

TYDDYN FLETCHER, FFORDD LLANBERIS, CAERNARFON

Bat Survey and Report

For



April 2025

3299/11

TYDDYN FLETCHER, FFORDD LLANBERIS, CAERNARFON

Bat Survey and Report

For



April 2025

3299/11

© Copyright. This report and figures remain the copyright of Richards, Moorehead & Laing Ltd.

QUALITY ASSURANCE PROCEDURES: Qp4, QP7.3Doc6

Prepared by: Katy Morris ACIEEM Date: 24/05/2024
Checked by: Donna Hall MCIEEM Date: 17/04/2025
Approved by: Jon Stoddard Date: 08/05/2025

Issue Record

Rev	Date	Description	Prepared by	Checked by
01	08/05/2025	For issue to client	KM	DH



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



Adra (Tai) Cyfyngedig Bat Survey and Report

CONTENTS

Executive Summary.....	1
1 Introduction	2
1.1 Scope of commission	2
1.2 Site description	2
1.3 Development proposal	2
1.4 Aims and Objectives	3
1.5 Consultations and meetings	3
1.6 Personnel and quality assurance.....	3
2 Legislation and Policy.....	5
2.1 Protection	5
2.2 Environment (Wales) Act 2016.....	6
2.3 Planning Policy Wales (PPW12)	6
2.4 Biodiversity Policy and Net Benefits for Biodiversity	7
3 Methodology.....	8
3.1 Desk Study	8
3.2 Field Survey.....	8
3.3 Data Analysis	9
3.4 Survey Constraints and Limitations	9
4 Results.....	10
4.1 Desk Study	10
4.2 Field Surveys.....	11
4.3 Night-time Bat Walkover Survey Results.....	11
5 POTENTIAL EFFECTS	15
5.1 Summary.....	15
6 RECOMMENDATIONS.....	16
7 Conclusion.....	18
7.1 Summary.....	18
8 REFERENCE.....	19
9 HEADING 1 LANDSCAPE	20
9.1 Heading 2.....	20



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
 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



Adra (Tai) Cyfyngedig Bat Survey and Report

List of Tables

TABLE 1: Statutory Designated Sites for Bats

TABLE 2: Weather Variables for Night-time Bat Walkover Survey

TABLE 3: Summary of Night-time Bat Walkover Survey Results

List of Appendices

APPENDIX A: Site Location

APPENDIX B: Proposal plan

APPENDIX C: Transect Route with Stopping Points

APPENDIX D: Designated and Non Designated Statutory Sites

APPENDIX E: Location of TPO

APPENDIX F: Bat Survey Raw Data

APPENDIX G: Results from the Night-Time Bat Walkover Surveys

APPENDIX H: Example of Bat and Bird Boxes

APPENDIX I: Landscape Masterplan



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



Adra (Tai) Cyfyngedig Bat Survey and Report

Executive Summary

Richards, Moorehead and Laing Ltd (RML) were commissioned by ADRA to undertake a bat survey and report to inform a proposed development at, Tyddyn Fletcher, Ffordd Llanberis, Caernarfon, Gwynedd.

The bat survey is required to identify potential ecological constraints arising from the proposed development and to advise of any mitigation measures, further survey requirements and measures to avoid and minimise ecological impacts specifically with regards to bats.

The development site fronts onto the A4086 Ffordd Llanberis, Caernarfon and measures approximately 1.35ha (3.38 acres). It consists of one field currently used for grazing and agricultural purposes.

This report presents the findings of the Preliminary Roost Assessment and bat night-time walkover surveys and provides an assessment of the potential effects on potential roosting, commuting and foraging features which may result from the proposed development.

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). No bat roosts have been identified to date. However, the site has the potential to support several bat species, for foraging and commuting, no bat roosts were identified on site.

Several enhancements have been recommended to maximise biodiversity opportunities in accordance with Planning Policies Wales 12. These enhancements include the implementation and management of new landscape planting featuring native species indigenous to the local area, as well as the installation of bat boxes and sensitive lighting schemes.

The details in this report will remain valid for a period of one year from the date of this report (April 2025) after which if no site works have commenced, the validity of this assessment should be reviewed to determine whether further updates are necessary.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



1 Introduction

1.1 Scope of commission

- 1.1.1 Richards, Moorehead and Laing Ltd (RML) were commissioned by ADRA to undertake bat surveys and reporting to inform a proposed development referred to as Tyddyn Fletcher, located on Ffordd Llanberis, Caernarfon, Gwynedd (hereafter referred to as 'the site'), centred on Grid reference SH 49302 62817. This report provides the results of the bat surveys and provides an assessment of the potential effects on potential roosting, commuting and foraging features which may result from the proposed development.

1.2 Site description

- 1.2.1 The site is a rectangular field located adjacent to the A4086 Ffordd Llanberis in Caernarfon, Gwynedd in North Wales and currently comprises 1.35 ha of greenfield site of improved grassland, semi-improved grassland, scrub and hedgerows.
- 1.2.2 The location and extent of the site is shown in **Appendix A**.

1.3 Development proposal

- 1.3.1 The development would involve the following:
- Construction of a new site access
 - 36 dwellings and associated parking and infrastructure
 - Active travel routes
 - Amenity and play space
 - SUDs including rain gardens
 - Boundary fencing,
- 1.3.2 The proposed site masterplan (current at the time of writing) is shown in **Appendix B**.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



1.4 Aims and Objectives

1.4.1 The purpose of the surveys and this report are to:

- a) Conduct three Night-time Bat Walkover (NBW) surveys to identify the species assemblage within the survey area, and use of the site by bats.
- b) Provide the results of the bat surveys.
- c) Identify any further survey requirements, and
- d) Identify appropriate measures to avoid and minimise any negative effects to bats and advise upon appropriate mitigation and or enhancement measures.

1.5 Consultations and meetings

1.5.1 Consultation has been sought with Gwynedd County Council (GCC) and Natural Resources Wales as part of a Pre-application Enquiry. NRW stated that their records show there may be protected species in the vicinity of the site and advised that liaison with the LPA's ecologist is required to discuss and agree the scope of any surveys required.

1.5.2 The County Ecologist was contacted in July 2024, a number of protected species surveys were requested, including bat flight path surveys.

1.5.3 Regular Design Team Meetings (DTM) have been held. These included discussions in regard to constraints in respect of bats (and other species) and to advise of measures to avoid and minimise any negative effects to bats and appropriate mitigation and or enhancement measures which can be incorporated into the final design.

1.6 Personnel and quality assurance

1.6.1 This report has been written by Katy Morris reviewed by Donna Hall (Full member of the Chartered Institute for Ecology and Environmental Management (CIEEM) bat licensed # S091777-2) and approved by Jon Stoddard. The report is issued by RML Ltd. The surveys were led by Katy Morris, and assisted by Rhodri Edwards, both Accredited Agents on the aforementioned license.

1.6.2 Principal ecologist Donna Hall is a full member of the Chartered Institute for Ecology and Environmental Management with twenty years' experience of working on a variety of infrastructure projects. Donna has experience in Ecological Impact Assessment (EclA) carrying out both the baseline field surveys and reporting the assessment of impacts. She is an experienced field surveyor and has conducted numerous extended phase 1 and 2 habitat and protected species surveys. She has also designed and supervised mitigation and habitat creation schemes and has experience in the preparation and submission of Development License Applications. Donna has spent almost all of her career based in Wales and has experience of working with statutory undertakers based in North Wales



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



Adra (Tai) Cyfyngedig Bat Survey and Report

on many projects. In addition, she is licensed to survey bats, great crested newts and dormice and understands the importance of ecosystem resilience within project design and implementation.

