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# Land at Llanrwst Road, Gyffin

## Bat Survey Report

For

Adra

November 2025

3337/11

RML

R I C H A R D S

M O O R E H E A D & L A I N G L T D

P L A N N I N G | L A N D S C A P E | E N V I R O N M E N T

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QUALITY ASSURANCE PROCEDURES: Qp4, QP7.3Doc6

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|---|---|---|---|
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## Executive summary

Richards, Moorehead & Laing Ltd (RML) were commissioned by Atticus Land and Development on behalf of Adra (Tai) Cyfyngedig to undertake a series of bat surveys on land at Llanrwst Road, Gyffin, Conwy in 2024. RML were commissioned by Beech Developments in 2025 to provide ecological support to include updated bat surveys.

This Bat Survey Report provides the comprehensive ecological baseline data necessary to inform and support any potential future development proposals at the site. Following an initial assessment in 2024, updated surveys were commissioned and carried out in the 2025 bat activity season to ensure that the ecological information presented is current, scientifically robust, and fully compliant with the statutory requirements of the Habitats Regulations. The findings detailed herein are intended to facilitate accurate impact assessment and mitigation design for any subsequent planning applications.

The proposed site is situated on a sloped, elevated area encompassing three fields adjacent to the B5106, Llanrwst Road south of Gyffin, Conwy. The land comprises poor semi-improved grassland utilised for agricultural grazing, two mature broadleaved woodland strips occur to the east and the southwest, with frequent dense bramble and gorse present.

In the United Kingdom, all bat species are protected by law, under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). The survey results indicate that the site is utilised by a number of bat species including pipistrelles, myotis, nyctalus and long-eared bats. Although no bat roosts have been confirmed on the site to date, there is the potential for bats to use mature trees with some exhibiting Potential Roost Features (PRF). The hedgerows and treelines serve as foraging and commuting routes for the local bat population.

This report is considered valid for a period of twelve months from the date of issue (17 November 2025), **remaining current until 17 November 2026.** If site works have not commenced by this review date, the assessment must be formally reviewed by a qualified professional to confirm its continued validity and necessity for updates.

# 1 Introduction

## 1.1 Background

1.1.1 Richards, Moorehead & Laing Ltd (RML) were commissioned by Atticus Land and Development on behalf of Adra (Tai) Cyfyngedig to undertake a series of bat surveys on land at Llanrwst Road, Gyffin, Conwy in 2024. RML were subsequently commissioned by Beech Developments in 2025 to provide ecological support to include updated bat surveys.

## 1.2 Site location and description

1.2.1 The site is located on the southern periphery of the town of Conwy, in the area known as Gyffin, (central grid reference SH 777 765).

1.2.2 The proposed site is situated on a sloped, elevated area encompassing three fields adjacent to the B5106, Llanrwst Road. The land comprises poor semi-improved grassland utilised for agricultural grazing. Two mature broadleaved woodland strips occur to the east and the southwest, with frequent dense bramble and gorse present.

1.2.3 A small unnamed stream running adjacent to the western edge of the site leads to several culverted sections before feeding into the Afon Gyffin.

1.2.4 The location and extent of the site is shown on **Figure 01**, in **Appendix A**.

## 1.3 Development proposal

1.3.1 The development would involve the following:

- Retention of existing woodland
- Construction of a new site access
- Construction of up to 95 No. affordable homes and associated parking and infrastructure
- Active travel routes
- Amenity and play space
- SUDs including rain gardens
- Retaining walls
- Boundary fencing,

1.3.2 The proposed site masterplan (current at the time of writing) is shown in **Appendix B**.

## 1.4 Aims of the survey and report

1.4.1 The aims of the surveys and report are to:

- Conduct three Night-time Bat Walkover (NBW) Surveys to identify the species assemblage within the survey area in 2024.
- Conduct three automated bat surveys to identify the species assemblage and the relative level of activity in various habitat types over multiple full nights.
- Provide the results of the bat surveys.
- Identify any further survey requirements.
- Identify appropriate measures to avoid and minimise any negative effects to bats and advise upon appropriate mitigation and or enhancement measures.
- Following an initial assessment, updated surveys were commissioned and carried out in the 2025 bat activity season to ensure that the ecological information presented is current, scientifically robust, and fully compliant with the statutory requirements of the Habitats Regulations.

## 1.5 Background

1.5.1 The current proposals are for up to 95No. affordable homes to be managed by Adra, North Wales's largest housing association. The company looks after over 7,000 homes and provides services to over 16,000 local customers. Their goal is that these homes are affordable and reliable. A number of surveys have been conducted to inform the feasibility stage. This includes a Preliminary Landscape and Visual Appraisal[1] by RML, an ecological site walkover and Technical Note, also by RML[2] and a Tree Survey and Aboricultural Impacts Assessment (July 2023)[3] by ROAVR Grp.

1.5.2 Consultation has been sought with the LPA tree officer who provided information on Tree Preservation Orders (TPOs). The Ecology Technical Note was submitted to the LPA Ecologist for comment, though no response has been received to date. However, in the a Pre-Application consultation (December 2023), it was highlighted by the Ecology Officer that bats surveys should be conducted.

[1] July 2022 – RML 3222 -V1 Preliminary Landscape and Visual Appraisal
[2] July 2023 – RML Ecology Technical Note
[3] Barnes, A (July 2023) Tree Survey and Aboricultural Impact Assessment Land at Llanrwst Road, Gyffin, Conwy, LL32 8HZ. ROAVR Grp

## 1.6 Personnel and quality assurance

1.6.1 The surveys were led by Katy Morris, who also authored this report. This report has been reviewed and approved by Jon Stoddard, Environmental Coordinator for issue by RML Ltd.

1.6.2 Ecologist Katy Morris holds an Associate membership with CIEEM and possesses a Bachelor of Science degree in Environmental Science from Liverpool John Moores University. She has a particular interest in bats and has gained experience in surveying bats, dormice, otters, water voles, reptiles, and great crested newts. Additionally, she is skilled in conducting Phase 1 habitat surveys and is expanding her expertise to include invertebrates, NVC habitat surveys, Green Infrastructure Statements, Habitat Regulation Assessments, as well as proficiency in QGIS and QField. Katy is actively engaged in various voluntary bat-related activities, such as roost monitoring, bat care, and handling. She has successfully completed the Certificate of Bat Acoustics Analysis (CoBAA) and has attained Technician Level with a Grade B Assessment Result. Katy holds a survey licence from NRW for great crested newts.

1.6.3 Assistance for the bat surveys were provided by experienced RML personnel, Rhodri Edwards, Robert Jones and Dr Adam Lynch.

# 2 Legislation and Policy

## 2.1 Protection

2.1.1 Bats are protected under the Wildlife and Countryside Act 1981 (as amended)[4] and the Conservation of Habitats and Species Regulations 2017 (the 2017 Regulations) as amended[5].

2.1.2 Bats are listed in Schedule 2 of the 2017 Regulations. Under Section 43 of the Regulations, it an offence to:

a. deliberately capture, injure or kill a bat

b. deliberately disturb a bat

c. damage or destroy a breeding site or resting place of a bat; this applies whether bat species are present or not.

2.1.3 For the purposes of (b), disturbance of bats includes in particular any disturbance which is likely to impair their ability:

i. to survive, to breed or reproduce, or to rear or nurture their young; or

ii. to affect significantly the local distribution or abundance of the species to which they belong.

2.1.4 The protection afforded is overlapping but separate from the Wildlife and Countryside Act 1981 (as amended). Bats are protected under Schedule 5 of the Act. This makes it an offence to:

a. intentionally kill, injure or take a bat

b. possess or control any live or dead bat or any part of, or anything derived from a bat

c. intentionally or recklessly damage or destroy any structure or place used for shelter or protection by bats

d. disturbs a bat whilst it is occupying a structure or place which it uses for shelter or protection; or

e. obstruct access to any structure or place which a bat uses for shelter or protection.

[4] Available at https://www.legislation.gov.uk/ukpga/1981/69. [Accessed: 14/11/24]
[5] Available at https://www.legislation.gov.uk/uksi/2017/1012/contents/made. [Accessed: 14/11/24]

## 2.2 Environment (Wales) Act 2016[6]

2.2.1 Welsh legislation confirms Wales's legal commitment to biodiversity conservation. Section 6 of the Environment (Wales) Act 2016 introduced an "enhanced biodiversity and resilience of ecosystems duty (the S6 duty)" for public authorities, which requires that they "seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems".

2.2.2 Section 7 of the Act required the Welsh Ministers to prepare and publish a list of species and habitats which are of principal importance for the purposes of maintaining and enhancing biodiversity in relation to Wales. Bat species listed on Section 7 as priority species includes the following:

- Barbastelle bat (*Barbastella barbastellus*)
- Bechsteins bat (*Myotis bechsteinii*)
- Noctule (*Nyctalus noctula*)
- Common pipistrelle *(Pipistrellus pipistrellus)*
- Soprano pipistrelle (*Pipistrellus pygmaeus*)
- Brown long-eared bat (*Plecotus auritus*)
- Greater horseshoe bat (*Rhinolophus ferrumequinum*), and
- Lesser horseshoe bat (*R.hipposideros*)

## 2.3 Planning Policy Wales (PPW12)[7]

2.3.1 Planning Policy Wales 12 (PPW12) Section 6.4.3 sets out the responsibilities of the Local Planning Authority when assessing development proposals and their impacts on biodiversity. This document states:

> '*The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement*'.

2.3.2 It sets out the requirement for planning authorities to demonstrate that they have sought to fulfil the duties and requirements of Section 6 of the Environment Act 2016 by taking all reasonable steps to maintain and enhance biodiversity in the exercise of their functions.

[6] https://www.legislation.gov.uk/anaw/2016/3/contents/enacted
[7] https://www.gov.wales/sites/default/files/publications/2024-02/planning-policy-wales-edition-12_1.pdf

## 2.4 Biodiversity Policy and Net Benefits for Biodiversity

2.4.1 Wales Biodiversity Partnership (WDP)[8] have produced biodiversity checklists for local authority and public authority staff in Wales. The checklists will assist public and local authorities to take account of biodiversity in their operational activities and will help organisations to remain legal under the Environment (Wales) Act (2016) Biodiversity Duty and other biodiversity related legislation. In addition, the implementation of the checklists and guidance will help build towards the biodiversity outcomes contained in the Environment Strategy for Wales.

2.4.2 The net-benefits for biodiversity approach by Welsh Government has the intention to deliver an overall improvement in biodiversity by putting an emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context to be considered early in the design process. The aim is to design schemes that positively impact ecosystem resilience. Natural Resources Wales (NRW) has developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016. This is referred to as DECCA: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience.[9]

## 2.5 Placemaking Wales Charter

2.5.1 The Placemaking Wales Charter has been developed by Welsh Government and the Design Commission for Wales in collaboration with the Placemaking Wales Partnership, a multi-disciplinary group representing professions and organisations working within the built and natural environment sectors.

