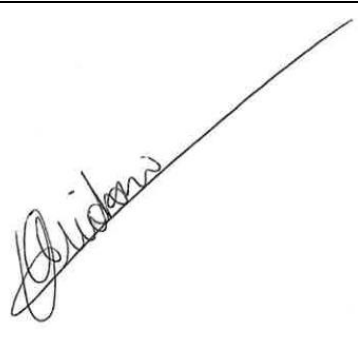
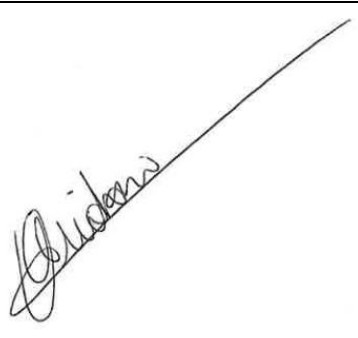




QA

Reading International Business Park – Bat Survey Report

Issue/Revision:	Draft	Final
Date:	October 2020	November 2020
Comments:		
Prepared by:	Olivia Guindon	Olivia Guindon
Signature:		
Authorised by:	Mitch Cooke	Mitch Cooke
Signature:		
File Reference:	551533og15Oct20DV01_BATS.docx	551533ogOct20FV01_BATS

CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	3
	SITE DESCRIPTION	3
	AIMS OF SURVEY	3
	PRELIMINARY ECOLOGICAL APPRAISAL	4
	Results	4
3.0	METHODOLOGY	6
	EMERGENCE SURVEY	6
	LIMITATIONS	6
	SURVEYORS	6
4.0	RESULTS	8
	EMERGENCE SURVEYS	8
5.0	IMPACT ASSESSMENT AND PRECAUTIONARY METHOD OF WORKS	10
	INTRODUCTION	10
	PREDICTED IMPACTS IN ABSENCE OF MITIGATION AND COMPENSATION	10
	Initial Impacts	10
	Long Term Impacts	11
	PRECAUTIONARY METHOD OF WORKS	11
	Location of Works	11
	Timing	11
	Lighting	11
	Landscaping	12
	ENHANCEMENT RECOMMENDATIONS	12
	Wildlife Friendly Landscaping	12
6.0	SUMMARY AND CONCLUSIONS	14

FIGURE 1 BAT SURVEY PLAN	15
APPENDIX 1: LEGISLATION AND POLICY	16
REFERENCES	17

1.0 EXECUTIVE SUMMARY

- 1.1 Greengage Environmental Ltd was commissioned by Tristan Capital Partners to undertake a Bat Survey of a site known as the Reading International Business Park in Reading, Berkshire. This survey was undertaken to determine the presence or likely absence of roosting bats in the old farmhouse building at the site and identify appropriate mitigation, compensation and enhancement measures for the proposed scheme.
- 1.2 This report has been produced to support a planning submission for the site which seeks the refurbishment of the buildings on site to provide offices and co-working space, a range of amenities such as cafe, shower/locker, cycling facilities, and improvements to external hard and soft landscaping.
- 1.3 A Preliminary Roost Appraisal (PRA) which entailed a detailed systematic daytime external and internal inspection was undertaken on the 28th August 2020 to look for evidence of roosting bats. The inspection noted several potential roosting features with moderate value for roosting bats on the old farmhouse building and two emergence surveys were accordingly undertaken following best practice guidance.
- 1.4 The second emergence survey undertaken on the 14th September 2020 confirmed the presence of a bat roost located under a roof tile on the north eastern elevation of the old farmhouse building.
- 1.5 In order to fully characterise the roost already confirmed as present and confirm the presence/likely absence of further roosts, one additional emergence/re-entry survey was recommended as per best practice guidelines.
- 1.6 This report therefore presents the findings of all three emergence surveys and outlines associated recommendations to enable works to proceed in accordance with relevant planning and legislative drivers.
- 1.7 The first roost was identified as a transitional common pipistrelle (*Pipistrellus pipistrellus*) day roost located under a roof tile on the north eastern elevation of the building.
- 1.8 A second roost was confirmed in the building on the third emergence survey undertaken on the 28th September 2020. This roost was identified as another transitional common pipistrelle day roost located under a roof tile on the north eastern elevation of the roof of the old farmhouse.
- 1.9 Moderate levels of commuting and foraging behaviour by common bat species were also recorded at site during the surveys.
- 1.10 Bats and their resting places are protected by law, with any works that may stand to disturb, kill or injure bats or impact their roosts requiring a European Protected Species Mitigation Licence to legally proceed.