- 1.6.3 Ecologist Katy Morris is an Associate member of CIEEM and is accredited on the aforementioned license. Katy has a BSc in Environmental Science from Liverpool John Moores University. She has a keen interest in bats. Katy has experience of surveying bats, dormice, otters, water vole, reptiles, and great crested newts. She is also proficient in Phase 1 habitat surveys and is extending her repertoire to include invertebrates, NVC habitat surveys, Green Infrastructure Statement, Habitat Regulation Assessment, QGIS and Qfields. Katy is currently involved in numerous voluntary bat activities, including roost monitoring, bat care and handling. Katy has completed the Certificate of Bat Acoustics Analysis (CoBAA) and has achieved Technician Level: Graded B Assessment Result.
- 1.6.4 Landscape Architect Rhodri Edwards has 20 years' experience of working on highways and infrastructure projects and has worked extensively on high profile schemes for Welsh Government. He is a native Welsh speaker with a farming background, who uses Welsh in meetings and consultation events. Rhodri has extensive experience of ecological surveys for a range of species. He is a proficient and Autodesk trained CAD user with design software packages of AutoCAD Civil 3D 2016, 3ds Max and TIN modelling. With a growing demand for visualisations, he has prepared photomontages, 3d visualisations and drive/fly-through videos. He is also skilled in the use of Adobe Photoshop, GIS and assessment techniques including preliminary surveys using GPS for arboricultural and ecological surveys and technical drawings from survey data.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
 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



2 Legislation and Policy

2.1 Protection

2.1.1 Bats are protected under the Wildlife and Countryside Act 1981 (as amended)¹ and the Conservation of Habitats and Species Regulations 2017 (the 2017 Regulations) as amended².

2.1.2 Bats are listed in Schedule 2 of the 2017 Regulations. Under Section 43 of the Regulations it is 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.

¹ Available at <https://www.legislation.gov.uk/ukpga/1981/69>. [Accessed: 14/11/24]

² Available at <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>. [Accessed: 14/11/24]



2.2 Environment (Wales) Act 2016³

2.2.1 Welsh legislation confirms Wales' 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)⁴

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.

³ <https://www.legislation.gov.uk/anaw/2016/3/contents/enacted>

⁴ 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)⁵ 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.⁶

⁵ Available at <https://www.biodiversitywales.org.uk/> [Accessed:09/10/24]

⁶ 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



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



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 of the site; and
- Records of any legally protected or other notable species within 2 km of the site.
- Records of bat species within 10 km of the site.

3.1.2 A copy of the public records available from Cofnod are provided in **Appendix D** of the Preliminary Ecological Appraisal by RML (2024)⁷.

3.2 Field Survey

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. The surveys were conducted following best practice guidance.⁸

3.2.2 Three NBW surveys were carried out on:

- 3rd June 2024,
- 23rd July 2024 and
- 1st October 2024.

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, and Night Vision Aids (NVAs) in the form of thermal imaging monocular to aid the surveyor. During the survey any bat activity was noted by the surveyors, including species, flight paths, general activity, commuting, foraging and the timings of these encounters.

3.2.5 Surveyors followed a pre-defined route which had 7, five-minute stopping points. The routes included the field subject to development, and the adjoining field. During the

⁷ Morris K; 2024; Richards Moorhead and Laing Ltd; Preliminary Ecological Appraisal

⁸ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The bat Conservation Trust, London.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



second survey the route was followed in reverse. **Appendix C** shows the Transect Route with stopping point locations.

3.3 Data Analysis

Night-time Bat Walkover survey

- 3.3.1 Recordings made with the Walkabout 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.

3.4 Survey Constraints and Limitations

- 3.4.1 There were no constraints or limitations to the surveys conducted. All surveys were conducted in suitable weather conditions, and at the appropriate time of year.
- 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.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



4 Results

4.1 Desk Study

Statutory designated sites for bats

- 4.1.1 There are four statutory designated sites within 10 km, two of which are designated for their assemblages of bat species. This is the Glynllifon Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). These are detailed in **Table 1** and shown in **Appendix D**.

Table 1: Statutory designated sites – bats

Site name	Distance from site	Reason for notification (as taken from site citations)
Glynllifon (SAC) UK0012661	6600 m southwest	Annex II species that are a primary reason for selection of this site. <ul style="list-style-type: none"> 1303 Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>). This site in North Wales is both a maternity and hibernation site due to a large population of lesser horseshoe bats, comprising about 6% of the UK population⁹.
Glynllifon (SSSI)	6600 m southwest	This site has been selected for its population of lesser horseshoe bats. The site is situated in the former Glynllifon estate, 7.5km southwest of Caernarfon. The site includes three summer roost sites and two hibernation sites for the lesser horseshoe bat.

Non-statutory designated sites

- 4.1.2 There are 10 Local Wildlife Sites (WS) located within 2 km of the site; these are detailed in **Table 3** of the Preliminary Ecological Appraisal as well as 18 candidate wildlife sites these are shown in **Appendix D**. The closest site is Coed Mawr WS which is less than 10 m from the development boundary to the north of the A4086 Ffordd Llanberis. This site consist of a river corridor, lowland mixed deciduous woodland, coastal & floodplain grazing marsh and lowland meadow, these habitats afford connectivity from the site to the wider landscape, in particular along the wooded Afon Cadnant.
- 4.1.3 There are 16 areas of ancient woodland (either ancient semi-natural or restored) within 2 km of the site. The closest lies 930 m to the southeast of the Site.

⁹ (March 2008) Core Management Plan including Conservation Objectives for Glynllifon SAC. Available at <https://naturalresources.wales/media/672257/Glynllifon%20SAC%20Management%20Plan%2021.4.08%20English.pdf> [Accessed 28/11/2024]

- 4.1.4 There are two notable trees within 2 km of the site which are listed on the Ancient Tree Inventory¹⁰. One tree is 1.3 km northeast, and the other is 1.2 km northwest.
- 4.1.5 There are several woodlands or individual trees which are subject to a Tree Preservation Order (TPO) within 2 km. One of these occurs adjacent to the site boundary, T9 a veteran sessile oak (*Quercus petraea*), as shown on the plan provided in **Appendix E**.
- 4.1.6 There were sixty-nine records of bat species recorded within 2 km within the last 10 years. No bat species have been identified on site; the nearest records are:
- Common pipistrelle (*Pipistrellus pipistrellus*) 555m northeast a live sighting during a survey.
 - Soprano pipistrelle (*Pipistrellus pygmaeus*) 555 m northeast a live sighting, of a foraging bat.
 - Lesser horseshoe (*Rhinolophus hipposideros*) 555 m northeast single bat dropping within a shed.
 - Lesser horseshoe night roost 769 m south.

4.2 Field Surveys

Bats

- 4.2.1 There are no buildings or structures present on the site, to provide potential roosting opportunities for bats.
- 4.2.2 There are several semi-mature to mature trees located within the site, primarily along the boundaries, notably a mature oak (TPO) within hedgerow HR3. However, none of these trees exhibit features such as cracks, rot holes, cavities, peeling bark, dense Ivy coverage, or other similar characteristics that could provide opportunities for supporting roosting bats.
- 4.2.3 The site is predominantly characterised by improved grassland and semi-improved grassland, providing limited opportunities for foraging bats due to its open nature and lack of structural diversity. Nonetheless, the trees and hedgerows, especially those along the site boundaries, offer linear features that could serve as potential flight paths for bats.

4.3 Night-time Bat Walkover Survey Results

- 4.3.1 The weather variables during the surveys are provided in **Table 2**.

¹⁰ <https://ati.woodlandtrust.org.uk/tree-search/?v=2666850&ml=map&z=13&nwLat=53.14918977791275&nwLng=-3.4138713082031247&seLat=53.06592472015136&seLng=-3.2023844917968747>

Table 2: The weather variables for the activity surveys.

Date	Time of sunset	Survey start / end times	Weather conditions at start/end
03/06/2024	21:36	Start: 21:26 End: 22:50	Start: 15°C, calm, 100% cloud, 53% rH, no precipitation, 202 lux End: 13°C, calm, 100% cloud, no precipitation.
24/07/2024	21:25	Start: 21:40 End: 22:50	Start: 18°C, no wind, 10% cloud 45% rH, no precipitation, 142 lux. End: 15°C, calm, 10% cloud, 55% rH, no precipitation, 0.0134lux.
01/10/2024	18:52	Start: 18:40 End: 19:50	Start: 13°C, no wind, 60% cloud cover, No precipitation. Finish: 13°C, no wind, 80% cloud cover, no precipitation.

4.3.2 **Table 3** below summarises the results from the NBW surveys. The vast majority of the bats observed/recorded were common pipistrelle.

4.3.3 Bat species were noted commuting and foraging around the site. These comprised of common pipistrelle, soprano pipistrelle (*Pipistrellus pygmaeus*) and there were several passes of a myotis sp along the tree line boundary with the industrial estate. **Table 3** shows a summary of the survey results; raw data is provided in **Appendix F. Appendix G** contains a plan detailing the locations where bat calls were recorded, with all three NBW surveys overlaid.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
 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



Adra (Tai) Cyfyngedig Bat Survey and Report

Table 3: Summary of Night-time Bat Walkover Survey Results.