2.5.2 The Charter builds on the strengthening focus on Placemaking in policy and practice in Wales and aims to provide a common understanding of the range of considerations that go into placemaking. The Charter outlines six placemaking principles that cover the range of considerations that contribute to establishing and maintaining good places. The six principles are:-

a) Location

b) People and Community

c) Public Realm

d) Identity

e) Mix of Uses

f) Movement

[8] Available at https://www.biodiversitywales.org.uk/ [Accessed:09/10/24]

[9] Garrett HM, and Ayling SC. 2021.Terrestrial and freshwater Resilient Ecological Networks: a guide for practitioners in Wales. 43 pp. NRW Report No. 483 Natural Resources Wales. Dolgellau

# 3 Methodology

## 3.1 Desk study

3.1.1 Third party consultation was undertaken as part of the proposal. Data was requested from Cofnod, the Local Environmental Records Centre for North Wales on 24th May 2024 to obtain the following ecological data:

- Details of any statutory and non-statutory nature conservation designations within 10 km[10] of the site.
- Records of any legally protected or other notable species within 2 km[11] of the site; and

3.1.2 A copy of the public records available from Cofnod are provided in **Appendix C[12].**

## 3.2 Field study

***Night-time Bat Walkover survey***

3.2.1 Night-time Bat Walkover (NBW) surveys were undertaken to identify the species assemblage within the survey area and to assess the relative importance of the habitat type, and features for commuting and foraging bats.

3.2.2 Three NBW surveys were carried out in 2024 and three in 2025:

- 2nd May 2024,
- 26th June 2024 and
- 16th September 2024.
- 11th June 2025
- 24th July 2025
- 17th September 2025

3.2.3 The surveys started approximately at sunset and continued for 1 hour and 30 minutes.

3.2.4 Surveyors were equipped with Anabat Walkabout or Scout detectors, to record bat call data for later analysis. During the survey any bat activity was noted by the surveyors, including species, the locations of any emerging bats, flight paths, general activity, commuting, foraging and the timings of these encounters.

[10] Only those sites within 2 km of the scheme proposals are reported within this document. Public Cofnod data of relevance to bats is provided in **Appendix C**
[11] Only those bat species within 1 km of the scheme proposals are reported within this document. Public Cofnod data is provided in **Appendix C**
[12] For this report, we have only included bat species, or site where bats are a feature of interest.

3.2.5 Surveyors followed a pre-defined route which had 7 five-minute stopping points. During the second survey the route was followed in reverse.

***Automated Static Detector Survey***

3.2.6 In addition to the NBW surveys, automated monitoring surveys were undertaken using static bat detectors (Anabat Swift) to record bat activity over continuous periods. These were deployed on trees, there locations and direction of the microphones are shown on in **Appendix D**. **Table 1** below shows the dates and periods that the static detectors were deployed.

**Table 1** ***The automated static deployment periods***

| | Survey 1 | Survey 2 | Survey 3 |
|---|---|---|---|
| Dates | 30/04/2024 – 07/05/2024 | 26/06/2024 – 30/06/2024 | 16/09/2024 – 23/09/2024 |
| Dates | 11/06/2025 – 16/06/2025 | 24/07/2025 – 04/08/2025 | 17/09/2025 – 25/09/2025 |

3.2.7 The detectors were programmed and positioned by an ecologist with suitable training in static detector functionality and deployment.

## 3.3 Data Analysis

***Night-time Bat Walkover survey***

3.3.1 Recordings made with the Walkabout and Scout detectors were later analysed in the office by a suitably trained/experienced ecologist using Anabat Insight software. Using the 'Batclassify species auto ID' plugin set at 70% ID certainty threshold to identity species encountered, calls were then manually checked by a competent bat ecologist to ensure ID accuracy.

***Automated static detector***

3.3.2 In addition to the NBW surveys, automated monitoring surveys were undertaken using four static bat detectors (2x Anabat Swift and 2x Anabat Ranger) to record bat activity over three continuous periods. These was deployed along potential flight lines of bats i.e hedgerows and treelines.

3.3.3 The recordings from the statics were used to identify species of bat within the site and to measure levels of activity throughout the night. This method is often used to pick up hard

to detect bat species such as brown long eared bats which have weak calls and are not always detected using handheld devices.

3.3.4 Upon concluding the survey periods, the detectors were collected from the site. The data was subsequently downloaded and analysed using Anabat Insight, with a manual review conducted by an ecologist possessing appropriate expertise. The static detector data was employed to evaluate the following:

- The species present within the site
- The frequency of bat activity; and
- The frequency of activity for individual species.

## 3.4 Limitations

3.4.1 During three separate surveys, one static detector malfunctioned. Nevertheless, with a total of four detectors deployed for each survey covering the active survey season, it is deemed that an adequate amount of data was collected.

3.4.2 Records held by local ecological record centres, local recording groups and on the internet are often collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, rather, it may simply indicate a gap in recording coverage.

3.4.3 As the behaviour of wild animals is unpredictable and can change over time, the results of the survey reflect site conditions on the dates of surveys.

# 4 Results

## 4.1 Desk study

***Statutory designated sites for bats***

4.1.1 There is one statutory designated site within 10 km for which bats are a feature of interest. This is a Site of Special Scientific Interest (SSSI). The details are given in **Table 2** and the location of the SSSI is shown in **Appendix E**.

***Table 2:*** *Statutory designated sites within 2 km of the site.*

| Site name | Site Designation | Distance from site | Reason for notification |
|---|---|---|---|
| Plas Maenan | Special Site of Scientific Interest (SSSI) | 9.70 km south of the site. | Plas Maenan is located 1.5 km east of the village of Dolgarrog and 5 km north of Llanrwst, at an altitude of 50 m. The site is of special interest for its summer and winter population of lesser horseshoe bats. Throughout the year bats use the old cellar-tunnel complex beneath Plas Maenan Hotel, as a nursery roost during the summer and as a hibernaculum over the winter. Plas Maenan is host to one of the largest colonies of lesser horseshoe bats in North Wales, with an average of 170 bats in the summer roost and 50 bats in the winter hibernaculum over the last three years[13]. A substantial proportion of the colony remains to hibernate within the site, though some bats may also be using the old mines nearby. |

***Bat records***

4.1.2 There were no records for bats returned in the last 10 years, within the site. There were four records returned within 2 km of the site in the last 10 years. The nearest record was of a common pipistrelle and soprano pipistrelle 700 m southwest of the site. A lesser horseshoe maternity roost was confirmed at a site 1190 m south, and records returned between 2008-2018.

4.1.3 The location of these is provided in **Appendix E.**

[13] It should be noted that surveys conducted in 2024 by the RML surveyor as part of the LHB hibernation and maternity roost counts recorded circa 500 in the summer and 250 in the winter. This indicates an increasing Favorable Conservation Status (FCS) for this site.

## 4.2 Night-time bat walkover (NBW)

4.2.1 The weather variables during the surveys are provided in **Table 3**.

***Table 3:*** *Weather variables for the Night-time Bat Walkover surveys.*

| Date | Time of sunset | Phase of the Moon | Survey start / end times | Weather conditions at start/end |
|---|---|---|---|---|
| 02/05/2024 | 20:46 | Waning Crescent | Start: 21:15<br>End: 22:45 | Start: 18°C, calm, 20% cloud, 39% rH, no precipitation,<br><br>End: 11°C, calm, 20% cloud, no precipitation, |
| 26/06/2024 | 21:47 | Waning Gibbous | Start: 21:40<br>End: 21:50 | Start: 19°C, no wind, overcast and humid, 48% rH, no precipitation,<br><br>End: 15°C, no wind, overcast and humid, precipitation, |
| 16/09/2024 | 19:27 | First quarter | Start: 19:15<br>End: 21:00 | Start: 16°C, no wind, 0 cloud cover, 60%rH, 271 Lux.<br><br>End: 14°C, no wind, 0 cloud cover, 61%rH, no precipitation, 0.02Lux |
| | | | | |
| 11/06/2025 | 21:42 | Full Moon | Start: 21:27<br>End: 22:51 | Start: 19°C, no wind, 0 cloud cover, 54%rH,<br><br>End: 16°C, no wind, 0 cloud cover, 45%rH, no precipitation, |
| 24/07/2025 | 21:24 | New Moon | Start: 21:24<br>End: 22:25 | Start: 18°C, no wind, 0 cloud cover, 54%rH, 136 Lux.<br><br>End: 16°C, no wind, 0 cloud cover, 45%rH, no precipitation, 0.0046Lux |
| 17/09/2025 | 19:27 | Waning Crescent | Start: 19:15<br>End: 20:20 | Start: 21°C, no wind, 50% cloud cover, 48%rH, 142 Lux.<br><br>End: 18°C, no wind, 50% cloud cover, 55%rH, no precipitation, 0.0109Lux |

4.2.2 **Table 4** below summarises the results from the NBW surveys. The vast majority of the bats observed/recorded were common pipistrelle.

4.2.3 Bat species were noted commuting and foraging around the site. These comprised of common pipistrelle, soprano pipistrelle and noctule. There were a few passes of a myotis species at the eastern and western field boundaries during the surveys and a rare pass by a lesser horseshoe bat was recorded in both seasons.

4.2.4 During the second survey a lesser horseshoe bat was heard along hedgerow HR5. **Table 4** shows a summary of the survey results, raw data is provided in **Appendix F** and **Appendix G** shows the location of bat passes, during all three surveys overlayed on one plan.

**Table 4: Summary of Night-time Bat Walkover (NBW) Survey Results.**

| Date | Species Recorded | Description of Activity |
|---|---|---|
| 02/05/2024 | Ppip, Ppyg, Nnoc, Myotis | Soprano pipistrelle and common pipistrelles bats were seen foraging and commuting along both eastern and western treeline boundaries as well as the two hedgerows which traverse the site east to west.<br><br>The majority of the activity was from the common pipistrelle with more activity associated with the veteran oak tree to the southwest of the site.<br><br>One noctule was heard and recorded along the treeline to the east in the most northern field.<br><br>Myotis species possibly Daubenton's were heard and seen foraging and commuting along the treeline to the west which is associated with the stream.<br><br>**No bats were seen to emerge.** |
| 26/06/2024 | Nnoc, Ppip, Ppyg, Myotis sp, Rhip | The majority of the activity was from common pipistrelles foraging and commuting either along the treeline to the north and west as well as hedgerow HR5.<br><br>There were a few passes from noctules recorded on the scout which were along the western tree line. There was one pass by a myotis species while surveyors were at Stopping Point 2 near the veteran oak tree, it was seen to fly from south to north over the tree and follow the hedgerow north.<br><br>One lesser horseshoe bat was recorded on the scout commuting along a hedgerow (HR5).<br><br>**No bats were seen to emerge.** |
| 16/09/2024 | Ppip, Ppyg, Myotis | Most of the activity recorded was from common pipistrelles and soprano pipistrelle (with a max of two pipistrelles seen together at any one time), along HR3.<br><br>Activity from the pipistrelles was noted along HR1, HR3, around the veteran oak tree (TN1) as well as along the treelines to the east and west of the site. Two myotis passes were recorded on the walkabout at Stopping Point 7 along the line of trees to the west of the site. |

| Date | Species Recorded | Description of Activity |
|---|---|---|
| | | **No bats were seen to emerge.** |
| | | |
| 11/06/2025 | Nnoc, Ppip, Ppyg, Myotis | The majority of the activity was from common pipistrelles near stopping point 3 and 5 with soprano pipistrelle dominating the calls at stopping point 2.<br><br>Three myotis species passes were recorded near the TPO tree and two noctule passes were recorded at the start of the survey. |
| 24/07/2025 | Nnoc, Ppip, Ppyg, Myotis | The majority of the activity was from common and soprano pipistrelles with one recording of a noctule along hedgerow HR5. The activity recorded was foraging and commuting along the eastern treeline and hedgerow HR5. |
| 17/09/2025 | Ppip, Ppyg, Myotis, Rhip | The majority of passes were from common pipistrelle and soprano pipistrelle. Activity was concentrated along the eastern treeline at the top of the slope, suggesting this feature is the primary feeding corridor. The highest intensity observed was a maximum of three individual pipistrelles seen foraging simultaneously along this eastern boundary.<br><br>The recording of rarer species is significant. High activity was recorded near Stop Point 3, which included passes by a Myotis species and noctule. A second Myotis pass was confirmed along the hedgerow HR5. The treeline along the western boundary also confirmed usage by the Myotis genus, with two further passes recorded, indicating a secondary, commuting route on this aspect of the field.<br><br>Crucially, the western treeline recorded two distinct passes of the Lesser Horseshoe Bat This recording is of the highest conservation significance as it confirms the use of the western woodland block. |