-
- 1.11 It is understood however that the development proposals will not affect the roof and exterior structure of the old farmhouse as it is a listed building. An EPSM Licence is therefore not considered necessary to enable the proposed refurbishment works. If the proposals alter in any way to include external works or works in the roof void, Greengage, or any other SQE should be notified.
- 1.12 Precautionary advice is however provided which aims to prevent the disturbance of bats during works or the operational lifetime of the development.
- 1.1 Mitigation recommendations also include implementation of a 'bat sensitive' lighting strategy designed to minimise disturbance to the commuting routes as well as provision of wildlife-friendly planting to replace any foraging resource potentially being lost. Detail on these mitigation measures are included in Section 5 of this report.
- 1.2 Enhancement recommendations are also provided which aim to improve roosting, foraging and commuting conditions for bats. These include:
- Wildlife-friendly planting to be integrated into the development proposals to provide improved landscaping for invertebrate prey; and
 - Provision of improved and more abundant roosting opportunities in the form of integrated bat boxes.
- 1.3 Assuming recommendations are followed, the impact of the proposed development upon the local bat population is expected to be negligible.

2.0 INTRODUCTION

- 2.1 Greengage Environmental Ltd was commissioned by Tristan Capital Partners to undertake a Bat Survey of the old farmhouse building at the Reading International Business Park site in Reading, Berkshire in order to confirm the presence/likely-absence of roosting bats in the old farmhouse building.
- 2.2 This report has been produced to support a planning submission for the site which seeks the refurbishment of the buildings on site to provide offices and co-working space, a range of amenities such as cafe, shower/locker, cycling facilities, and improvements to external hard and soft landscaping.

SITE DESCRIPTION

- 2.3 The survey area extends to approximately 5.5 hectares and is centred on National Grid Reference SU713689, OS Co-ordinates (471372, 168980).
- 2.4 The site comprises four buildings: Building 1 (Reading International) is a crescent-shaped office building providing 376,587m² of office and storage accommodation configured in six blocks; Building 2 (The Dot) is a round building located on the edge of the lake and currently offering restaurant/café opportunities; Building 3 (the Old Farmhouse) is a Grade II listed building vacant at the time of the survey and historically used as an on-site security centre; and Building 4 called Busy Bees nursery is out of the current scope. The four buildings are joined by areas of hardstanding used as roads and car parking spaces and greenery on site includes areas of amenity grassland, introduced shrubs and scattered trees. There is also an artificial lake on site, split over 2 levels.
- 2.5 The site is located just off junction 11 of the M4, south of Reading town centre. The wider landscape to the north is dominated by commercial and residential developments associated with Reading and below the M4 to the south are expanses of agricultural land. Notable greenspaces in the area include several Berkshire Local Wildlife Sites and Kennet Valley East which comprise large areas of gravel pits ~2km west of the site. Habitats within this area include chalk river, reedbeds, fen, wet woodland, lowland meadow, wet grassland and standing water and support notable species.

AIMS OF SURVEY

- 2.6 The purpose of the survey was to confirm the presence/likely-absence of roosting bats in the old farmhouse building on site as well as characterise bat roosts identified during previous surveys, in order to identify appropriate mitigation, compensation and enhancement actions, ensuring legislative and planning policy compliance during the proposed development works. The survey aimed to:
- Determine the presence/absence of bat species;

- Determine the intensity of bat activity both spatially and temporally to help estimate bat diversity and relative abundance, and measure relative importance of the site for local populations; and
 - Determine the type of activity, most usually
 - Roosting;
 - Foraging (by feeding buzzes); or
 - commuting (by high directional pass rates) and
 - Find and characterise roosts by observing emergence or re-entry behaviour.
- 2.7 By using a collation of existing data for the area to support the survey, it is possible to determine the presence/likely-absence of bats across the site and in the wider area. This information can then be used to determine the form and extent of any mitigation, compensation or enhancement that may be appropriate.

