Appendix F.1

Ecological Baseline Report

Bodelwyddan Solar and Energy Storage

Technical Appendix F.1: Ecological Baseline Report

Prepared by:
The Environmental Dimension Partnership Ltd

On behalf of:
Bodelwyddan Solar and Energy Storage Ltd.

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Section 1
Introduction

1.1 This Ecological Baseline Report has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Bodelwyddan Solar and Energy Storage Ltd. (hereafter referred to as 'the Applicant'). It sets out the technical ecological detail that has informed both the design, and the impact assessment, of the Proposed Development to the north-west and south-east of Bodelwyddan, in North Wales (hereafter referred to as 'the Site').

1.2 The Proposed Development is to be the subject of a Development of National Significance (DNS) application and a formal Environmental Impact Assessment (EIA). The application is therefore supported by an Environmental Statement (ES), Chapter 10 of which relates specifically to ecology and biodiversity and details the Ecological Impact Assessment (EcIA) of the Proposed Development. This report is a Technical Appendix to Chapter 10 of the ES and should be read in conjunction with it.

1.3 This report has been prepared with reference to the following key guidance:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal[1];
- CIEEM Guidelines for Ecological Impact Assessment[2]; and
- British Standard: Biodiversity - Code of Practice for Planning and Development[3].

1.4 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

1.5 The Site comprises three components, namely:

- The Solar Site (location of proposed solar panel arrays), measuring c. 168.95 hectares (ha) and centred approximately at Ordnance Survey Grid Reference (OSGR) SH 98274 77362. This component is located c. 0.6 km north of Bodelwyddan and comprises intensively managed farmland (sheep and cattle pasture and arable) enclosed by hedgerows and field ditches, and is bisected by the A547 (Rhuddlan Road);

[1] CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester

[2] CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester

[3] BSI (2013) *Biodiversity - Code of Practice for Planning and Development*. BS 42020:2013. British Standards Institute

- The Battery Energy Storage System (BESS) Site, measuring c. 6.52 ha centred approximately OSGR SJ 01308 73447. This component is located c. 1 km south-east of Bodelwyddan, just to the south of St Asaph Business Park and comprises intensively managed farmland (sheep pasture) enclosed by hedgerows; and

- A Cable Corridor, c. 8 km in length and 10m in width and totalling approximately 8.29 ha, linking up the Solar Site and BESS Site. The corridor initially runs southward from the south-west corner of the Solar Site, passing through farmland and under the A55. It then runs east and south-eastward through Kinmel Park and Bodelwyddan Park, utilising existing roads and tracks where available to pass through a mix of farmland, plantation woodland and open parkland habitats, before running along the Glascoed Road (B5831).

1.6 The Solar Site is located within both the Conwy Local Planning Authority (LPA) and Denbighshire LPA areas, whereas the BESS Site is located solely within the Denbighshire LPA and the Cable Corridor crosses both LPAs.

1.7 The location and extents of the Site are illustrated on the plans appended to this report and described in the material supporting the planning application, particularly the introductory chapters of the ES.

PROPOSED DEVELOPMENT

1.8 The formal description of the Proposed Development is:

"The construction, operation and maintenance of a proposed solar photovoltaic electricity generating system and battery energy storage system ('BESS'), associated solar arrays, inverters, transformers, cabling, substations, access tracks, landscaping, ecological enhancement areas and associated ancillary development."

1.9 The ecological sensitivities of the Site have influenced the layout through an iterative design process. Thus, the masterplan incorporates a degree of 'inherent' mitigation to avoid or reduce the severity of potential ecological impacts.

REPORT SCOPE

1.10 This Ecological Baseline Report describes the current ecological interest within and around the Site, which has been identified through standard desk- and field-based investigations, to inform the EcIA.

1.11 The remainder of this report is structured as follows:

- **Section 2** summarises the methodology employed in determining the baseline ecological conditions within and around the Site (with further details provided within Appendices and on Plans where appropriate);

- **Section 3** summarises the baseline ecological conditions (with further details also provided within Appendices and on Plans where appropriate) and identifies and evaluates any Important Ecological Features (IEFs); and

- **Section 4** summarises the IEFs that are relevant to the EcIA of the proposed development.

1.12 Potential impacts on IEFs resulting from the proposed development, together with proposed measures to avoid and mitigate impacts and deliver ecological enhancements and any residual significant effects (positive or negative), are described in detail in Chapter 10 of the ES.

Section 2
Baseline Methodology

2.1 This section summarises the methodologies employed in determining the baseline ecological conditions within and around the Site. This has been undertaken by appropriately qualified ecologists using relevant best practice methodologies wherever possible. Reasons for any departure from best practice methodology are given and normally relate to the timing of EDP's commission and/or the availability of access to parts of the Site or wider study area. Full details of the techniques and process adopted are, where appropriate, provided within Appendices and on Plans to the rear of this report.

DESK STUDY

2.2 The desk study is an important element of the initial baseline data gathering, which entails the initial collation and review of contextual information, such as designated sites, together with known records of important habitats or species.

2.3 The desk study involved collating biodiversity information from the following sources:

- North Wales Environmental Information Service (Cofnod);
- Multi-Agency Geographic Information for the Countryside (MAGIC) website[4]; and
- National Biodiversity Network (NBN) Atlas website[5].

2.4 The desk study was first undertaken in August 2024 and involved obtaining the following information:

- International statutory designations (15 km radius around the boundary of the Site);
- National statutory designations and non-statutory local sites (2 km radius);
- All other protected, priority and notable species records (2 km radius); and
- All other notable habitat records (500 m radius).

2.5 These search areas are considered sufficient to cover the potential zones of influence[6] of the proposed development in relation to designated sites, habitats and species.

[4] www.magic.gov.uk
[5] www.nbnatlas.org
[6] Zone of Influence - the areas and resources that may be affected by the Proposed Development

2.6 The following Local Development Plans (LDPs) and supporting documents were also reviewed as part of the desk study to understand local priorities with regard to protection of ecological features/biodiversity:

- Conwy Adopted LDP (2007-2022);
- Conwy LDP Supplementary Planning Guidance (SPG) LDP 5: Biodiversity in Planning (November 2014);
- Conwy Replacement LDP (2018-2033) – Evidence Base:
  - Topic Paper 6: Natural Environment (August 2018); and
  - Background Paper 47: Green Infrastructure Assessment (October 2020).
- Denbighshire Adopted LDP (2006-2021);
- Denbighshire LDP SPG Note Conservation and Enhancement of Biodiversity (July 2016); and
- Denbighshire Replacement LDP (2018-2033) - Habitats Regulations Appraisal for the Draft Preferred Strategy.

2.7 In addition to the above, previous survey information for adject solar farm sites including Kinmel Solar Farm[7], collected by Avian Ecology Ltd. consultancy in August 2014 was reviewed to obtain further contextual information.

EXTENDED PHASE 1 HABITAT SURVEY

2.8 The main habitats within the Site, together with their dominant/characteristic plant species, were identified by undertaking an Extended Phase 1 Habitat survey as follows:

- Solar Site and BESS Site – July 2024;
- Cable Corridor (western half) – October 2024; and
- Cable Corridor (eastern half) – a formal habitat survey of the eastern section was not undertaken because this part of the cable route is proposed along Glascoed Road (B5381), and therefore no habitat is present within this section and ecological impacts have been ruled out.

