

Loddon Garden Village, Shinfield

Addendum 2025 Bat Survey Report

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Addendum 2025 Bat Survey Report

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Loddon Garden Village, Shinfield

Addendum 2025 Bat Survey Report

1. INTRODUCTION

Scope

- 1.1 This report supports **Chapter 11 (Ecology)** of the Environmental Statement (ES) and adds to the **Technical Appendix 11.12: Bats** (EPR, 2025a), summarising the 2025 bat survey work undertaken within the Site (**Map 1**).

Site and Development Description

- 1.2 Full details of the Site and Development description are included in **Technical Appendix 11.1**

Policy and Legislative Context

Legislation

- 1.3 Full details of the legislation of relevance to ecology and nature conservation are included in **Technical Appendix 11.1**, however those of particular relevance to bats are summarised in **Technical Appendix 11.12**.

2. SURVEY AND ASSESSMENT METHODOLOGY

- 2.1 The approach to ecological impact assessment taken in this report is in line with guidance from the Chartered Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment (CIEEM, 2018), as set out in **Technical Appendix 11.2**.

Defining the Zone of Influence

- 2.2 The Zone of Influence (Zoi) for bats is as defined in **Technical Appendix 11.12**.

Desktop Study

- 2.3 The methodology was the same as **Technical Appendix 11.12**.

Field Survey Methodology

Preliminary Building Roost Assessments for Bats

- 2.4 The survey methodology was consistent with that set out in **Technical Appendix 11.12**. The buildings which were subject to an updated Preliminary Roost Assessment are shown on **Map 2a-b**. Building 27 was subject to an internal and external inspection however, all other buildings only had an updated external inspection.
- 2.5 The updated external building inspections were undertaken by Siobhan Pryke, a Natural England level 2 bat survey class licence holder, on the 22nd of April 2025.

Bat Emergence Surveys - Buildings

- 2.6 Bat dusk surveys were undertaken during the active bat survey season; the methodology is the same as outlined in **Technical Appendix 11.12**.
- 2.7 The buildings subject to emergence/re-entry surveys are shown on **Map 3a and b**.
- 2.8 Details of survey timings and weather conditions are provided in **Annex 1**.

Bat Activity Surveys

- 2.9 In 2025, a spring activity survey was undertaken for transects E, G, H, I, J, K, L and North of M4. The summer and autumn activity surveys were undertaken in 2024 and therefore did not require updating and were reported within **Technical Appendix 11.12**. These surveys were not updated due to being undertaken within the last year which is in line with CIEEM's best practice guidance. The aforementioned transect routes are shown on **Maps 4a-c**. Details of the surveys timings and weather conditions are provided in **Annex 2**.

Automated Static Bat Detector Surveys

- 2.10 Automated Static Bat Detector surveys followed the same methodology as outlined in **Technical Appendix 11.12**.
- 2.11 Automated static bat detectors were deployed across the Site in spring (April and May 2025) to supplement the bat activity surveys. The static bat detectors were deployed at positions 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 24 as shown on **Map 5**. Details of the surveys timings and weather conditions are provided in **Annex 3**.

Aerial Close Inspection Surveys

- 2.12 Following the Ground Level Tree Assessment (GLTA) undertaken in 2024 (full details of which are included in **Technical Appendix 11.12**), a further survey was undertaken for trees noted as suitable to support roosting bats in the form of an elevated search via tree climbing to inspect the Potential Roost Features (PRFs). Trees which were subject to further surveys in 2025 include trees 590, 3044, 595, 2092, 3035, 304, 297, 168 and 196/153 as shown on **Map 6**.
- 2.13 The **Aerial Close Inspection** surveys were conducted on the 8th of August 2025 by Phillip Brown BSc (Hons), MSc (R), MCIEEM and Chris Mungo BSc (Hons), MSc, MCIEEM PIEMA, both Natural England Level 2 Bat Licence holders and hold the relevant award/certificate in Tree Climbing and Aerial Rescue.
- 2.14 The purpose of the aerial close inspection survey was to gain a more detailed assessment of PRFs and their likely suitability to support roosting bats. The assessment also included a search for direct evidence of bats such as live or dead bats and droppings as well as staining and the use of an endoscope to search cavities. The trees were climbed using a rope system with a safety second on the ground at all times. The initial aim of the survey was to re-assess PRFs and to inform the need for further surveyor further recommendations.

Lekking Surveys

- 2.15 Due to the high number of Nathusius' Pipistrelle *Pipistrellus nathusii* being recorded in at Static Location 24 in September 2024 via the Automated Static Bat Detector Surveys, Wokingham Borough Council requested that further surveys take place to confirm if Nathusius' Pipistrelles are lekking within the Site boundary. Static Location 24 is shown on **Map 11.12.13 of Technical Appendix 11.12**, which recorded 45 calls on a single night.
- 2.16 There is no formal guidance for lekking surveys, however there is guidance for swarming surveys using acoustic detectors (BCT, 2023). The guidance for acoustic surveys for swarming states that the surveys should be carried out August to October inclusive, with each month having a minimum of five nights.
- 2.17 We adjusted the survey method to include July due to Nathusius' Pipistrelle being known to for lekking sites and mate as early as July, additionally a period of seven nights was used over the standard five, due to Nathusius' Pipistrelle being a migratory species and therefore allowing a wider survey window to incorporate the migratory window.
- 2.18 The survey was based on Nathusius' Pipistrelle typical emergence time and on each occasion, automated detectors recorded bat activity from 30 minutes before sunset until 30 minutes after sunrise. Nathusius' Pipistrelle typically emerge 11 minutes after sunset and therefore the 30

minutes before sunset will allow for any early bats to be picked up. The 30 minutes either side of sunset and sunrise is sufficient for covering the core lekking window.

- 2.19 Automated Static Bat Detectors were used for the Lekking surveys (**Map 7**). Automated bat detectors with full spectrum recording capability (Anabat Express and Anabat Swift units) were deployed at four strategic locations between July and November 2025. Nathusius' Pipistrelle are known to mate from Late July to early September with lekking occurring after the maternity season, however, mating can often coincide with Nathusius' Pipistrelle migration which can be as late as late October depending on weather conditions. The timing of the deployment of static bat detectors therefore was designed to cover this period of the active bat season and to encompass the most likely lekking period for Nathusius Pipistrelle.
- 2.20 Weather information for each survey period was provided by Weathernet from the nearest weather station. Survey dates and weather information is provided in **Annex 4**.

Trapping Surveys

- 2.21 As a result of the data collected in 2024 via the Automated Static Bat Detector surveys (see **Technical Appendix 11.12**), Myotis bats *Myotis* sp. and Long-eared bats *Plecotus* sp., were confirmed as present within the species assemblage for the Site. Given the geographical location of the Site and the habitats present there is the potential for rarer bats to be present within the species assemblage such as Grey Long-eared bats *Plecotus austriacus* and Bechstein's bat *Myotis bechsteinii*. There is no way to definitively identify these species from acoustic surveys alone and so a series of trapping surveys were undertaken to further identify to species level the assemblage within the Site.
- 2.22 Trapping surveys were undertaken by surveyors who hold Natural England Level 3 and 4 licences, Paul Hope BSc (Hons) MCIEEM and Colleen Hope BSc PGCE MCIEEM CEcol.
- 2.23 As represented in **Map 8**, the spatial scope of these surveys was targeted in connected habitat with the off-site Bear Wood, as well as two locations near the River Loddon corridor in which *Myotis* bats were recorded on the automated Static bat detector surveys.
- 2.24 Trapping survey metadata is provided in **Annex 5**.
- 2.25 On each survey, a series of mist nets and harp traps was deployed, as shown in **Maps 10a-c**, where appropriate with a lure, within areas of potential suitable habitat – particularly including woodland edge, hedgerows and river edge habitat – and periodically checked for the presence of bats. Licensed surveyors were also equipped with ultrasound bat detectors.
- 2.26 Acoustic lures were used periodically to attract the target species towards the nets. The lure use was based on David Hill's and Frank Greenway's (2008) methodology and good practice guidance, where the lure was used following the main emergence window and was on for a period of 20-30 seconds and then off for 30 seconds. This was repeated for a minimum of 30 minutes per mist net or harp trap. The lure had several calls and call sequences on it, which were rotated to ensure that the calls were natural and allow for breaks in calls, so not to deter bats.
- 2.27 Captured bats were identified to species level in the hand with the collection of biometric data (includes species, sex, age and breeding condition) before being released.

- 2.28 Where Long-eared bats were caught, additional data was recorded, including thumb length and tragus width to further enable species identification (to confirm the presence of Brown Long-eared *Plecotus auritus* and Grey Long-eared bats).

Survey Constraints

Preliminary Building Roost Assessments for Bats

- 2.29 The updated PRA was done externally only for all buildings bar B24. Only external inspections were undertaken due to the survey being to look for any new features; the internal inspection survey data was still valid, and therefore, external was a sufficient survey effort. This is not considered a significant limitation, as the access and egress points and internal conditions are unlikely to be significantly altered; the internal inspection survey data are valid, and additional emergency surveys were undertaken.

Bat Emergence/Re-entry Surveys

- 2.30 **Table 2.1** below breaks down each building surveyed in 2025 along with detailed survey constraints, if any.

Table 2.1: Bat Emergence/Re-entry Survey Constraints.

Building Reference	Survey Constraint(s)
B3	Artificial lights are present on the building, which obstructs the surveyor's view. Noise from working vehicles
B4	Occasional artificial lights from working vehicles.
B7	None
B11	None
B15	16/06/25 – Started 12 minutes late due to concerns from residents about privacy. Light facing one surveyor made it hard to see the building after dark. Security lights triggered at another surveyor's position
B17	Infrared flood light was being triggered by residents. Would be on for a few minutes at a time.
P20a	Activity from working vehicles with headlights on
B18	Floodlights around the extension of the house causing glare
B18a	None
B22	None
B22a	None
B24	Trees are blocking the view down the east length of the building
B25	Obscured views due to the close proximity of the water barrel and other buildings
B26	Trees partially obstructing view
B27	Floodlights
B35	IR Flood light
B35a	None

- 2.31 The above limitations were not considered a significant constraint to the results of the data due to multiple surveys and previous survey data being present, and where applicable roosts already being confirmed.

Automated Bat Detector Surveys

2.32 On occasion, automated bat detectors failed to record the full five-night period as due to technical faults. Where this was the case, efforts were made to redeploy detectors within the same seasonal recording period. In some instances, this was not possible; these occasions are listed below, together with the type of constraint on the data.

- Location 13- April- Only recorded for three nights
- Location 14– May– Only recorded for three nights

2.33 The above limitations were not considered a significant constraint due to data being available for 2022 and 2024. The previous surveys would have already recorded the species assemblage present, and further surveys have been conducted to identify species and activity of bats within the Site.