PRELIMINARY ECOLOGICAL APPRAISAL

- 2.8 A Preliminary Roost Appraisal was undertaken by Greengage in August 2020 as part of a Preliminary Ecological Appraisal (PEA) (Report ref: 551533ogOct20FV01_PEA).
- 2.9 Biological records were analysed to determine the records of bat species in the local area. Records were obtained from the Thames Valley Environmental Records Centre (TVERC) in August 2020.
- 2.10 An assessment of the local area using aerial photography and available maps and biological data was also undertaken.
- 2.1 Full access to the external areas of the site and internal access into the old farmhouse building was granted and the survey was undertaken on the 28th August 2020. Weather conditions were clear, dry and mild.
- 2.2 The visual assessment of the building on site for suitability of roosting bats entailed checking for bat signs including the presence of droppings, urine staining, grease marks and signs of food remnants such as moth and butterfly wings.
- 2.3 The potential access points, roost locations, foraging areas and commuting routes were identified.

Results

- 2.4 Records for the following bat species were identified within 2km of the site:
- Daubenton's (*Myotis daubentoni*);
 - Noctule (*Nyctalus noctule*);
 - Brown long eared (*Plecotus auritus*);

-
- Nathusius's pipistrelle (*Pipistrellus nathusii*);
 - Common pipistrelle (*Pipistrellus pipistrellus*); and
 - Soprano pipistrelle (*P. pygmaeus*);
- 2.5 During the PEA, a number of features of moderate potential value for bats were noted on the old farmhouse building. These included the following;
- Broken and missing roof tiles;
 - Gaps in brickwork;
 - Missing mortar; and
 - Gaps between brickwork and wooden beam leading into the internal roof void space.
- 2.6 Potential bat foraging and commuting habitat was also noted, associated with the shrubs and trees on site, and the river Len to the south of the site.
- 2.7 Further surveys were accordingly recommended.

3.0 METHODOLOGY

EMERGENCE SURVEY

- 3.1 Three emergence surveys were undertaken between August and September 2020. Each survey was undertaken in clear, still and warm conditions with sunset temperatures between 13°C and 25°C, in accordance with Bat Conservation Trust (BCT) guidelines¹.
- 3.2 Emergence surveys commenced 15 minutes prior to sunset and continued for one and a half hours after sunset. Each survey was conducted by two surveyors for health and safety purposes and to ensure all features with the potential to support roosting bats and aspects of the building could be assessed. Location of surveyors can be found in the plan at Figure 1.
- 3.3 Surveyors were equipped with a Batbox Duet Heterodyne bat detector and Echometer Touch bat detector to hear, visualize and record bat calls and identify bats to species level.

LIMITATIONS

- 3.4 Due to restrictions around the Covid-19 pandemic overnight accommodation was not available throughout the duration of May and June. Therefore, dawn surveys could not be undertaken. Despite these limitations Greengage believe that all suitable and relevant information regarding the roosts present on site, was gathered during the dusk surveys. Therefore, the results and recommendations presented in this report are not considered to be affected.
- 3.5 Due to Greengage's appointment late in the survey season, it was not possible to undertake a survey in June/July during the maternity season. However as works on the old farmhouse building are not affecting the roof void area nor the exterior structure of the building, no impacts on bats potentially using the roof void at this time of year are therefore predicted.
- 3.6 There were no other limitations to this survey work, all surveys were undertaken at a suitable time of year and in generally suitable weather conditions.