2.9 Full details of the habitat survey methodology are provided within **Appendix EDP 1**.

[7] Kinmel Solar Farm (August 2014), Avian Ecology, on behalf of Haymaker Energy Ltd. Report number Hayma-063-173-1

DETAILED (PHASE 2) SURVEYS

2.10 The scope of Phase 2 Surveys undertaken within the Site was defined following the initial studies described above.

2.11 The surveys 'scoped in' based upon the findings of the desk study Extended Phase 1 Habitat survey are summarised in turn below, with reference to sources of further detailed information where applicable.

Hedgerow Survey

2.12 Owing to the presence of a network of hedgerows within the Solar Site and BESS Site with variable species-diversity, structure and condition, a detailed survey was undertaken to assess the value and condition of all hedgerows. The survey was completed on 09 October 2024.

2.13 Full details of the hedgerow survey methodology, and any limitations encountered, are provided in **Appendix EDP 2**.

Breeding Bird Survey

2.14 Habitats within and immediately adjacent to the Site are suitable for nesting birds, including woodland, hedgerows, wet ditches, trees, scrub, pasture and arable land. A full breeding bird survey was therefore undertaken with reference to standard methodology, entailing a modified Common Bird Census (CBC)[8] 'territory mapping' approach.

2.15 This involved the completion of a pilot visit to the Solar Site in 2024, followed by a full six visits to the Site in 2025, on the following dates to coincide with the height of the breeding bird season for lowland Britain:

- 08 July 2024 (including part of the Solar Site covered in an evening visit);
- 10 and 11 April 2025;
- 23 and 24 April 2025;
- 20 and 21 May 2025;
- 10 and 11 June 2025;
- 02 and 03 July 2025; and
- 08 and 09 July 2025.

2.16 The breeding bird surveys covered the Solar Site only. It was not deemed necessary to include the BESS Site, owing to its small size and very limited suitability for ground nesting species, in addition to retention of its boundary hedgerows. It was also not considered necessary to survey the Cable Corridor owing to its limited footprint and negligible impact on bird nesting habitats,

[8] Marchant, J. (1983). *Common Bird Census Method*. BTO

given its careful routing to avoid impacts on trees. Full details of the breeding bird survey methodology, and any limitations encountered, are provided in **Appendix EDP 3**.

Wintering Bird Survey

2.17 The Solar Site contains several habitats which are suitable for wintering birds including pasture and arable land. Furthermore, the Dee Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site, which supports an important wintering bird assemblage, is just over 10km to the north-east of the Solar Site. British farmland is an essential habitat for many resident bird species and also for many migrants (Gillings *et al*., 2008)[9]. A wintering farmland bird survey was therefore undertaken to identify whether any notable species populations occur within the Solar Site during the winter and migratory months.

2.18 The survey involved the completion of six visits to the Solar Site, undertaken on the following dates:

- 05 and 06 November 2024;
- 03 and 04 December 2024;
- 16 and 17 January 2025;
- 30 and 31 January 2025;
- 18 and 19 February 2025; and
- 27 and 28 February 2025.

2.19 Full details of the winter bird survey methodology, and any limitations encountered, are provided in **Appendix EDP 4**.

Bat Surveys

2.20 During the Extended Phase 1 Habitat survey, several trees present within, or immediately adjacent to, the Site were identified as having potential to support roosting bats. In addition, a number of habitats present within the Site, including woodland edge, trees, scrub hedgerows, wet ditches, were identified as being of suitability to support foraging and commuting bats. The following surveys for bats were therefore undertaken, with reference to best practice guidelines[10]:

Bat Roost Surveys – Trees:

- Ground Level Tree Assessment (GLTA), undertaken on 16 April 2025, of all trees on-site to look for features that bats could use for roosting in order to determine the available roosting resource and the need for further survey.

[9] Gillings, S., Wilson, A.M., Conway, G.J., Vickery, J.A. & Fuller, R.J. (2008). Distribution and abundance of birds and their habitats within the lowland farmland of Britain in winter. *Bird Study*, 55:1, 8-22.

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

Bat Activity Surveys:

- Nighttime Bat Walkover (NBW) surveys conducted each season in summer (August 2024), autumn (October 2024) and spring (April 2025); and
- Automated detector surveys conducted monthly in July – October 2024 and April – June 2025.

2.21 Full details of the bat survey methodologies, and any limitations encountered, are provided in **Appendix EDP 5**.

Great Crested Newt Survey

2.22 An initial assessment of the Site's suitability to support great crested newt (*Triturus cristatus*) was initially undertaken with reference to desk study records as described above, and subsequently during the Extended Phase 1 Habitat survey. A single suitable pond was identified within the boundaries of the Solar Site, together with several wet ditches which were deemed to be not suitable for this species due to flowing water, dense marginal vegetation and/or lack of submerged and floating species. A further 12 waterbodies were identified within a 500m radius of the Solar Site, of which eight are within 250m. No waterbodies are present in the BESS Site, however there are 24 within 500m, of which five are within 250m. A smaller search radius of 100m was used for the Cable Corridor, in which there are 10 waterbodies identified.

2.23 All waterbodies on-site, and those within 250m of the Solar and BESS and 100m of the Cable Corridor (but not separated from the Site by significant dispersal barriers) to which access was granted, were subject to the following survey types in accordance with relevant best practice guidance:

- Habitat Suitability Index (HSI) Assessment;
- Environmental DNA (eDNA) Sampling; and
- Conventional presence/absence and population assessment surveys.

2.24 Waterbodies more than 250m of the Solar and BESS and 100m of the Cable Corridor were not surveyed as the likelihood of great crested newts dispersing over this distance within to the Site is much reduced, and surveys of the nearer waterbodies are sufficient to identify likelihood of presence on site and assess impacts on the local population.

2.25 Full details of the great crested newt survey methodology, and any limitations encountered, are provided in **Appendix EDP 6**. The great crested newt eDNA analysis repots are presented in **Appendix EDP 7**.

Otter Survey

2.26 An initial assessment of the Site's suitability to support otter (*Lutra lutra*) was undertaken during the Extended Phase 1 Habitat survey and with reference to desk study records as described above. Based on this initial habitat assessment, a detailed survey for signs of otter was subsequently undertaken of the watercourses within and, where possible, adjacent to the Solar Site and BESS Site by experienced surveyors. The Site was initially survey on 18 and

19 September 2024, an additional survey was carried out across 08 and 09 May 2025 and 17 and 18 June 2025.

2.27 Each survey was undertaken with reference to published methodologies on surveying otter[11]. These took place between May and September and involved a visual inspection of the entire watercourse for characteristic signs of otter, including evidence of feeding remains, prints, tracks, spraints and resting sites including lay-ups and holts. Features considered to have the potential to be used as holts were also documented during the survey.