Date	Species Recorded	Description of Activity
03/06/2024	Ppip, Ppyg,	<p>Soprano and common pipistrelles bats were seen foraging and commuting along the tree line boundary with the industrial estate. Bats were also observed foraging and commuting along the two hedgerows within the field.</p> <p>The majority of the activity was to the north of the site, this area was along the tree line Bat activity from both soprano and common pipistrelle was recorded along HR3, especially near to the veteran oak tree and HR5 with the associated drain and marshy grassland.</p> <p>No bats were seen to emerge.</p>
23/07/2024	Ppip, Ppyg Myotis species, Mdau	<p>The majority of the activity was from common pipistrelles foraging and commuting either along the treeline to the east or along HR3, HR5 and HR6.</p> <p>There was a pass from a Myotis species which was later confirmed as Daubenton's (<i>Myotis daubentonii</i>) noted by surveyors along the treeline to the northeast.</p> <p>No bats were seen to emerge.</p>
01/10/2024	Ppip, Ppyg,	<p>Common pipistrelle and soprano pipistrelle were the only species observed and recorded during the 3rd NBW survey. Most of the activity recorded was from common pipistrelles (with a max of three pipistrelles seen together) along HR3 near to the veteran oak tree.</p> <p>While at stopping point 7, under the veteran oak tree, pipistrelles were observed by the surveys foraging around the canopy and commuting across the A4086.</p> <p>No bats were seen to emerge.</p>
<p>Key:</p> <p>Myotis sp. = <i>Myotis species</i></p> <p>Mdau = Daubenton's <i>Myotis daubentonii</i></p> <p>Ppip = Common pipistrelle <i>Pipistrellus pipistrellus</i></p> <p>Ppyg = Soprano pipistrelle <i>Pipistrellus pygmaeus</i></p>		



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



Adra (Tai) Cyfyngedig Bat Survey and Report

Bats

- 4.3.4 There are no buildings or structures present on the site, to provide potential roosting opportunities for bats.
- 4.3.5 The site is predominantly characterised by improved grassland and semi-improved grassland, providing limited opportunities for foraging bats due to its open nature and lack of structural diversity. Nonetheless, the trees and hedgerows, especially those along the site boundaries, offer linear features that could serve as potential flight paths for bats.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



5 POTENTIAL EFFECTS

5.1 Summary

5.1.1 The following sections discuss the potential effects of the works, current at the time of writing, upon the ecological interest at the site and advises upon methods which can either avoid, mitigate, or compensate for these effects.

5.1.2 Potential effects which could arise from the development of a residential development consisting of approximately 36 affordable homes include the following:

- Direct mortality and disturbance to bats.
- Direct loss of and disturbance to habitats; and,
- Increased noise, disturbance, and risk of pollution during construction.

5.1.3 No buildings or other structures are present within the site, to offer roosting potential.

5.1.4 Based on survey data collected to date the following bat species have been confirmed as utilising the site for commuting and foraging:

- Common pipistrelles
- Soprano pipistrelles
- Myotis sp.

5.1.5 Some effects on bats are envisaged, this would be the loss of foraging habitat within the redline boundary, the grassland would be replaced by houses and infrastructure. However It is not anticipated that there will be any loss of trees with the potential to support bat species but there will be the removal of a small section of hedgerow in order to make way for site access and visibility, this would be replaced by a stone wall which would serve as a linear connecting feature for navigation purposes, post construction.

5.1.6 It is assumed that all works would be undertaken during daylight hours, and no night-time work would be required.

5.1.7 Should any semi-mature or mature trees be identified for removal however, these should be inspected by suitably qualified bat worker and advice sought.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



6 RECOMMENDATIONS

6.1 Bats

- 6.1.1 New trees and shrubs will be planted, consisting of native species, to improve foraging opportunities for bats. Additionally, the landscaped areas within the site should be managed to maximise the abundance of invertebrates. Habitat connectivity would be retained, in particular with the retention of the majority of the hedgerows which bound the site. Any trees to be removed would need to be assessed and, if required, surveyed for bats prior to their removal.
- 6.1.2 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.
- 6.1.3 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.
- 6.1.4 The following should be considered when choosing luminaires and their potential impact on Key Habitats and features¹¹:
- 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.
 - 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.

¹¹ Bat Conservation trust and the Institute of Lighting Professionals. Guidance Note 08/23: Bats and Artificial Lighting At Night (2023 ILP).

1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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

Adra (Tai) Cyfyngedig Bat Survey and Report

- 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.

6.1.5 To enhance habitat for bats, the development design will include integrated bat boxes or bat access slates on new buildings and/or retained mature trees (examples in **Appendix H**). Placement of these bat boxes will follow best practice guidelines, prioritising locations on south- or southwest-facing walls near eaves, at a minimum height of 3 meters, and away from artificial light and predators. Clear flight paths and connectivity to hedgerows and trees will be maintained. The proposed bat box locations are illustrated in **Appendix I**.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



7 Conclusion

7.1 Summary

- 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 proposed works.
- 7.1.2 The site supports bats which are a protected species. No bat roosts have been identified however common and soprano pipistrelle bats and a myotis bat have been observed utilising the site for commuting and foraging. Recommendations have been made in Section 6.
- 7.1.3 Several enhancements have been recommended to be integrated into the development proposals for the site to maximise biodiversity opportunities in accordance with Planning Policies Wales 12. These enhancements include the implementation and management of new landscape planting featuring native species indigenous to the local area, as well as the installation integrated bat boxes into the new properties and wood concrete bat boxes to be installed on mature trees to be retained.
- 7.1.4 The details in this report will remain valid for a period of up to one year for information regarding bats from the date of this report (October 2024) after which if no site works have commenced, the validity of this assessment should be reviewed to determine whether further updates are necessary.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
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



8 REFERENCE

- CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester, UK.
- Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
- HMSO, 1981. The Wildlife & Countryside Act 1981 (as amended), Norwich: Her Majesty's Stationary Office.
- HMSO, 2016. Environment (Wales) Act 2016.
- HMSO, 2017. The Conservation of Habitats and Species Regulations 2017. (as amended).
- 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. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
 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



APPENDIX A: SITE LOCATION



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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





Contains OS data © Crown copyright and database right 2025

Cleient / Client:



Enw project / Project name:

Tyddyn Fletcher, Ffordd Llanberis, Caernarfon

Teitl lluniad / Drawing title:

Site Location

Eglurhad / Key:

 Redline Boundary

Insert map: 1:2000000 @ A3



Graddfa / Scale (A3): 1:2000 @ A3	Dyddiad / Date: Apr/2025	Darlunwyd gan: Drawn by: KM
Rhif lluniad / Drawing number: 3299-RML-PEA-DR-01		Gwilynyd gan: Checked by: DH
		Cwyriad: Revision: 01

Darparwyd gan / Prepared by:



RML Consultancy Ltd, Unit 1, Ddwrn, Ffordd Celyn, Rhydymain, Denbighshire, LL15 1NZ
Rhif Ffôn/Tel: +44 (0)1824 704366, Ffôn/Fax: +44 (0)1824 705450
e-bost/e-mail: info@rmlconsult.com, Gwefayr/Website: www.rmlconsult.com

APPENDIX B: PROPOSAL PLAN



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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





