







QA

**Employment Land North of Maple Cross Lodge – Bat
 Survey Report**

Issue/Revision:	Draft	Final
Date:	January 2021	January 2021
Comments:		
Prepared by:	Daniel Perlaki	Daniel Perlaki
Signature:		
Authorised by:	Mitch Cooke	Mitch Cooke
Signature:		
File Reference:	550987dpJan21DV01_Bats	550987dpJan21FV01_Bats

CONTENTS

1.0 EXECUTIVE SUMMARY	3
2.0 INTRODUCTION	4
SITE DESCRIPTION	4
ECOLOGICAL CONTEXT AND PREVIOUS ECOLOGICAL SURVEYS	4
3.0 METHODOLOGY	6
SURVEYORS	6
CONSTRAINTS	7
4.0 RESULTS	8
5.0 EVALUATION AND DISCUSSION	9
6.0 SUMMARY & CONCLUSION	10
FIGURE 1 BAT ACTIVITY PLAN	11
APPENDIX 1 RELEVANT LEGISLATION	12

1.0 EXECUTIVE SUMMARY

- 1.1 Greengage Environmental Ltd was commissioned to undertake a bat survey by BCL (Maple Cross) LLP for Employment Land North of Maple Cross Lodge in Rickmansworth.
- 1.2 This document is a report of this survey and has been produced to support a planning submission for the site which seeks for the comprehensive redevelopment to provide 2 no. warehouse Class B1c/B2/B8 units comprising a total of 16,115 sqm including 1,882 sqm ancillary B1a office space, access, landscaping and associated works.
- 1.3 This survey aimed to establish the presence/likely absence of roosting bats from the site and identify appropriate mitigation and enhancement recommendations in light of the findings to ensure legislative and policy compliance.
- 1.4 Four emergence/re-entry surveys were undertaken focusing on trees identified as having moderate potential to support roosting bats. The surveys confirmed the likely absence of roosting bats from site.
- 1.5 Moderate levels of foraging activity was recorded. This was predominantly associated with common and soprano pipistrelles and noctules, with one brown long-eared bat pass recorded.
- 1.6 There are no proposed removal of trees which have potential to support roosts, therefore there are no predicted detrimental impacts. Additionally, compensatory roosting opportunities and foraging habitat should be provided to compensate for the losses associated with the development proposals.

2.0 INTRODUCTION

- 2.1 Greengage was commissioned to undertake a bat survey by BCL (Maple Cross) LLP of Employment Land North of Maple Cross Lodge in Rickmansworth, within the administrative boundary of Three Rivers District Council.
- 2.2 This document is a report of this survey and has been produced to support a planning submission for the site which seeks for the comprehensive redevelopment to provide 2 no. warehouse Class B1c/B2/B8 units comprising a total of 16,115 sqm including 1,882 sqm ancillary B1a office space, access, landscaping and associated works.
- 2.3 This survey aimed to establish the presence/like absence of roosting bats from the site and identify any actions required to mitigate for impacts upon roosting bats arising from the proposed redevelopment of the site.

SITE DESCRIPTION

- 2.4 The assessment site is approximately 3.4ha and is centred on National Grid Reference TQ036929 and OS coordinates 503625, 192903.
- 2.5 The site is located within Maple Cross, Hertfordshire just inside the M25, approximately 2.5km from Rickmansworth. It is accessed from Denham Way.
- 2.6 The site comprises an irregular shaped field lined with trees and scrub along all boundaries and a stream along the west. Except for a small (c. 4 sqm), partially collapsed brick building on the west of the site and a small flat-roof building outside the eastern boundary, there are no existing buildings or hardstanding present and the site is covered almost entirely by natural or semi-natural habitats.
- 2.7 The surrounding landscape includes light industrial space, small residential areas and agricultural/pasture. More naturalised areas in the landscape include Maple Lodge Local Nature Reserve and Stocker's Lake Local Nature Reserve which are both within 1km of the site. The site is located within the Colne Corridor (including Ebury Way) Green Infrastructure Corridor between Maple Cross and Rickmansworth.