2.28 Full details of the otter survey methodology, and any limitations encountered, are provided in **Appendix EDP 8**.

Water Vole Survey

2.29 An initial assessment of the Site's suitability to support water vole (*Arvicola amphibius*) was undertaken during the Extended Phase 1 Habitat survey and with reference to desk study records as described above. Based on this initial habitat assessment, a detailed survey of the watercourses within and, where possible, adjacent to the Site for signs of water vole activity was subsequently undertaken by two experienced surveyors, this included a late season survey on the 18 and 19 September 2024 and an early season survey on the 08 and 09 May 2025 and 17 and 18 June 2025.

2.30 Each survey was undertaken with reference to best practice guidelines[12].and involved a search for burrows, feeding stations (including feeding stations and grazed lawns), faeces (latrines and droppings), footprints, and possible runs.

2.31 Full details of the water vole survey methodology, and any limitations encountered, are provided in **Appendix EDP 8**.

Badger Survey

2.32 During the Extended Phase 1 Habitat survey the Site was found to support suitable foraging habitats, and some limited sett building opportunities, for badger (*Meles meles*). A survey to record any evidence of badger activity within the Solar Site and BESS Site was therefore undertaken on 09 October 2024.

2.33 During the survey, any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified, the following signs of badger activity were searched for in order to determine whether they were currently in use:

- Fresh spoil outside entrances;
- Bedding material (typically dried grass) outside entrances;

[11] Chanin P (2003). *Monitoring the Otter Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.
[12] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook* (Mammal Society Mitigation Guidance Series) Mammal Society, London

- Holes being cleared of leaf litter/other debris;
- Badger guard hairs; and
- Footprints and fresh tracks leading to/from the holes.

2.34 Where any holes were found, they were categorised into the following[13]:

- Well used (/active): these are clear of any debris or vegetation, and are obviously in regular use;
- Partially used (/partially active): these are not in regular use and have debris such as leaves or twigs in the entrance, or have moss and/or other plants growing in or around the entrance. They could be in regular use after minimal amount of clearance; or
- Disused: these have not been in use for some time, are partially or complete blocked and cannot be used without a considerable amount of clearance.

2.35 Several categories of badger setts are used to describe a sett as described below[13]:

- Main setts are defined as setts with a 'large number' entrance holes (although this can be fewer) associated with large spoil heaps and well-trodden paths. This is normally where cubs are raised and is in continuous use throughout the year;
- Annexe setts - These setts are intermediate-sized (with 'several holes') and may be used by breeding badgers. These setts are normally close to a main sett (within 150m of the main sett) and connected to it by obvious paths. They may not be in use all the time, even if the main sett is very active;
- Subsidiary setts - These are similar to annexe setts but are likely to be further away (at least 50m from the main sett) and not as well connected to the main sett as annexe setts. They are not continuously active; and
- Outlier setts - Outlier setts are small setts with one or two entrance holes which are used sporadically by badgers as a temporary refuge. Spoil heaps are likely to be small and there may not be obvious paths connecting to other setts. Use may be sporadic. There may be several outlier setts within one badger social group's territory.

Limitations

2.36 Badger surveys can be undertaken at any time of year and are, therefore, not limited by seasonal factors.

2.37 There were no significant limitations to the badger surveys. Some discrete areas of dense scrub were present within the Site, although these did not significantly prevent access for survey.

[13] Harris, S., Cresswell, P. and Jeffries, D. (1989). Surveying Badgers. Occasional publication of Mammal Society, Number 9. Mammal Society.

ECOLOGICAL SURVEYS SCOPED OUT

2.38 **Table EDP 2.1** summarises other survey types which, whilst occasionally required to inform a planning submission for development sites, are not deemed to be necessary/appropriate in this case.

Table EDP 2.1: Ecology Surveys Scoped Out

Survey Type	Reasons for Scoping Out
Detailed Botanical Survey	The majority of the land use within the Site is intensively managed arable crops and closely grazed pasture. This habitat supports limited species diversity. The field margins' ground flora was sparse and of low species diversity such that the standard baseline adequate to habitat survey was deemed to be suitable to identify and value the habitats present.
Dormouse Survey	The hedgerows and off-site woodland provide some limited suitability for this species; however, the hedgerows are typically species-poor and are not well connected to other more suitable habitats in the wider landscape. Furthermore, these features are being retained and buffered. Additionally, the desk study returned no records of dormouse within the last 10 years from within 2km of the Site, therefore, it is very unlikely that dormice are present within or near the Site.
Reptile Survey	The Site mostly comprises intensely managed agricultural land providing limited suitability for reptiles. However, some habitats of higher suitability for reptiles are present, restricted to the field boundaries of the Site, which will be largely retained and the Proposed Development is anticipated to deliver an overall increase in suitable habitats for reptiles. Given the limited potential impacts to this species group, the presence of common and widespread species is assumed within all suitable habitat across the Site, and surveys to determine distribution or population size not considered necessary.
Invertebrate Survey	The Site mostly comprises intensely managed agricultural land considered of limited suitability for invertebrates. Additionally, habitats of higher quality for invertebrates are restricted to the field boundaries of the Site, and will be largely retained. As such, there is not likely to be a notable invertebrate assemblage present and impacts to the group would nonetheless be avoided.

Section 3
Baseline Results

3.1 This section summarises the baseline ecological conditions determined through the course of desk-based and field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors that lie within the Site's potential zone of influence and which are pertinent in the context of the proposed development. Further technical details are, where appropriate, provided within Appendices and on Plans to the rear of this report.

3.2 Where a particular ecological feature/receptor has been confirmed to be present, or presence is inferred based on habitat suitability, its ecological importance is assessed. The level of ecological importance assigned to each ecological feature is based upon established geographical value systems and the uses the following scale: International and European (highest) > National > Regional > County > Local > Site/Negligible (lowest).

DESIGNATED SITES

3.3 Information regarding designated sites was obtained during the desk study. Statutory designations (those receiving legal and planning policy protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below.

Statutory Designations

3.4 Statutory designations represent the most significant ecological receptors. Internationally important statutory designations include SPAs, SACs and Ramsar sites (including potential SPAs, possible SACs and proposed Ramsars). These designations are protected under the *Conservation of Habitats and Species Regulations* 2017 (as amended) (the Habitats Regulations).

3.5 Nationally important statutory designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). NNRs are also SSSIs, both of which are protected under the *Wildlife and Countryside Act* 1981 (as amended).

3.6 The legal protection of SACs, SPAs, Ramsar Sites and SSSIs is also reflected in policies included within *Planning Policy Wales Edition 11* (February 2021) (PPW) and within *Technical Advice Note 5: Nature Conservation and Planning* (TAN5), which are a material consideration during the planning application process. Further consideration is afforded to the protection of SSSIs within recent updates to Chapter 6 of PPW, published during October 2023, with increased clarity on the position for site management and exemptions for minor development necessary to maintain a 'living' landscape, and contribute to an ecologically coherent and resilient network of protected sites and linkages between these. Other development is considered unacceptable as a matter of principle.

3.7 Local level statutory designations include Local Nature Reserves (LNRs) and are generally considered to be of importance at the County level or lower. LNRs are designated under the

National Parks and Access to the Countryside Act 1949, however protection of LNRs is given via local planning policies and/or by-laws.