Key:
Nnoc = Noctule *Nyctalus noctula*
Myotis sp. = *Myotis species*
Ppip = Common pipistrelle *Pipistrellus pipistrellus*
Ppyg = Soprano pipistrelle *Pipistrellus pygmaeus*
Rhip = Lesser horseshoe *Rhinolophus hipposideros*

## 4.3 Automated detector survey 2024

4.3.1 An overview of the bats recorded during the automated surveys is presented in **Tables 5 – 7** below and **shown** in **Appendix H. Appendix H** shows the total number of passes from each species of bat on the static detectors.

**Table 5:** Results of the automated survey in May 2024.

| Location of static | Dates set | Sunset / sunrise | Species recorded / total number of passes | Time of first/last recording |
|---|---|---|---|---|
| ST1 | 30/04/2024 – 07/05/2024 | 20:41 (30th)<br>20:53 (05th)<br><br>05:41(30th)<br>05:28 (05th) | Ppip / 2327<br>Ppyg / 2297<br>Myotis / 51<br>Nnoc / 17<br>Rhip / 64<br>Paur / 1 | 20:44 / 05:37<br>20:44 / 05:39<br>21:34 / 05:06<br>21:13 / 03:18<br>21:53 / 04:52<br>22:35 |
| ST2 | | | Ppip / 2611<br>Ppyg / 800<br>Myotis / 166<br>Nnoc / 36<br>Rhip / 11<br>Paur / 2 | 20:46 / 05:54<br>20:49 / 05:30<br>21:28 / 04:57<br>21:08 / 05:08<br>22:24 / 03:47<br>22:01 / 05:13 |
| ST3 | | | Ppip / 6445<br>Ppyg / 929<br>Myotis sp / 1205<br>Nnoc / 7<br>Rhip / 13 | 20:36 / 05:22<br>20:53 / 05:17<br>21:10 / 05:03<br>20:57 / 23:29<br>21:35 / 03:25 |
| ST4 | | | Ppip / 4172<br>Ppyg / 2309<br>Myotis sp / 109<br>Nnoc / 34<br>Rhip / 7<br>Paur / 2 | 20:42 / 05:31<br>20:41 / 05:36<br>21:13 / 05:35<br>21:08 / 04:30<br>23:56 / 04:19<br>21:52 / 03:40 |
| Key<br>Ppip = Common pipistrelle *Pipistrellus*<br>Ppyg = Soprano pipistrelle *P. Pygmaeus*<br>MbraMmys = *Whiskered/Brandts Myotis mystacinus/brandtii agg*<br>*Myotis Sp = Myotis species*<br>Paur = Brown long eared *Plecotus auritus*<br>Rhip = Lesser horseshoe *Rhinolophus hipposideros* | | | | |

4.3.2 The bat activity survey was conducted over seven nights between April 30 and May 7, 2024, recording substantial activity across all four static locations. The dominant species group across the entire survey were the Pipistrelles (common and soprano), with ST3 recording the highest total activity (8,699 passes). The species distribution varied by location: ST3 was overwhelmingly dominated by the common pipistrelle (6,445 passes)

and also recorded a remarkably high number of Myotis species (1,205 passes). In contrast, ST1 showed a near-equal split between the two Pipistrelle species (common: 2,327 vs. soprano: 2,297 passes), while ST4 also recorded very high numbers of both species, but maintained common pipistrelle as the most abundant.

*4.3.3* All four locations recorded common pipistrelle, soprano pipistrelle, Myotis species, noctule, Lesser horseshoe, and Brown long-eared bat—present across the survey area. The highest number of noctule passes (36) and a notable presence of Myotis species (166) were found at ST2, alongside a strong dominance by common pipistrelle. Activity consistently began shortly after sunset (approximately 20:40) and continued throughout the night, with last recordings near sunrise (around 05:30), indicating extensive nightly foraging and commuting behaviour across all locations.

**Table 6:** Results of the automated survey in June 2024

| Location of static | Dates set | Sunset / sunrise | Species recorded / total number of passes | Time of first/last recording |
|---|---|---|---|---|
| ST1 | Static malfunctioned – no recordings | | | |
| ST2 | 26/06/2024 – 30/06/2024 | 21:47 (26th)<br>21:46 (30h)<br><br>04:49 (26th)<br>04:52(30th) | Ppip / 4490<br>Ppyg / 749<br>Myotis / 84<br>Nnoc / 3<br>Rhip / 14<br>Paur / 1 | 21:53 / 05:03<br>21:53 / 04:46<br>22:14/ 04:16<br>23:28 / 01:42<br>22:34 / 03:36<br>22:30 |
| ST3 | | | Ppip / 2450<br>Ppyg / 1623<br>Myotis sp / 65<br>Nnoc / 17<br>Rhip / 9<br>Paur / 2 | 21:53 / 05:02<br>21:53 / 04:53<br>22:12 / 04:03<br>22:40 / 04:43<br>22:36 / 02:47<br>22:53 / 02:24 |
| ST4 | | | Ppip / 1735<br>Ppyg / 1319<br>Myotis sp / 49<br>Nnoc / 16<br>Rhip / 11<br>Paur / 2 | 21:18 / 04:54<br>21:24/ 04:55<br>22:12/ 03:58<br>22:02 / 04:22<br>22:33 / 03:17<br>22:25 / 02:22 |
| Key<br>Ppip = Common pipistrelle *Pipistrellus*<br>Ppyg = Soprano pipistrelle *P. Pygmaeus*<br>MbraMmys = *Whiskered/Brandts Myotis mystacinus/brandtii agg*<br>*Myotis Sp = Myotis species*<br>Paur = Brown long eared *Plecotus auritus*<br>Rhip = Lesser horseshoe *Rhinolophus hipposideros* | | | | |

4.3.4 The bat activity survey, conducted over five nights from June 26 to June 30, 2024, successfully recorded activity at three static locations (ST2, ST3, and ST4), while ST1 malfunctioned and yielded no data. Overall activity was overwhelmingly dominated by

the pipistrelle species (common and soprano) across all operational location. ST2 recorded the highest total number of passes (5,346 total passes), characterised by a massive dominance of the common pipistrelle, which accounted for over 84% of all passes at that location (4,490 passes). All three successful locations recorded a high degree of nightly activity, with the first recordings consistently occurring shortly after sunset (around 21:50) and the last recordings near sunrise (around 05:00).

4.3.5 All three functional sites recorded five identified species and one species group: common pipistrelle, soprano pipistrelle, Myotis species, noctule, Lesser horseshoe, and Brown long-eared bat. While the Pipistrelles were dominant everywhere, ST3 recorded the highest count of soprano pipistrelle (1,623 passes) and ST4 showed a more balanced distribution between the two main pipistrelle species compared to ST2. Counts for the other, less common species remained low, with Myotis species (84 passes) being the third most frequently recorded bat at ST2, and noctule (17 passes) being most active at ST3.

**Table 7:** Results of the automated survey in September 2024

| Location of static | Dates set | Sunset / sunrise | Species recorded / total number of passes | Time of first/last recording |
|---|---|---|---|---|
| ST1 | 16/09/2024 – 22/09/2024 | 19:28 (16th)<br>19:13 (22nd)<br><br>06:51 (16th)<br>07:02 (22nd) | Ppip / 2612<br>Ppyg / 2523<br>Myotis / 55<br>Nnoc / 5<br>Rhip / 45 | 19:11 / 06:43<br>19:14 / 06:55<br>19:27 / 06:31<br>20:07 / 06:27<br>20:16 / 06:22 |
| ST2 | | | Ppip / 893<br>Ppyg / 1307<br>Myotis sp / 65<br>Nnoc / 21<br>Rhip / 150<br>Paur / 5 | 19:12 / 06:48<br>19:07 / 06:47<br>19:39 / 04:14<br>19:40 / 00:10<br>20:01/ 06:02<br>20:31/ 02:36 |
| ST3 - Malfunctioned | | | | |
| ST4 | | | Ppip / 2580<br>Ppyg / 665<br>Myotis sp / 765<br>Rhip / 215 | 19:22 / 06:53<br>19:31/ 06:52<br>19:37 / 06:29<br>20:13 / 06:22 |
| Key<br>Ppip = Common pipistrelle *Pipistrellus*<br>Ppyg = Soprano pipistrelle *P. Pygmaeus*<br>MbraMmys = *Whiskered/Brandts Myotis mystacinus/brandtii agg*<br>*Myotis Sp = Myotis species*<br>Paur = Brown long eared *Plecotus auritus*<br>Rhip = Lesser horseshoe *Rhinolophus hipposideros* | | | | |

4.3.6 The bat activity survey, conducted over seven nights from September 16 to 22, 2024, successfully recorded activity at three static locations (ST1, ST2, and ST4), while ST3 unfortunately malfunctioned. Overall activity was dominated by the pipistrelle species, with common pipistrelle and soprano pipistrelle accounting for the vast majority of passes across all locations. The highest overall activity was observed at ST1, which recorded a total of 5,240 passes, showing nearly equal numbers of common and soprano pipistrelles.

*4.3.7* The survey recorded five distinct species and one species group (Myotis sp). ST2 demonstrated the highest species richness, recording six species, including the only instance of the Brown long-eared bat. In contrast, ST4 was notable for recording a significantly higher abundance of Myotis species (765 passes) compared to the other locations, alongside its primary detection of common pipistrelles. Lesser horseshoe and noctule bats were also present across the locations, with activity consistently starting shortly after sunset and continuing until before sunrise.

***Summary***

4.3.8 The surveys were consistently dominated by the Pipistrelle species, with the common pipistrelle being the most frequently recorded bat, followed by the soprano pipistrelle; together, they accounted for the vast majority of activity. Notably, the April/May (Spring) survey was the most active period overall, recording 23,615 passes, which suggests significant activity coinciding with bat emergence and the early maternity period.