Evaluation Methodology

2.34 The evaluation methodology is the same as in the **Technical Appendix 11.12**.

3. ECOLOGICAL BASELINE

2025 Field Survey Results

Preliminary Building Roost Assessments for Bats

- 3.1 A total of 32 buildings were subject to an updated Preliminary Roost Assessment (PRA) and their locations are shown on **Map 1a and 1b**. All buildings were subject to an external inspection but only B27 was subject to an updated internal inspection due to the location of a roost, previously recorded, being unknown. The internal inspection for this building was designed to try to locate the exact roost location.
- 3.2 Building conditions were consistent with the previous survey findings with each buildings Bat Roosting Potential remaining the same from the previous inspections undertaken in 2022, (see **Technical Appendix 11.12**).
- 3.3 A summary of the Bat Roost Potential for each of these buildings is summarised below. Full survey details, including building descriptions and details of the potential Bat Roost Features, can be found in **Annex 2**. In summary:
- **Nine buildings** were **confirmed as supporting roosting bats** (namely buildings B17, B18, P20a, B22, B24, B26, B27, B35 and B35a) which was verified by the previous surveys which been undertaken and summarised in **Technical Appendix 11.12**. No evidence was found during the PRA to confirm roosting bats.
 - **One building** was assessed as having **high suitability** for supporting roosting bats (namely P22A).
 - **One building** was assessed as having **moderate suitability** for supporting roosting bats (namely B25).
 - **Four buildings** were assessed as having **low suitability** for supporting roosting bats (namely B03a, B04, B25a and B34).
- 3.4 The remaining 17 buildings were assessed as being of negligible suitability for supporting roosting bats and were not subject to any further surveys.
- 3.5 No new buildings were assessed as having potential to support roosting bats.

Bat Emergence Surveys

- 3.6 Following the results of the Preliminary Roost Assessment of the 32 buildings, any building identified with potential to support roosting bats were subject to further surveys in the form of emergence surveys between May and September 2025. A summary of the date's the buildings were surveyed and related metadata can be found in **Annex 1**.
- 3.7 Below is a summary of those surveys where bat emergence from the buildings were recorded.

Building 7

- 4th August 2025: four Soprano Pipistrelle *Pipistrellus pygmaeus* bats were recorded emerging from the south-east gable end.

Building 17

- 10th June 2025: 16 Common Pipistrelle *Pipistrellus pipistrellus* bats were recorded emerging from the soffit above the front door facing west.

Building 18

- 9th June 2025: 12 Soprano Pipistrelle bats were recorded emerging from the soffits of the northern gable end.
- 15th July 2025: 17 Soprano Pipistrelle bats were recorded emerging from the soffits at the southern gable end.
- 19th August 2025: 20 Soprano Pipistrelle bats were recorded emerging from the soffits at the southern gable end.

Building 22

- 21st August 2025: one Common Pipistrelle and one Soprano Pipistrelle bat were recorded emerging from underneath roof tiles on the western aspect of the building in between the dormer and the northwestern corner.

Building 26

- 14th July 2025: one Brown Long-eared bat was recorded emerging from a roof tile in the middle of the south-eastern aspect.
- 18th August 2025: one Brown Long-eared bat was recorded emerging from a roof tile in the middle of the south-eastern aspect.

Building 27

- 2nd June 2025: two Brown Long-eared bats were recorded emerging through the door on the north east side of the building
- 14th July 2025: four Brown Long-eared bats were recorded emerging through the door on the north east side of the building.
- 18th August 2025: two Brown Long-eared bats were recorded emerging from under the flat roof area of the north-western aspect of the building.

Building 35a

- 16th July 2025: four Soprano Pipistrelle bats were recorded emerging from under the felt lip of the eastern corner of roof.

- 3.8 Where emergence surveys were undertaken but no bats were recorded emerging from the building, the results of these surveys are not summarised above as no bat roosts have been identified. However full details of all the emergence surveys can be found in **Annex 3**.

Bat Activity Surveys

- 3.9 During the Spring 2025 bat activity surveys at least six bat species were recorded. The following species/species groups were recorded:
- Common Pipistrelle;

- Soprano Pipistrelle;
 - Pipistrelle species *Pipistrellus* sp.;
 - Noctule *Nyctalus noctula*;
 - *Myotis* species; and
 - Long-eared species *Plecotus* sp.
- 3.10 Bats were also recorded that could not be identified to species or genus level due to being seen only with no accompanying echolocation call.
- 3.11 The key bat foraging and commuting habitat has remained the same as shown in **Map 11.15.11** of **Technical Appendix 11.12**.
- 3.12 The areas which individual species or genus were primarily using remains the same as present in **Technical Appendix 11.12**, these are summarised below.
- *Myotis* bats were mostly recorded south of the river Loddon, utilising the woodland pockets closely connected to the river as well as boundary features, particularly the larger lines of trees within the southern extent of the Site.
 - Long-eared bats were recorded predominantly in a patch of woodland towards the north-east of the Site.
 - Noctule and Pipistrelle bats (including Common and Soprano) were more widespread across the Site, with key activity recorded around the hedgerows extending west to east from the River Loddon and woodlands surrounding the river.
- 3.13 Results from the walked surveys are in line with the previous findings during the 2024 survey season, showing the Site is consistently used for sustained levels of foraging and commuting.

Automated Bat Detector Surveys

- 3.14 At least 11 species of bat species or genus were recorded by the automated static detectors between April and May 2025, including:
- Common Pipistrelle;
 - Soprano Pipistrelle;
 - Pipistrelle Species;
 - Nathusius' Pipistrelle;
 - Long-eared species;
 - *Myotis* species;
 - Serotine *Cnephaeus serotinus*;

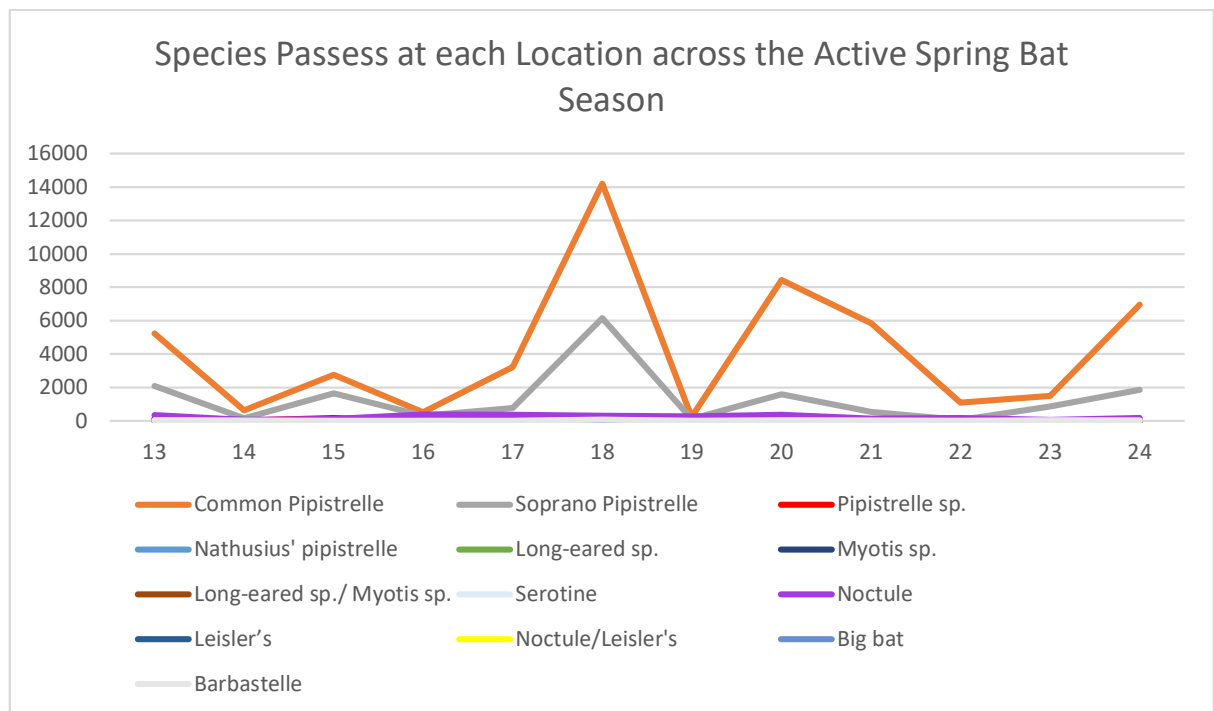
- Noctule;
- Leisler's *Nyctalus Isisleri*;
- *Nyctalus* species *Nyctalus* sp.; and
- Western Barbastelle *Barbastella barbastellus*

3.15 The locations of the Automated Static Bat Detectors are shown on **Map 5**.

3.16 **Annex 4** shows the total bat passes recorded at each static detector location in April and May 2025.

3.17 The Automated Bat Detector Surveys recorded a similar bat assemblage to that of the 2024 survey, with the species recorded per location shown in **Figure 3.1** below.

Figure 3.1. Bat Passes Per Species Per Location across the Spring Season.



3.18 Across Locations 13-24, either Soprano Pipistrelle or Common Pipistrelle were the most frequently recorded species, 70.98% and 22.49% of all passes recorded, respectively. Common Pipistrelle and Soprano Pipistrelle are both common and widespread in England.

3.19 Low numbers of passes by Serotine (0.04%), Nathusius' Pipistrelle (0.17%), Noctule (3.74%), Leisler's bat (<0.01%), *Myotis* species (1.02%) and Barbastelle (0.40%) were also recorded.

3.20 Serotine are restricted primarily to southern England, and Noctule/Leisler's bat is considered frequent and widespread.

3.21 The distribution and status of *Myotis* bats depend on the species and can range from widespread to restricted and from common to rare.

- 3.22 Although distributed across southern England and Wales, Barbastelle are rare in both the UK and across Europe, although there is potential that this species is under-recorded (JNCC, undated).
- 3.23 April and May static results are in line with the previous seasons findings and confirm a consistent level of activity in the spring season, therefore concluding to a consistent level of activity, in the form of commuting and foraging across the year.

Lekking Surveys

- 3.24 The results of the acoustic lekking surveys are summarised below in **Table 3.1-3.2**, which summarises the total calls recorded and a breakdown of September's survey.

Table 3.1: Automated Bat Detector survey summary table

Static Detector Reference	Species	Total Bat Passes (over seven consecutive nights)			
		July	August	September	October
1	Nathusius' Pipistrelle	0	0	6	4
2	Nathusius' Pipistrelle	0	1	9	2
3	Nathusius' Pipistrelle	0	2	19	0
4	Nathusius' Pipistrelle	0	0	35	4

- 3.25 As the highest number of Nathusius Pipistrelle bats were recorded in September **Table 3.2** shows the number of passes split between each of the seven survey nights.

