited from Market Street. However, the rear of the building was surveyed from an adjacent rooftop which gave a comprehensive view of the roof structure including that of adjacent buildings. It is therefore

considered that despite the limited view from Market Street, bat activity, and in particular emergence/re-entry behaviour will have been adequately observed during the survey.

Assessment

- 3.15 Any bat roosts identified during the surveys have been evaluated in line with Wray *et al.* (2010), which provides guidance on assessing the conservation value of bat roosts according to type and species. This guidance is summarised below in Tables 1 and 2.

Table 1 Categorising Bats by Distribution and Rarity

Rarity within range	Species
Rarest (under 10,000)	Greater mouse-eared Greater horseshoe Grey long-eared Bechstein's Barbastelle
Rarer (10,000 – 100,000)	Lesser horseshoe Whiskered/Brandt's Nathusius' pipistrelle Serotine Leisler's
Common (over 100,000)	Common pipistrelle Soprano pipistrelle Brown long-eared Noctule Natterer's Daubenton's

Table 2 Valuation of Roosts

Geographic frame of reference	Roost types
International	Sites which meet SAC selection criteria (i.e. important roost for Annex IV species)
National	Sites meeting SSSI selection criteria Maternity sites of rarest species
Regional	Large swarming sites Mating sites for rarer/rarest species Maternity sites of rarer species Significant hibernation sites for rarer/rarest species, or all species assemblages
County	Feeding perches of rarer/rarest species Small numbers of rarer/rarest species (not maternity sites) Hibernation sites for small numbers of common/rarer species Maternity sites of common species Sites meeting Local/County Wildlife Sites selection criteria
Local (Parish or District)	Feeding perches Individual bats of common species Small numbers of common species (not maternity sites) Mating site of common species

4.0 RESULTS

Site Context

- 4.1 A total of 20 location records of EPSML for bats within 5km of the Site, with reference to the following species (with frequency of occurrences):
- Common pipistrelle *Pipistrellus pipistrellus* (n=33)
 - Soprano pipistrelle *P. pygmaeus* (n=26)
 - Brown long-eared bat *Plecotus auritus* (n=20)
 - Daubenton's bat *Myotis daubentonii* (n=2)
 - Natterer's bat *M. nattereri* (n=1)
- 4.2 The nearest records for EPSML are located c.300m northeast of the Site for common pipistrelle and Daubenton's bat, with the latter likely associated with the River Thames 200m further north..
- 4.3 The Site is in an urbanised location with few obvious foraging resources for bats. The nearest greenspace being Forbury Gardens, a formal public open space to the northeast, with the nearest significant resource for bats being the River Thames c.500m northeast of the Site.

Building Inspections

- 4.4 The results of the building inspections are provided in Appendix B. In summary, 173-175 Friar Street has 'Negligible' potential to support roosting bats and the bat roost potential of 27-32 Market Place is 'Low' given the presence of features suitable for individual crevice dwelling bats, such as slipped/missing tiles and weatherboarding.

Nocturnal Surveys

- 4.5 Full results tables presenting all of the observations made by the surveyors are provided in Appendix C. In summary the survey work in 2018 and 2020 survey work undertaken to date has confirmed the presence of up to seven minor common pipistrelle day roosts within the roof structure of 27-32 Market Place.

Dusk Emergence 21/05/2018

- 4.6 A total of three common pipistrelle bats were identified emerging from the roof of 27-32 Market Place during the dusk emergence survey. The first was observed by the surveyor in location A and emerged from the apex of the roof at 21:00. The second and third bats to emerge were located under tiles on a dormer to the rear of the roof. A fourth bat flew from the direction of the roof of 27-32 Market Place but emergence was not confirmed. Moderate levels of foraging activity were recorded by both surveyors throughout the survey, indicating bats are present within the surrounding area.

- 4.7 Constant, low levels of foraging common pipistrelle bats were observed during the survey associated with sheltered courtyards to the north and around street lights.