SURVEYORS

- 3.1 Mitch Cooke, who undertook the PEA survey and reviewed this report, has a degree in Ecology (Hons), an MSc in Environmental Assessment and Management, and is a Full member of CIEEM with over 35 years' experience in ecological survey and assessment. Mitch has set up and developed ecological and environmental teams for nearly 20 years and has undertaken and managed numerous ecological surveys and assessments. He is the Director at Greengage and manages the team.

-
- 3.2 Olivia Guindon, who undertook two of the bat surveys and wrote this report, has an undergraduate degree in Ecology and Wildlife Conservation (BSc Hons), a Master's degree in Species Identification and Survey Skills and is a Qualifying member of CIEEM. Olivia has over two years' experience in the commercial sector.
- 3.3 Rodger Thompson, who undertook one of the surveys, has several years' experience surveying bats.
- 3.4 Sara Morris, who undertook one of the surveys, has a BSc Hons degree in Environmental Biology and three years experience in ecological surveying.
- 3.5 Joanne Reynolds, who undertook one of the bat surveys, has a degree in Environmental Science (BSc Hons), is a CIEEM Qualifying Member and holds Natural England licences in Bats (2017-32694-CLS-CLS), Dormice and Great Crested Newts. She has a several years' experience surveying in the commercial sector.
- 3.6 This report was written by Olivia Guindon and reviewed and verified by Mitch Cooke who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:
- Represents sound industry practice;
 - Reports and recommends correctly, truthfully and objectively;
 - Is appropriate given the local site conditions and scope of works proposed; and
 - Avoids invalid, biased and exaggerated statements.

4.0 RESULTS

EMERGENCE SURVEYS

- 4.1 During the surveys, two surveyors stood at two positions, one looking at the south western elevation of the building and the other looking at the north eastern elevation of the building to observe any evidence of bats emerging from features identified as being of potential value.
- 4.2 The first emergence survey, undertaken on the 31st August 2020 observed no evidence of roosting.
- 4.3 The second emergence survey was undertaken on the 14th September 2020 observed one emergence from the building. At 19:39 a common pipistrelle was observed emerging from beneath roof tile on the north eastern elevation of the building.
- 4.4 The third emergence survey, undertaken on the 28th September 2020 observed one emergence from the north eastern elevation of the building. At 18:58 a common pipistrelle was observed emerging from beneath a roof tile, this time close to the roof apex.
- 4.5 During the surveys, moderate levels of commuting and foraging activity were also recorded around the old farmhouse building and associated to the group of trees just west of the building. Six species were recorded; common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), nathusius pipistrelle (*Pipistrellus nathusii*), common noctule (*Nyctalus noctula*), leisler's (*Nyctalus leisleri*), and brown long eared (*Plecotus auritus*).
- 4.6 Location of observed roosts, passes and foraging activity, in addition to the surveyor locations, can be found on the plan at Figure 1.
- 4.7 Table 4.1 below provides details on timings and conditions for each survey.

Survey type	Date	Surveyors	Sunset/ Sunrise	Conditions
Preliminary Ecological Appraisal	28/08/20	MC	NA	Dry and mild

Emergence 1	31/08/20	JR, RR	19:52	16°C Cloud cover 2/8 No wind
Emergence 2	14/09/20	JR, OG	19:20	25°C No clouds No wind

Table 4.1 Surveyor timings and conditions for each survey

5.0 IMPACT ASSESSMENT AND PRECAUTIONARY METHOD OF WORKS

INTRODUCTION

- 5.1 The survey results confirmed the presence of two bat roosts within the building on site alongside moderate levels of foraging and commuting.
- 5.2 The development proposals seek the internal refurbishment of the old farmhouse building, with no external works and no changes to the roof void proposed, and the wider site, including the trees and landscaped areas will be retained.
- 5.3 It is therefore understood that proposals do not stand to impact the roosts, as works on the old farmhouse building consist of minor internal refurbishments. Therefore, a European Protected Species Mitigation (EPSM) Licence is not required from Natural England to undertake the works.
- 5.4 Measures outlined in this chapter should however be followed to ensure that works avoid impacting on bats. Precautionary actions primarily relate to:
- Avoiding works in and around the roost;
 - Timing certain works to avoid sensitive periods;
 - Avoiding change to lighting regime; and
 - Avoiding change to foraging or commuting resource availability.
- 5.5 These methods should be approved by the Local Planning Authority (LPA), as the governing body, before the commencement of the works.
- 5.6 Please note if measures below are not followed then further survey work and an EPSM Licence may be required.