Table 3.2: Total Nathusius Pipistrelle passes over each night in September 2025

Static Detector Reference	Total Bat Passes (over each night)						
	17/09/25	18/09/25	19/09/25	20/09/25	21/09/25	22/09/25	23/09/25
1	1	0	0	1	0	1	3
2	0	2	2	0	5	0	0
3	6	7	6	0	0	0	0
4	2	13	10	0	6	1	3

- 3.26 The results show that Nathusius' Pipistrelle are using the Site during the mating period; however, the number of calls recorded is significantly lower than expected if lekking was taking place. This is due to lekking having territory defence behaviour such as that mentioned in Toth and Parson (2013). As males will guard females or try to attract females there will be a large number of calls over a long period of time. During the lekking period males will aggregate in small territories with the aim of defending these territories and displaying with loud social calls to attract females. During this period males are known to spend a large portion of the night calling from their roost (BCT,2010). As a result, if lekking were occurring at these above locations one would expect a consistently high number of calls recorded per night. The numbers present above are more akin to low numbers of bats passing by either as commuting or brief foraging. Therefore, it can be concluded that the Site is unlikely to support Nathusius' Pipistrelle lekking.

Aerial Close Inspection Surveys

- 3.27 A total of nine trees were accessed via ladder or tree climbing to carry out a close inspection of potential Bat Roosting Features following the results of the Ground Level Tree Assessment (GLTA). **Table 3.3** summarises the results of the 2022-2023 GLTA and the final result following the Aerial Close Inspection Survey (see also **Map 9**).

Table 3.2: Updated Tree Assessment Results

Tree ID Ref	2022-2023 Previous Bat Roost Suitability	2025 Current Tree Bat Roost Suitability
590	PRF-I	PRF-I
3044	PRF-I	PRF-I
595	PRF-M	PRF-I
2092	PRF-M	PRF-M
3035	PRF-I	PRF-I
304	PRF-M	PRF-M
297	PRF-M	PRF-I
168	High Suitability	Tree fallen down - no action needed
196/153	PRF-M	PRF-M

- 3.28 Of the nine trees subject to further survey, two trees were downgraded on closer inspection to PRF-I, namely Tree 595 and Tree 297. Six of the trees retain the same Bat Roost Suitability upon further inspection, with one tree having since fallen down from natural causes and is no longer considered suitable for supporting roosting bats.

Trapping Surveys

- 3.29 Three nights of trapping survey took place between August and September 2025. Each evening, a variety of mist nets and harp traps were used, as shown in **Maps 10a-c**.
- 3.30 The results of each trapping survey are recorded in **Tables 3.3-3.4**.
- 3.31 No bats were caught on the trapping survey, which took place on the 19th of August 2025. The weather was suitable for trapping, with minor periods of strong wind but not consistent or over a period of time for deterring foraging/commuting bats. Bats were heard to be foraging on acoustic bat detectors so bats were present throughout the survey window.
- 3.32 The results of each trapping survey are recorded in **Tables 3.3-3.4**.

Table 3.3: Trapping Survey Results from 13th August 2025

Time	Species	Sex	Age	Breeding Status	F/Arm mm	Weight (g)	Thumb (mm)	Tragus (mm)
23:45	Barbastelle	F	Juvenile	N/A	39	9	N/A	N/A
00:25	Soprano Pipistrelle	F	Adult	Nonparous	30.6	5	N/A	N/A

Table 3.4: Trapping Survey Results from 3rd September 2025

Time	Species	Sex	Age	Breeding Status	F/Arm mm	Weight (g)	Thumb (mm)	Tragus (mm)
20:10	Soprano Pipistrelle	M	Adult	Testes swollen	30.9	4	N/A	N/A
20:15	Soprano Pipistrelle	F	Adult	Parous	31.4	4	N/A	N/A
20:18	Soprano Pipistrelle	M	Adult	Testes swollen	29.9	4.5	N/A	N/A
20:20	Common Pipistrelle	M	Adult	Non-breeding	31.1	4	N/A	N/A
20:25	Common Pipistrelle	M	Adult	Testes swollen	30.0	4	N/A	N/A
20:30	Pipistrelle species (bat escaped)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21:35	Common Pipistrelle	F	Adult	Nonparous	32.9	5	N/A	N/A
21:45	Common Pipistrelle	M	Adult	Testes swollen	31.1	4.5	N/A	N/A
22:00	Common Pipistrelle	F	Adult	Nonparous	32.5	6	N/A	N/A
22:11	Brown Long-eared	M	Adult	Testes swollen	36.2	8	6.6	4.4
22:11	Brown Long-eared	F	Adult	Nonparous	38.2	8.5	8.1	4.4
22:11	Brown Long-eared	M	Adult	Non-breeding	36.7	8	6.9	5.3
22:30	Barbastelle (bat escaped)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22:30	Barbastelle	M	Adult	Non-breeding	35.8	9	N/A	N/A

3.33 No *Myotis* species or Grey Long-eared bats were caught or recorded during the trapping surveys.

4. EVALUATION

Roosting Bats

- 4.1 Based upon the previous survey data and the 2025 survey data, bats were found to be roosting in seven buildings. **Table 4.1** below summarises the roosts known in 2022-2023, roosts recorded in 2025 and the roost the building supports. Surveys undertaken in EPR to date have resulted in the identification of 12 buildings that are confirmed bat roosts.

Table 4.1: Bat Roosts recorded by EPR in 2022- 2023 compared to update in 2025

Building Reference	2022-2023 Roosts Recorded	2025 Roost Recorded	Roost Supported
3	No bats recorded emerging	No bats recorded emerging	None
4	No bats recorded emerging	No bats recorded emerging	None
7	No bats recorded emerging	Soprano Pipistrelle Day Roost	Soprano Pipistrelle Day Roost
11	No bats recorded emerging	No bats recorded emerging	None
12	Brown Long-eared Day Roost	No bats recorded emerging	Brown Long-eared Day Roost
15	Brown Long-eared Day Roost	No bats recorded emerging	Brown Long-eared Day Roost
17	Brown Long-eared Day Roost Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost	Common Pipistrelle Day Roost	Brown Long-eared Day Roost Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost
18	Soprano Pipistrelle Day Roost <i>Myotis</i> Species Day Roost	Soprano Pipistrelle Day Roost	Soprano Pipistrelle Day Roost <i>Myotis</i> Species Day Roost
18a	Soprano Pipistrelle Day Roost	No bats recorded emerging	Soprano Pipistrelle Day Roost
P20a	No bats recorded emerging	No bats recorded emerging	None
22	Brown Long-eared Day Roost Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost	Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost	Brown Long-eared Day Roost Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost
22a	No bats recorded emerging	No bats recorded emerging	None
24	Brown Long-eared Day Roost Soprano Pipistrelle Day Roost	No bats recorded emerging	Brown Long-eared Day Roost Soprano Pipistrelle Day Roost

25	No bats recorded emerging	No bats recorded emerging	None
26	Common Pipistrelle Day Roost	Brown Long-eared Day Roost	Common Pipistrelle Day Roost Brown Long-eared Day Roost
27	Brown Long-eared Maternity Roost Soprano Pipistrelle Day Roost	Brown Long-eared Day Roost	Brown Long-eared Maternity Roost Brown Long-eared Day Roost Soprano Pipistrelle Day Roost
35	Soprano Pipistrelle Day Roost Unknown Pipistrelle species Day Roost	No bats recorded emerging	Soprano Pipistrelle Day Roost Unknown Pipistrelle species Day Roost
35a	Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost	Soprano Pipistrelle Day Roost	Common Pipistrelle Day Roost Soprano Pipistrelle Day Roost

- 4.2 Using the evaluation method for assessing importance of roosts (Reason & Wray, 2023) Common Pipistrelle, Soprano Pipistrelle and Brown Long-eared bats are all considered widespread in Southern England. *Myotis* species (with the exception of Bechstein's which are most often tree-roosting species) are considered Widespread but not as abundant in Southern England. For non-breeding day roosts for Common Pipistrelle, Soprano Pipistrelle, *Myotis* species and Brown Long-eared bats using the evaluation method this leads to a Zone of Influence important valuation for day roosts within the Site. For Maternity roosts for Brown Long-eared bats this leads to a County level importance value for the Site. Therefore, the Site is considered up to **County Level Importance** for roosting bats within the Site. This is the same evaluation as the previous evaluation outlined in **Technical Appendix 11.12-Bats**.

Commuting and foraging bats

- 4.3 Overall, the bat assemblage is mostly comprised of predominantly common and widespread species, particularly Common Pipistrelle, Soprano Pipistrelle and Brown Long-eared bats mainly using the boundary habitats for foraging or commuting, and low numbers of less common species such as *Myotis* species and Noctule. Low numbers of rarer bats, including Barbastelle, Leisler's, Nathusius Pipistrelle and Serotine, were also picked up during static bat detector surveys, but the levels of recorded calls indicate only very infrequent transient use likely utilising the linear corridors within the Site to pass through to suitable habitats such as ancient woodlands. These results are indistinguishable to the result of data collected in 2022/2023 and as such the value of commuting and foraging habitat remains as previously outlined in **Technical Appendix 11.12-Bats**.
- 4.4 Using the evaluation method for assessing the importance of a bat assemblage (Reason & Wray, 2023) this leads to a **Regional importance** of the bat assemblage on the Site, and their conservation status is considered to be favourable and stable, as detailed in the **Technical Appendix 11.12-Bats**.

Survey Summary

Roosting Bats

- 4.5 2022-2023 recorded a total of 19 roosts. These include a maternity roost for Brown Long-eared bats and day roosts for Brown Long-eared bats, Common Pipistrelle, Soprano Pipistrelle, Myotis bats and unknown Pipistrelle species.
- 4.6 2025 recorded fewer roosts with a total of eight being recorded. These include day roosts for Brown Long-eared bats, Common Pipistrelle and Soprano Pipistrelle.
- 4.7 Although the roosts recorded between the seasons were different, all roosts are being accounted for. Bats will move roosts readily depending on conditions and changes to surroundings, so bats not being recorded for a year does not mean the roost is no longer present.
- 4.8 Based on the proposals, it is likely that many of the buildings onsite will be demolished to facilitate the development, which will subsequently result in the loss of bat roosts across the Site.
- 4.9 All native species of bat and their roosts benefit from protection under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England. Further details on licencing requirements including appropriate mitigation, compensation and enhancements, can be found with the Chapter 11 (Ecology) of the Environmental Statement (ES) (EPR 2025b) and Technical Appendix 11.16 Ecological Mitigation and Enhancement Strategy (EPR, 2025c)

Trapping Survey

- 4.10 The trapping surveys did not result in any *Myotis* species being caught within the Site. However, based on the 2025 static survey, Myotis species are only recorded in low numbers, 1.02 % of bats recorded on Site and a peak of this may mean *Myotis* are on site in low numbers and numbers peaking at only on any one night. Based on the geographic location, on a precautionary basis, all myotis species are assumed to use the Site in the absence of species identification. However, as numbers are considered low, likely just passing bats, the proposed mitigation is deemed sufficient based on the survey findings.
- 4.11 Additionally, where Long-eared bats were caught during the trapping surveys, they were all confirmed as Brown Long-eared bats. Therefore, it is considered likely that where *Plecotus* species was recorded through the Automated Static Bat Detectors surveys across the Site this are more than likely to be Brown Long-eared bats. As a consequence, no Grey Long-eared bats have been confirmed as present within the Site boundary.