Pre-dawn Re-entry Survey 12/06/2018

- 4.8 Two common pipistrelle bats were seen to re-enter roosts underneath tiles on the roof of 27-32 Market Place during the dawn re-entry survey. Both bats were observed by the surveyor in location B to re-enter at 04:13 and 04:15.
- 4.9 Low levels of foraging and commuting activity were observed.

Dusk Emergence Survey 03/07/2018

- 4.10 The first bat activity recorded was of common pipistrelle bats foraging above the courtyard and roof structure to the rear of 27-32 Market Place from 21:48 in surveyor location B. Following this the surveyor at location B observed two common pipistrelle bats emerging from underneath roof tiles on the rear of Market Place in two locations at 21:51 and 21:52.
- 4.11 Constant common pipistrelle foraging activity was recorded from surveyor location B, with up to two bats observed at a time up until 22:54. However, only very low levels of foraging were recorded from surveyor location A.

Pre-dawn Re-entry Survey 26/08/2020

- 4.12 A single bat, likely to be common pipistrelle based on recordings from survey position A, was seen to re-enter roosts underneath tiles on the roof of 27-32 Market Place during the dawn re-entry survey. This bat was observed at 05:46.

Dusk Emergence Survey 07/09/2020

- 4.13 No bats were seen to emerge from 27-32 Market Place during the dusk emergence survey. Very low levels of common pipistrelle activity was recorded during the remainder of the survey.

Dusk Emergence Survey 28/09/2020

- 4.14 A single common pipistrelle bat was recorded to emerge from the frontage of 27-32 Market Place at 19:22 during the dusk emergence survey. The bat emerged from the eaves of the mock-Tudor dormer on the top floor of the building. Only a single other pass was recorded of a bat, common pipistrelle, during the remainder of the survey.

5.0 DISCUSSION

Importance

- 5.1 The survey work undertaken in 2018 and 2020 to date has confirmed the presence of up to seven minor common pipistrelle day roosts within the roof structure of 27-32 Market Place. In line with the methodology set out in Wray *et al* (2010), these roosts are all considered to be of '**Local**' importance. Structures at 173-175 Friar Street have 'Negligible' potential to support roosting bats with no bat roosts recorded and are therefore not of importance in respect of bats.
- 5.2 It is acknowledged that whilst a low number of bats was identified ("small number of common species"), given the urban location with fewer opportunities for roosting bats, this roost could be considered of elevated importance in the local context. However, it is still considered that this roost falls within the bounds of 'Local' importance as defined by Wray *et al* (2010).
- 5.3 Foraging activity was higher closer to sunset and recognised emergence times for common pipistrelles. Little foraging activity was identified during the re-entry survey, suggesting that bats may be utilising the building to roost but commuting to higher quality feeding ground to foraging during the evening.

Impact Assessment

- 5.4 Works are proposed for to the rear of the roof of 27-32 Market Place, in addition to four rooflights. The majority of the roof and its structure is understood to remain intact with only a limited number of tiles having to be removed to allow for the new structures.
- 5.5 The Preliminary Roost Assessment identified 173-175 Friar Road as having 'negligible' potential to support roosting bats. Works to these buildings can be carried out without further safeguards in respect of bats.
- 5.6 In the absence of any mitigation, the removal of tiles for the installation of a new dormer and rooflights would result in the illegal destruction of a single individual pipistrelle bat roost and damage/disturbance of up to a further six roosts of common pipistrelle bat (non-maternity). As such a European Protected Species (EPS) licence from Natural England is required to enable the works to proceed. No final licensing decisions can be made, or any licence issued, until the development has obtained all necessary consents in order to proceed, with any conditions relevant to wildlife discharged.