ECOLOGICAL CONTEXT AND PREVIOUS ECOLOGICAL SURVEYS

- 2.8 A Preliminary Ecological Appraisal (PEA) which included a Preliminary Roost Appraisal (PRA) was undertaken on 8th March 2019 to identify the potential for features on the site to support roosting bats. An updated PEA was undertaken on 23rd November 2020. This identified a number of trees as having low and moderate potential to support roosting bats. Tree numbers are given in Table 2.1. Approximate locations of trees with bat roost potential are shown in Figure 1. For precise locations, see the Tree Constraints Plan appended to the Arboricultural Impact Assessment for the site (Ref: 550987dpJan21FV01_AIA). As such, the requirement for two emergence/re-entry surveys for trees of moderate value was identified.

Table 2.1 Trees with bat roost potential

Low potential trees	Moderate potential trees
T6, T10, T12, T16-T18, T22, T23, T29, T38, T40 and T47	T14, S25, T26, T33, T34, T41-T43, T53, T64 and G33

2.9 Two buildings are also present on site. Building A is considered to have negligible potential to support roosting bats, therefore no further surveys were recommended. Building B was considered to have moderate potential to support roosting bats. Subsequent emergence/re-entry surveys undertaken by Wardell-Armstrong in 2018 confirmed the likely absence of roosting bats from this building.

2.10 Bat activity surveys were also undertaken in 2018 by Wardell-Armstrong, which identified low-moderate levels of bat activity. This was concentrated around the site peripheries. Activity was predominantly by soprano (*Pipistrellus pygmaeus*) and common pipistrelles (*P. pipistrellus*) and noctules (*Nyctalus noctula*), with occasional activity by Leislars (*Nyctalus leislerii*), *Myotis spp.* and Nathusius' pipistrelle (*P. nathusii*).

3.0 METHODOLOGY

3.1 The emergence/re-entry surveys were undertaken between 28th May and 21st June 2019. Auxiliary survey data is given in the table below.

Table 3.1 Auxiliary Survey Data

Date	Sunset/Sunrise time	Start time	Finish time	Surveyors	Weather conditions
28/05/2019	21:05	20:55	22:35	Daniel Perlaki, Naomi Foot, Laura Thomas	12°C, 0/8 cloud, no wind
29/05/2019	04:53	03:23	05:00	Daniel Perlaki, Naomi Foot, Laura Thomas	9°C, 2/8 cloud, no wind. Dew on ground
20/06/2019	21:23	21:08	22:53	Naomi Foot, Laura Thomas, Olivia Guindon	16°C, 7/8 cloud, 10mph wind, mild feeling
21/06/2019	04:44	03:14	04:55	Naomi Foot, Laura Thomas, Olivia Guindon	10°C, 3/8 cloud, 4mph wind

3.2 The emergence surveys commenced 15 minutes prior to sunset and continued for 90 minutes after sunset. Re-entry surveys commenced 90 minutes prior to dawn and continued until sunrise.

3.3 Three surveyors were present during each survey. The surveyors were situated in optimal locations allowing for all features of potential value for bats to be directly observed, as well as note bat activity in the surrounding area.

3.4 Each surveyor was equipped with BatBox Duet Heterodyne detectors and an Echo Meter Touch bat detector to detect, visualise, and record the calls of any bats present in the area and identify bats to species level.

SURVEYORS

3.5 Mitch Cooke, who 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.

3.6 Naomi Foot, who undertook the surveys, has an undergraduate degree in Ecology and Conservation (BSc Hons), a Master's degree in Applied Ecology and is a Graduate member of CIEEM. Naomi has 5 years' experience in surveying bats throughout her degree and her experience in the commercial sector.