Lekking Survey

- 4.12 The lekking data showed that few calls were recorded by Nathusius' Pipistrelle bats over the mating period, with a peak of 13 calls in any one night. Lekking behaviour is having territory defence behaviour such as that mentioned in Toth and Parson (2013). As males will guard females or try to attract females there will be a large number of calls over a long period of time. During the lekking period males will aggregate in small territories with the aim of defending these

territories and displaying with loud social calls to attract females. During this period males are known to spend a large portion of the night calling from their roost (BCT,2010). Therefore with a peak of only 13 calls on any one night, it is unlikely that the Site supports Nathusius' Pipistrelle lekking.

Tree Climbing Survey

- 4.13 All trees that have PRF-I suitability can be felled under a Precautionary Working Method Statement (PWMS) whilst the trees with PRF-M suitability are subject to further inspection or emergence surveys, if these trees are to be removed, these surveys will take place at Reserved Matters Application stage.

Summary

- 4.14 Based on the findings on the 2025 survey, the impact avoidance, mitigation and enhancement measures set out in Chapter 11 of the Environmental Statement therefore remain valid and will ensure that significant negative effects on the bat assemblage do not arise as a result of the Proposed Development.

5. REFERENCES

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Maps

Map 1	Site Overview
Map 2a-b	Update 2025 Preliminary Roost Assessment
Map 3a-b	Updated 2025 Bat Emergence Surveys
Map 4a-c	2025 Bat Transect Routes
Map 5	2025 Static Detector Locations
Map 6	Trees with Bat Roosting Potential Surveyed in 2025
Map 7	Lekking Automated Detector Locations
Map 8	Trapping Survey Locations
Map 9	Updated Tree Survey Results
Map 10a-c	Trapping Survey Set-up

KEY

-
- Site Boundary
- EcoValley
- Hall Farm
- Innovation Valley
- North of M4

SCALE: 1:11,750 at A3

0 100 200 300 400 500 Metres



CLIENT: University of Reading
PROJECT: Loddon Garden Village
DATE: 02 February 2026

Update 2025 Preliminary Roost Assessment

KEY

1

1000

Main Map Frame:

SCALE: 1:1,500 at A3



CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 03 February 2026

VLS edition Garden V8Maps, SiteNet 2.0 10/05/2006Advanced Bat Survey/May2a_BatSurvey/batshobby_CEDAR_F13AD_44M_030226.aprs

P23/42



Update 2025 Preliminary Roost Assessment

KEY

Site boundary

Buildings surveyed in 2025

Main Map Frame:
SCALE: 1:1,500 at A3

0 20 40



CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 02 February 2026

[illegible]

KEY

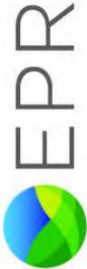


Site boundary



Buildings surveyed in 2025

Main Map Frame:
SCALE: 1:1,500 at A3



CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 03 February 2026

\\uk01uk01\Garden_Village_03Feb2026\Map_3a_Update_2025_Emergence_Surveys\Map_3a_Update_2025_Emergence_Surveys.dwg

P23142





MAP 3b Update 2025 Emergence Surveys

KEY

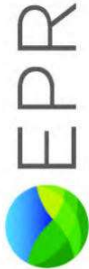


Site boundary

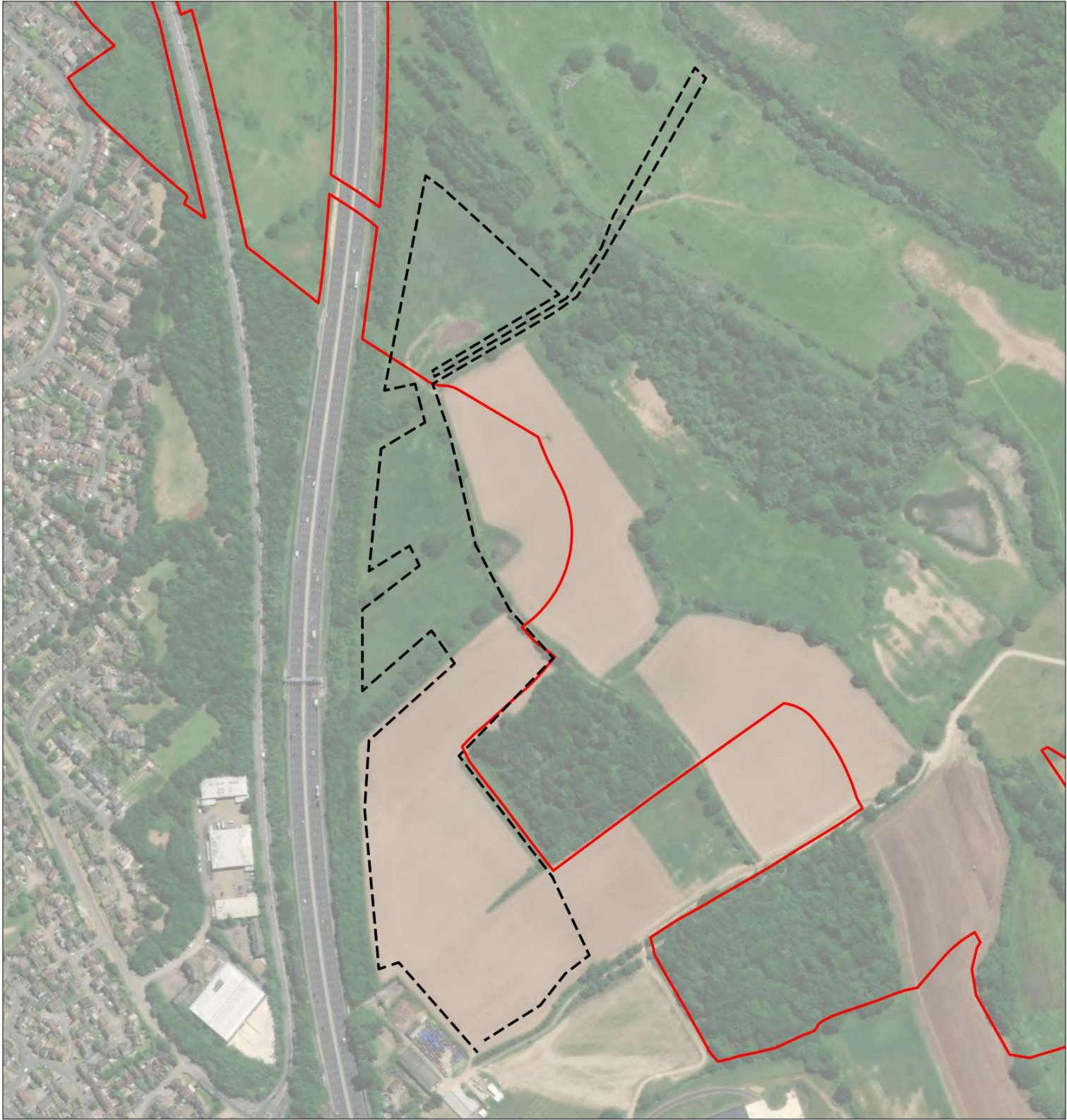


Buildings surveyed in 2025

Main Map Frame:
SCALE: 1:1,500 at A3



CLIENT: University of Reading
PROJECT: Loddon Garden Village
DATE: 03 February 2026

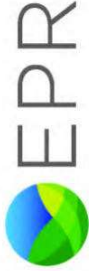


MAP 4a Eco-Valley Transect Route - 2025
Survey

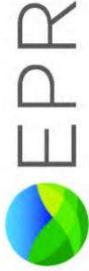
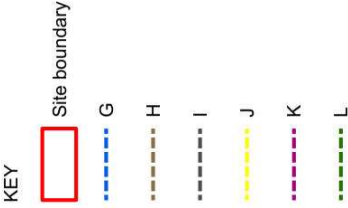
KEY

Site boundary

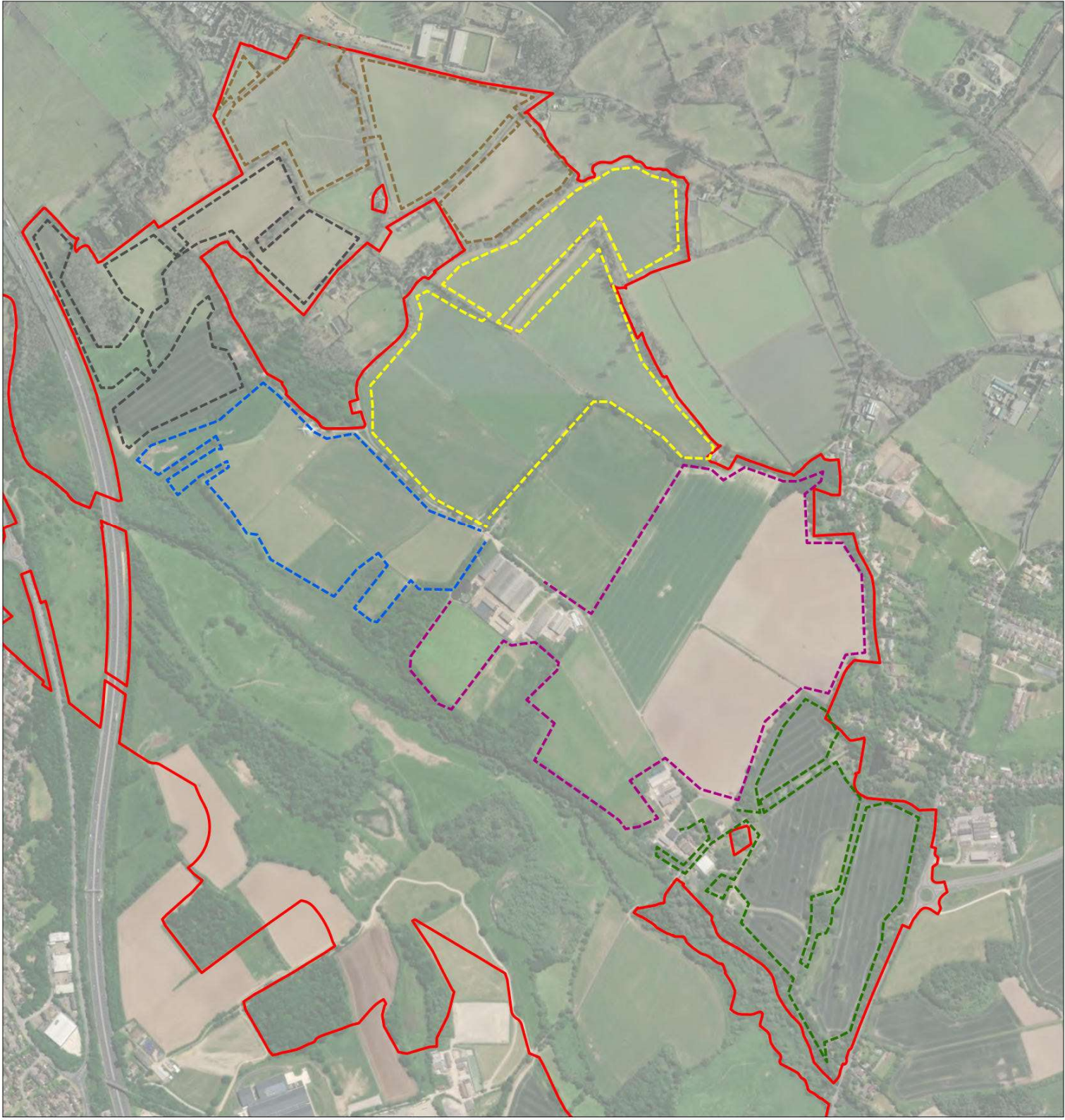
--- E



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DATE: 02 February 2026



CLIENT: University of Reading
PROJECT: Loddon Garden Village
DATE: 02 February 2026



KEY



North of M4

SCALE: 1:3,750 at A3



CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 02 February 2026

MAP 52025 Static Detector Locations
(13-24)

KEY

Site boundary

S

Static detectors

SCALE: 1:10,000 at A3

0100200300400500

Metres

N

EPR

CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 02 February 2026

13-24

Static Detectors

University of Reading

Project: Loddon Garden Village

Date: 02 February 2026

Aerial Image: Microsoft, Vantor

This aerial photograph displays a rural landscape with a mix of green fields, brown ploughed land, and some buildings. A red line delineates the site boundary, which is irregular and covers a large portion of the central and right-hand side of the image. Eleven black circular markers, each containing a white letter 'S', are distributed across the site, indicating the locations of static detectors. The detectors are positioned at various points within the site, including near the top left, top center, middle left, middle right, and bottom right. To the left of the site boundary, a major road (A3) runs vertically. The surrounding area includes other fields, some trees, and a few small structures.