INDICATIVE VISIBILITY SPLAY

NEW SITE ENTRANCE

INDICATIVE VISIBILITY SPLAY

OPTIONAL BUS STOP

LINK

MATURE OAK TREE TO BE RETAINED

SUBSTATION

POSITION OF OVERHEAD CABLES

FARM GATE FOR ACCESS TO ADJACENT LAND

OVERHEAD CABLES DIVERTED UNDERGROUND

EXISTING POSITION OF OVERHEAD CABLES

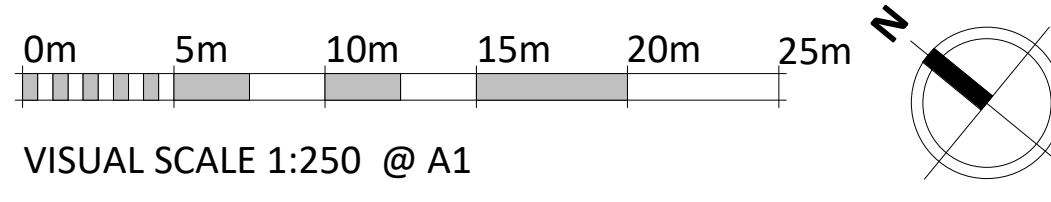
CAERNARFON PENTECOSTAL CHURCH

Bungalow

LINE OF WATERMAIN

PROPOSED BIODIVERSITY MITIGATION TO BUILDINGS. REFER TO TIRLUN BARR DRAWINGS

- BAT BOXES
- BIRD BOXES



M	TREES UPDATED & BIODIVERSITY MITIGATION ADDED TO MATCH LANDSCAPE PLAN	21/05/25	GT
L	EQUIPPED PLAY SPACE MOVED SOUTH EAST.	20/05/25	IO
K	MORE GREEN AREAS SHOWN & AMENITY SPACE FOR PLATS	30/04/25	GT
J	SECTIONS OF HIGHWAY SHOWN IN 'BROWN' COLOUR ADJUSTED TO LIGHT GREY IN FRONT OF HOUSES	29/04/25	GT
H	FLATS 15-20 MOVED UP AND ONE 4P28 HOUSE MOVED DOWN, ADJACENT TO PLOT 26. PLAY AREA MOVED OUT OF THE WATER MAIN EASEMENT	28/04/25	GT
G	WATERMAIN POSITION ADJUSTED	24/04/25	IO
F	AMENDED TEXT ANNOTATION OF ADJACENT LAND	16/04/25	GT
E	FARM GATE ADDED FOR ACCESS TO PHASE 2 LAND WITH STOCK PROOF FENCE EITHER SIDE OF GATE AND ALONG MAIN ROAD. 2.1M FENCE ADDED TO BOUNDARY WITH CIBYN INDUSTRIAL ESTATE.	16/04/25	GT
D	BINS & SHEDS ADDED, 1.2m LANDING DEPTH TO FRONT DOORS	11/04/25	GT
C	PLOT 12 & 13 SWITCHED, SUBSTATION PUSHED BACK, RAIN GARDEN REMOVED ADJACENT PLOT 8	27/03/25	GT
B	AMENDMENTS TO SITE LAYOUT FOLLOWING ADRA'S PREFERRED HOUSING MIX	03/03/25	GT
A	FOR WELSH GOVERNMENT SUBMISSION	09/12/24	GT
REV	DESCRIPTION	DATE	BY

PROJECT
LLANBERIS ROAD,
CAERNARFON
for ADRA

DRAWING TITLE
PROPOSED SITE LAYOUT

SCALE	As indicated @A1	DATE	17/10/24	DRAWN	GT	CHECKED	SV
DRAWING STATUS	PLANNING						
JOB No	C1139	DRAWING No	015	REVISION	M		

AG

AINSLEY GOMMON ARCHITECTS

THE OLD POLICE STATION, 15 GLYNNE WAY, HAWARDEN, CH5 3NS
Tel: 01244 537 100 | wales@agarchitects.co.uk | www.agarchitects.co.uk
Ainsley Gommon Architects Ltd. Registered in England & Wales No. 1187948
Registered Office: 1 Price Street, Hamilton Square, Birmingham B6 4AA

APPENDIX C: TRANSECT ROUTE WITH STOPPING POINTS



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



APPENDIX D: Statutory Designated and Non Statutory Designated Sites



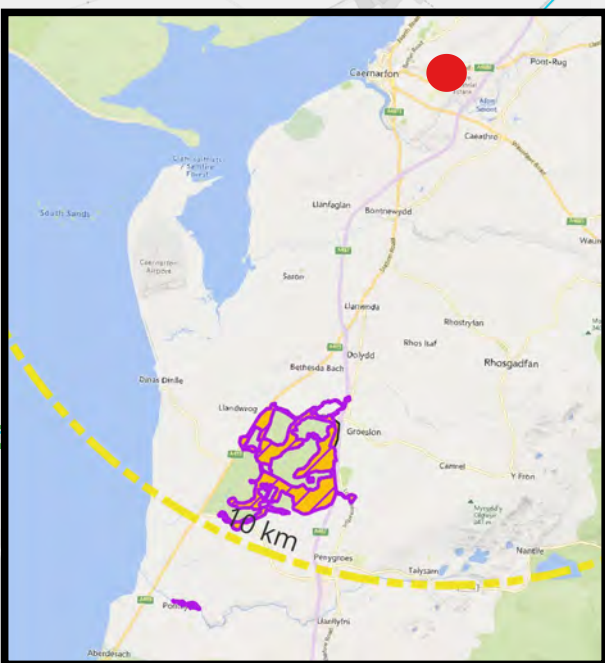
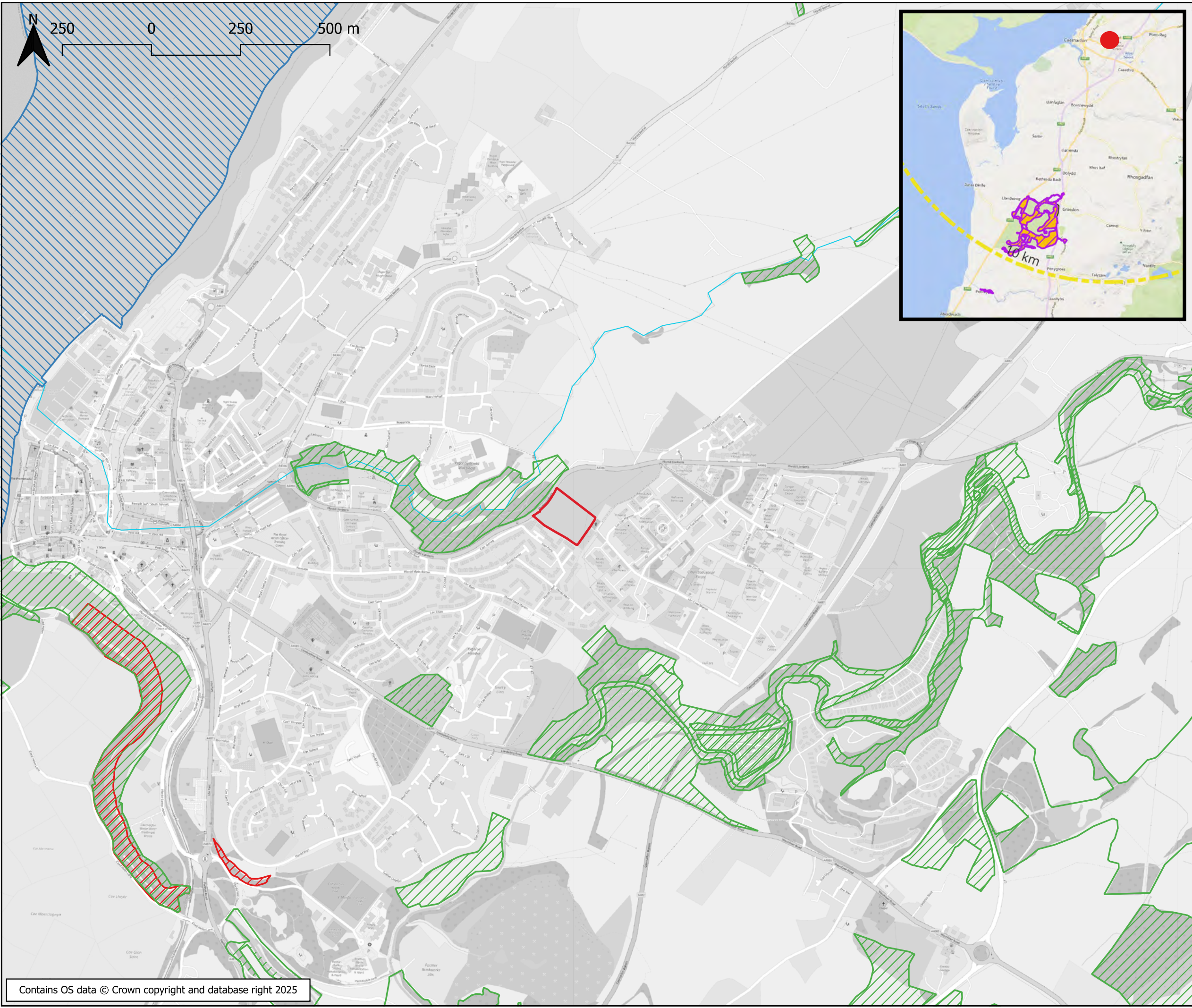
1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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





Cleient / Client:












Enw project / Project name:

Tyddyn Fletcher, Ffordd Llanberis, Caernarfon

Teitl lluniad / Drawing title:

Designated and Non Designated Sites

Eglurhad / Key:


-  Site Location
-  Redline Boundary
-  Special Area of Conservation SAC
-  Special Area of Conservation for Bats
-  Site of Special Scientific Interest SSSI
-  Site of Special Scientific Interest SSSI for Bats
-  Wildlife Sites
-  Afon Cadnant
-  10km Search Area for Sites Designated for Bats

Data sourced from Cofnod

Insert map: 1:150000@A3

Graddfa / Scale (A3):	Dyddiad / Date:	Darlunwyd gan:	KM
1:10000@ A3	Apr 2025	Drawn by:	
Rhif lluniad / Drawing number:		Gwilywyd gan:	DH
3299-RML-PEA-05		Checked by:	
		Cwriad:	01
		Revision:	

Darparwyd gan / Prepared by:



RML, Cwm Y Dderwen, Ffordd Celyn, Rhydym, Derbyshire, LL15 1ND
Rhydym Tel: +44 (0)1824 704366, Ffôn/Fax: +44 (0)1824 705450
e-bost/e-mail: rml@rmlconsult.com, Gwefay/Website: www.rmlconsult.com

APPENDIX E: TREE PRESERVATION ORDER



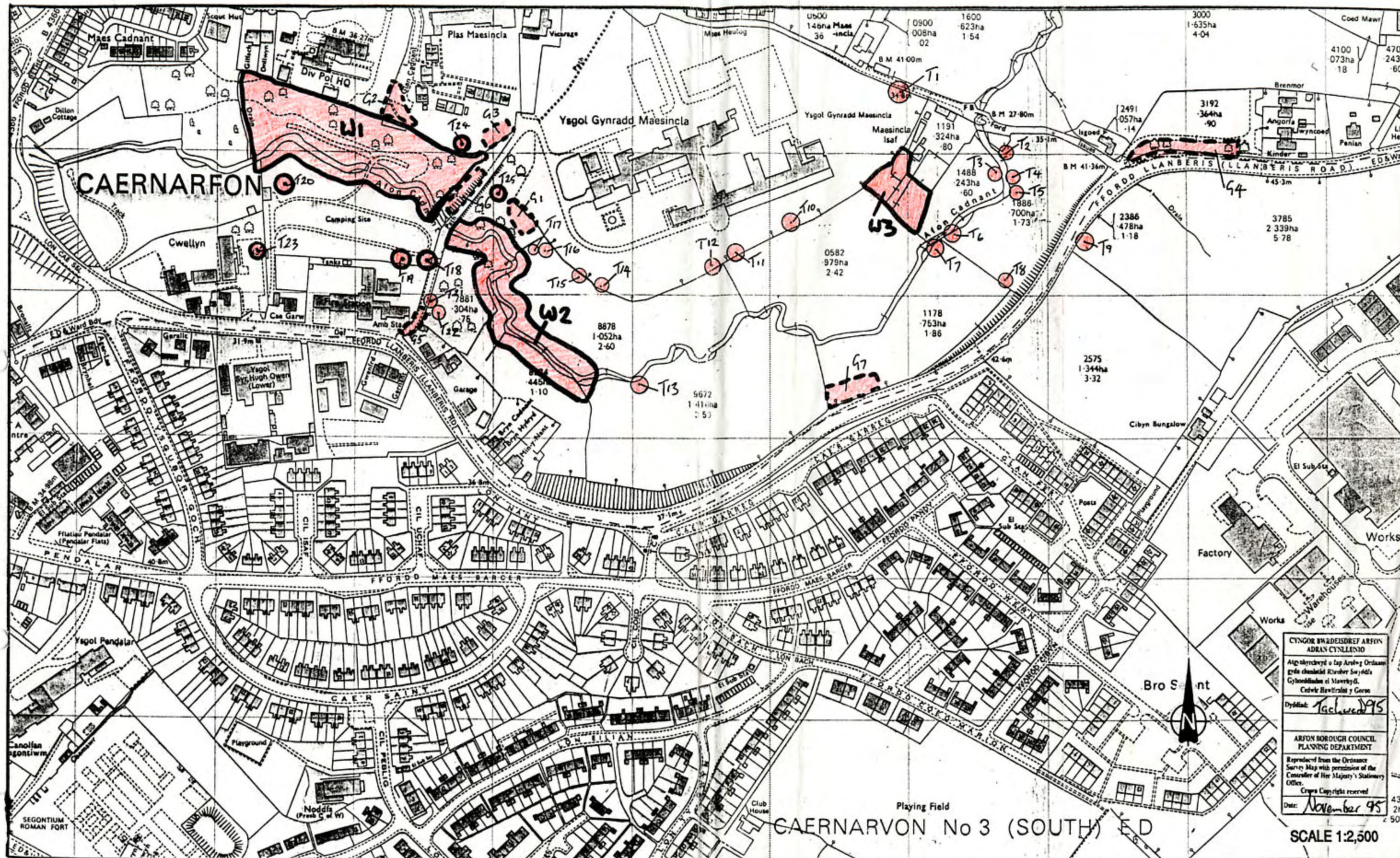
1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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





TREE PRESERVATION ORDER

3/TPO/56

Maesincla / Afon Cadnant,
Caernarfon, Gwynedd .

APPENDIX F: RAW DATA



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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



Date	Start and end times and time of sunset/sunrise	Weather conditions	Transect route and survey number	Time/Species recorded/Location and activity
Key Ppip = Common pipistrelle <i>Pipistrellus pipistrellus</i> Ppyg = Soprano pipistrelle <i>P. pygmaeus</i> Myotis sp. SP# = Stopping point number HNS = heard not seen				
3 rd June 2024	Start 21:26 Finish: 22:50 Sunset: 21:36	Start: 15°C. Calm, dry, 100% cloud cover, 53% rH. 202 Lux. Finish: 13°C.	1/3	21:35 – Ppip SP1 HNS. 21:54 – Ppip foraging in the canopy of oak trees and foraging low to the ground. 22:02 – Ppyg 2 bats seen foraging along southern boundary of mature trees. 22:11 – Ppip bats seen on opposite side of the mature trees near streetlights. 22:17 – Ppip foraging along drain line. 22:20 – Ppip foraging along drain line, several passes. 22:22 – Ppyg foraging along drain line, several passes. 22:27 – Ppyg HNS assume the bat is in the canopy, several passes. 22:38 – Ppip foraging in the canopy. 22:40 – Ppip HNS. No bats seen emerging
22 July 2024	Start: 21:40 Finish: 22:55 Sunset: 21:25	Start: 18°C dry, 10% cloud cover, cool and calm. 45% rH. 142 Lux Finish: 15°C. dry, 10% cloud cover, cool and calm. 55% rH. 0.013 Lux	2/3 Route reversed	21:56 – Ppip Foraging along hedgerow HR6. 22:02 – Ppip Foraging along hedgerow HR5. 22:08 – Ppip HNS. 22:18 – Ppip + Myotis foraging along hedgerow HR4, 3 passes. 22:22 – Ppip HNS + social calls. 22:24 – Ppip several passes over marshy grassland. 22:34 – Ppip HNS. 22:42 – Ppyg HNS. No bats seen emerging
1 st October 2024	Start: 18:40 Finish: 19:50 Sunset: 18:52	Start: 13°C. Dry, cool, 80% cloud	3/3	18:56 – Ppip foraging along treeline at the eastern section of HR3. 19:24 – Ppyg 3 x individual bats seen, foraging and commuting along hedgerow HR4, several passes. 2 bats seen crossing over the road and 1 heading along HR6

Date	Start and end times and time of sunset/sunrise	Weather conditions	Transect route and survey number	Time/Species recorded/Location and activity
		Finish: 12°C. dry, cool 80% cloud cover.		19:37 – Ppip + Ppyg 2 x individual bats seen foraging, several passes

APPENDIXG: RESULTS OF THE NIGHT-TIME BAT WALKOVER SURVEYS



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ





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



APPENDIX H: EXAMPLE BAT AND BIRD BOXES

Bat access slates Links to suppliers ¹² and images	
<p>Bat access slate</p> <p>https://beddoesproducts.com/products/bat-access-slate</p>	
<p>Bat access tile for slated & tiled pitched roofs</p> <p>https://www.justlead.co.uk/product/bat-access-tile-weathering/</p>	
<p>Bat Access Slate For Natural Spanish Slates 500mm x 250mm</p> <p>https://www.aboutroofing.com/bat-access-slate-natural-spanish-slate-500mm-x-250mm.html</p>	
<p>https://www.manthorpebp.co.uk/environmental/bat-ridge-roost/bat-ridge-roost-0</p>	