Mitigation Strategy

- 5.7 The following measures will be incorporated into the method statement of the EPS licence application, in order to mitigate the impact on bats

as a result of the proposed works and provide adequate replacement roosting opportunities:

- In the absence of any trees on-site two Schwegler 1FF bat boxes will be installed externally on unaffected sections of the building in appropriate locations prior to commencement of works (to provide a safe location for any bats found during works to be relocated to by the licenced ecologist);
- A licensed bat ecologist will provide an induction for contractors and other site workers prior to the commencement of works on-site to make them aware of the possible presence of bats, their legal protection and of working practices to avoid harming bats;
- Any features on 27-32 Market Place with potential to support bats which will be damaged by the works (e.g. roof tiles, ridge tiles, soffits, gutter fascia boards) will be searched and dismantled under supervision and direction from a licensed bat worker. These works would ideally be done when bats are most active (April-September i.e. prior to bat hibernation), but outside of the summer period (May to August). However, it is anticipated that Natural England will not impose a constraint on timings of works, other than outside of inclement weather and after minimum 5°C temperature overnight;
- An endoscope and other such equipment will be used to investigate crevices (e.g. under tiles) where appropriate and possible;
- In the event that any bats are found during supervised works the licensed bat worker will catch them by hand, or a hand net, and place them in a breathable holding bag for immediate relocation to one of the Schwegler 1FF bat boxes nearby. Care will be taken to move the bat quickly and with minimal handling. Injured bats will be immediately taken into care (as directed by the Bat Worker's Manual, 2004). Details of a local bat carer/hospital will be carried by the licensed bat worker throughout the works;
- Once potential roost areas have been stripped under supervision, further work will then proceed swiftly without the supervision of an ecologist. In the unlikely event that a bat is found during any of the building works when the named ecologist is not present, contractors will be instructed to stop work immediately and contact the named ecologist for advice. Other contractors are explicitly forbidden from handling bats.

- 5.8 To compensate for the anticipated loss of a single common pipistrelle roost a minimum of two bat access tiles will be provided within the new roof, once works are complete. This access tile will continue to allow pipistrelle bats to make use of the crevice formed between the tiles and roofing felt. No modern 'breathable' roofing membranes will be used within any of the roof voids, with traditional bitumastic felt to be used, allowing bats to use crevice roosting features safely.

- 5.9 There is a risk of temporary disturbance to six common pipistrelle roosts during the works to the rear of the building. These works would be covered under the licence obtained from Natural England and the above safeguards would ensure any impacts are minimised. In addition, further bat access tiles would be provided, primarily as an 'enhancement' (as set out below) but which 'mitigate' for potential disturbance impact to the additional common pipistrelle bats, which is inherently difficult to quantify,
- 5.10 Any new lighting scheme for the Site will be designed to avoid illuminating any of the bat roosting boxes/integrated units that are to be installed as part of mitigation, as well as minimising illumination of the rear of the building, which has been identified as being used by bats as a commuting corridor/foraging area.

Enhancement

- 5.11 In addition to the access tile provided for mitigation for the loss of the single minor pipistrelle roost, it is proposed that a minimum of three additional bat access tiles will be installed within the new/existing roof structure of 27-32 Market Place to provide additional roosting opportunities for bats.

Monitoring

It is anticipated that Natural England will not impose monitoring of mitigation provided for loss of roosts of low conservation status, in line with the Natural England Bat Mitigation Guidelines, although a final site visit will be undertaken by the consultant ecologist following completion of all mitigation works. However, to ensure the efficacy of the proposed mitigation and enhancement measures, it is recommended that a monitoring visit be undertaken to the property two years following completion of mitigation works to confirm the presence or absence of roosting bats within the building.

6.0 REFERENCES

Chartered Institute of Ecology and Environmental Management, 2015. *Guidelines for Ecological Report Writing*. Winchester: CIEEM.

Chartered Institute of Ecology and Environmental Management, 2016. *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*. 2nd ed. Winchester: CIEEM

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

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Wray et al., 2010. Valuing bats in ecological impact assessment. *In Practice - Bulletin of the Chartered Institute of Ecology and Environmental Management*, 70, pp.23-25.