PREDICTED IMPACTS IN ABSENCE OF MITIGATION AND COMPENSATION

Initial Impacts

- 5.7 As the proposals will not see the destruction or permanent loss of the roosts, given the old farmhouse building is to be retained, the impacts of the proposals in lieu of mitigation could potentially cause minor disturbance to the roosts.
- 5.8 Disturbance in this instance could constitute noise and vibration from internal construction works and dust creation. This would be considered to cause a low negative, temporary, impact at the site scale only.

Long Term Impacts

- 5.9 Proposals are not predicted to prevent bats from accessing or utilising the site in any way, either for roosting, commuting, or foraging. Therefore, the long term impacts are considered to be negligible.

PRECAUTIONARY METHOD OF WORKS

Location of Works

- 5.10 No works will take place to the roof or internal roof void of the old farmhouse. No scaffolding will be erected on the elevation which supports the roost.

Timing

- 5.11 As set out in the Bat Mitigation Guidelines, the most common and effective way of avoiding disturbance of a roost is to complete works outside of the time or season when bats are likely to be using the roost. This varies between species and roost types.
- 5.12 With regards to the roosts on site, current observations suggest these are likely to be used as summer day roosts used by a small number of common pipistrelle bats.
- 5.13 Based on this information it unlikely that bats would be present over the winter months, especially as the feature is particularly exposed to the elements and therefore would not provide the thermal stability required to support hibernating bats. Accordingly, works should ideally be undertaken outside of the summer months, when bats(s) and should instead take place over the winter months (1st October – 1st May), when bat are less likely to be present. This strategy would also avoid the maternity season.

Lighting

- 5.14 Artificial lighting can cause disturbance to bat roosting, foraging and commuting activity. Proposals should therefore impose measures to limit additional light disturbance at site during and following development. Bat-sensitive lighting should be incorporated into the scheme to minimise any potential impacts of increased lighting levels on foraging, commuting and socialising bats. Lighting should follow guidance provided by the Institute of Lighting Professionals and Bat Conservation Trust². This involves the use of low-UV warm-white LED bulbs with directional, downward facing and shielded lights which point away from green features such as tree lines or areas of planting.
- 5.15 External lights should be subject to curfew controls where possible with lights on movement sensors to reduce light pollution when not needed. Open green spaces should remain unlit, particularly between April and October, inclusive. Measures should be taken in internal light placement to reduce risk of light spill from windows, as per guidelines.

Lighting at site should be modelled to confirm predicted intensity and spill, ensuring that it meets the criteria outlined above.

Landscaping

- 5.16 There will be no loss of landscaping around the buildings ensuring that indirect impacts upon the roost through impacts upon local foraging resources do not occur. If areas of landscape are impacted through development, then this should be compensated for through recreation of appropriate bat friendly landscaping.

ENHANCEMENT RECOMMENDATIONS

Wildlife Friendly Landscaping

- 5.17 It is understood that greenspace on the site will be retained and a community garden and recreational area will be created. Landscaping in this area should be enhanced through the provision of native trees, shrubs and wildflowers which attract insect prey.
- 5.18 Mixtures of flowering plants that vary in colour, fragrance, shape, amount of nectar and time of flowering should be incorporated into flower beds. Landscaping in recreational areas should also be enhanced by varying grass heights through selective cutting to provide diversity and vegetation structure. Amenity grassland should incorporate wildflower turf or products with high provision of wildflowers.