¹² Other suppliers are available

1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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

Adra (Tai) Cyfyngedig Bat Survey and Report

<p>Ibstock Enclosed Bat Box 'C'</p> <p>https://www.nhbs.com/4/practical-conservation-equipment?q=&hPP=60&idx=titles&p=0&fR%5Bhide%5D%5B0%5D=false&fR%5Bhide%5D%5B1%5D=false&fR%5Blive%5D%5B0%5D=true&fR%5Blive%5D%5B1%5D=true&fR%5Bshops.id%5D%5B0%5D=4&fR%5Bshops.id%5D%5B1%5D=4&fR%5Bsubsidiaries%5D%5B0%5D=1&hFR%5Bsubjects_eqipment.lv1%5D%5B0%5D=Bat%20Boxes%20%3E%20Integrated%20Bat%20Boxes&gad_source=1&gclid=Cj0KCQjw1Yy5BhD-ARIsAI0RbXbX4ycA1cB7y_1rzcgHSOGRZUQDPwKJFtDuzOskjO_I_HNyBIU1e10aAicWEALw_wcB&qtview=193867</p>	
Bat Boxes Links to suppliers¹³ and images – external mounted for buildings	
<p>2FE Schwegler Wall-Mounted Bat Shelter</p> <p>https://www.nhbs.com/search?q=2FE+Schwegler+Wall-Mounted+Bat+Shelter</p>	
<p>1FQ Schwegler Bat Roost</p> <p>https://www.nhbs.com/1fq-schwegler-bat-roost-for-external-walls</p>	
Externally mounted – trees	

¹³ Other suppliers are available




1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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

Adra (Tai) Cyfyngedig Bat Survey and Report

<p>2F Schwegler Bat Box (General Purpose)</p> <p>https://www.nhbs.com</p> <p>currently out of stock from this supplier - usually dispatched between 1 – 2 weeks</p>	
<p>Eco Kent Bat Box</p> <p>https://www.nhbs.com/</p> <p>currently out of stock from this supplier - Usually dispatched within 1-2 months</p>	
<p>2FN Schwegler Bat Box</p> <p>https://www.nhbs.com//bat-boxes</p> <p>currently out of stock – usually dispatched between 1 – 2 weeks</p>	



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ
 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



APPENDIX I:LANDSCAPE MASTERPLAN



1 Llys Clwyd, Cwrt Y Dderwen, Ffordd Celyn, Ruthin, Denbighshire LL15 1NJ

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

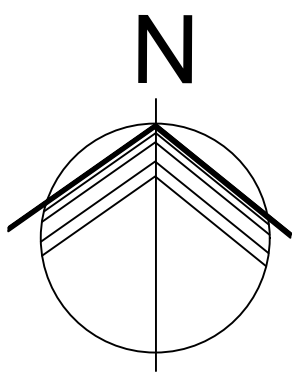


Abbr	Shrubs and Groundcover	Height	Pot Size	Form	Notes	no/m²
	Species selected for Amenity, seasonal interest and Pollinator benefit with certain plants taken from RHS recommended List and for additional Shoulder Month nectar benefits where suitable.					
Epm	Eleagnus pungens Maculata	450-600mm	5ltr	ctr	Min. 5 breaks in lower third	3
Fcm	Fuchsia magellanica	450-600mm	3ltr	ctr	Min. 3 breaks in lower third	3 or 2.5/1in metre
Lav	Lavandula angustifolia Hidcote	450-600mm	3ltr	Ctr	Min. 3 breaks in lower third	6
Hct	Hebe albicans Super Red	450-600mm	2ltr	ctr	Min 3 breaks in lower third	4
Psr	Pyracantha Saphyr Red	450-600mm	5ltr	ctr	Min 3 breaks in lower third	2 per l in m
Rb	Rosa bonica	450-600mm	2ltr	ctr/br	Min 3 breaks in lower third	4
Rmg	Rosa nevada	450-600mm	2ltr	ctr/br	Min 3 breaks in lower third	4
Pt	Pachysandra terminalis	300-450mm	1ltr	ctr	Min 3 breaks in lower third	6
Voc	Viburnum opulus Compactum	450-600mm	2ltr	Ctr	Min 3 breaks in lower third	4
Sjf	Spirea japonica Firelight	450-600mm	2ltr	ctr	Min 3 breaks in lower third	3
Shrubs to be planted into prepared ground (including 100mm well incorporated peat free Compost, slow release fertiliser and Micchorizal additives at manufacturers recommended rates, and be evenly spaced within extents indicated. All Ornamental planting areas to receive min 50mm coarse Grade Bark Mulch immediately after planting.						

Climbers	Size	Spec	Form	Spacing	Notes
Species	450-600mm	2ltr	ctr	As indicated on drawing	Min 4 breaks, cane to remain until established
Lonicera periclymenum					Planted into prepared pit 300x300x300mm with added Peat free rooting medium, slow release fertiliser and micorrhizal additive at manufacturers recommended rates.

Species	Size	Notes	
Narcissus pseudonarcissus	14/16cm	In natural drifts	As indicated

Rain Garden Planting						Planted in single species block as directed on site evenly spaced throughout area into prepared rain garden medium.	BED
Code	Species	Size	Spec	Form	Notes		no/m²
Ah	Aster herveyi	300-450mm	P9/1Ltr	Ctr			8
Am	Alchemilla mollis	300-450mm	P9/1Ltr	Ctr			6
Cg	Campanula glomerata	300-450mm	P9/1Ltr	Ctr			8
Gr	Geranium Rozanne 'Gerwat'	300-450mm	P9/1Ltr	Ctr			8
Gjb	Geranium Jacksons Blue	300-450mm	P9/1Ltr	Ctr			8
MS	Micanthus sinensis Silbespinne	450-600mm	2Ltr	Ctr			3
Vm	Vinca minor	300-450mm	P9/1Ltr	Ctr	Cut back to 300mm before planting		6
Vor	Viburnum opulus Compactum	450-600mm	2Ltr	Ctr			5



Key

Proposed dwellings - refer to Architects drawings for details

Proposed parking and access roads - refer to Architects drawings for details

Existing retained trees - refer to Arboricultural reporting for details

Existing mixed Native hedgerows (retained)

Proposed Specimen Native Field tree (species as indicated within schedules)

Proposed Specimen Native street tree (species as indicated within schedules)

Proposed Amenity/Pollinator Low shrubs and groundcover(refer to schedule for species)

Proposed Raingarden (species as indicated)

Short mown Amenity grass seeded areas Mix 1 (species as indicated)

Species Rich long sward seeded areas Mix 2 (species as indicated)

Species Rich long sward seeded areas Mix 3 (wetland species as indicated)

Proposed Native tree and Shrub Mix planting(species as indicated)

Specimen Shrub/Climber (species as indicated)

Proposed Native Hedge Planting (species as indicated)

Proposed Biodiversity MitigationProposed Bat BoxProposed Bird BoxProposed Hedgehog HouseProposed Hedgehog Hole (Highway route)**NOTES:**
1. Proposals based upon layout provided within Ainsley Gomon Architects Proposed Site Plan Site Analysis and FFL Drawing Ref: G1106 016 Rev L dated 20.05.25
2. Drawing issued for Planning purposes only - not for tendering.
3. Ecological Arboricultural and Drainage reporting provided separately.
4. All fencing to have compliant Hedgehog Holes and signage as indicated - Bat Bird and Hedgehog House types as detailed by RML
5. Plant schedules indicated on Sheets 1 and 2.
6. For Hard Landscape proposals refer to Architects Proposals
7. This drawing remains © copyright of Tirlunbarr Associates.