4.3.9 All six identified species/species groups—including the two pipistrelles, Myotis species, noctule, Lesser horseshoe, and Brown long-eared bat — were recorded across the three survey periods, confirming a diverse bat assemblage in the area. The activity varied by location and time: ST3 was the most active single static site, particularly in the April/May survey, where it also recorded the highest abundance of Myotis species (1,205 passes). Activity for less common species like the Lesser horseshoe peaked during the Late Summer/Autumn survey (410 passes total), while the Brown long-eared bat was recorded in very low numbers across all three periods. Equipment issues were also noted, with ST3 failing in September and ST1 failing in June.

## 4.4 Automated detector survey 2025

4.4.1 An overview of the bats recorded during the automated surveys is presented in **Tables 8 – 10** below and shown in Appendix H shows the total number of passes from each species of bat on the static detectors.

**Table 8:** Results of the automated survey in June 2025

| Location of static | Dates set | Sunset / sunrise | Species recorded / total number of passes | Time of first/last recording |
|---|---|---|---|---|
| ST1 | 11/06/2025 – 16/06/2025 | 21:47 (11th)<br>21:45 (16th)<br><br>04:48 (11th)<br>04:48 (16th) | Ppip / 2328<br>Ppyg / 1404<br>Myotis / 112<br>Nnoc / 6<br>Paur / 5<br>Rhip / 8 | 21:26 / 05:03<br>21:27 / 04:58<br>21:56 / 03:56<br>22:19 / 04:05<br>22:19 / 03:31<br>22:20 / 02:18 |
| ST2 | | | Ppip / 8398<br>Ppyg / 1062<br>Myotis sp / 86<br>Nnoc / 12<br>Paur / 2<br>Rhip / 30 | 21:25 / 04:57<br>21:58 / 04:38<br>22:18 / 03:33<br>01:07 / 04:30<br>02:11<br>22:52 / 03:51 |
| ST3 | | | Ppip / 7294<br>Ppyg / 2508<br>Myotis sp / 280<br>Nnoc / 174<br>Paur / 4<br>Rhip / 8 | 21:34 / 04:38<br>21:46 / 05:09<br>22:00 / 03:50<br>22:03 / 04:30<br>01:51 / 03:11<br>22:43 / 03:01 |
| ST4 | | | Ppip / 4194<br>Ppyg / 4080<br>Myotis sp / 158<br>Nnoc / 174<br>Paur / 4<br>Rhip / 94 | 21:26 / 05:02<br>21:25 / 05:02<br>21:56 / 04:32<br>22:58 / 05:03<br>01:56<br>22:18/ 04:01 |
| Key<br>Ppip = Common pipistrelle *Pipistrellus*<br>Ppyg = Soprano pipistrelle *P. Pygmaeus*<br>MbraMmys = *Whiskered/Brandts Myotis mystacinus/brandtii agg*<br>*Myotis Sp = Myotis species*<br>Paur = Brown long eared *Plecotus auritus*<br>Rhip = Lesser horseshoe *Rhinolophus hipposideros* | | | | |

4.4.2 The site is characterised by high overall bat activity during the summer foraging period.

4.4.3 Common pipistrelles are overwhelmingly the dominant species across all locations, accounting for the highest pass counts. ST2 recorded the highest single total at 8,398 passes, suggesting this location is the most heavily used foraging or commuting point on the site. Soprano pipistrelles are also highly active, with ST4 showing a high count of 4,080 passes, nearly matching the common pipistrelle activity at that point.

4.4.4 Lesser Horseshoe Bat, this protected species was recorded at all four static locations The highest concentration of passes (94 passes) was recorded at ST4, indicating that this specific area is a commuting or foraging route for the Lesser Horseshoe Bat.

4.4.5 Myotis bats are recorded frequently at all four locations, with ST3 recording the highest count (280 passes). These bats often fly low and are associated with water or dense vegetation, confirming the ecological importance of the features near these detectors.

4.4.6 There is a smaller number of passes from Brown Long-Eared Bat (2 to 5) were recorded at all locations, confirming the presence of this woodland-associated species.

**Table 9:** Results of the automated survey in July 2025

| Location of static | Dates set | Sunset / sunrise | Species recorded / total number of passes | Time of first/last recording |
|---|---|---|---|---|
| ST1 | 24/07/2025 – 04/08/2025 | 21:24 (24th)<br>21:05 (04th)<br><br>05:19 (24th)<br>05:37 (04th) | Ppip / 11,772<br>Ppyg / 5368<br>Myotis / 676<br>Nnoc / 78<br>Paur / 16<br>Rhip / 140 | 20:55 / 05:36<br>20:48 / 05:37<br>21:22 / 06:03<br>20:07 / 06:27<br>20:16 / 06:22<br>20:16 / 06:22 |
| ST2 Malfunctioned | | | | |
| ST3 - | | | Ppip / 10,858<br>Ppyg / 6334<br>Myotis sp / 278<br>Nnoc / 576<br>Rhip / 4<br>Paur / 34 | 21:16 / 05:21<br>21:06 / 05:43<br>21:43 / 05:37<br>21:13 / 05:28<br>22:00 / 01:13<br>21:20 / 04:54 |
| ST4 | | | Ppip / 11,420<br>Ppyg / 4662<br>Myotis sp / 493<br>Nnoc / 238<br>Rhip / 76<br>Paur / 17 | 20:56 / 05:35<br>20:57 / 05:35<br>21:30 / 05:00<br>21:29 / 05:50<br>21:50 / 04:35<br>21:35 / 03:27 |
| Key<br>Ppip = Common pipistrelle *Pipistrellus*<br>Ppyg = Soprano pipistrelle *P. Pygmaeus*<br>MbraMmys = *Whiskered/Brandts Myotis mystacinus/brandtii agg*<br>*Myotis Sp = Myotis species*<br>Paur = Brown long eared *Plecotus auritus*<br>Rhip = Lesser horseshoe *Rhinolophus hipposideros* | | | | |

4.4.7 ST1 recorded nearly 12,000 common pipistrelle passes, while ST3 and ST4 also exceeded 11,000 total passes each. This confirms that these three locations are primary, high-volume foraging zones for bats feed throughout the night.

4.4.8 ST1 recorded a high total of 676 Myotis sp. passes. This significant clustering of Myotis activity suggests that the habitat feature near ST1 (a nearby water source) is a key feeding area for the genus.

4.4.9 Lesser Horseshoe Bat were recorded at all three locations: ST1 (140 passes), ST4 (76 passes), and ST3 (4 passes). The 140 passes at ST1 are the highest recording of Lesser horseshoe activity across the monitoring period, confirming this location as an important and actively used commuting/foraging corridor for the Lesser Horseshoe Bat population. This figure elevates the conservation significance of the ST1 corridor significantly.

4.4.10 The activity at ST4 (76 passes) and ST3 (4 passes) shows the activity is distributed, with ST3 being the least active corridor for lesser horseshoe.

**Table 10:** Results of the automated survey in September 2025

| Location of static | Dates set | Sunset / sunrise | Species recorded / total number of passes | Time of first/last recording |
|---|---|---|---|---|
| ST1 | 16/09/2024 – 22/09/2024 | 19:29 (16th)<br>19:14 (22nd)<br><br>06:51 (16th)<br>07:01 (22nd) | Ppip / 12,759<br>Ppyg / 8666<br>Myotis / 891<br>Nnoc / 143<br>Rhip / 55<br>Paur / 20 | 19:17 / 06:49<br>19:15 / 06:52<br>19:33 / 07:09<br>19:08 / 07:20<br>19:54 / 06:07<br>20:07 / 06:38 |
| ST2 | | | Ppip / 11,876<br>Ppyg / 3330<br>Myotis sp / 1172<br>Nnoc / 418<br>Rhip / 164<br>Paur / 10 | 19:12 / 07:22<br>18:52 / 06:42<br>19:01 / 06:53<br>19:04 / 07:33<br>19:48 / 06:20<br>20:17 / 23:56 |
| ST3 - | | | Ppip / 4332<br>Ppyg / 2944<br>Myotis sp / 1020<br>Nnoc / 1426<br>Rhip / 140<br>Paur /16 | 19:22 / 06:48<br>19:22 / 06:41<br>19:16 / 06:19<br>19:00 / 07:31<br>19:57 / 05:46<br>20:59 / 03:13 |
| ST4 | | | Ppip / 3962<br>Ppyg / 2280<br>Myotis sp / 522<br>Nnoc / 60<br>Rhip / 294<br>Paur / 76 | 18:58 / 06:38<br>18:57 / 06:49<br>19:04 / 06:26<br>18:58 / 06:46<br>19:53 / 06:00<br>19:50 / 06:28 |
| Key<br>Ppip = Common pipistrelle *Pipistrellus*<br>Ppyg = Soprano pipistrelle *P. Pygmaeus*<br>MbraMmys = *Whiskered/Brandts Myotis mystacinus/brandtii agg*<br>*Myotis Sp = Myotis species*<br>Paur = Brown long eared *Plecotus auritus*<br>Rhip = Lesser horseshoe *Rhinolophus hipposideros* | | | | |

4.4.11 ST1 and ST2 recorded the highest total activity, with nearly 13,000 common pipistrelles passes at ST1 and almost 12,000 Ppip passes at ST2. This confirms these corridors are still used intensively for feeding and commuting before hibernation.

4.4.12 Activity is significant for soprano pipistrelles, particularly at ST1 (8,666 passes), suggesting this area provides excellent late season foraging for the soprano species.

4.4.13 ST4 is the critical hotspot for Lesser horseshoe bats, recording a high 294 passes. This is the highest Lesser Horseshoe count across all static locations, indicating this specific location is likely a key swarming or pre-hibernation staging post, or a highly utilised commuting corridor linked to a nearby roost. ST2 also recorded 164 passes, confirming its function as a corridor for lesser horseshoe movement.

4.4.14 Myotis sp. ST2 (1,172 passes) and ST3 (1,020 passes) show the highest concentration of Myotis activity. Myotis bats often use the cover of trees and dense vegetation for late-season foraging, highlighting the vital role of the specific linear features near these two detectors.

4.4.15 High activity from noctule bats at ST3 with the presence of open habitat and high tree canopy, this structure provides the environment for this fast-flying, high-altitude species to effectively forage on large, aerial insects. While the high Brown Long-Eared count at ST4 reinforces the importance of dense foliage cover near this location.

***Summary***

4.4.16 The surveys show consistent, activity from early summer through to the pre-hibernation period, indicating the site is a highly productive and essential part of the local foraging landscape. The data confirms the continuous, presence of Lesser Horseshoe Bat and Myotis species across all monitoring periods.

4.4.17 The 140 lesser horseshoe passes recorded at ST1 in July/August confirm the stream corridor is a vital foraging and commuting route for the species during the critical post-maternity period.

4.4.18 Myotis activity is highest near water and cover, peaking at 1,172 passes at ST2 in September and 676 passes at ST1 in July/August. This confirms that linear features and the riparian habitat provide essential foraging and commuting cover for this sensitive genus.

4.4.19 The three static surveys, spanning the full active season, establish the site's usage by Lesser Horseshoe Bats requires the development to prioritise Avoidance strategies, particularly around the ST1 stream corridor and the ST4 hotspot.