Bat boxes

- 5.19 Increased roosting opportunities for bats should be incorporated in the form of bat boxes hung from existing trees. They should be positioned in sunny locations on the south or west elevations of the trees, at least 2-7m above ground, and away from any form of disturbance. Recommended products are given in Figure 5.1 below:

Figure 5.1 Improved cavity bat box³



6.0 SUMMARY AND CONCLUSIONS

- 6.1 Greengage Environmental Ltd was commissioned by Tristan Capital Partners to undertake a Bat Survey at a site known as the Reading International Business Park in Reading, Berkshire in order to confirm the presence/likely absence of roosting bats and identify appropriate mitigation, compensation and enhancement measures for the proposed scheme.
- 6.2 This report has been produced to support a planning submission for the site which seeks the refurbishment of the buildings on site to provide offices and co-working space, a range of amenities such as cafe, shower/locker, cycling facilities, and improvements to external hard and soft landscaping.
- 6.3 A detailed systematic daytime external and internal inspection noted moderate potential value for roosting bats in the old farmhouse building on site.
- 6.4 The subsequent emergence surveys confirmed the presence of two bat roosts; two single common pipistrelle were recorded emerging from roof tiles on the north western elevation of the roof of the old farmhouse. Moderate levels of commuting and foraging behaviour by common bat species were also recorded.
- 6.5 Proposals do not stand to impact the roosts, assuming measures outlined in this report are followed, and a licence from Natural England is therefore not considered necessary.
- 6.6 Precautionary advice is given to avoid impacting bats during works and enhancement measures have been recommended which include the provision of enhanced landscaping and roosting opportunities.
- 6.7 Assuming recommendations are followed, the impact of the proposed development upon both local bat populations is expected to be negligible.

FIGURE 1 BAT SURVEY PLAN

READING INTERNATIONAL BUSINESS PARK



-  Bat activity
-  Emergence 28th September 2020
-  Emergence 14th September 2020
-  Surveyor positions
-  Building with moderate potential for roosting bats



Greengage Environmental Ltd
9 Holyrood Street, London SE1
2EL

Project Number 551502
October 2020

Fig 1.0 Bat survey map

APPENDIX 1: LEGISLATION AND POLICY

All UK bats and their roosts are protected by law. Since the first legislation was introduced in 1981, which gave strong legal protection to all bat species and their roosts in England, Scotland and Wales, additional legislation and amendments have been implemented throughout the UK.

Six of the 18 British species of bat have Biodiversity Action Plans (BAPs) assigned to them, which highlights the importance of specific habitats to species, details of the threats they face and proposes measures to aid in the reduction of population declines.

The Wildlife & Countryside Act 1981 (WCA)⁴ was the first legislation to provide protection for all bats and their roosts in England, Scotland and Wales (earlier legislation gave protection to horseshoe bats only.)

All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annexe IV of the Habitats Directive⁵, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 43 of the Conservation of Habitats and Species Regulations 2017⁶, which transposes the Habitats Directive into UK law. Consequently, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

This legislation applies to all bat life stages.

The implications of the above in relation to the proposals are that where it is necessary during construction to remove trees, buildings or structures in which bats roost, it must first be determined that work is compulsory and if so, appropriate licenses must be obtained from Natural England. Additionally, although habitats that are important for bats are not legally protected, care should be taken when dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

REFERENCES

-
- ¹ Collins, J. (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines. Bat Conservation Trust 3 edn
- ² Institution of Lighting Professionals and Bat Conservation Trust (2018), Bats and Artificial Lighting in the UK; Bats and the Built Environment Series.
- ³ NHBS Improved cavity bat box. Available at URL: https://www.nhbs.com/improved-cavity-bat-box?bkfno=187778&ca_id=1495&gclid=CjwKCAjww5r8BRB6EiwArcckC4wnBwbU2wJKY_H4Y5VY6P_chO6fSV-AKWEZVkfFfI32NJxuk_rOBoCVNwQAvD_BwE
- ⁴ HM Government, (1981); Part I and Part II of Wildlife and Countryside Act (as amended). HMSO
- ⁵ CEC (Council of the European Communities), (1992); Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
- ⁶ HM Government, (2017); The Conservation of Habitats and Species Regulations 2017. Statutory Instrument 2010 no. 490 Wildlife Countryside. OPSI