0m4m8m12m16m20m

Scale 1:250 @ A1

v2	PW	JB	JB	21/05/25
v1	PW	JB	JB	15/05/25
Issue	Drawn	Checked	Approved	Date

Tirlun Barr
Chartered Landscape Architecture
Tan y Berllan, Llanbedr y Cennin, Conwy, LL32 8UY
Tel Office: 01492 650333
www.tirlunbarr.com

Client

Project Title

Land at Tyddyn Fletcher, Caernarfon

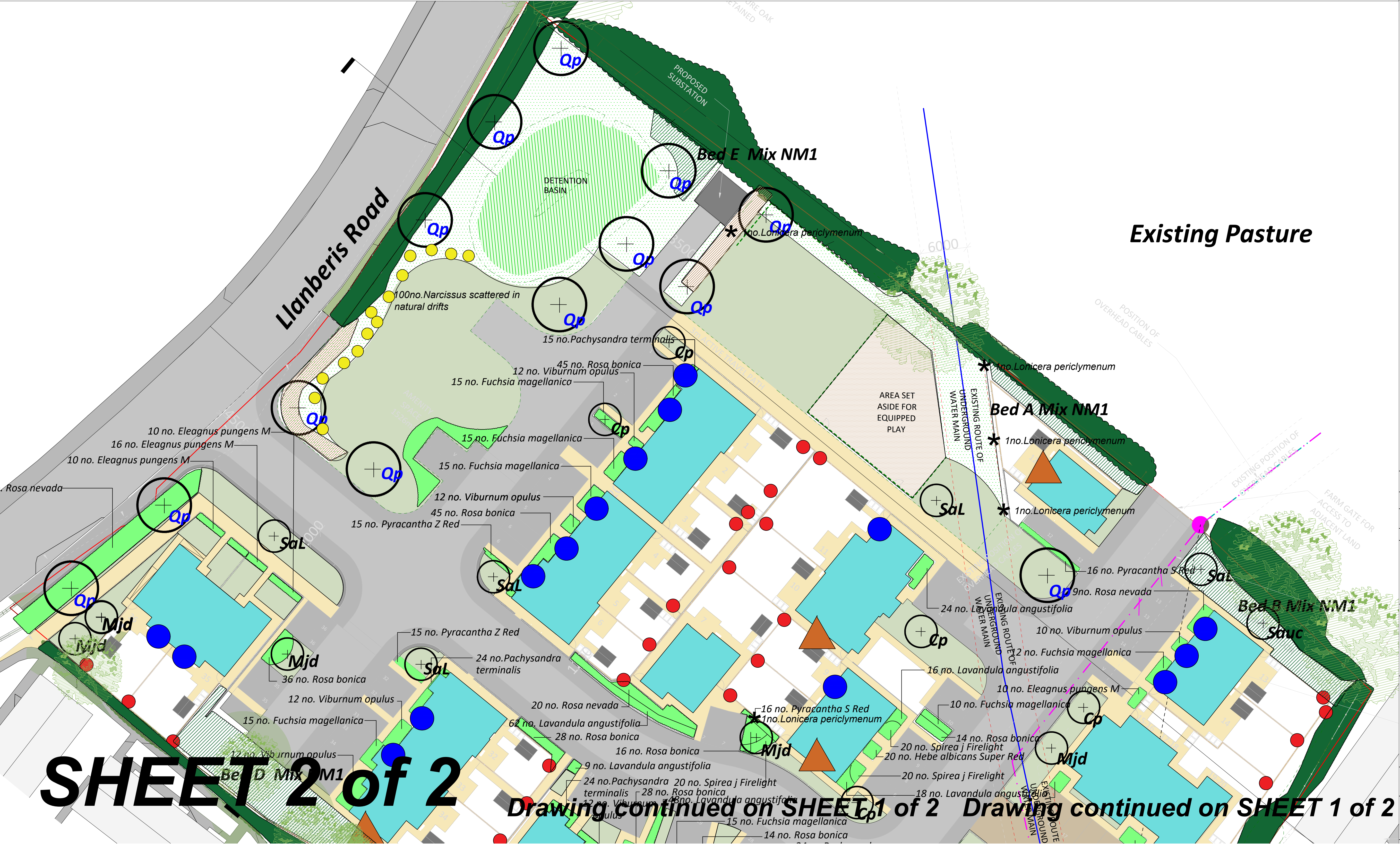
Drawing Title

Soft Landscape and Ecological Mitigation Proposals

Drawing Number

10/025/PP/01.02

Size	Scale	Issue
A1	1:250	v2



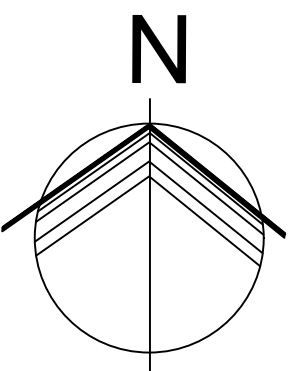
Specimen EHS Native trees					
Abbr.	Species	Size	Pot Size	Form	Spacing
Qp	Quercus petraea	14-16cm	min 75Ltr	Ctr/rb/Airpot	As shown
Planted into prepared pits min 900x900x900cm with added peat free rooting medium, slow release fertiliser and michorhizal additive at manufacturers recommended rates. Fitted with tree guard immediately after planting. Where planted in grass/wildflower areas - 1m diameter circle to be kept weed free and mulched with min 50mm coarse grade bark mulch.					

Native Hedge INFILL planting - Mix NHM2	Height	Form	Size	%mix	Spacing	Notes
Species						
Crataegus mongyna	450-600mm	Br	2+0	20	3/lin m	Min 3 breaks
Prunus spinosa	300-450mm	Ctr	2ltr min	70	3/lin m	Min 3 breaks
Sambucus nigra	450-600mm	Br	2+0	10	3/lin m	Min 3 breaks
Planting to be used as infill to gap up the existing hedges where required at a spacing of min 300mm apart grouping of 7 plants of the same species either notch planted or planted into prepared Pits (300x300x300mm backfilled with topsoil, Michorhizal granular additive and 100mm organic matter + Slow release fertiliser at manufacturers recommended rate) Where used as infill planting to gap up hedge plant in double or single staggered row as existing root matrix allows. All planting to be fitted with tree shelters to be removed once established and protected from stock grazing where appropriate.						

Specimen Street /Garden trees					
Code	Species	Height	Pot Size	Form	Spacing
Cp	Crataegus prunifolia	10-12cm	min 75Ltr	Ctr/rb	n/a
Mjd	Malus John Downie	8-10cm	min 75Ltr	Ctr/rb	n/a
Sar	Sorbus aria lutescens	12-14cm	min 75Ltr	Ctr/rb	n/a
Sauc	Sorbus aucuparia Streetwise	12-14cm	min 75Ltr	Ctr/rb	n/a
Planted into prepared pits min 600x600x900cm with added peat free rooting medium, slow release fertiliser and michorhizal additive at manufacturers recommended rates. Tree guards to be fitted immediately after planting Staked					

Native Hedge planting - Mix NHM1	Height	Form	Size	%mix	Spacing	Notes
Species						
Corylus avellana	450-600mm	Br	2+0	5	3/lin m	Min 3 breaks
Crataegus mongyna	450-600mm	Br	2+0	15	3/lin m	Min 3 breaks
Prunus spinosa	300-450mm	Ctr	2ltr min	70	3/lin m	Min 3 breaks
Rosa canina	450-600mm	Br	2+0	10	3/lin m	Min 3 breaks
Planting to be at 450mm centres in a double staggered rows 300mm apart max. grouping of 7 plants of the same species. Trench to be 300x300x300mm backfilled with topsoil, Michorhizal granular additive, and 100mm organic matter + Slow release fertiliser at manufacturers recommended rate. Where used as infill planting to gap up hedge plant in double or single staggered row as existing root matrix allows. All planting to be fitted with tree shelters to be removed once established and protected from stock grazing where appropriate.						

Native tree and shrub planting - Native Mix NM2	Height	Form	Size	%mix	Spacing	Notes
Species						
Corylus avellana	450-600mm	Br	2+0	60	1/m²	Min 3 breaks
Crataegus mongyna	450-600mm	Br	2+0	20	1/m²	Min 3 breaks
Prunus spinosa	300-450mm	Ctr	2ltr min	5	1/m²	Min 3 breaks
Rosa canina	450-600mm	Br	2+0	5	1/m²	Min 3 breaks
Sorbus aucuparia	450-600mm	Br	2+0	10	1/m²	Min 3 breaks
Planting to be at 1m centres in staggered rows max. grouping of 7 plants of the same species. Pits to be 300x300x300mm backfilled with topsoil and 100mm organic matter + Michorhizal additive and Slow release fertiliser at manufacturers recommended rate. All Above planting to be fitted with tree shelters and protected from stock grazing where applicable.						