## 4.5 2024 vs. 2025: Comparative Summary

4.5.1 This comparison focuses on the overall bat activity and species distribution between the 2024 and 2025 automated detector surveys, both of which covered the full active season (Spring/May, Mid-Summer/June-July, and Late Summer/September).

***Overall Activity and Dominance***

4.5.2 The 2025 survey recorded a significantly higher total volume of bat activity compared to the 2024 survey. In 2025, total passes per survey period often exceeded 20,000 passes (e.g., July/August), compared to the 2024 surveys where total passes generally ranged from 11,000 to 23,615. The dominant species remained consistent in both years: common pipistrelle and soprano pipistrelle were overwhelmingly the most frequently recorded bats, confirming they are the primary species utilising the site across the active season. In 2025, the common pipistrelle activity at a single static (e.g., ST1 in September 2025: 12,759 passes) was far greater than any single-static reading in 2024 (e.g., ST3 in May 2024: 6,445 passes), indicating a substantial increase in usage or a larger local population in 2025.

***Species Diversity and Distribution***

4.5.3 Both years recorded common pipistrelle, soprano pipistrelle, Myotis species, noctule, Lesser horseshoe, and Brown long-eared bat. However, the distribution of sensitive and less common species showed distinct patterns:

4.5.4 **Myotis Species**: While recorded heavily in both years, Myotis activity was highest in 2025, particularly in the September survey where ST2 (1,172 passes) and ST3 (1,020 passes) showed high concentrations, confirming the importance of cover and riparian features near those detectors.

4.5.5 **Lesser Horseshoe Bat:** The conservation significance of the site increased in 2025 due to significantly higher counts of Lesser horseshoe bats. The July/August 2025 survey recorded the highest single-static count at ST1 (140 passes), identifying the stream corridor as a vital foraging route. This was surpassed in the September 2025 survey at ST4 (294 passes), marking this location as a critical late-season hotspot, potentially for pre-hibernation staging, a level of activity exceeding any 2024 Lesser horseshoe recordings.

4.5.6 **Noctule:** Noctule activity was also notably higher in 2025, with a peak of 1,426 passes at ST3 in September 2025, suggesting that the open habitat and high tree canopy at this location provided an excellent foraging environment for this species that year.

4.5.7 **In summary,** the 2025 survey confirms the site's role as a highly productive foraging/commuting landscape, demonstrating a marked increase in overall bat activity and identifying critical, high-use corridors (ST1 and ST4) for the nationally protected Lesser horseshoe bat.

4.5.8 The most likely reasons for the substantially higher bat pass count in 2025 compared to 2024 are related to population dynamics and favourable environmental conditions.

1. **Successful Reproduction and Population Increase:** The higher numbers in 2025 may reflect a successful breeding season during 2024, leading to a larger overall local bat population. This means more juvenile bats would have survived and dispersed into the foraging population observed during the 2025 surveys.
2. **More Favourable Foraging Conditions:** Environmental factors, such as warmer, calmer weather and higher insect availability during the 2025 survey periods, can directly influence bat activity. Better weather and more food encourage bats to fly for longer periods and more frequently, leading to higher detector pass counts, even if the underlying population size only slightly increased.
3. **Peak Activity Timing**: Although both years covered the active season, the specific timing of the 2025 surveys may have better coincided with peak activity events, such as post-maternity dispersal, pre-hibernation swarming, or local peak insect hatches, which would concentrate activity into a shorter window.

## 4.6 Tree roosts and adjacent habitat

4.6.1 A number of the trees within the surveyed area were of suitable size or had features suitable for bat roosting potential, the most notable is the veteran oak tree (TN2 as shown on the Phase 1 plan, **Appendix I**).

4.6.2 The habitat surrounding the site, is considered to be of high quality that is well connected to the wider landscape. This is provided by the woodland adjacent to the site boundary and connecting hedgerows within and adjacent to the site. The open grassland, treelines and riparian corridors, all provide additional connecting habitat.

# 5 Potential Effects

## 5.1 Summary

5.1.1 The following sections discuss the effects of potential future proposals at the site, based on the evidence of the use of the site by bats from surveys conducted to date. Recommendations are given which could be incorporated into future design proposals which can either avoid, mitigate, or compensate for these effects.

5.1.2 Potential effects which could arise from the development and future use of the site include, but are not limited to:

- Reduced abundance and distribution of bat species within the affected area
- Direct loss of and disturbance to habitats used by bats
- Disruption of commuting routes
- Increased light pollution
- Habitat fragmentation
- Potential displacement of bats to less favourable habitat
- Increased noise, disturbance, and risk of pollution during construction.

## 5.2 Designated sites

5.2.1 No direct effects to statutory designated sites for bats will occur as the nearest sites is nearly 10 km south.

## 5.3 Bats

5.3.1 Based on survey data collected to date; the following bat species have been confirmed as utilising the site for foraging and commuting, no known roosts would be disturbed:

- Common pipistrelle
- Soprano pipistrelle
- Lesser horseshoe bat
- Brown Long-eared bat
- Myotis sp
- Noctule

5.3.2 There is the potential loss or degradation of commuting and foraging habitat (hedgerows, permanent pasture, trees), leading to habitat fragmentation. It is not anticipated that

there will be any loss of trees with the potential to support bat species but there may be the removal of sections of hedgerows.

# 6 Recommendations

6.1.1 It is important that habitat connectivity would be retained wherever possible, in particular the woodland areas, tree lines and hedgerows. Existing treelines and hedgerows should be preserved where possible, or new habitat such as native hedgerows with hedgerow trees created to offset that which would be lost and to retain connectivity. Any newly created habitat should be of high quality and planted with locally native species.

6.1.2 An area should be set aside and created to support biodiversity, this could include species rich meadows and field margins, ponds and mixed woodland/scrub. This will improve plant diversity and structure, and in turn boost fauna biodiversity including a wider range of invertebrates, which bat species feed on. Reduced cutting periods would enable wildflowers and insects to be undisturbed for longer increasing the availability of flowers and fruits, which benefit a range of wildlife, not only bats.

6.1.3 It is advised to retain all mature trees, if any trees are to be removed, they would need to be assessed and, if required, surveyed for bats prior to their removal.

6.1.4 It is advised that where lighting is required, the amount of light should not exceed the minimum necessary and the spread of light should be no more than is necessary to serve the purpose[14].

6.1.5 Careful lighting design will need to limit the spread of light to critical areas for people so that the hedgerows are retained as 'dark' corridors.

6.1.6 The following should be considered when choosing luminaires and their potential impact on Key Habitats and features[15]:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used
- LED luminaires should be used where possible.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm.
- Waymarking inground markers to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility.

[14] https://www.gov.wales/sites/default/files/publications/2025-02/dark-skies-guidance.pdf
[15] Bat Conservation trust and the Institute of Lighting Professionals. Guidance Note 08/23: Bats and Artificial Lighting at Night (2023 ILP).

- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.
- The use of bollard or low-level downward-directional luminaires should only be utilised if carefully designed to not produce unacceptable glare, unacceptable upward light output, increased upward light scatter from surfaces.

6.1.7 Consideration should be given to the installation of integrated bat boxes within new buildings and wood concrete bat boxes on retained mature trees around the site. Examples bat boxes are provided in **Appendix J.**

# 7 Conclusion

7.1.1 This report presents the findings of the bat surveys and provides an assessment of the potential effects on bats and their roosting sites which may result from the potential future development of the site.

7.1.2 The survey results indicate a high level of bat activity along the tree lines to the west of the site and along all hedgerows and treelines. There was a high number of passes of bats near the TPO tree and lesser horseshoe bats were recorded and observed during the NBW surveys for commuting along HR5.

7.1.3 Biodiversity enhancements including the provision of native planting in landscape proposals, sensitive lighting schemes and provisions for bats, have been advised and incorporated into the scheme design. The current scheme provides opportunities for the provision of additional linear features such as hedgerows along the full length of the site on elevated sections of the site east of the proposed residential properties. The hedgerows that follow the alignment of retaining wall structures provide good habitat for a wide range of species ranging from large mammals such as deer and badger to small mammals such as voles and hedgehogs. The hedgerows would also provide good nesting habitat for birds and additional foraging lines for bats.

7.1.4 It is advised that the details in this report will remain valid for a period of twelve months from the date of the report (14/11/2025), after which, if no site works have commenced, the validity of this assessment should be reviewed to determine whether further updates are necessary.

# 8 References


- Bat Conservation Trust, May 2022. Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys.
- Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
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- HMSO, 2016. Environment (Wales) Act 2016.
- Mitchell-Jones, A.J. and McLeish, A.P (2004). Bat Workers' Manual (3rd edn). Joint Nature Conservation Committee, Peterborough.
- Reason, P.F. and Wray, S. (2025). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield

# APPENDIX A: Site Location

N

0 100 200 m

PW FB Car Pk

BRYN FELIN

BRYN

Tk

Bryn Gynog Residential Park

Weir

B5106

NEW ST

MAES-Y-LLAN

ISGOED

19m

BRYN SEIRI RD

PARC BENARTH

HENDRE ROAD

Afon Gyffin

The Old Rectory

Bryn Iocyn

Mast

112

82m

Coed Bryn-glorian

Path

Track

Bryn-glorian-bach

Bryn-seiri

Path

Track

Path

BRYN

Issues



Cleient / Client:

Adra

Enw project / Project name:

**Land at Llanrwst Road Gyffin, Conwy**

Teitl lluniad / Drawing title:

**Site Location**

Eglurhad / Key:

Site Boundary

Insert map 1:200,000@A3

Based upon Getmapping Aerial Photography. © Getmapping plc

| Graddfa / Scale (A3): | Dyddiad / Date: | Darlunwyd gan: Drawn by: | KM |
|---|---|---|---|
| 1: 5000@ A3 | Nov 2025 | Gwiriwyd gan: Checked by: | DH |
| Rhif lluniad / Drawing number: 3222-RML-RT-DR-01 | | Cywiriad: Revision: | 01 |

Darparwyd gan / Prepared by:

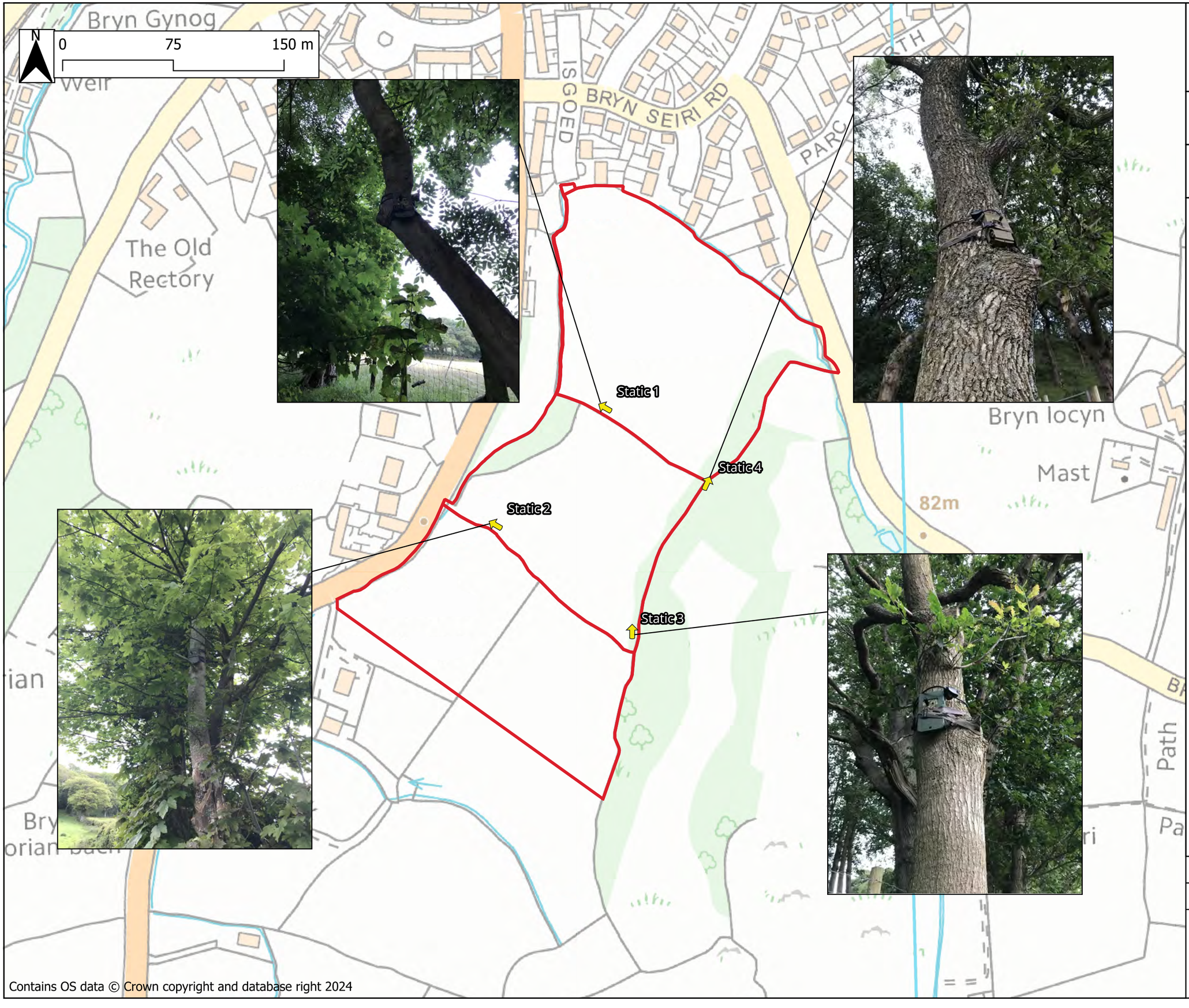
RML

Uned 1,Hwyd, Cwrt Y Ddderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
Rhif Ffon/Tel: +44 (0)1824 704366, Ffacs/Fax: +44 (0)1824 705450
e-bost/e-mail: rml@rmlconsult.com, Gwefan/Website: www.rmlconsult.com

# APPENDIX B: Proposed Plans

# APPENDIX C: Cofnod data

# APPENDIX D: Location of static detectors














Cleient / Client:

Adra

Enw project / Project name:

**Land at Llanrwst Road Gyffin, Conwy**

Teitl lluniad / Drawing title:

**Static & Camera Locations**

Eglurhad / Key:

Red Line Boundary

Static Detector Location

| | | |
|---|---|---|
| Graddfa / Scale (A3): 1:4000@ A3 | Dyddiad / Date: May 2024 | Darlunwyd gan / Drawn by: KM |
| | | Gwirwyd gan / Checked by: DH |
| Rhif lluniad / Drawing number: 3222-RML-RT-DR-04 | | Cywiriad / Revision: 01 |

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# APPENDIX E: Designated Sites for Bats

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email: rml@rmlconsult.com web: www.rmlconsult.com
Tel: +44(0)1824 704366
Registered in England and Wales No. 1848683 VAT Reg No. 401 424 313

N

0 1 2 3 km

Soprano pipistrelle 2020

Bat species 2013

Common pipistrelle 2018

Lesser Horseshoe 2018

PLAS MAENAN Site of Special Scientific Interest (SSSI)

Throughout the year bats use the old cellar-tunnel complex beneath Plas Maenan Hotel, as a nursery roost during the summer and as a hibernaculum over the winter. Plas Maenan is host to one of the largest colonies of lesser horseshoe bats in North Wales.



Cleient / Client:

Adra

Enw project / Project name:

**Land at Llanrwst Road Gyffin, Conwy**

Teitl lluniad / Drawing title:

**Location od SSSI for bats and bat records**

- Red Line Boundary
- Site of Special Scienctific Interest (SSSI) for Bats
- Bat
- Common Pipistrelle
- Soprano Pipistrelle
- Lesser horseshoe

Source data provided by Cofnod

| Graddfa / Scale (A3): | Dyddiad / Date: | Darlunwyd gan: Drawn by: | KM |
|---|---|---|---|
| 1:70,000@ A3 | May 2024 | Gwirwyd gan: Checked by: | DH |
| Rhif lluniad / Drawing number: 3222-RML-RT-DR-03 | | Cywiriad: Revision: | 01 |

Darparwyd gan / Prepared by:

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# APPENDIX F: Raw survey data

| Date | Start and end times and times of sunset/sunrise | Weather conditions | Transect route and survey number | Time/Species recorded/Location and activity |
|---|---|---|---|---|
| Key<br>Ppip = Common pipistrelle *Pipistrellus pipistrellus*<br>Ppyg = Soprano pipistrelle *P. pygmaeus*<br>Myotis sp.<br>SP# = Stopping point number<br>HNS = heard not seen | | | | |
| 02/05/2024 | Start 21:15<br>Finish: 22:45<br>Sunset: 20:46 | Start: 18°C, calm, 20% cloud, 39% rH, no precipitation,<br><br>End: 11°C, calm, 20% cloud, no precipitation, | 1/3 | 21:31 – Ppip foraging along tree line (northern boundary), several passes.<br>21:32 – Ppip 2 bats foraging along tree line.<br>21:34 – Ppip foraging.<br>21:39 – Ppyg heard not seen.<br>21:41 – Ppip heard not seen.<br>21:58 – Ppip foraging around tree on eastern boundary.<br>22:01 – Ppyg heard not seen.<br>22:04 – Ppip heard not seen.<br>22:11 – Myotis around oak tree near proposed entrance on western boundary.<br>22:15 – Ppip foraging around canopy of oak tree near proposed entrance.<br>22:16 – Ppip commuting along roadside hedge (western boundary) in in southward direction.<br>22:18 – Ppip commuting along roadside hedge.<br>22:21 – Myotis, Ppyg commuting along woodland edge (western boundary), several passes.<br>22:25 – Myotis seen (thermal camera), not heard (Anabat 1), foraging around canopy of sycamore in woodland<br>22:33 – Ppip seen (thermal camera), not heard (Anabat 1), Commuting alongside watercourse vegetation.<br><br>**No bats seen emerging** |
| 26/06/2024 | Start: 21:40<br>Finish: 22:50<br>Sunset: 21:47 | Start: 19°C, no wind, overcast and humid, 48% rH, no precipitation, | 2/3 Route reversed | 21:49 – Ppip commuting east.<br>21:50 – Ppip x2 commuting, several passes.<br>22:01 – Myotis commuting northward from tree.<br>22:16 – Ppip commuting.<br>22:19 – Ppip commuting along edge of woodland. |

| Date | Start and end times and times of sunset/sunrise | Weather conditions | Transect route and survey number | Time/Species recorded/Location and activity |
|---|---|---|---|---|
| | | End: 15°C, no wind, overcast and humid, precipitation, | | 22:23 – Ppyg commuting along woodland edge, several passes.<br>22:27 – Ppip foraging along woodland edge, several passes.<br>22:29 – Ppyg x2 social calls, foraging, circling overhead several passes – 2-3m high.<br>22:37 – Ppip x3 foraging and feeding buzzes.<br>22:53 – Ppip commuting north to south.<br><br>**No bats seen emerging** |
| 16/09/2024 | Start: 19:15<br>Finish: 21:00<br>Sunset: 19:27 | Start: 16°C, no wind, 0 cloud cover, 49%rH, 271 Lux.<br>Finish: 14°C, no wind, 0 cloud cover, 55%rH, no precipitation, 0.02Lux | 3/3 | 19:38 – Ppyg foraging along treeline x2 passes.<br>19:49 – Ppip heard not seen.<br>19:50 – Ppyg foraging up/down hedgerow.<br>20:00 – Ppip heard not seen.<br>20:08 – Ppyg + Ppip heard not seen.<br>20:14 – Nnoc heard not seen.<br>20:17 – Ppip heard not seen.<br>20:20 – Myotis + Ppip heard not seen.<br>20:25 – Ppip heard not seen.<br><br>**No bats seen emerging** |
| | | | | |
| 11/06/2025 | Start: 21:27<br>Finish: 22:51<br>Sunset: 21:42 | Start: 19°C, no wind, 0 cloud cover, 60%rH,<br><br>Finish: 16°C, no wind, 0 cloud cover, 61%rH, no precipitation, | 1/3 | 21:52 – Ppyg woodland edge HNS initially then seen foraging along boundary between the northern most field and the middle field. 2 bats seen.<br>21:52 – Ppip seen commuting along hedgerow.<br>22:02 – Nnoc HNS.<br>22:04 – Ppip darted out of the trees and a second commuting along the treeline.<br>22:10 – Ppip woodland edge seen foraging on the corner southeast within the middle field.<br>22:16 – Ppip foraging in the southern of the three fields.<br>22:24 – Ppip foraging.<br>22:30 – Ppip foraging along the hedgerow adjacent to the road.<br>22:43 – NHS. |

| Date | Start and end times and times of sunset/sunrise | Weather conditions | Transect route and survey number | Time/Species recorded/Location and activity |
|---|---|---|---|---|
| 23/07/2025 | Start: 21:24<br>Finish: 22:25<br>Sunset: 21:24 | Start: 18°C, no wind, 0 cloud cover, 54%rH, 136 Lux.<br><br>Finish: 16°C, no wind, 0 cloud cover, 45%rH, no precipitation, 0.0046 Lux | 2/3 | 21:31 – Ppyg commuting above treeline.<br>21:35 – Ppyg HNS.<br>21:57 – Ppip foraging back and forth along treeline.<br>21:58 – Ppip foraging back and forth along treeline, 2 bats seen together. Several low passes over the field.<br>22:02 – Ppyg + Ppip 3xbats foraging along treeline low above the field, several passes.<br>22:06 – Ppip flew from west to east along hedgerow.<br>22:09 – Ppip HNS.<br>22:10 – Ppip HNS.<br>22:12 – Ppip flew south to north. 1 pass.<br>22:18 – Ppip HNS. |
| 17/09/2025 | Start: 19:27<br>Finish: 20:20<br>Sunset: 19:27 | Start: no wind, 0 cloud cover, 48%rH, 42 Lux.<br><br>Finish: no wind, 0 cloud cover, 55%rH, no precipitation, 0.0109Lux | 3/3 | 19:44 – Ppip + Myotis 3 bats seen foraging along treeline back and forth.<br>20:02 – Ppip 1 pass north to south.<br>20:04 – Ppip HNS.<br>20:06 – Ppip HNS – foraging around beech tree or above the stream.<br>20:07 – Ppip several passes.<br>20:13 – Ppip HNS.<br>20:18 – Ppyg commuting and foraging along the treeline.<br>20:20 – Myotis HNS. |