3.8 Statutory designations are also recognised as key natural assets within the Conwy Adopted LDP (2007-2022), specifically strategic policy NTE/1 – The Natural Environment, and Denbighshire Adopted LDP (2006-2021), specifically policy VOE 1 – Key Areas of Importance and policy VOE 5 – Conservation of Natural Resources.

3.9 No part of the Solar Site is covered by any statutory designations. However, there are six internationally important designations within 10 km of the Solar Site (including the Dee Estuary, which is covered by three different designations), and one designation of county importance within 2 km of the Solar Site. These sites are summarised in **Table EDP 3.1** and illustrated on **Plan EDP 1** and **2**.

Table EDP 3.1: Statutory Designations Within the Solar Site's potential Zone of Influence

Designation	Approx. Distance from Solar Site	Interest Feature(s)
Internationally Important Statutory Designated Sites (within 10 km of the Solar Site)		
Liverpool Bay/Bae Lerpwl SPA	2.1 km north	The site qualifies under SPA as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season: In the non-breeding season, the site regularly supports at least 69,687 (2004/05 – 2010/11) individual waterbirds. The main components of the assemblage include all of the non-breeding qualifying features listed above, as well as an additional two species present in numbers exceeding 1% of the GB total: red-breasted merganser (*Mergus serrator*) and great cormorant (*Phalacrocorax carbo*).
Elwy Valley Woods/ Coedwigoedd Dyffryn Elwy SAC	5 km south-east	Elwy Valley Woods/Coedwigoedd Dyffryn Elwy SAC is one of the three sites selected to represent Tillio-acerion forests across its geographical range on the Carboniferous limestone of North Wales and is an example of the habitat with an outstanding lower-plant flora. The majority of the SAC is comprised of Ancient Semi-Natural Woodland (ASNW). The site also contains small areas of limestone grassland that is found at Coed yr Allt and Cefn Rocks. Here, the Schedule 8 species spiked speedwell (*Veronica spicata*) is found as well as the nationally scarce spring cinquefoil (*Potentilla neumanniana*). The woodland and watercourses afford lying-up sites for otter. Natterer's bat (*Myotis nattereri*), brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*) and lesser horseshoe (*Rhinolophus hipposideros*), have been recorded in caves within the woodland.

Designation	Approx. Distance from Solar Site	Interest Feature(s)
The Dee Estuary/ Aber Dyfrdwy SAC, SPA and Ramsar	9.9 km north-east	The primary reasons for designation of the Dee Estuary as an SAC are the presence of mudflats and sandflats not covered by seawater at low tide, Salicornia and other annuals colonising mud and sand, and Atlantic salt meadows. Species present as a qualifying feature (but not primary reason for designation) include sea lamprey (*Petromzon marinus*), river lamprey (*Lampetra fluviatilis*) and petalwort (*Petalophyllum ralfsii*). The site also qualifies as an SPA and Ramsar as it is used regularly by 1% or more of the Great Britain populations of bar-tailed godwit (*Limosa lapponica*), common tern (*Sterna hirundo*), little tern (*Sternula albifrons*), and sandwich tern (*Sterna sandvicensis*). The site also qualifies as an SPA because it is used regularly by 1% or more of the biogeographical populations of redshank (*Tringa tetanus*), shelduck (*Tadorna tadorna*), teal (*Anas crecca*), pintail (*Anas acuta*), oystercatcher (*Haematopus ostralegus*), grey plover (*Pluvalis squatarola*), knot (*Calidris canutus islandica*), dunlin (*Calidris alpina*), black-tailed godwit (*Limosa limos islandica*), curlew (*Numenius Arquata*) and redshank (*Tringa totanus*).
Coedwigoedd Penrhyn Creuddyn/ Creuddyn Peninsula Woods SAC	14.7 km west	This SAC supports the following Annex I habitats that are a primary reason for selection[14]: • Tilio-Acerion forests of slopes, screes and ravines. This SAC also supports the following Annex I habitats that are present as a qualifying feature but are not a primary reason for selection: • Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites); and Taxus baccata woods of the British Isles.
Statutory Designated Sites of County Importance (within 2 km of the Solar Site)		
Kinmel Dunes LNR	1.8 km north	Dune grassland.

3.10 No part of the BESS Site is covered by statutory designations. However, there are four internationally important designations within 10 km of the BESS Site, and one nationally important designation within 2 km of the BESS Site. These sites are summarised in **Table EDP 3.2** and illustrated on **Plan EDP 2**.

[14] JNCC SAC Site Information available at https://sac.jncc.gov.uk/site/UK0030124 [accessed June 2025]

Table EDP 3.2: Statutory Designations Within the BESS's potential Zone of Influence

Designation	Approx. distance from BESS Site	Interest Feature(s)
Internationally Important Statutory Designated Sites (within 10km of the BESS Site)		
Liverpool Bay/Bae Lerpwl SPA	8 km north	Detailed above in **Table EDP 3.1**.
Elwy Valley Woods SAC	1.4 km south	Detailed above in **Table EDP 3.1**.
Llwyn SAC	10.7 km south-east	This SAC supports the following Annex I habitats that are a primary reason for selection[15]: Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae* and *Salicion albae*).
Halkyn Mountain/ Mynydd Helygain SAC	14.3 km east	This SAC supports the following Annex I habitats that are a primary reason for selection[16]: • Calaminarian grasslands of the Violetalia calaminariae. This SAC also supports the following Annex I habitats that are present as a qualifying feature but are not a primary reason for selection: • European dry heaths; • Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites); and • Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). This SAC supports the following Annex II species that are a primary reason for selection: • Great crested newt (*Triturus cristatus*).

[15] JNCC SAC Site Information available at https://sac.jncc.gov.uk/site/UK0030185 [accessed June 2025]
[16] JNCC SAC Site Information available at https://sac.jncc.gov.uk/site/UK0030163 [accessed June 2025]

Designation	Approx. distance from BESS Site	Interest Feature(s)
Nationally Important Statutory Designated Sites (within 2 km of the BESS Site)		
Coedydd ac Ogofau Elwy a Meirchion SSSI	1.4 km south	This Site is a component of Elwy Valley Woods SAC. The woodlands consist largely of ash (*Fraxinus excelsior*) and sessile oak (*Quercus petraea*) high forest, with other woodland communities occasionally assuming local prominence. Of particular interest are the uncommon wild service tree (*Sorbus torminalis*) and small-leaved lime (*Tilia cordata*), both of which occur east of the River Meirchion. In the ash-dominated woodland uncommon species within the herb layer include broadleaved helleborine (*Epipactis helleborine*), columbine (*Aquilegia vulgaris*) and herb Paris (*Paris quadrifolia*). Uncommon herbs within the oak woodland include heather (*Calluna vulgaris*), greater woodrush (*Luzula sylvatica*), bell-heather (*Erica cinerea*), wavy hair-grass (*Deschampsia flexuosa*) and golden-rod (*Solidago virgaurea*). Nationally scarce liverwort species (*Cololejeunea rossettiana*) is recorded in the woodland. Nationally scarce mosses present include *Amblystegium confervoides*, *Bryum canariense* and *Eurynchium striatulum*. Important plants to be found in the cliff-top grassland, among the more usual salad burnet (*Sanguisorba minor*) and common rockrose (*Helianthemum nummularium*), include the nationally scarce spiked speedwell. The well-wooded and sheltered watercourses afford lying-up sites for otter. Additionally, Natterer's bat, brown long-eared, pipistrelle and lesser horseshoe bat, are recorded in the caves.