Key

Proposed dwellings - refer to Architects drawings for details

Proposed parking and access roads - refer to Architects drawings for details

Existing retained trees - refer to Arboricultural reporting for details

Existing mixed Native hedgerows (retained)

Proposed Specimen Native Field tree (species as indicated within schedules)

Proposed Specimen Native street tree (species as indicated within schedules)

Proposed Amenity/Pollinator Low shrubs and groundcover(refer to schedule for species)

Proposed Raingarden (species as indicated)

Short mown Garden amenity grass seeded areas Mix 1 (species as indicated)

Species Rich long sward seeded areas Mix 2 (species as indicated)

Species Rich long sward seeded areas Mix 3 (wetland species as indicated)

Proposed Native tree and Shrub Mix planting NH1 (species as indicated)

Specimen Shrub/Climber (species as indicated)

Proposed Native Hedge Planting (species as indicated)

Proposed Biodiversity MitigationProposed Bat BoxProposed Bird BoxProposed Hedgehog HouseProposed Hedgehog Hole (Highway route)**NOTES:**
1. Proposals based upon layout provided within Ainsley Gommom Architects Proposed Site Plan Site Analysis and FFL Drawing Ref: C1106 016 Rev L dated 20.05.25
2. Drawing issued for Planning purposes only - not for tendering.
3. Ecological Arboricultural and Drainage reporting provided separately.
4. All fencing to have compliant Hedgehog Holes and signage as indicated - Bat Bird and Hedgehog House types as detailed by RML
5. Plant schedules indicated on Sheets 1 and 2.
6. For Hard Landscape proposals refer to Architects Proposals
7. This drawing remains © copyright of Tirlunbarr Associates.

0m4m8m12m16m20m

Scale 1:250 @ A1

Tirlun Barr
Chartered Landscape Architecture
Tan y Berllan, Llanbedr y Cennin, Conwy, LL32 8UY
Tel Office: 01482 650333
www.tirlunbarr.com

Adra

Client

Project Title

Land at Tyddyn Fletcher, Caernarfon

Drawing Title

Soft Landscape and Ecological Mitigation Proposals

Drawing Number

10/025/PP/01.01

Size

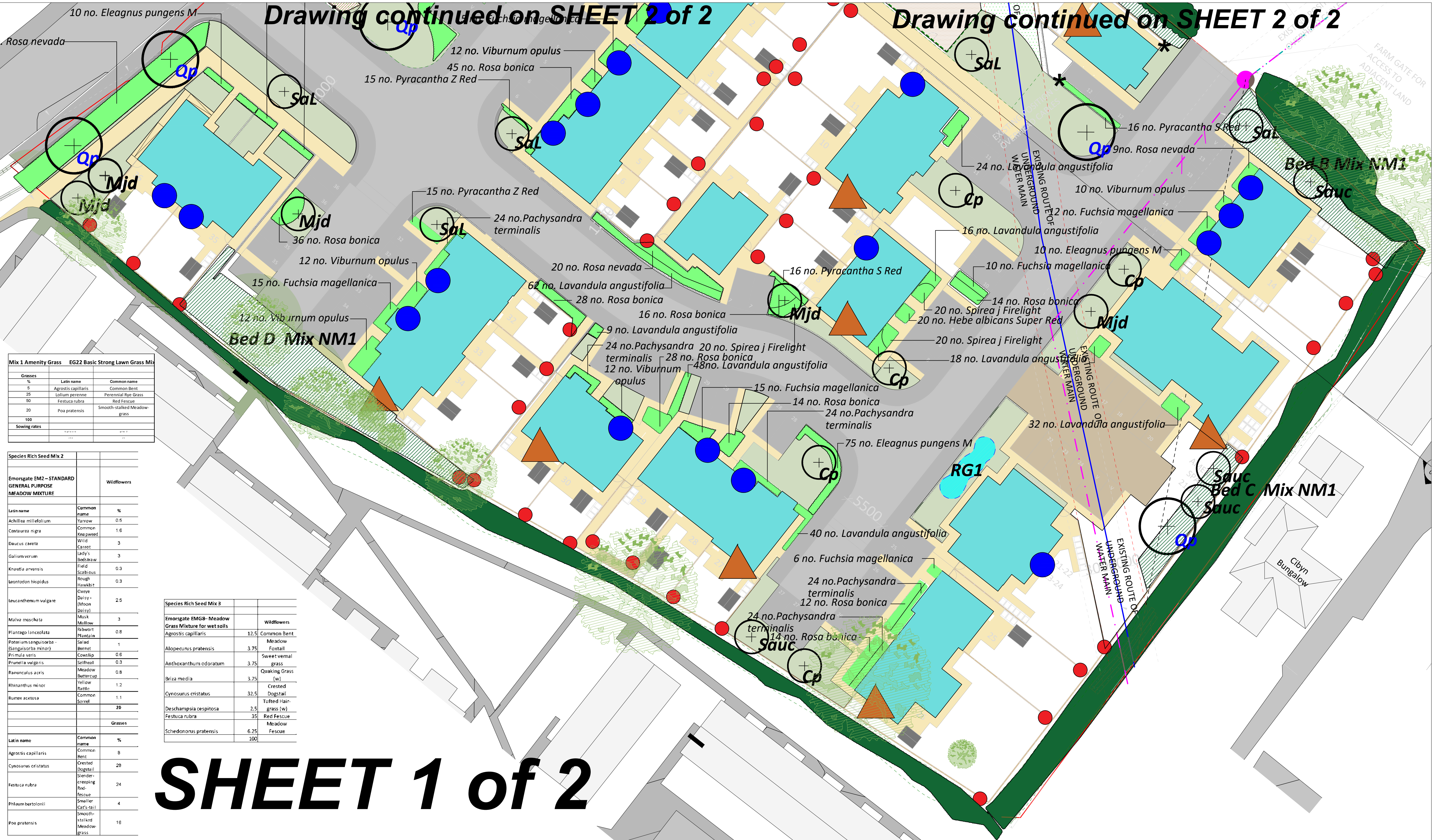
Scale

Issue

A1

1:250

v2



Mix 1 Amenity Grass		EG22 Basic Strong Lawn Grass Mix	
Grasses	%	Latin name	Common name
5		Agrostis capillaris	Common Bent
25		Lolium perenne	Perennial Rye Grass
50		Festuca rubra	Red Fescue
20		Poa pratensis	Smooth-stalked Meadow-grass
100			
Sowing rates			

Species Rich Seed Mix 2			Wildflowers
Ermorgate EM2 - STANDARD GENERAL PURPOSE MEADOW MIXTURE			
Latin name	Common name	%	
Achillea millefolium	Yarrow	0.5	
Centaura nigra	Common Ragwort	1.6	
Daucus carota	Wild Carrot	3	
Galium verum	Lady's Bedstraw	0.3	
Knautia arvensis	Field Scabious	0.3	
Leontodon hispidus	Rough Hawkbit	0.3	
Leucanthemum vulgare	Daisy	2.5	
Malva moschata	Musk Mallow	3	
Plantago lanceolata	Plantain	0.8	
Potentilla anagallis	St. Barnet	0.6	
Primula veris	Cowslip	0.6	
Prunella vulgaris	Selfheal	0.3	
Ranunculus acris	Meadow Buttercup	0.8	
Rhinanthus minor	Yellow Rattle	1.2	
Rumex acetosa	Common Sorrel	1.1	
		20	
			Grasses
Latin name	Common name	%	
Agrostis capillaris	Common Bent	5	
Cynosurus cristatus	Crested Dogtail	20	
Festuca rubra	Slender-crimping Red Fescue	24	
Phleum bertolonii	Smaller Cat's-tail	4	
Poa pratensis	Smooth-stalked Meadow-grass	10	

Species Rich Seed Mix 3			Wildflowers
Ermorgate EMG8 - Meadow Grass Mixture for wet soils			
Agrostis capillaris	12.5	Common Bent	Meadow
Alopecurus pratensis	3.75	Foxtail	Sweet vernal grass
Anthoxanthum odoratum	3.75	Meadow Quaking Grass	Crested Dogtail
Briza media	3.75	Tufted Hair-grass (w)	Red Fescue
Cynosurus cristatus	32.5	Meadow Fescue	
Deschampsia cespitosa	2.5	Red Fescue	
Festuca rubra	35	Meadow Fescue	
Schedonorus pratensis	6.25	Fescue	
	100		