# APPENDIX G: NBW results

N

0 50 100 m

Hedgerow 2 (HR2)

Hedgerow 1 (HR1)

Hedgerow 6 (HR6)

Hedgerow 5 (HR5)

Hedgerow 4 (HR4)

Hedgerow 3 (HR3)



Cleient / Client:

Adra

Enw project / Project name:

**Land at Llanrwst Road**
**Gyffin, Conwy**

Teitl lluniad / Drawing title:

**Location of Bat Passes During 3x Night-time Bat Walkover Surveys**

Eglurhad / Key:

- Red Line Boundary
- Stopping Points

Bat Species

- Noctule
- Myotis sp
- Common pipistrelle
- Soprano pipistrelle
- Lesser horseshoe

The drawing shows the number of passes bats made past the surveyors' bat detector. The drawing does not show the number of indivdiual bats.

| Graddfa / Scale (A3): | Dyddiad / Date: | Darlunwyd gan: Drawn by: | KM |
|---|---|---|---|
| 1:2500 @ A3 | Nov 2024 | Gwirwyd gan: Checked by: | DH |
| Rhif lluniad / Drawing number: 3222-RML-RT-DR-05 | | Cyw/rad: Revision: | 01 |

Darparwyd gan / Prepared by:

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e-bost/e-mail: rml@rmlconsult.com, Gwefan/Website: www.rmlconsult.com

N

0 50 100 m

1 2 3 4 5 6 7

Contains OS data © Crown copyright and database right 2025

Cleient / Client:

Adra

Enw project / Project name:

**LAND AT LLANRWST ROAD**

Teitl lluniad / Drawing title:

**2025 NBW Survey Results**

Eglurhad / Key:

- Transect Route - transect 2 was carried out in Reverse
- Stopping Points

Transect 1 Results
- Myotis sp
- NSL
- Ppip
- Ppyg

Transect 2 Results
- NSL
- Ppip
- Ppyg

Transect 3 Results
- Myotis sp
- NSL
- Ppip
- Ppyg
- Rhip

| | | |
|---|---|---|
| Graddfa / Scale (A3): 1:2500@ A3 | Dyddiad / Date: Nov 2025 | Darlunwyd gan: Drawn by: KM |
| | | Gwirwyd gan: Checked by: JS |
| Rhif lluniad / Drawing number: Appendix G | | Cywiriad: Revision: 01 |

Darparwyd gan / Prepared by:

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# APPENDIX H: Static detector results

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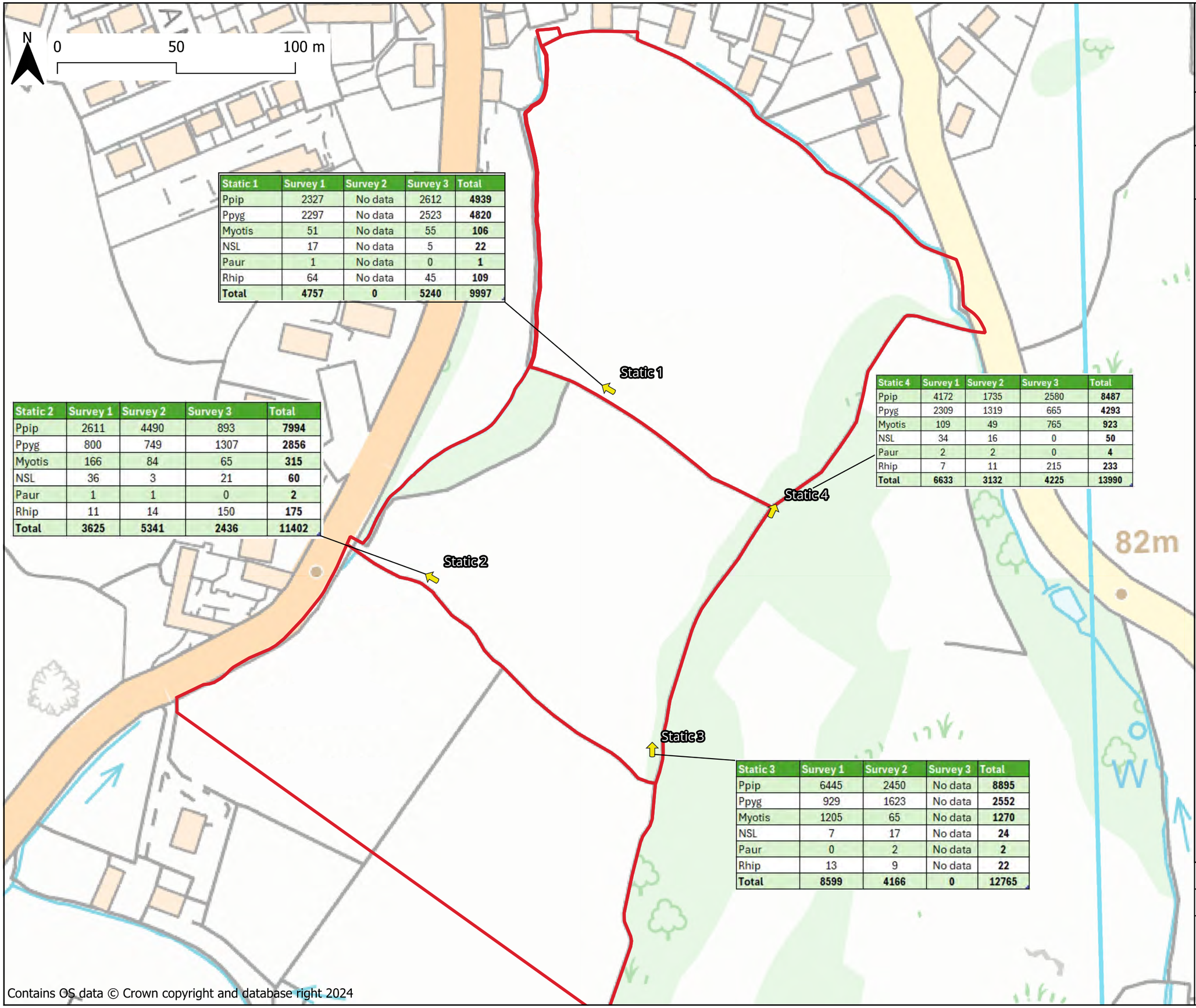
Tel: +44(0)1824 704366
Registered in England and Wales No. 1848683 VAT Reg No. 401 424 313




| Static 1 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 2327 | No data | 2612 | **4939** |
| Ppyg | 2297 | No data | 2523 | **4820** |
| Myotis | 51 | No data | 55 | **106** |
| NSL | 17 | No data | 5 | **22** |
| Paur | 1 | No data | 0 | **1** |
| Rhip | 64 | No data | 45 | **109** |
| **Total** | **4757** | **0** | **5240** | **9997** |

| Static 2 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 2611 | 4490 | 893 | **7994** |
| Ppyg | 800 | 749 | 1307 | **2856** |
| Myotis | 166 | 84 | 65 | **315** |
| NSL | 36 | 3 | 21 | **60** |
| Paur | 1 | 1 | 0 | **2** |
| Rhip | 11 | 14 | 150 | **175** |
| **Total** | **3625** | **5341** | **2436** | **11402** |

| Static 3 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 6445 | 2450 | No data | **8895** |
| Ppyg | 929 | 1623 | No data | **2552** |
| Myotis | 1205 | 65 | No data | **1270** |
| NSL | 7 | 17 | No data | **24** |
| Paur | 0 | 2 | No data | **2** |
| Rhip | 13 | 9 | No data | **22** |
| **Total** | **8599** | **4166** | **0** | **12765** |

| Static 4 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 4172 | 1735 | 2580 | **8487** |
| Ppyg | 2309 | 1319 | 665 | **4293** |
| Myotis | 109 | 49 | 765 | **923** |
| NSL | 34 | 16 | 0 | **50** |
| Paur | 2 | 2 | 0 | **4** |
| Rhip | 7 | 11 | 215 | **233** |
| **Total** | **6633** | **3132** | **4225** | **13990** |



Cleient / Client:

Adra

Enw project / Project name:

**Land at Llanrwst Road**
**Gyffin, Conwy**

Teitl lluniad / Drawing title:

**Static detector Locations and Bat Passes Results**

Eglurhad / Key:

Red Line Boundary

Static Detector Locations

| Graddfa / Scale (A3): | Dyddiad / Date: | Darlunwyd gan: Drawn by: | KM |
|---|---|---|---|
| 1: 2500@ A3 | Nov/2024 | Gwirwyd gan: Checked by: | DH |
| Rhif lluniad / Drawing number: 3222-RML-RT-DR-06 | | Cyfrinad: Revision: | 01 |

Darparwyd gan / Prepared by:

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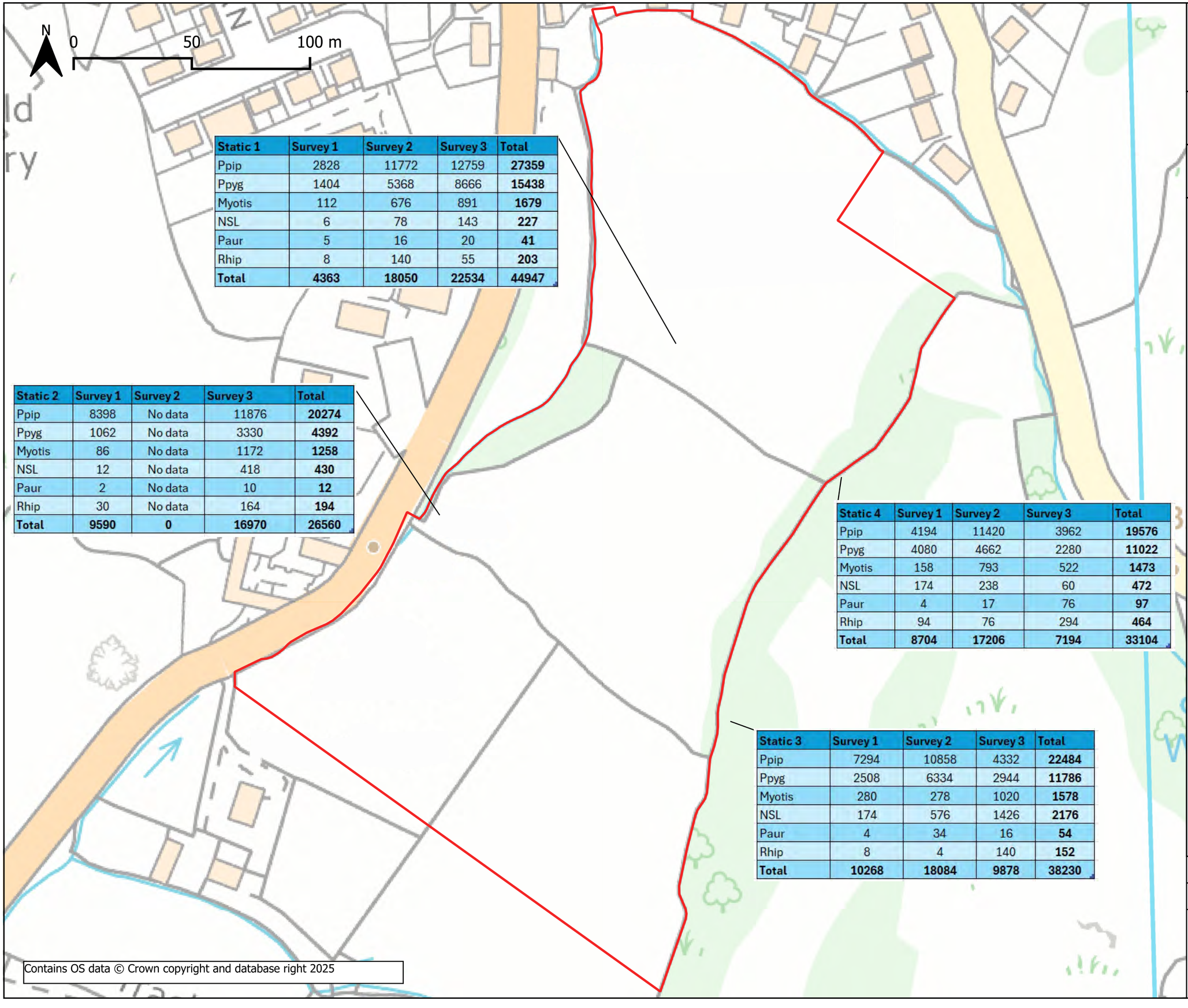
e-bost/e-mail: rml@rmlconsult.com, Gwefan/Website: www.rmlconsult.com