Non-statutory Designations

3.11 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although such designations are typically considered to be of importance at a County level. In Conwy and Denbighshire, such designations are termed Wildlife Sites. Additional sites such as non-designated nature reserves (e.g. Wildlife Trust nature reserves) and ASNW are considered here when not covered by other designations. The importance of Local Wildlife Sites (LWS) is recognised in PPW and in the within the Conwy Adopted LDP (2007-2022), specifically strategic policy NTE/1 - The Natural Environment, and Denbighshire Adopted LDP (2006-2021), specifically VOE 5 - Conservation of Natural Resources.

3.12 The Solar Site overlaps with two non-statutory designations, namely Abergele Grazing Marsh Wildlife Site (Candidate) and Morfa Rhuddlan Wildlife Site (Candidate), both sites are designated for grazing marsh. There are a further 29 Wildlife Sites located within 2km of the Solar Site, as summarised in **Table EDP 3.3** and shown on **Plan EDP 3**.

Table EDP 3.3: Non-Statutory Designations Within 2km of the Solar Site

Designation	Approx. distance from Solar Site	Interest Feature(s)
Abergele Grazing Marsh Wildlife Site (Candidate)	Overlaps Site	Grazing marsh.
Morfa Rhuddlan Wildlife Site (Candidate)	Overlaps Site	Grazing marsh.
Coed Bodtegwal Wildlife Site (Candidate)	0.3 km south	Broadleaved woodland.
Pwll Towyn Way Wildlife Site (Candidate)	0.1 km north	Standing water.
Coed Gors Wildlife Site (Candidate)	0.3 km north	Broadleaved woodland.
Pwll Bodoryn Fawr Wildlife Site (Candidate)	0.3 km south	Standing water.
The Warren Wildlife Site (Candidate)	0.3 km south-west	Calcareous grassland.
Plas Kimmel Wildlife Site (Candidate)	0.6 km south	Standing water.
St Georges Well Wildlife Site (Candidate)	0.8 km south-west	Standing water.
Pwll Ffordd St Asaph Wildlife Site (Candidate)	0.8 km south	Standing water.
Pwll Llwyni Lodge Wildlife Site (Candidate)	0.8 km south	Standing water.
Coed y Geufron Wildlife Site (Candidate)	0.9 km south-west	Coniferous woodland.
Coed Nant Ddu Wildlife Site (Candidate)	1 km south-west	Broadleaved woodland.
Coed Parc Kinmel Wildlife Site (Candidate)	1 km south	Coniferous woodland.
Afon Gele Wildlife Site (Candidate)	1.1 km north-west	Running water.
Berthglyd Pond Wildlife Site (Candidate)	1.1 km west	Standing water.
Clwyd Estuary and Adjacent Fields Wildlife Site	1.1 km north-east	An estuary including mudflats, where large numbers of birds feed, saltmarsh, a disused tip with botanical interest and supporting ground nesting birds, and adjacent fields and water bodies which support significant numbers of wintering waders and wildfowl.
Pwll Tan-y-bryn Wildlife Site (Candidate)	1.2 km west	Standing water.
Pwll Parc Kimmel Wildlife Site (Candidate)	1.3 km south	Standing water.

Designation	Approx. distance from Solar Site	Interest Feature(s)
Ffordd Las Wildlife Site (Candidate)	1.3 km west	Mixed woodland.
Coed Parc y Meirch/Coed Ty Croes Wildlife Site (Candidate)	1.5 km south	Broadleaved woodland; coniferous woodland.
Coed Pen y Garreg Wildlife Site	1.5 km south	A lowland ancient woodland in the grounds of Bodelwyddan Army Training Camp. The plant communities are ash and alder woodland. Sycamore (*Acer pseudoplatanus*) is dominant with ash, elm (*Ulmus procera*), oak and sweet chestnut (*Castanea sativa*). the shrub layer includes hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), elm, ash, privet (*Ligustrum vulgare*), spindle (*Euonymus europaeus*) and yew (*Taxus baccata*). a stream runs through the west of the Site. ancient woodland plants include dog's mercury (*Mercurialis perennis*), woodruff (*Galium odoratum*), bluebell (*Hyacinthoides non-scripta*), enchanter's-nightshade (*Circaea lutetiana*), pignut (*Conopodium majus*), broadleaved helleborine (*Epipactis helleborine*) and early-purple orchid Orchis mascul (*Orchis mascul*).
Fferam Ffordd Las Bach Wildlife Site (Candidate)	1.5 km south-west	Calcareous grassland; scrub.
North Wales Holiday Camp Wildlife Site (Candidate)	1.5 km north-west	Neutral grassland.
Pwll St Georges Well Wildlife Site (Candidate)	1.5 km south	Standing water.
Coed Meibion Wildlife Site (Candidate)	1.6 km south	Broadleaved woodland; coniferous woodland.
Remo Avenue Wildlife Site (Candidate)	1.7 km north	Coastal grassland.
Afon Clwyd Saltmarsh Wildlife Site (Candidate)	1.8 km north-east	Saltmarsh.
Bryn Plas Uchaf Wildlife Site (Candidate)	1.9 km south-west	Calcareous grassland; broadleaved woodland.
Pwll Fardre Wildlife Site (Candidate)	1.9 km south	Standing water.
Kimnel Bay Dunes Wildlife Site (Candidate)	2 km north	Dune grassland.

3.13 Of additional pertinence, the desk study identified six areas of ASNW, 16 areas of Restored Ancient Woodland area, five areas of Plantation on Ancient Woodland area and one Ancient Woodland Site of Unknown Category within 2 km of the Solar Site. The closest being an area of

Restored Ancient Woodland located immediately adjacent to the southern boundary of the Solar Site. Additionally, there is one Wild Ground Reserve, Belgrano, located 1.4 km north-west.

3.14 No part of the BESS Site is covered by any non-statutory designations. There are 11 Wildlife Sites located within 2km of the BESS Site, as summarised in **Table EDP 3.4** and shown on **Plan EDP 3**.

Table EDP 3.4: Non-Statutory Designations Within 2 km of the BESS Site

Designation	Approx. distance from BESS Site	Interest Feature(s)
Coed Cord, block to NW and Coed y Saeson (3 areas) Wildlife Sites	0.1 km east	Ancient broadleaved woodland.
Bryn Meiriadog Wildlife Site	0.8 km south	Ancient woodland including alder (*Alnus glutinosa*), ash and oak communities, blackthorn (*Prunus spinosa*) and hazel scrub and calcareous grassland, the latter occurs on rocky outcrops within the wood. Ancient woodland flora includes black bryony (*Dioscorea communis*), bluebell, wild strawberry (*Fragaria vesca*), wood avens (*Geum urbanum*), common cow-wheat (*Melampyrum pratense*) and wood melick (*Melica uniflora*). The limestone grassland flora in rocky areas includes sheep's fescue (*Festuca ovina*), meadow oat-grass (*Helictochloa pratensis*), musk thistle (*Carduus nutans*), common rock-rose (*Helianthemum nummularium*), common stork's-bill (*Erodium cicutarium*) and wild thyme (*Thymus serpyllum*). On deeper soils it is quite rank but species rich with sweet vernal-grass (*Anthoxanthum odoratum*), false oat-grass (*Arrhenatherum elatius*), meadow oat-grass, pignut, salad burnet (*Sanguisorba minor*), goat's-beard (*Aruncus dioicus*) and the uncommon dropwort (*Filipendula vulgaris*). This area is part of Cefn Estate, which supports a large population of fallow deer (*Dama dama*).
Glascoed (2 areas) Wildlife Sites	1.4 km south-east	Lowland, ancient broadleaved woodland.
Plas Newydd/Coed Carreg Dafydd Wildlife Site	1.5 km west	A flat, ancient woodland site with ash and beech woodland communities.
Ty'n-y-Coed Rough (2 areas) Wildlife Sites	1.5 km south-east	Flat, lowland broadleaved woodland.