- 3.7 Olivia Guindon, who undertook the surveys, has a Bachelor's degree in Ecology and Wildlife Conservation (BSc Hons), a Master's degree in Species Identification and Survey Skills and is a Graduate member of CIEEM.
- 3.8 Daniel Perlaki, who undertook the surveys and prepared this report, has an undergraduate degree in Ecology (BSc Hons), a Master's degree in Conservation Science and Policy and is a Graduate member of CIEEM.
- 3.9 Laura Thomas, who undertook the surveys, has an undergraduate degree in Biology (BSc Hons) and a Master's degree in Evolutionary and Behavioural Ecology and is a Graduate member of CIEEM. Laura has over 3 years' experience in the commercial sector.
- 3.10 This report was written by Daniel Perlaki 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.

CONSTRAINTS

- 3.11 The surveys were undertaken during a suitable time of year in conditions conducive to bat surveying.
- 3.12 Identifying bat roosting behaviour associated with trees presents inherent difficulties due to the cluttered nature of the environment preventing observation of bat silhouettes against the sky. However, re-entry surveys were conducted as bats typically circle roosts prior to re-entering. Therefore, this isn't considered to be a significant constraint.

4.0 RESULTS

- 4.1 No roosting activity was observed associated with any of the trees assessed. As such, roosting bats can be considered likely absent from the site and no formal mitigation is required.
- 4.2 Mixed levels of bat activity were recorded on each of the survey visits with higher levels of activity recorded during emergence surveys when compared with re-entry surveys. On both emergence surveys (28/05/19 and 20/06/19), common pipistrelles, soprano pipistrelles and noctules were all recorded within 30 minutes of sunset and activity was intermittent/continuous until the surveys finished. The only other species recorded was brown long-eared bat (*Plecotus auritus*) which was recorded on one occasion at 22:29 on 28/05/19.
- 4.3 Markedly lower levels of activity were recorded on re-entry surveys, and only common and soprano pipistrelles were recorded.

5.0 EVALUATION AND DISCUSSION

- 5.1 As there were no roosts identified, roosting bats can be considered likely absent from the site. Therefore, there are no formal mitigation measures required as no impacts are predicted to arise as a consequence of the development proposals.
- 5.2 However, should any trees be required, it is recommended that a soft felling programme is undertaken as a precautionary measure. Specifically, the trees in question should be lowered to the ground once cut and left in situ for a minimum of 24 hours before being disposed of.
- 5.3 Compensatory roosting features should be provided to offset the loss of roosting opportunities associated with any tree removals. Hanging boxes should be installed on suitable mature trees retained along the site peripheries.
- 5.4 Wildlife friendly landscaping should be provided to mitigate for the loss of bat foraging habitat associated with the proposals. The details of this should be contained within an Ecological Management Plan (EMP) for the site, likely secured through planning condition.