Appendix A

Site Photographs



Plate 1. Exterior of 173-175 Friar Street - 'Bristol and West Arcade'



Plate 2. Interior of 173-175 Friar Street - 'Bristol and West Arcade'



Plate 3. Interior of 173-175 Friar Street - 'Bristol and West Arcade'



Plate 4. Roof and small external structure/room of 173-175 Friar Street - 'Bristol and West Arcade'



Plate 5. Exterior of 27-28 Market Place - 'Kik Sports'



Plate 6. Basement of 27-28 Market Place - 'Kik Sports'



Plate 7. First floor of of 27-28 Market Place - 'Kik Sports'



Plate 8. Third floor of 27-28 Market Place - 'Kik Sports' with dormer windows



Plate 9. Roof void above dormer window on third floor of of 27-28 Market Place - 'Kik Sports'. Small tear in bitument felt lining. Visible via hole in ceiling.



Plate 10. Exterior of 29-31 Market Place 'Coopers Arms'



Plate 11. Interior of 29-31 Market Place 'Coopers Arms'



Plate 12. Interior of 29-31 Market Place 'Coopers Arms'



Plate 13. Basement of of 29-31 Market Place 'Coopers Arms'



Plate 14. Former pub room in of 29-31 Market Place 'Coopers Arms'



Plate 15. Pitched glass roof above former pub within 29-31 Market Place 'Coopers Arms'



Plate 16. Roof void of 29-31 Market Place 'Coopers Arms'



Plate 17. Bitumen lining of roof void of 29-31 Market Place 'Coopers Arms'



Plate 18. Chicken wire over window in roof void of 29-31 Market Place 'Coopers Arms'



Plate 19. Exterior of 32 Market Place (lower levels)



Plate 20. Exterior of 32 Market Place (upper levels, not accessed during survey)



Plate 21. Interior of ground floor of 32 Market Place



Plate 22. Interior of safe within basement of 32 Market Place



Plate 23. Rear exterior of 32 Market Place (interior of these levels not accessed during survey)



Plate 24. Roof structure of 27-32 Market Place

Appendix B

Building Inspection Results

Table B.1 Results of Building Inspection Survey

Building Ref.	Building Description	External features/ evidence	Internal features/ evidence	Bat roost potential
173-175 Friar Street 'Bristol and West Arcade'	Structure – Intact brickwork and mortar. Sash windows, lintels, and ornate stone sections are intact. Basement – Not accessible due to asbestos. Ground floor – No access to shops. Boarded either end with a metal roll shutter. First floor – No access to room to north-east due to asbestos. Front sashed windows fixed shut. Rear windows boarded shut. Walls boarded and plastered. Ceilings intact where plastered, otherwise ceiling tiles are loose/missing in places. Second Floor - No access to room to south-east due to asbestos. Windows, walls and ceilings as first floor. Third Floor – Windows, walls and ceilings as first floor. No access to small structure/room located on the roof of the building, hatch locked and boarded from outside. Roof – flat roof with bitumen felt.	None.	None. Rat droppings present throughout building. Old bird nesting material present on ground floor. Bird droppings on second floor.	Negligible
27-28 Market Place 'Kik Sports'	Structure – 'mock' tudor timber frame with brick and render. Basement - access to basement from interior stairs only. Ground floor – windows and door boarded, no access for bats. First and second floor – prior use as office, no access for bats. Third floor – dormer windows, no access to roof void. Hole in ceiling into roof void – potentially only around dormer. Bitumen lined with small tear. Extent of void unknown.	Complex roof structure with a small number of slipped/ missing tiles and weather-boarding provide potential roosts for individual crevice dwelling bats.	None. Rat droppings present on first floor.	Low (but confirmed roost- see further surveys)
29-31 Market Place 'Coopers Arms'	Structure – 'mock' tudor timber frame with brick and render. Ground floor windows and door boarded. Basement - access to basement from interior stairs	Complex roof structure with a small number of slipped/ missing tiles and weather-boarding	None. Rat and bird droppings present throughout building (not	Low (but confirmed roost- see further surveys)