Designation	Approx. distance from BESS Site	Interest Feature(s)
Coed y Ddol/Coed y Fadir Wildlife Site	1.5 km south-west	A south facing lowland ancient woodland on the valley side of the River Elwy. Wet, alder woodland occurs on lower slopes, ash woodland where it is drier, and silver birch (*Betula pendula*) woodland where soils are more acid.
Coed yr Accar (2 areas) Wildlife Sites	1.5 km south	Ancient broadleaved woodland.
Coed Fron and Eryl Hall Wood Wildlife Site	1.7 km east	Ancient woodland with alder, ash, oak and birch communities.
Coed Wig Wildlife Site (Candidate)	1.9 km south-west	Broadleaved woodland.
Pwllau Graig Wildlife Site (Candidate)	1.9 km south	Standing water.
Coed Nant-y-graig Wildlife Sites (Candidate)	2 km south	Broadleaved woodland.

3.15 Of additional pertinence, the desk study identified 20 areas of ASNW, 16 areas of Restored Ancient Woodland area, 11 areas of Plantation on Ancient Woodland area and three Ancient Woodland Sites of Unknown Category within 2km of the BESS Site. The closest being an area of Restored Ancient Woodland located 150m east. Additionally, there are two areas of Wild Ground Reserves, Gwynt-y-Mor is located immediately adjacent to the eastern boundary and Glascoed is located 0.3km north-west.

3.16 Furthermore, the proposed Cable Corridor linking the Solar Site to the BESS Site also passes through Coed Parc Kinmel (Candidate) Wildlife Site, designated for its coniferous woodland.

HABITATS

3.17 There are several mechanisms by which habitats that lie outside of statutory and non-statutory designations are protected, or by which their importance is recognised at a national level. This includes the following:

- 'Important' hedgerows are protected from removal (out with the planning process) by the Hedgerows Regulations 1997;

- Certain habitats are listed priority habitats, which public authorities in Wales must seek to maintain and enhance (to promote ecosystem resilience) as part of policy or decision making under Section 6 of the *Environment (Wales) Act* 2016; and in so doing, deliver net benefits to biodiversity in accordance with Chapter 6 of PPW through adoption of a stepwise approach by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort, compensated for. Enhancement must be secured by delivering a biodiversity benefit primarily on a site or immediately adjacent to the site, over and above that required to mitigate or compensate for any negative impact;

- PPW 12 includes a presumption against development which results in significant harm to biodiversity and ecosystem functioning, or results in the loss of irreplaceable habitat[17]. PPW 12 also sets out how planning authorities should fulfil their 'Biodiversity and Resilience of Ecosystems Duty' as required by the Environment (Wales) Act 2016. Pertinent to this, Chapter 6 of PPW 12 also afford further consideration to the protection of trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function;

- Chapter 6 of PPW 12 places further emphasis on adopting a proactive approach to integration of green infrastructure within development plans/proposals, adopting building with nature standards and in so doing, supporting the delivery of ecosystem services and net benefits to biodiversity across site boundaries; and

- The importance of protecting habitats, and networks of habitats, is reflected in the Conwy Adopted LDP (2007-2022), specifically strategic policy NTE/1 - The Natural Environment, and Denbighshire Adopted LDP (2006-2021), specifically policy VOE 5 - Conservation of Natural Resources.

3.18 The distribution of different habitat types within and adjacent to the Site is illustrated on **Plan EDP 1**. The habitats are further described in **Appendix EDP 1** alongside illustrative photographs and species lists. A summary and qualitative assessment of these habitats is provided in **Table EDP 3.5**. **Plan EDP 1** also shows the field, hedgerow and woodland reference numbers referred to below.

Table EDP 3.5: Summary of Habitats Within the Site

Habitat Type	Distribution	Intrinsic Ecological Importance*
Improved Grassland	Improved grassland is dominant across the northern section of the Solar Site and abundant within the southern section. This habitat is also dominant across the BESS Site.	Negligible
Arable Land	Arable land is abundant across the southern section of the Solar Site.	Negligible
Priority Habitat: Coastal Floodplain and Grazing Marsh	Covers the northern section of the Solar Site.	County
Priority habitat: Wood-Pasture and Parkland	Present along parts of the proposed Cable Corridor, within Kinmel Park and Bodelwyddan Park.	County

[17] Irreplaceable habitats are technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed. Habitats noted as irreplaceable within PPW are ancient woodland, semi-natural woodland, and ancient, veteran and heritage trees

Habitat Type	Distribution	Intrinsic Ecological Importance*
Ancient Woodland (off-site)	A corridor of Restored Ancient Woodland is immediately adjacent to the southern boundary of the Solar Site. The Cable Corridor also runs adjacent to two parcels of Plantation on Ancient Woodland Site and Restored Ancient Woodland Site at points along its length.	County
Priority Habitat: Broadleaved and Mixed semi-Natural Woodland (off-site)	There are no on-site woodlands, however, there are three woodland parcels immediately adjacent, some broadleaved and some mixed, which overhang the Solar Site boundaries.	Local
Priority Habitat: Native Hedgerows and Mature Trees	Native hedgerows dominate the field boundaries of the Site. Furthermore, there is a line of trees located along the northern boundary of the Solar Site and scattered trees throughout the Site.	Local
Dense and Scattered Scrub	Dense and scattered scrub habitats are primarily associated with ditches and also the on-site pond.	Negligible
Wet Ditches	Wet ditches delineate many of the of the field boundaries across the Solar Site, parallel to hedgerows.	Local
Dry Ditches	Ditches delineate many of the field boundaries across the Solar Site, parallel to hedgerows.	Negligible
Priority Habitat: Pond (standing water)	There is one pond within the Site boundary, located within the southern section of the Solar Site.	Local

*Importance irrespective of any protected, priority or other notable species which may be present

3.19 As noted within **Table EDP 3.5**, the majority of the Site is made up of habitats which are of less than Local, or Negligible, intrinsic importance. However, the coastal floodplain and grazing marsh, wood-pasture and parkland, adjacent ancient and non-ancient woodland parcels, wet ditches, hedgerows and pond, are judged to be of Local or higher level importance and most are priority habitats as protected under PPW 12. Furthermore, a number of the habitats, including those which are of limited intrinsic importance, also require consideration in relation to their importance in maintaining populations of protected, priority or other notable species. This is discussed further below.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

3.20 Certain species receive legal protection in the UK and are commonly known as 'protected species'. In reality, the level of protection for different species varies considerably, from protection solely against 'killing and injury' to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species-groups are provided below.