| Static 1 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 2828 | 11772 | 12759 | **27359** |
| Ppyg | 1404 | 5368 | 8666 | **15438** |
| Myotis | 112 | 676 | 891 | **1679** |
| NSL | 6 | 78 | 143 | **227** |
| Paur | 5 | 16 | 20 | **41** |
| Rhip | 8 | 140 | 55 | **203** |
| **Total** | **4363** | **18050** | **22534** | **44947** |

| Static 2 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 8398 | No data | 11876 | **20274** |
| Ppyg | 1062 | No data | 3330 | **4392** |
| Myotis | 86 | No data | 1172 | **1258** |
| NSL | 12 | No data | 418 | **430** |
| Paur | 2 | No data | 10 | **12** |
| Rhip | 30 | No data | 164 | **194** |
| **Total** | **9590** | **0** | **16970** | **26560** |

| Static 4 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 4194 | 11420 | 3962 | **19576** |
| Ppyg | 4080 | 4662 | 2280 | **11022** |
| Myotis | 158 | 793 | 522 | **1473** |
| NSL | 174 | 238 | 60 | **472** |
| Paur | 4 | 17 | 76 | **97** |
| Rhip | 94 | 76 | 294 | **464** |
| **Total** | **8704** | **17206** | **7194** | **33104** |

| Static 3 | Survey 1 | Survey 2 | Survey 3 | Total |
|---|---|---|---|---|
| Ppip | 7294 | 10858 | 4332 | **22484** |
| Ppyg | 2508 | 6334 | 2944 | **11786** |
| Myotis | 280 | 278 | 1020 | **1578** |
| NSL | 174 | 576 | 1426 | **2176** |
| Paur | 4 | 34 | 16 | **54** |
| Rhip | 8 | 4 | 140 | **152** |
| **Total** | **10268** | **18084** | **9878** | **38230** |



Cleient / Client:

Adra

Enw project / Project name:

**LAND AT LLANRWST ROAD**

Teitl lluniad / Drawing title:

**2025 Static Survey Results**

Eglurhad / Key:

Site Boundary

Graddfa / Scale (A3): 1:2500@ A3

Dyddiad / Date: Nov 2025

Darlunwyd gan: Drawn by: KM

Gwiriwyd gan: Checked by: JS

Cywiriad: Revision: 01

Rhif lluniad / Drawing number: Appendix G

Darparwyd gan / Prepared by:

RML
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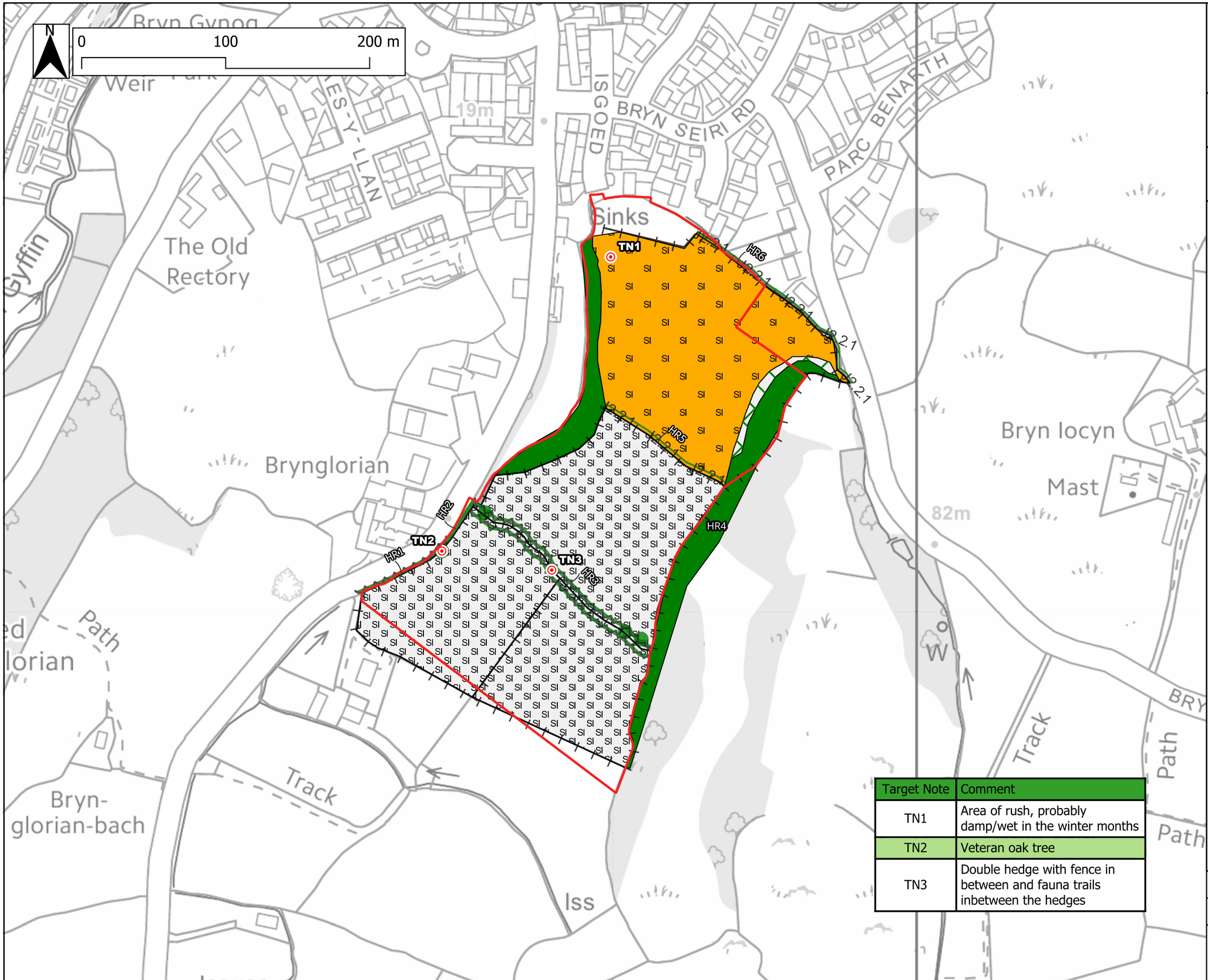
e-bost/e-mail: rml@rmlconsult.com, Gwefan/Website: www.rmlconsult.com

# APPENDIX I: Phase 1 habitat plan




| Target Note | Comment |
|---|---|
| TN1 | Area of rush, probably damp/wet in the winter months |
| TN2 | Veteran oak tree |
| TN3 | Double hedge with fence in between and fauna trails inbetween the hedges |

Cleient / Client:

Adra

Enw project / Project name:

**LAND AT LLANRWST ROAD**

Teitl lluniad / Drawing title:

**Phase 1 Plan**

Eglurhad / Key:

- Redline Boundary
- A1.1.1 - Broadleaved woodland - semi-natural
- A2.1 - Scrub - dense/continuous
- B2.2 - Neutral grassland - semi-improved
- B6 - Poor semi-improved grassland
- J2.1.1 - Intact hedge: native species-rich
- J2.1.2 - Intact hedge: species-poor
- J2.2.1 - Defunct hedge: native species-rich
- J2.4 - Fence
- Parkland, scattered trees, broad-leaved
- Target Note

| Graddfa / Scale (A3): | Dyddiad / Date: | Darlunwyd gan: / Drawn by: | KM |
|---|---|---|---|
| 1:2500@ A3 | May 2024 | Gwirwyd gan: / Checked by: | DH |
| Rhif lluniad / Drawing number: Appendix I | | Cywiriad: / Revision: | 01 |

Darparwyd gan / Prepared by:

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# APPENDIX J: Example bat boxes

| **Bat Boxes Links to suppliers[16] and images – external mounted for buildings** | |
|---|---|
| **Bat Boxes Links to suppliers[17] and images – integrated bat boxes and access tiles for buildings** | |
| Habibat Access Tile<br>https://www.wildcare.co.uk/bat-access-tile.html<br>The Habibat Access Tile is a roof tile which has been modified to allow bats either under the roof felt or under the roof void. |  |
| 1FR Bat Tube<br>https://www.wildcare.co.uk/schwegler-bat-tube-1fr.html<br>A good option if you are looking for a unit that can be built in - either bricked in or rendered over into the building façade, and are designed for bat inhabiting buildings |  |
| Integrated Eco Bat Box<br>https://www.wildcare.co.uk/integrated-eco-bat-box-cavity.html<br>Ecologically friendly solution to accommodating bat species. |  |

[16] Other suppliers are available

[17] Other suppliers are available

| | |
|---|---|
| Manthorpe Bat Ridge Roost<br><br>Designed in association with the Bat Conservation Trust as part of their Roost Partnership scheme the product is a self-contained, externally mounted unit which offers no means of access for the bats to enter the roof space or the property.<br><br>https://www.wildcare.co.uk/manthorpe-bat-ridge-roost.html |  |
| **Externally mounted – trees** | |
| 2F Schwegler Bat Box (General Purpose)<br><br>https://www.nhbs.com |  |
| **Eco Kent Bat Box**<br><br>https://www.nhbs.com/ |  |
| **2FN Schwegler Bat Box**<br><br>https://www.nhbs.com//bat-boxes |  |