Building Ref.	Building Description	External features/ evidence	Internal features/ evidence	Bat roost potential
	and externally via trap door to street. No access for bats. Ground floor – former pub, complex structure with bathrooms, kitchen and bar area. Double height, pitched glass roof above centre of room. Walls combination of wood panelling, plaster and exposed brickwork. Some areas of weatherboarding in interior of building. Sealed windows to higher floors in double height section. First floor & second floor – former residential dwelling. Complex arrangement of rooms with timber structure exposed in places. Number of fireplaces present. Exposed wooden structure, missing floorboards, areas of rot and collapsed ceilings in places. Third floor/roof void – full height rooms, timber framed with intact bitumen felt lining, very light in places due to presence of windows.	provide potential roosts for individual crevice dwelling bats.	present at a density which would obscure bat droppings). Roof void recently cleared with chicken wire on windows (see limitations).	
32 Market Place	Structure – Intact brickwork and mortar. Sash windows, lintels are intact. Basement - access to basement from interior stairs only. Well-sealed with safe (former bank). Ground floor – former bank, false ceiling with asbestos ceiling tiles. Well-sealed, no access for bats. First, second and third floor – only accessible from exterior.	Complex roof structure with a small number of slipped/ missing tiles and weather-boarding provide potential roosts for individual crevice dwelling bats.	None. First – third floors not accessed (see limitations).	Low (but confirmed roost- see further surveys)

Appendix C

Nocturnal Survey Results

Table C.1 Weather Conditions

Survey Date (2018)	Sunset/ Sunrise	Survey Duration	Temp (°C)	Rain	Cloud Cover (oktas; n/8)	Wind (Beaufort Scale)
			Start/End		Start/End	Start/End
2018						
21 May	20:57	20:42 – 22:27	22/22	No rain	1/6	1/1
12 June	04:47	03:17 – 05:02	13/13	No rain	0/0	0/0
03 July	21:24	21:09 – 22:54	23/22	No rain	3/0	1/1
2020						
26 Aug	06:07	04:47-06:22	12/07	No rain	3/2	4/1
07 Sept	19:35	19:20-21:05	10/08	No rain	4/4	1/1
28 Sept	18:47	18:32-20:17	09/07	No rain	5/6	1/2

Table C.2 Dusk Emergence Survey (21 May 2018)

Time Activity Recorded		Sunset	20:27
Start	End	Species	Bat Behaviour (and surveyor position)
20:42	20:59	-	-
21:00	21:10	Common pip.	A Common pipistrelle emerged from apex of 27-32 Market Place (21:00).
21:11	21:20	Common pip.	A HNS (21:18) B Continuous foraging by individual bats (21:19-21:20)
21:21	21:30	Common pip.	B 2 No. common pipistrelle emergence from roof of 27-32 Market Place (21:21) B Bat flew from direction of building (21:26) B Potential albino bat observed (21:29)
21:31	21:40	Common pip.	B Foraging for approx. 2 minutes (21:31) A Bat flew across road (21:40) B Continuous foraging by individual bats (21:39-21:40)
21:41	21:50	Common pip.	B Continuous foraging by individual bats (21:41-21:43 & 21:46 - 21:50)
21:51	22:00	Common pip.	B Continuous foraging by individual bats (21:51-21:54) A Foraging around lights above surveyor (21:54) B HNS (21:57) B HNS (21:58)
22:01	22:10	Common pip.	B Continuous foraging by individual bats (22:04-22:10) A Brief pass (22:08)
22:11	22:20	Common pip.	B Continuous foraging by individual bats (22:11-22:20) A HNS, no activity after 22:12
22:21	22:27	Common pip.	B Continuous foraging by individual bats (22:21-22:27)

Abbreviations: pip. = pipistrelle, HNS = heard, not seen.