3.21 In addition to protected species there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status. This includes priority

species, which public authorities in Wales must seek to maintain and enhance as part of policy or decision making under Section 7 of the Environment (Wales) Act 2016. PPW 12 recognises species as an important component of biodiversity, as does the Conwy Adopted LDP (2007-2022), specifically strategic policy NTE/1 - The Natural Environment, and Denbighshire Adopted LDP (2006-2021), specifically VOE 5 - Conservation of Natural Resources.

3.22 The likelihood of presence, or confirmed presence, of protected, priority or other notable[18] wildlife species within the Site is summarised below with reference to desk study records, habitat suitability and detailed surveys where relevant. Further details are made available within the appendices and plans where referenced.

Breeding Birds

3.23 All wild birds, their nests and eggs are protected under the *Wildlife and Countryside Act* 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take, damage or destroy the egg of any wild bird; or
- To have in one's possession or control any wild bird (dead or alive) or egg, or any part of a wild bird or egg.

3.24 In addition, further protection is afforded to those wild bird species listed on Schedule 1 of the *Wildlife and Countryside Act* 1981 (as amended), prohibiting any intentional or reckless disturbance to these species while it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird. A number of species are also included as priority species.

3.25 A large number of records of bird species were retrieved during the desk study, within 2 km of the Solar Site. This includes 51 records of *Wildlife and Countryside Act* 1981 (as amended) Schedule 1 species, 37 records of priority species, and a further 128 records of species included on the latest Red and Amber lists of Birds of Conservation Concern in Wales[19]. Within 2km of the BESS Site this includes 18 records of *Wildlife and Countryside Act* 1981 (as amended) Schedule 1 species, 23 records of priority species, and 59 records of species included on the latest Red and Amber lists of Birds of Conservation Concern in Wales. Pertinent records of the species with possible suitable breeding habitats on-site include skylark, owing their dependence on open arable and grassland for breeding, for which 45 records were returned within 2km of the Solar Site and 5 records within 2km of the BESS Site.

3.26 The full results of the breeding bird survey are provided in **Appendix EDP 3** and on plans **Plan EDP 4 - 10**. In summary, a total of 69 bird species were recorded, including 26 bird species of conservation concern considered to be possibly breeding on-site. This includes one

[18] Notable species are those which are not legally protected but are formally identified as being of conservation concern
[19] Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. 2022. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus 2:1.

Wildlife and Countryside Act 1981 (as amended) Schedule 1 species, 13 priority species and 22 species of conservation concern.

3.27 Species of particular note in the context of the Proposed Development, owing to their dependence on open arable and grassland habitats for breeding include:

- 2-3 pairs of lapwing; and
- 9-15 pairs of skylark.

3.28 Lapwing are a red list species and Priority Species owing to population declines and considered a declining breeding resident in North East Wales, while skylark are Amber Listed and also a Priority Species, but common and widespread residents in North East Wales. As such, owing to the small lapwing population and commonness of skylark locally, both populations are not considered to be significant beyond the local context.

3.29 In terms of other species, a number of uncommon conservation concern species were recorded but not regularly and in low numbers, with breeding evidence inconclusive (0-1 pair). Such species include spotted flycatcher, snipe, yellow wagtail, yellowhammer and shelduck. Other small breeding populations recorded that are notable at a local level include teal (2-4 pairs), meadow pipit (2-3 pairs), reed bunting (1-3 pairs), wheatear (2-3 pairs) and linnet (3-6 pairs).

3.30 No species for which the Liverpool Bay/Bae Lerpwl SPA are designated were recorded.

3.31 The diversity of bird species recorded on-site is relatively high reflecting the range of grassland, ditch, adjacent woodland and farmland present. However, the populations are relatively small for the size of the Solar Site (with the possible exception of skylark, for which numbers are considered typical for the size of the area and habitats present), which is likely a result of the dominance of intensively farmed arable and pastureland. Taking this into account, alongside the status of the species, the breeding bird assemblage is judged to be of Local ecological importance.

Wintering Birds

3.32 Wintering birds do not receive direct legal protection; however, they may form part of a protected assemblage originating from a statutory designation in the vicinity, or significant numbers of Priority Species or other notable species may be present.

3.33 The full results of the wintering bird survey are provided in **Appendix EDP 4** and on **Plans EDP 11-16**. In summary, a total of 33 bird species were recorded on-site. This includes four *Wildlife and Countryside Act* 1981 (as amended) Schedule 1 species, 13 priority species and 31 other species of conservation concern. Those species of note include:

- Teal – an average of 125 individuals were recorded over the six surveys, which is above 1% of the Dee Estuary SPA population (a benchmark typically used to determine if land could potentially be considered as 'functionally linked' to the SPA population). While it is considered unlikely that these birds are part of the same population as the SPA owing to the spatial separation from this designation (c. 9.9 km) and the widespread nature of this species across North Wales, as a precaution, it has been assumed as a worst case to be

functionally linked and is therefore of up to International level importance. It should also be noted that a large proportion of the teal recordings related to birds using the wet ditches bounding or outside of the northern boundary of the Solar Site. Within North East Wales, teal are considered to be abundant winter visitor to estuaries and wetlands;

- Shelduck, curlew, redshank – although only recorded in small numbers and sporadically using the site (recorded on three surveys, one survey and one survey respectively), these species are qualifying species of the Dee Estuary SPA and Ramsar Site. As such, these more specialist wetland species are considered to be of at least Local level importance;

- Lapwing – only recorded on three of the six visits in flocks moving between fields both on- and off-site. However, due to being a Priority Species and recorded in flocks of up to 100, this species is considered to be of at least Local importance;

- Snipe and jack snipe – both recorded fairly regularly across the survey visits in small numbers primarily associated with the wet ditches. They appear to be more resident on site than some of the other wetland species and are both on the Amber list. As such, the populations are of Local to County importance; and

- Gulls - including black-headed and herring gull were recorded in large flocks utilising the Solar Site for foraging opportunities. Given the large numbers but relatively common nature of the species in the region, these species are considered of Local level importance.

3.34 No species for which the Liverpool Bay/Bae Lerpwl SPA are designated were recorded.

3.35 In summary, the diversity and abundance of over-wintering birds is relatively high reflecting the proximity to coastal areas and nature of the habitats present, including the large expanse of grazed and arable fields and their boundary habitats which support populations of farmland birds as well as various waterfowl and waders, particularly in association with wetter areas and ditches. Use of the Solar Site by flocking species varied across the survey visits, reflecting their use of the wider landscape for foraging. The population of teal is significant with numbers recorded suggesting a possible functional link to the Dee Estuary SPA and Ramsar Site, although most of this species were using the wet ditches bounding or outside of the northern boundary of the Solar Site.

3.36 Overall, given this diversity of species and presence of larger flocks, albeit sporadically, the winter bird assemblage present, as a collective, within the Solar Site is judged to be of up to County level ecological importance. The exception is the teal population, which, despite being abundant in North East Wales, are considered to be of up to International importance, assuming, on a precautionary basis, that it forms part of the wider Dee Estuary SPA/Ramsar population.