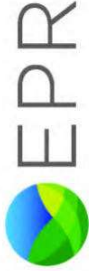
MAP 6 Trees with Bat Roosting Potential
Surveyed in 2025

KEY

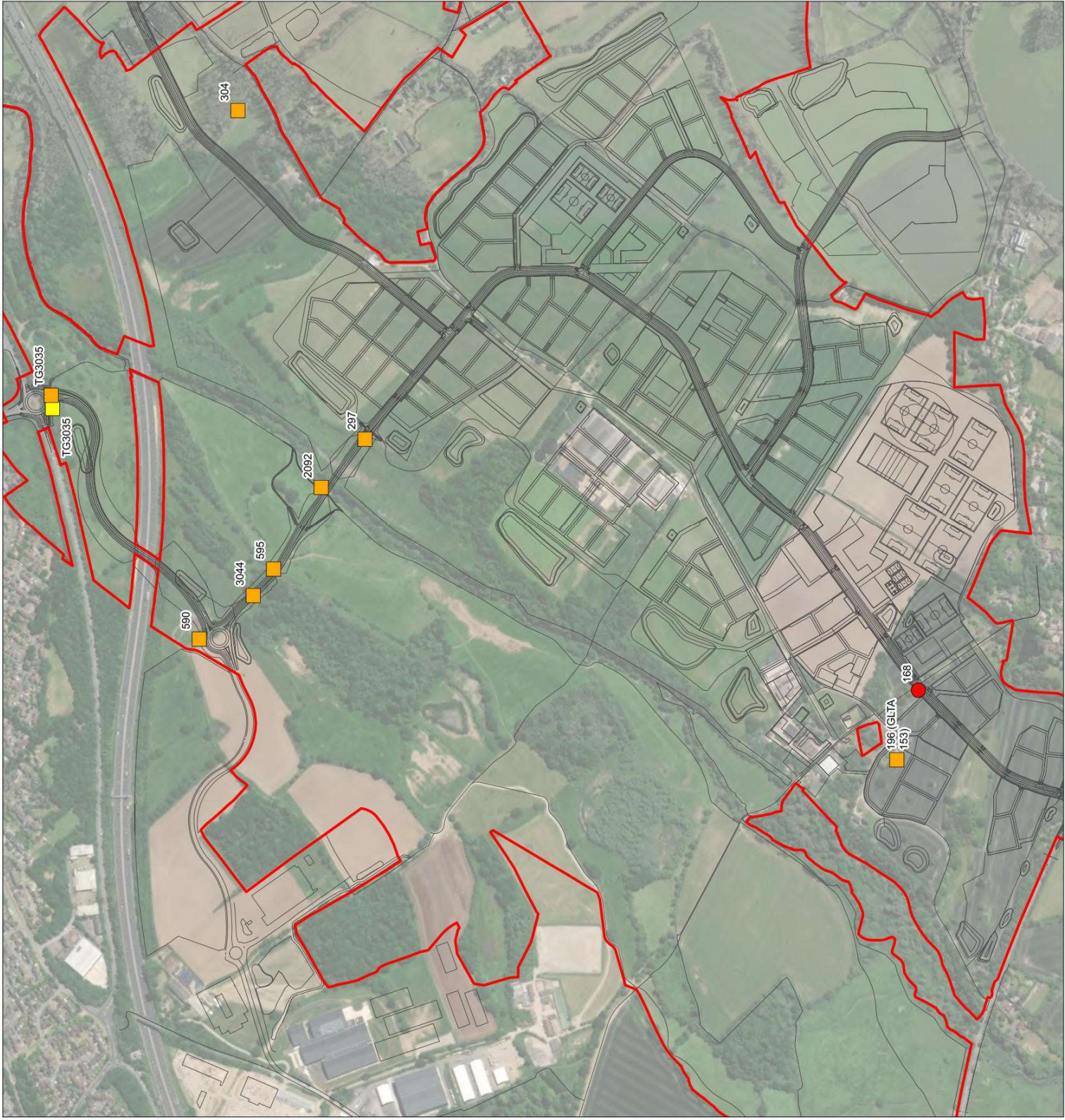
- Site boundary
- New methodology
 - PRF-M
 - PRF-I
- Previous methodology
- High suitability

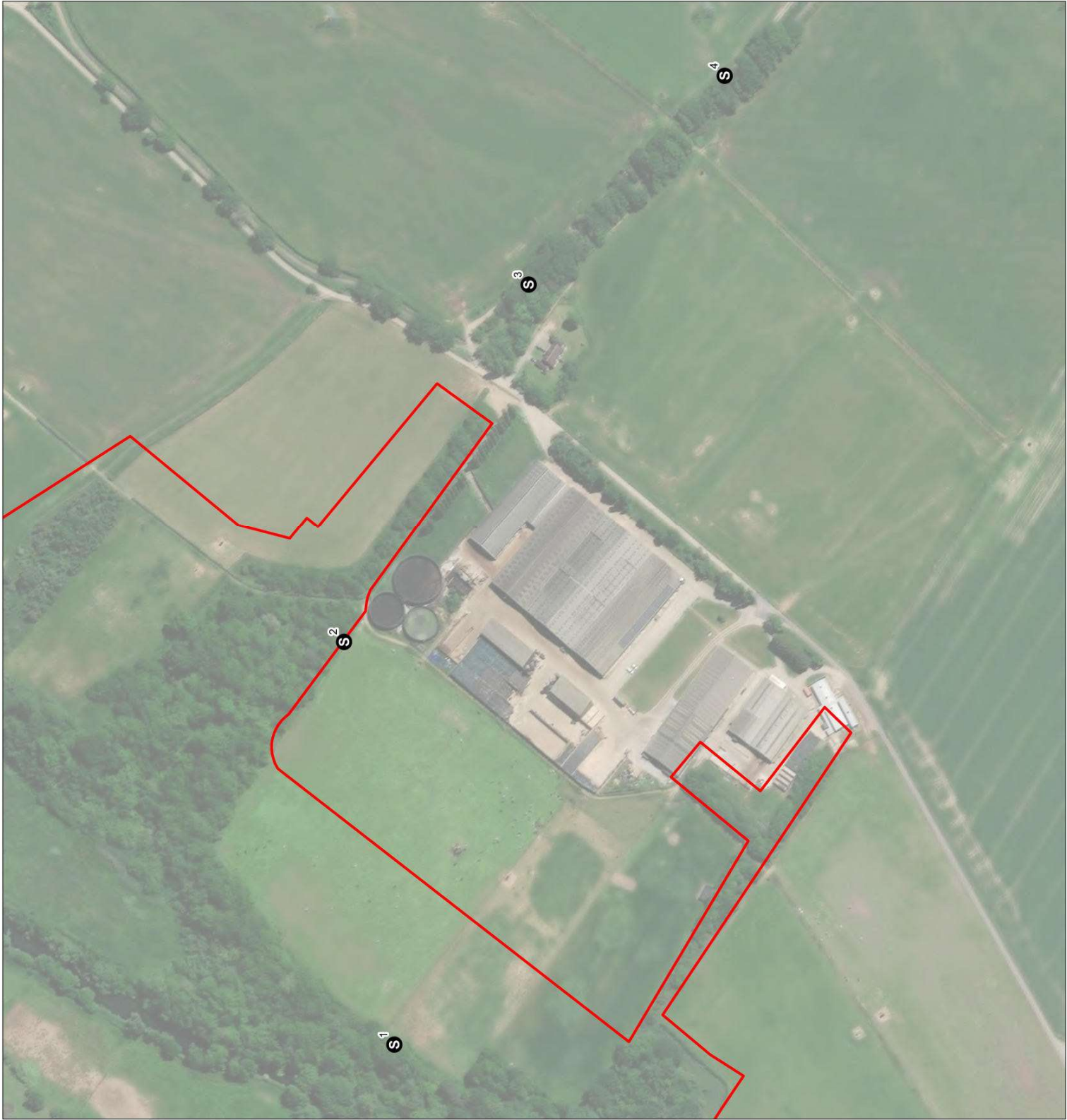
Arb ID	EPR ID	Roost Survey
TG3035	TG3035	PRF-M
2122	297	PRF-M
3040	590	PRF-M
TG6005	168	High suitability
3061	595	PRF-M
2092	2092	PRF-M
6026	196 (GLTA 153)	PRF-M
TG3035	TG3035	PRF-M/PRF-I
3044	304	PRF-M
6026	3044	PRF-M