Table C.3 Dawn Re-entry Survey (12 June 2018)

Time Activity Recorded		Sunrise	04:47
Start	End	Species	Bat Behaviour (and surveyor position)
03:17	03:26	Common pip.	B Common pipistrelle HNS (03:19-03:21) A Common pipistrelle HNS (03:24)
03:27	03:36	Common pip.	A Common pipistrelle HNS (03:33) B Common pipistrelle foraging (03:33-03:34) B Common pipistrelle flew NE towards church, over church and towards park (03:34)
03:37	03:46	Common pip.	B Common pipistrelle HNS (03:43) A Common pipistrelle HNS (03:46) B Common pipistrelle HNS (03:46)
03:47	03:56	Common pip.	B Intermittent common pipistrelle activity inc. foraging (03:50-03:55)
03:57	04:06	Common pip.	A Common pipistrelle HNS (04:01) B Common pipistrelle flying N (04:01)
04:07	04:16	Common pip.	B Common pipistrelle foraging (04:07-04:15) B 1 No. common pipistrelle re-entry under tile on roof of 27-32 Market Place (04:13) B 1 No. common pipistrelle re-entry under tile on roof of 27-32 Market Place (04:15)
04:17	05:02	-	No activity after 04:15

Abbreviations: pip. = pipistrelle, HNS = heard, not seen.

Table C.4 Dusk Emergence Survey (03 July 2018)

Time Activity Recorded		Sunset	21:24
Start	End	Species	Bat Behaviour (and surveyor position)
21:09	21:47	-	-
21:48	21:57	Common pip.	B Common pipistrelle foraging (21:48-21:56) B Common pipistrelle emerged from tile on roof of 27-32 Market Place (21:51) B Common pipistrelle emerged from edge of dormer on flat roof section of 27-32 Market Place (21:52)
21:58	22:07	Common pip.	B Common pipistrelle foraging (21:58-22:54)
22:08	22:17	Common pip.	B Common pipistrelle foraging (21:08-22:17)
22:18	22:27	Common pip.	B Common pipistrelle foraging (21:18-22:27) A Common pipistrelle HNS (22:20)
22:28	22:54	Common pip.	B Common pipistrelle foraging (21:28-22:54) A Common pipistrelle HNS (22:30) A Common pipistrelle HNS (22:49)

Abbreviations: pip. = pipistrelle, HNS = heard, not seen.

Table C.5 Dawn Re-entry Survey (26 August 2020)

Time Activity Recorded		Sunrise	04:47
Start	End	Species	Bat Behaviour (and surveyor position)
04:47	05:45	-	-
05:46	05:47	Common pip.	A common pipistrelle HNS briefly B bat (no echolocation, likely common pipistrelle) re-entry under tile on roof of 27-31 Market Place (05:46)
05:48	06:22	-	No activity

Abbreviations: pip. = pipistrelle, HNS = heard, not seen.

Table C.6 Dusk Emergence Survey (07 September 2020)

Time Activity Recorded		Sunset	21:24
Start	End	Species	Bat Behaviour (and surveyor position)
20:09	20:17	-	-
20:18	20:37	Common pip.	A Common pipistrelle foraging periodically
20:38	20:45	Common pip.	B Common pipistrelle foraging briefly
20:46	21:01	Common pip.	B Common pipistrelle foraging briefly
21:02	21:05	-	No activity after 21:01

Abbreviations: pip. = pipistrelle, HNS = heard, not seen.