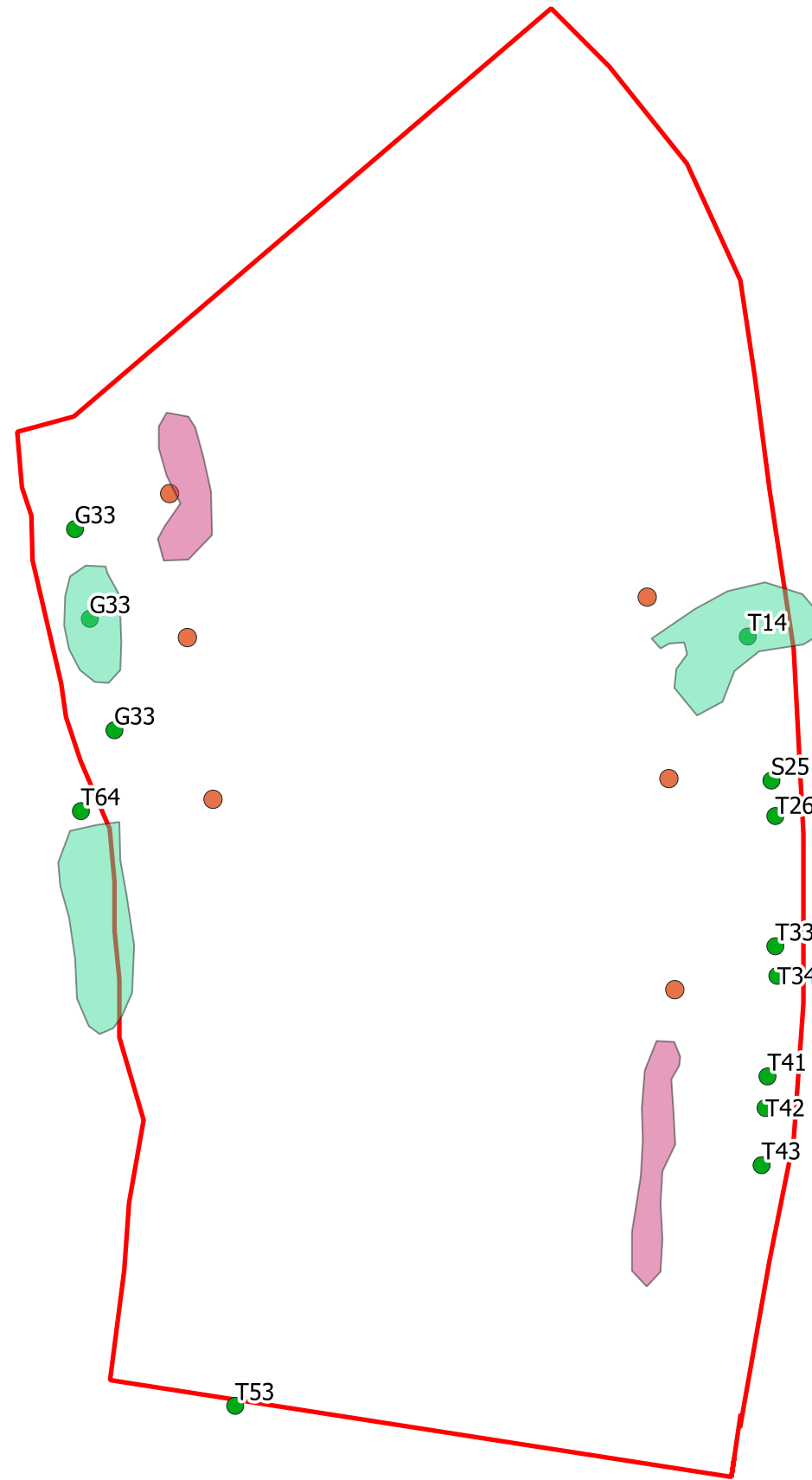
6.0 SUMMARY & CONCLUSION

- 6.1 Greengage was commissioned by BCL (Maple Cross) LLP to undertake a bat survey for Employment Land North of Maple Cross Lodge in order to establish the presence/likely absence of roosting bats.
- 6.2 No roosting bats were recorded on site, however moderate levels of foraging activity from common and soprano pipistrelles were recorded. Occasional noctule and low brown long-eared bat activity was also recorded.
- 6.3 Accordingly, bats are considered to be likely absent from the site and no formal mitigation is required. Compensatory roosting opportunities and wildlife friendly landscaping is recommended to mitigate for the loss of roosting opportunities and foraging habitat should any trees require removal.
- 6.4 Key actions should be included within a landscape and ecology management plan for the site which will be secured through planning condition.

FIGURE 1 BAT ACTIVITY PLAN

MAPLE CROSS

- Approximate Tree Locations
- Approximate Surveyor Locations
- Bat Activity**
- Noctule
- Pipistrellus spp.
- Site Boundary



Greengage Environmental Ltd
64 Great Suffolk Street, London SE1 0BL
www.greengage-env.com

Fig 1.0 Bat Activity Plan

Project Number 550987
July 2019
1 to 900 at A3
Basemap data: Google Earth



APPENDIX 1 RELEVANT LEGISLATION

Legislation Relating to Bats

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.

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.

The Wildlife & Countryside Act 1981 (WCA) 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 Annex IV of the Habitats Directive, 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 2017, 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.