SCALE: 1:8,000 at A3



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DATE: 03 February 2026





MAP 7 Lekking Automated Detectors

KEY

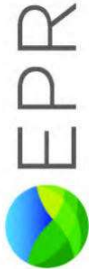


Site boundary



Static detectors

SCALE: 1:2,500 at A3



CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 03 February 2026

\\ucldev01\dev\Map_Reading\2026\20260203\20260203_20260203_20260203.apx

Aerial Image: Microsoft, Vantor

MAP 8

Trapping Survey Locations

KEY

Site boundary

03/09/2025

13/08/2025

19/08/2025

SCALE: 1:10,000 at A3

0

100

200

300

400

500 Metres

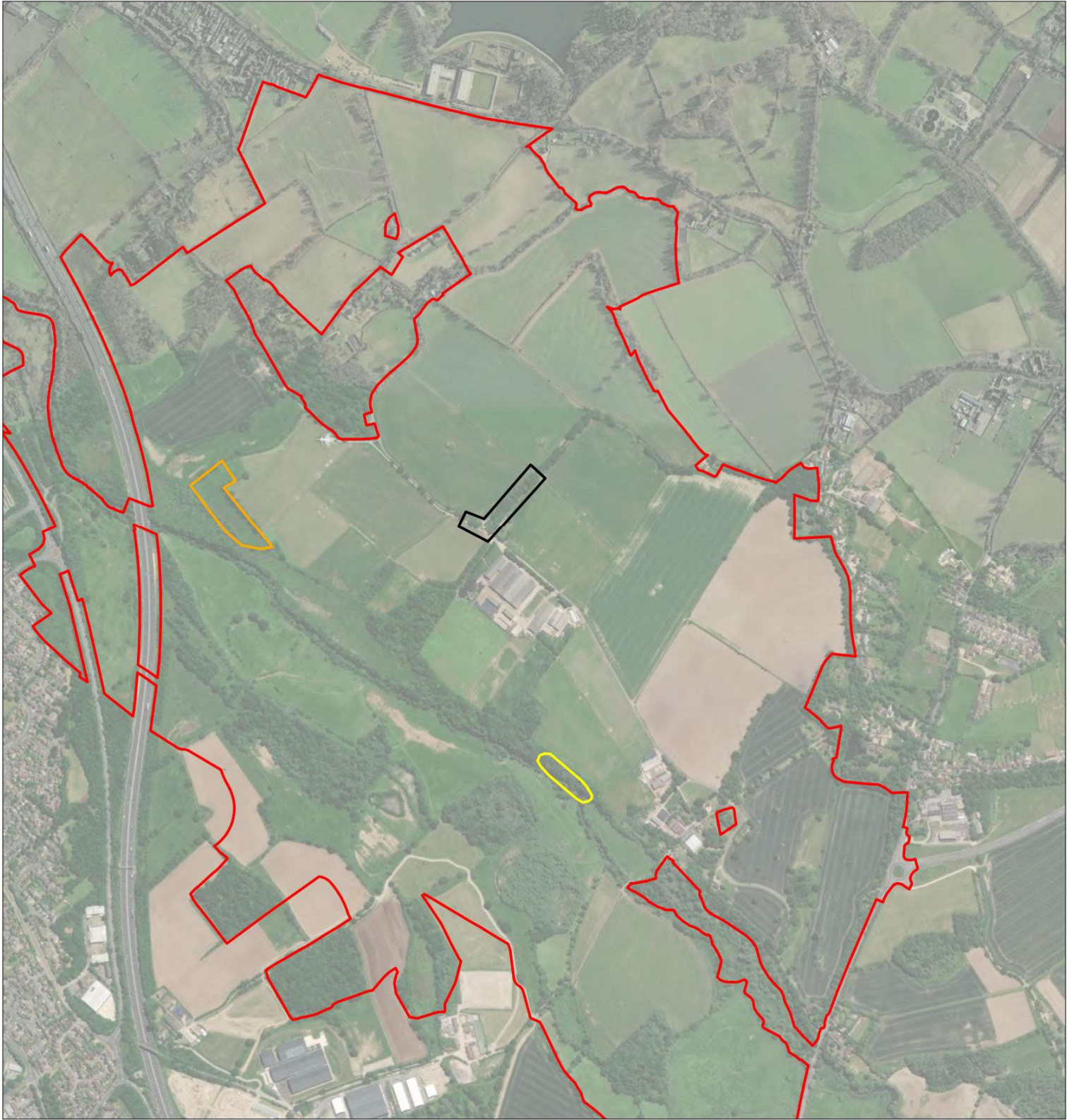
EPR

CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 03 February 2026

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MAP 9 Updated Tree Surveys Results

KEY

Site boundary

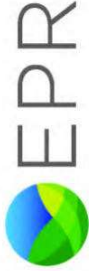
New methodology

PRF-M

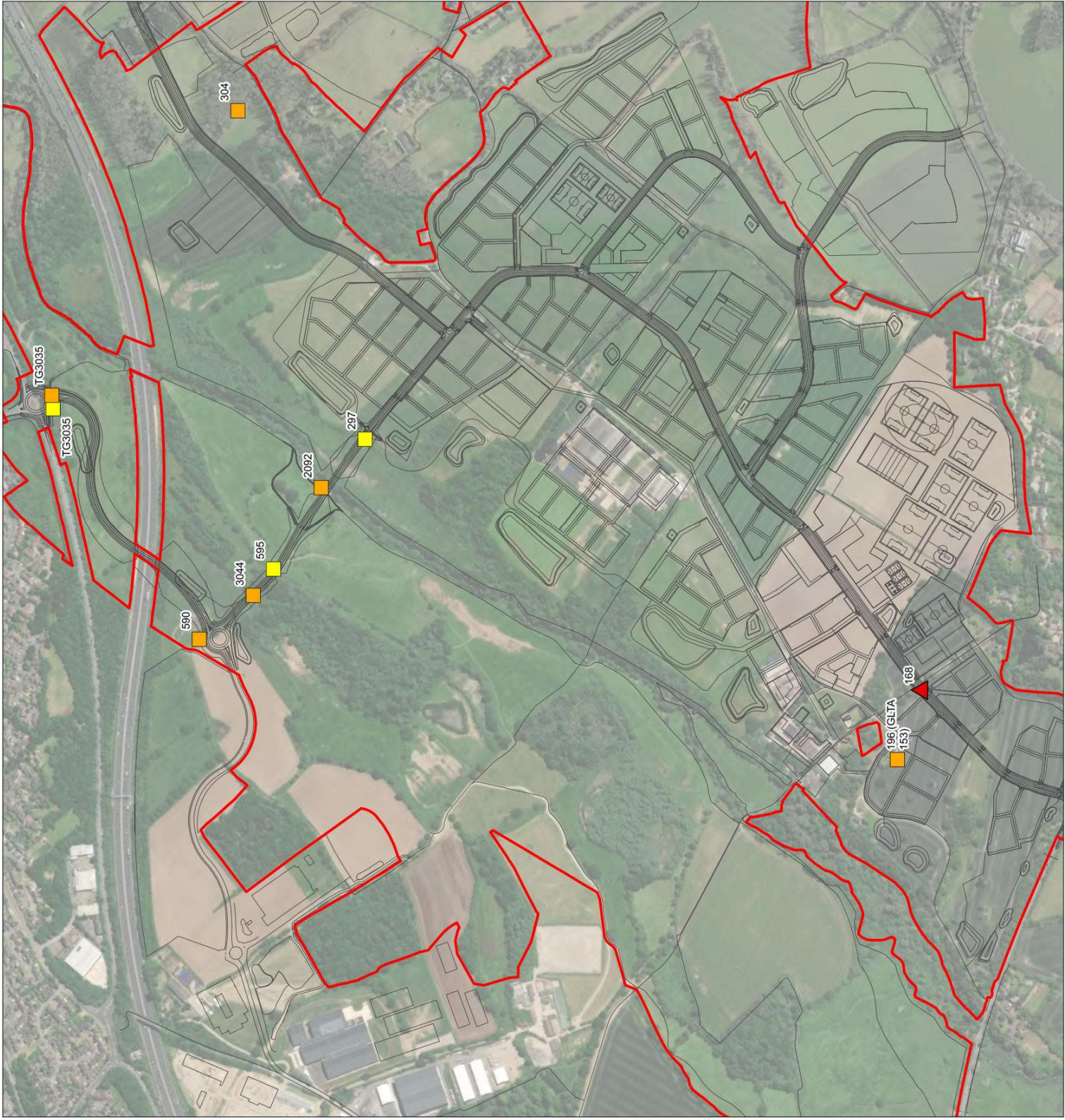
PRF-I

No longer present

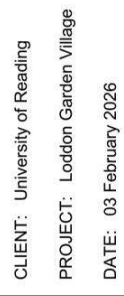
Arb ID	EPR ID	Roost Survey
TG3035	TG3035	PRF-M
2122	297	PRF-I
3040	590	PRF-M
TG6005	168	No longer present
3061	595	PRF-I
2092	2092	PRF-M
6026	196 (GLTA 153)	PRF-M
TG3035	TG3035	PRF-M/PRF-I
3044	304	PRF-M
6026	3044	PRF-M



CLIENT: University of Reading
PROJECT: Loddon Garden Village
DATE: 03 February 2026



Site boundary
 Trapping area
 Indicative locations of traps:
 6m single mist net
 9m single mist net
 12m single mist net
 Harp traps



MAP 10b Trapping Survey Set Up -
19/08/2025

KEY

Site boundary

Trapping area

Indicative locations of traps:

6m single mist net

12m high mist net

Harp traps

SCALE: 1:575 at A3

010203040

Metres

N

EPR

CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 03 February 2026

Visualisation created using Microsoft 3D Visualisation software. All surveying data is for information only. P23142

Aerial Image: Microsoft, Bing

MAP 10c Trapping Survey Set Up -
03/09/2025

KEY

Site boundary

Trapping area

Indicative locations of traps:

2.6m single mist net

6m single mist net

9m single mist net

Harp traps

SCALE: 1:875 at A3

01020304050

Metres

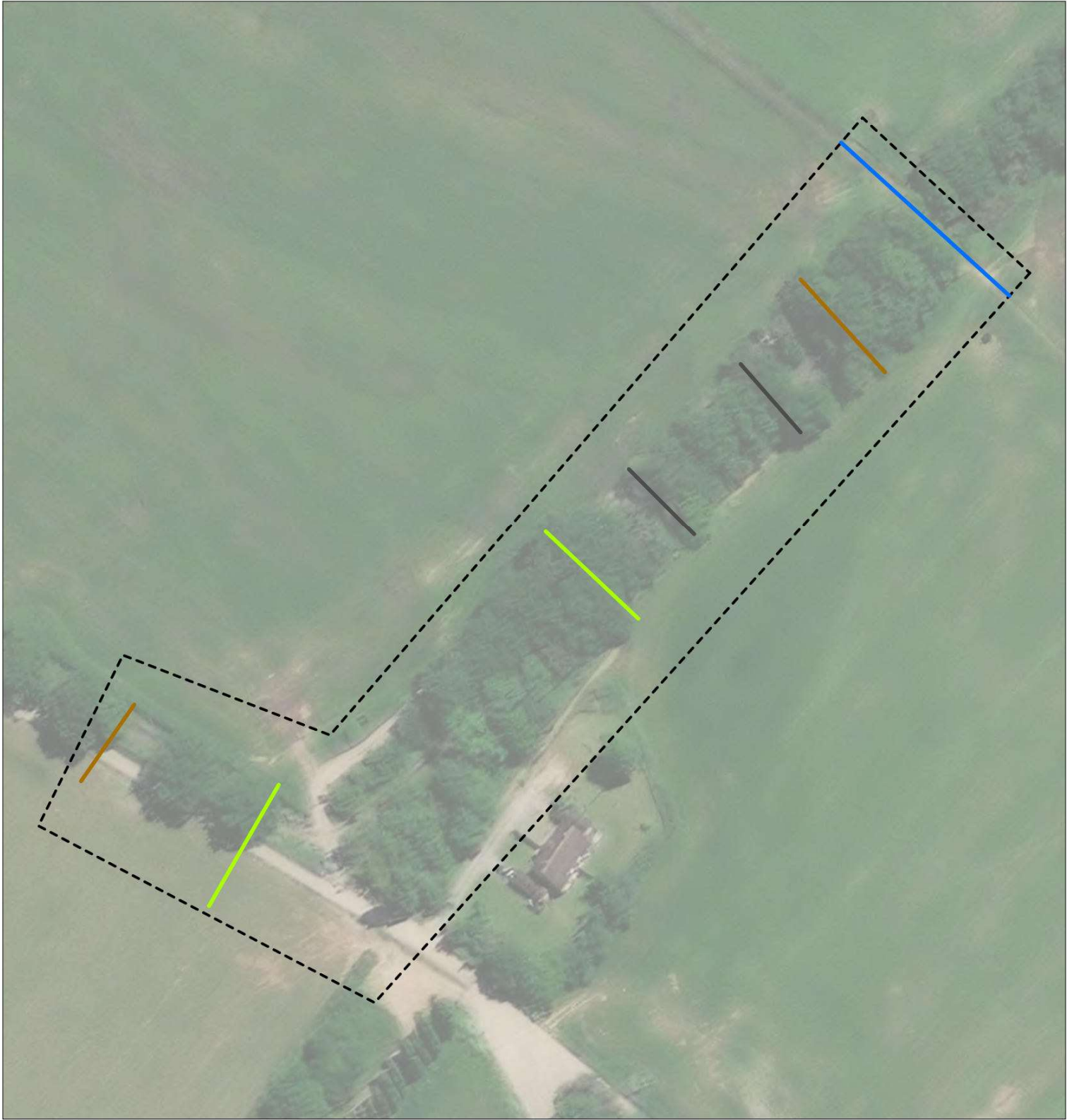
N

EPR

CLIENT: University of Reading
PROJECT: Loddon Garden Village
DATE: 03 February 2026

Project Name: Water, Wetland and Wildlife Survey of the Loddon Garden Village
Aerial Image: Microsoft, Bing

P23142



Annex 1

Building Emergence/Re-entry Surveys Metadata

Building Reference	Date	Start time	End time	Sunset	Start Temp (°c)	End Temp (°c)	Wind (Beaufort Scale)	Rain	Cloud Cover (%)
B3a	19/05/2025	20:40	22:25	20:55	17	13	1 – 2	No	10
B4	19/05/2025	20:40	22:25	20:55	17	13	1 – 2	No	10
B7	04/08/2025	20:29	22:16	20:46	20	16	1 – 2	No	0
	02/09/2025	19:33	20:23	19:48	17	16	1 – 2	No	80
B11	04/06/2025	21:00	22:45	21:15	16	13	0	No	70
B15	16/06/2025	21:20	23:08	21:23	20	16	0 – 1	No	5
	02/09/2025	19:33	20:23	19:48	17	16	1 – 2	No	80
B17	10/06/2025	21:05	22:50	21:20	20	18	1 – 2	No	20
	10/07/2025	21:03	22:48	21:18	26	22	0	No	10
	14/08/2025	20:13	21:58	20:28	23	21	2	No	0
P20a	10/06/2025	21:05	22:50	21:20	20	18	1 – 2	No	20
	10/07/2025	21:03	22:48	21:18	26	22	0	No	10
	14/08/2025	20:13	21:58	20:28	23	21	2	No	0
B18	09/06/2025	21:04	23:04	21:19	18	16	2 – 3	No	100
	15/07/2025	20:59	22:44	21:14	20	16	1	No	100
	19/08/2025	20:03	21:47	20:17	19	18	2	No	80
B18a	09/06/2025	21:04	23:04	21:19	18	16	2 – 3	No	100
	15/07/2025	20:59	22:44	21:14	20	16	1	No	100
	19/08/2025	20:03	21:47	20:17	19	18	2	No	80
B22	11/06/2025	21:04	23:05	21:12	20	17	0 – 1	No	5
	17/07/2025	20:57	23:05	21:12	23	22	1	No	100
	21/08/2025	19:58	21:43	20:13	19	14	0 – 1	No	60
B22a	11/06/2025	20:57	23:05	21:12	20	17	0 – 1	No	5
	17/07/2025	20:57	23:05	21:12	23	22	1	No	100
	21/08/2025	19:58	21:43	20:13	19	14	0 – 1	No	60
B24	02/06/2025	20:57	22:22	21:12	15	13	1 – 2	No	0
	14/07/2025	21:01	23:09	21:16	21	17	0 – 1	No	0
	18/08/2025	20:05	21:50	20:20	20	18	0	No	75
B25	20/05/2025	20:42	22:27	20:57	18	16	0	No	100
	09/07/2025	21:04	22:49	21:19	25	19	0	No	50
B25a	09/07/2025	21:04	22:49	21:19	25	19	0	No	50
B26	02/06/2025	20:57	22:22	21:12	15	13	1 – 2	No	0
	14/07/2025	21:01	23:09	21:16	21	17	0 – 1	No	0
	18/08/2025	20:05	21:50	20:20	20	18	0	No	75
B27	02/06/2025	20:57	22:22	21:12	15	13	1 – 2	No	0
	14/07/2025	21:01	23:09	21:16	21	17	0 – 1	No	0

	18/08/2025	20:05	21:50	20:20	20	18	0	No	75
B28	14/07/2025	21:01	23:09	21:16	21	17	0 – 1	No	0
B35	16/06/2025	21:20	23:08	21:23	20	16	0 – 1	No	5
	16/07/2025	20:58	22:43	21:13	22	19	0	No	70
	20/08/2025	20:00	21:45	20:15	19	17	2 – 3	No	20
B35a	16/06/2025	21:20	23:08	21:23	20	16	0 – 1	No	5
	16/07/2025	20:58	22:43	21:13	22	19	0	No	70
	20/08/2025	20:00	21:45	20:15	19	17	2 – 3	No	20

Annex 2

Bat Activity Survey Meta Data

Transect Routes	Date	Start time	End time	Sunset	Start Temp (°C)	End Temp (°C)	Wind (Beaufort Scale)	Rain	Cloud Cover (%)
E	22/04/25	20:13	22:43	20:13	12	10	1	None	20
G	16/04/25	20:03	22:33	20:03	12	5	2 – 1	None	0
H	17/04/25	20:04	22:34	20:04	10	8	2 – 0	None	10 – 15
I	17/04/25	20:04	22:34	20:04	11	6	1	None	10 – 15
J	16/04/25	20:03	22:33	20:03	11	8	3 – 1	None	0
K	16/04/25	20:03	22:33	20:03	11	5	2 – 0	None	10 – 0
L	17/04/25	20:04	22:34	20:04	13	6	1	None	15 – 5
North of M4	22/04/25	20:13	22:13	20:13	11	9	1	None	20 – 70

Annex 3

Automated Static Bat Detector Survey Meta Data

Date Range	Temperature range (°C)	Weather	Positions covered
16/04/25 - 22/04/25	4– 21	Dry and clear nights with some cloud cover	13, 14, 18, 21, 22, 24
23/04/25 – 28/04/25	4 – 16	Dry and clear nights with some cloud cover. Rain was recorded on the 23 rd	15, 16, 17, 19, 20, 23
09/05/25 – 14/05/25	5 – 20	Dry and clear most night with some cloud cover. Rain in the early hours on the 12 th	13, 14, 15, 18, 23, 24
15/05/25- 19/05/25	5 – 16	Dry and clear on all nights with some cloud cover.	16, 17, 19, 20, 21, 22

Annex 4

Lekking Survey Meta Data

Date Range	Temperature range (°C)	Weather
22/07/25 – 28/07/25	9 – 27	Dry and clear nights with some cloud cover
21/08/25 – 27/08/25	4 – 25	Dry and clear nights with some cloud cover
17/09/25 – 23/09/25	0 – 22	Dry and clear most night with some cloud cover. Rain in the early hours on the 17 th
16/10/25 – 22/10/25	4 – 15	Dry and clear most nights with some cloud cover. Rain in the evening of the 19 th

Annex 5

Trapping Surveys Meta Data

Date	Start/End time	Locations	Temp / °C	Cloud /%	Wind /BFS	Rain
13.08.25	21:32 / 1:00	1	22.5-20.0	5	0	None
19.08.25	20:20 / 00:30	2	20.8-18.5	80	3-2	None
03.09.25	19:48 / 00:20	3	16.1-15.7	80-20	3-1	None

Annex 6

Building Inspection Summary

Building Ref (See Maps 2-b)	Building Description	Features	Previous (Pre-2025) Suitability	2025 Building Descriptions	2025 Bat Roost Suitability
B1	-	-	-	Agricultural Building	Negligible
B02	Elevations: Occasional gappy weatherboarding at gable ends, otherwise Open. Roof: Asbestos. Frame: Metal.	Floodlighting present.	Negligible	No changes	Negligible
B03 (cow shed, comprising majority of building)	Elevations: Open. Roof: Corrugated asbestos. Frame: Metal.	Floodlighting present. Open and airy.	Negligible	No changes	Negligible
B03a (offices, comprising SW of building)	Elevations: Ground floor is breezeblock, 1st floor is clad in corrugated metal. Roof: Corrugated asbestos.	Solar panels on roof.	Low	No changes	Low
B03b (Storage areas N. of 3)	Elevations: Corrugated metal. Roof: Corrugated metal. Frame: Metal.	E. one is completely open on one side. W. on has a temporary covering.	Negligible	No changes	Negligible
B04	Elevations: Upper level is gappy weatherboarding, Lower is concrete panel. Roof: Corrugated metal. Frame: Steel. W. side has bargeboards with possible access.	SW. end contains plant equipment. Floodlights present. Gaps in bargeboards.	Low	Gaps present in bargeboards	Low
B05	Elevations: Lower level is breezeblock, Upper level is corrugated metal. Roof: Corrugated metal. Internal layering of structures.	Various bits of internal machinery/equipment/storage areas.	Negligible	No change	Negligible
B06	Modern Port-a-cabin (recent construction).	n/a	Negligible	No change	Negligible
B17	Elevations: Brick. Roof: Clay tile.	Tight fitting, but possible gaps on hips. W. side of building has a single-story lean-to.	Confirmed	Gaps present at the hips and on wester side of single storey extension	Confirmed