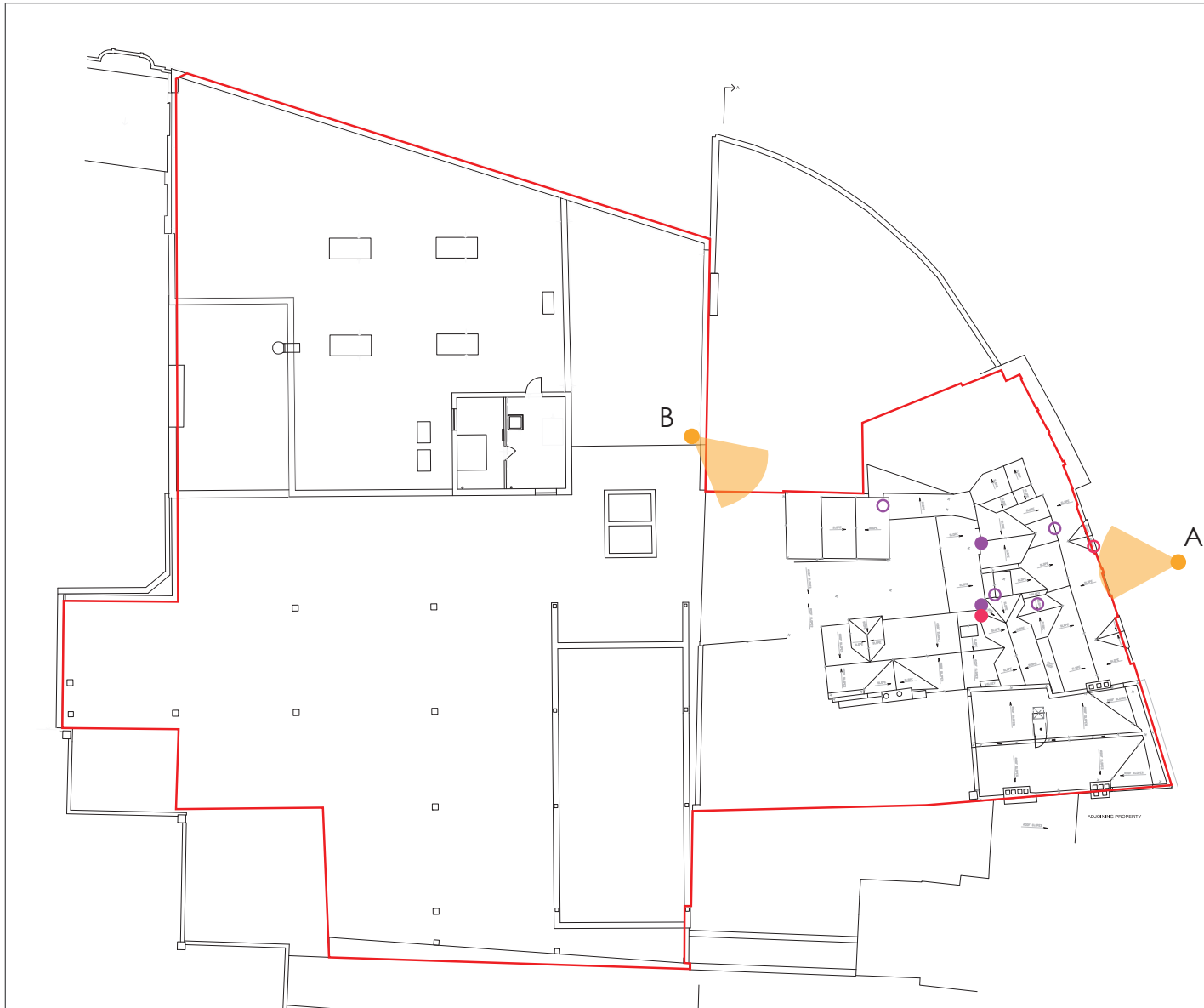
Table C.7 Dusk Emergence Survey (28 September 2020)

Time Activity Recorded		Sunset	21:24
Start	End	Species	Bat Behaviour (and surveyor position)
18:32	19:21	-	-
19:22	19:23	Common pip.	A Common pipistrelle emerged from eaves of frontage of 27-32 Market Place (19:22)
19:24	20:01	-	No activity
20:02	20:10	Common pip.	B Common pipistrelle HNS briefly (20:02)
20:11	20:17	-	No activity after 20:11

Abbreviations: pip. = pipistrelle, HNS = heard, not seen.

Appendix D

Bat Survey Plan



-  Site boundary
-  Surveyor location
-  Location of bat emergence (common pipistrelle) 2018
-  Location of bat re-entry (common pipistrelle) 2018
-  Location of bat emergence (common pipistrelle) 2020
-  Location of bat re-entry (common pipistrelle) 2020



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Project	173-175 Friar St & 27-32 Market Place, Reading
Drawing Title	Bat Survey Plan
Client	Savills

Date	Oct 2020	Drawing No.	CSA/3517/101
Scale	Not to scale	Rev	-
Drawn	AC	Checked	JW



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