Building Ref (See Maps 2-b)	Building Description	Features	Previous (Pre-2025) Suitability	2025 Building Descriptions	2025 Bat Roost Suitability
		Internal: trussed structure with felt and insulation. Viewed from hatch possible droppings c.50 around western chimney. Some old but some possibly from previous survey season.			
B18	Elevations: Brick. Roof: Pitched clay tile. Garage Roof: Flat bitumen felt. 2-story main building. N./S. gable ends.	Possible gaps, especially around soffits. Lead flashing on chimney. Garage is on N. side. Internal: c.100 droppings scattered around the gable end	Confirmed	Gaps present around the soffits and lifted lead flashing around the chimney	Confirmed
B20	Elevations: Open all sides. Roof: Corrugated metal.	n/a	Negligible	No change	Negligible
B21	Elevations: Metal. Roof: Domed, corrugated metal.	n/a	Negligible	No change	Negligible
B22	Elevations: Rendered walls. Roof: Clay tile. 2-story house. E./W. gable ends. Dormer window present.	Raised tiles. Single story extension on E. side.	Confirmed	1x likely pipistrelle dropping on the front door. Hanging tiles with gaps present.	Confirmed
P22a	Elevations: Brick. Roof: Clay tile. Ivy partially covering roof.	Damaged brick work. Multiple lifted tiles.	High	No change	High
B23	Elevations: Open. Roof: Corrugated asbestos. Frame: Metal.	n/a	Negligible	No change	Negligible
B24	Elevations: Brick. Roof: Clay tiled.	Slipped and missing tiles.	Previously confirmed	No change	Confirmed
B25	Elevations: Single skin brick. Roof: Corrugated asbestos. E./W. gable ends	Gaps in overlapping asbestos. Gaps in overlapping windows.	Moderate	Gaps where gutters are missing and where metal has lifted.	Moderate

Building Ref (See Maps 2-b)	Building Description	Features	Previous (Pre-2025) Suitability	2025 Building Descriptions	2025 Bat Roost Suitability
B25a	Elevations: Single skin brick. Roof: Pitched slate.	Overgrown ivy. Gaps in brickwork and barge boards.	Low	4/4 ivy covered	Low
B26	Elevations: Brick. Roof: Clay tiled, hipped. 2-story building.	Gap in mortar, close to the ridge.	Moderate	Gaps in mortar and gaps on north eastern side of chimney	Confirmed
B27	Elevations: Brick. Roof: Clay tiled.	Lifted tiles. Bitumen felt present. Gap in 1 timber. Internal: 2x droppings found	Confirmed	Gaps in soffits present.	Confirmed
B28	Elevations: Open. Roof: Corrugated metal. Frame: Metal.	n/a	Negligible	No change	Negligible
P28a	Elevations: Open. Roof: Corrugated metal. Frame: Metal.	n/a	Negligible	No change	Negligible
B29	Elevations: Single skin timber on 2 sides, other 2 sides are Open. Roof: Single skin metal. Frame: Timber.	Elevations: Single skin timber on 2 sides, other 2 sides are Open. Roof: Single skin metal. Frame: Timber.	Negligible	No change	Negligible
B29a	Elevations: Open. Roof: Corrugated metal. Frame: Timber.	Elevations: Open. Roof: Corrugated metal. Frame: Timber.	Negligible	No change	Negligible
B30	Elevations: Corrugated metal present on 2 sides, other 2 sides are Open. Roof: Asbestos.	Elevations: Corrugated metal present on 2 sides, other 2 sides are Open. Roof: Asbestos.	Negligible	No change	Negligible
P30a	Elevations: Open. Roof: Corrugated metal. Frame: Metal.	Elevations: Open. Roof: Corrugated metal. Frame: Metal.	Negligible	No change	Negligible
B31	Elevations: Open all sides. Roof: Corrugated metal. Frame: Timber.	Elevations: Open all sides. Roof: Corrugated metal. Frame: Timber.	Negligible	No change	Negligible
B34	Elevations: Timber weatherboarding. Roof: Pitched bitumen felt.	Tight fitting. Slightly raised weatherboard.	Low	No change	Low

Building Ref (See Maps 2-b)	Building Description	Features	Previous (Pre-2025) Suitability	2025 Building Descriptions	2025 Bat Roost Suitability
B35	Elevations: Brick. Roof: Clay tile. 2-story building. N./S. gable ends.	Slightly lifted tiles. Some gaps on mortar. Pumping station next to building with ivy covering.	Low	No change	Confirmed
P35a	2x structures in Fishing area.	No access.	Low	Wooden structure with felted roof. Gaps present where wood is rotting away and gaps where porch meets the building.	Confirmed

Annex 7

Bat Emergence Summary

Building Reference	Survey Date	Bat Species Recorded Emerging	Peak Count emergences
B3a	19/05/2025	None	0
B4	19/05/2025	None	0
B7	04/08/2025	Soprano Pipistrelle	4
	02/09/2025	None	0
B11	04/06/2025	None	0
B15	16/06/2025	None	0
	02/09/2025	None	0
B17	10/06/2025	Common Pipistrelle	16
	10/07/2025	None	0
	14/08/2025	None	0
P20a	10/06/2025	None	0
	10/07/2025	None	0
	14/08/2025	None	0
B18	09/06/2025	Soprano Pipistrelle	12
	15/07/2025	Soprano Pipistrelle	17
	19/08/2025	Soprano Pipistrelle	20
B18a	09/06/2025	None	0
	15/07/2025	None	0
	19/08/2025	None	0
B22	11/06/2025	None	0
	17/07/2025	None	0
	21/08/2025	Soprano Pipistrelle / Common Pipistrelle	1 / 1
B22a	11/06/2025	None	0
	17/07/2025	None	0
	21/08/2025	None	0
B24	02/06/2025	None	0
	14/07/2025	None	0
	18/08/2025	None	0
B25	20/05/2025	None	0
	09/07/2025	None	0
B25a	09/07/2025	None	0
B26	02/06/2025	None	0
	14/07/2025	Brown Long-eared	1
	18/08/2025	Brown Long-eared	1
B27	02/06/2025	Brown Long-eared	2
	14/07/2025	None	0

	18/08/2025	Brown Long-eared	2
B28	14/07/2025	Brown Long-eared	4
B35	16/06/2025	None	0
	16/07/2025	None	0
	20/08/2025	None	0
B35a	16/06/2025	None	0
	16/07/2025	Soprano pipistrelle	4
	20/08/2025	None	0

Annex 8

Automated Bat Detector Survey Summary Table

Static number (refer to map 5)	Species/ Genus	Total Bat Passes (over five consecutive nights)	
		Apr-25	May-25
13	Common Pipistrelle	2960	2289
	Soprano Pipistrelle	1394	707
	Pipistrelle sp.	0	90
	Nathusius' pipistrelle	0	5
	Long-eared sp.	9	9
	Myotis sp.	0	123
	Long-eared sp./ Myotis sp.	0	3
	Serotine	00	0
	Noctule	80	250
	Leisler's	0	0
	Noctule/Leisler's	3	4
	Big bat	6	2
	Barbastelle	31	0
14	Common Pipistrelle	358	283
	Soprano Pipistrelle	1	150
	Pipistrelle sp.	9	0
	Nathusius' pipistrelle	0	1
	Long-eared sp.	4	0
	Myotis sp.	35	8
	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	1
	Noctule	24	26
	Leisler's	0	0
	Noctule/Leisler's	0	2
	Big bat	3	0
	Barbastelle	8	1
15	Common Pipistrelle	829	1933
	Soprano Pipistrelle	215	1437
	Pipistrelle sp.	10	161
	Nathusius' pipistrelle	1	1
	Long-eared sp.	11	36
	Myotis sp.	5	5
	Long-eared sp./ Myotis sp.	0	2
	Serotine	0	0
	Noctule	74	34
	Leisler's	0	1
	Noctule/Leisler's	0	0

	Big bat	0	3
	Barbastelle	0	0
16	Common Pipistrelle	283	236
	Soprano Pipistrelle	45	264
	Pipistrelle sp.	2	0
	Nathusius' pipistrelle	1	0
	Long-eared sp.	11	11
	Myotis sp.	2	15
	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	0
	Noctule	250	132
	Leisler's	0	0
	Noctule/Leisler's	2	1
	Big bat	2	2
	Barbastelle	1	1
17	Common Pipistrelle	1791	1437
	Soprano Pipistrelle	604	180
	Pipistrelle sp.	3	0
	Nathusius' pipistrelle	0	42
	Long-eared sp.	3	22
	Myotis sp.	27	16
	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	0
	Noctule	240	108
	Leisler's	0	0
	Noctule/Leisler's	1	0
	Big bat	0	0
	Barbastelle	0	0
18	Common Pipistrelle	4752	9461
	Soprano Pipistrelle	2040	4109
	Pipistrelle sp.	2	23
	Nathusius' pipistrelle	1	27
	Long-eared sp.	11	99
	Myotis sp.	12	40
	Long-eared sp./ Myotis sp.	0	6
	Serotine	0	12
	Noctule	131	169
	Leisler's	0	1
	Noctule/Leisler's	8	26
	Big bat	9	8
	Barbastelle	31	42
19	Common Pipistrelle	98	127
	Soprano Pipistrelle	44	62

	Pipistrelle sp.	1	1
	Nathusius' pipistrelle	2	4
	Long-eared sp.	8	1
	Myotis sp.	31	165
	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	0
	Noctule	149	119
	Leisler's	0	0
	Noctule/Leisler's	0	1
	Big bat	0	0
	Barbastelle	0	0
20	Common Pipistrelle	7255	1175
	Soprano Pipistrelle	1325	269
	Pipistrelle sp.	0	4
	Nathusius' pipistrelle	2	6
	Long-eared sp.	36	46
	Myotis sp.	112	32
	Long-eared sp./ Myotis sp.	5	0
	Serotine	2	1
	Noctule	74	292
	Leisler's	2	0
	Noctule/Leisler's	0	2
	Big bat	0	1
	Barbastelle	31	8
21	Common Pipistrelle	4272	1586
	Soprano Pipistrelle	464	68
	Pipistrelle sp.	2	4
	Nathusius' pipistrelle	3	1
	Long-eared sp.	8	2
	Myotis sp.	20	11
	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	0
	Noctule	77	47
	Leisler's	0	0
	Noctule/Leisler's	1	0
	Big bat	4	2
	Barbastelle	4	16
22	Common Pipistrelle	1052	56
	Soprano Pipistrelle	46	16
	Pipistrelle sp.	0	0
	Nathusius' pipistrelle	1	1
	Long-eared sp.	23	2
	Myotis sp.	19	8

	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	0
	Noctule	116	46
	Leisler's	0	0
	Noctule/Leisler's	0	0
	Big bat	1	0
	Barbastelle	1	1
23	Common Pipistrelle	431	1076
	Soprano Pipistrelle	186	673
	Pipistrelle sp.	0	0
	Nathusius' pipistrelle	0	22
	Long-eared sp.	1	4
	Myotis sp.	9	14
	Long-eared sp./ Myotis sp.	0	0
	Serotine	1	12
	Noctule	15	42
	Leisler's	0	0
	Noctule/Leisler's	0	3
	Big bat	0	0
	Barbastelle	13	18
	Common Pipistrelle	1747	5202
24	Soprano Pipistrelle	207	1653
	Pipistrelle sp.	0	4
	Nathusius' pipistrelle	0	0
	Long-eared sp.	0	4
	Myotis sp.	8	8
	Long-eared sp./ Myotis sp.	0	0
	Serotine	0	0
	Noctule	112	63
	Leisler's	0	0
	Noctule/Leisler's	0	9
	Big bat	0	2
	Barbastelle	5	3