Bats

3.37 All species of British bat are listed as European Protected Species (EPS) on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (referred to as the 'Habitats Regulations'). This affords strict protection to bats and their roosts, and makes it an offence to:

- Deliberately capture, injure or kill a wild animal of an EPS;
- Deliberately disturb wild animals of an EPS wherever they are occurring, in particular, any disturbance which is likely to impair their ability to survive, to breed or reproduce, to significantly affect the local distribution or abundance of the species to which they belong, or in the case of hibernating or migratory species, to hibernate or migrate; or
- Damage or destroy a breeding site or resting place of a wild animal of an EPS.

3.38 Additional protection for bats is also afforded under the *Wildlife and Countryside Act* 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place. In addition, soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), greater horseshoe bat (*Rhinolophus ferrumequinum*), barbastelle bat (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), and lesser horseshoe bat (*Rhinolophus hipposideros*) are also listed as priority species.

3.39 The desk study returned 86 records for bats within the 2km search radius around the Solar Site. These records relate to at least eight different species, with the closest record of confirmed bat roosting being for brown long-eared bat recorded in 2005, located approximately 1.2km west from the Solar Site. More recently, a maternity roost of common pipistrelle was recorded in 2012, located 1.8km south-east of the Solar Site.

3.40 In relation to Annex II species, three records were returned for lesser horseshoe bat within 2km of the Solar Site.

3.41 The desk study returned 89 records for bats within the 2km search radius around the BESS Site. These records relate to at least eight different species, with the closest record of confirmed bat roosting being for a noctule maternity roost recorded in 2009, located approximately 200m east from the BESS Site. More recently, roosts for common and soprano pipistrelle have been recorded 1.5km south-east of the BESS Site in 2019.

3.42 Nine records for lesser horseshoe were returned within 2km of the BESS Site. This includes multiple records of hibernating lesser horseshoe bats, located in caves c.1.9km south of the BESS Site.

Bat Roosting

3.43 A total of 24 trees were identified during the GLTA as having Potential Roosting Features (PRF) for bats that could be seen from the ground. 21 of the trees supported PRFs that were estimated from the ground as suitable for individual bats (PRF-I) and three trees supported PRFs that were estimated as being suitable for multiple bats (PRF-M). Full details are provided within **Appendix EDP 5** with tree locations shown on **Plan EDP 17**. This potential roosting resource across the Site is considered to be of Local level ecological importance.

Bat Foraging/Commuting Activity

3.44 Overall, the habitats present within the Site were assessed as being of moderate suitability for foraging and commuting bats, given its location surrounded mostly by open agricultural land,

with vegetated boundaries predominantly defunct albeit with connectivity to suitable habitat to the south, including patches of semi-natural woodland.

3.45 The findings of the NBW and automated detector surveys are provided in detail within **Appendix EDP 5** and the approximate distribution and diversity of bat species recorded during the NBW surveys are illustrated on **Plans EDP 18** - **20**. Automated detector locations are shown on **Plan EDP 21**.

3.46 In summary, at the observation point of each NBW survey, soprano pipistrelle was observed commuting or foraging along field boundaries of the pink and green route and common pipistrelle was initially observed along the purple route, however, there was no clear pattern of activity. Noctule was recorded at the at the observation point along the blue route during each NBW, the earliest being 13 minutes after sunset, indicating a possible roost nearby. A *Myotis* sp was recorded 23 minutes after sunset along the pink route in Autumn 2025 and also recorded early on during the Summer 2024 walked pink route, possibly indicating a roost nearby, but activity was low.

3.47 Soprano pipistrelle and common pipistrelle were the dominant species during the course of the walked part of each survey, with occasional recordings of *Myotis* sp. and noctule and single recordings of lesser horseshoe, Nathusius' pipistrelle and serotine.

3.48 On each occasion, bat activity was typically greatest along the field boundaries of fields **F5.1** and **F5.2** and along the edge of woodland **W4**.

3.49 Levels of bat activity recorded during the automated detector surveys were generally moderate and comprised soprano and common pipistrelle, *Myotis* sp., noctule, *Plecotus* sp., lesser horseshoe, greater horseshoe, Nathusius pipistrelle, serotine and barbastelle.

3.50 Three Annex II species were recorded during the automated detector surveys, including greater and lesser horseshoes and barbastelle bats. Two individual registrations of barbastelle were recorded at locations **L1** and **L6**, which indicate that this species is not reliant on the habitats within the Site and is only an occasional visitor. Greater horseshoe was recorded at all six locations but consisted of no more than two registrations at any one location, indicating that this species is widespread across the Site but also not reliant on the habitats within the Site. Lesser horseshoe was also recorded at all six locations, activity peaked across all locations in April 2025 with a total of 180 registrations, and specifically at **L6** in April 2025 (within the BESS Site) with 139 registrations.

3.51 Overall, species-poor semi-improved grassland and arable fields, which dominate the Site are considered to be of limited importance to a foraging bat assemblage given its small extent and poor botanical diversity. Boundary features, including hedgerows, mature tree lines, ditches and adjacent woodland however, are of value for dispersal of a bat assemblage across the wider landscape, with the woodland edges in particular providing a potential foraging resource.

3.52 Taking into account the diversity of bat species utilising the Site and the extent of their foraging and commuting activity, the overall bat species assemblage using the Site is considered to be of Local importance.

Dormouse

3.53 Hazel dormouse is an EPS receiving strict protection under the Habitats Regulations as summarised above in respect of bats. Additional protection is also afforded to this species under the *Wildlife and Countryside Act* 1981 (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

3.54 There are no records for dormouse within 2km of the Solar Site. There is one historic record for dormouse nests, located 0.9km south-west of the BESS Site, found during a dormouse nest tube survey of hedgerow in 2013.

3.55 The hedgerows and off-site woodland provide some limited suitability for this species; however, the hedgerows are typically species-poor and are not well connected to other more suitable habitats in the wider landscape. As such, dormouse are considered highly likely to be absent from the Site.

Otter

3.56 Otter is an EPS receiving strict protection under the Habitats Regulations as summarised above in respect of bats. Additional protection is also afforded to this species under the *Wildlife and Countryside Act* 1981 (as amended), as summarised above in respect of bats. This species is also listed as a priority species.

3.57 There were 17 records of otter were returned within 2km of the Solar Site boundary, of those records, six are from within the last ten years. The closest record being immediately adjacent to the northern boundary of the Solar Site, along the Bodoryn Cut.

3.58 Five records of otter were returned within 2km of the BESS Site, the closest record being 1.8km south-east from the boundary, along the River Elwy.

3.59 The potentially suitable habitats on-site are restricted to the Solar Site only and are of low suitability for otter, comprising field boundary ditches adjacent to hedgerows, scrub and woodland habitats, with wider connectivity to the surrounding habitats providing commuting routes, but limited habitat for foraging and resting sites. The detailed survey of the water courses on-site found two potential otter prints along wet ditch **5.16** within the Solar Site during the detailed survey in May 2025. The locations of the surveyed watercourses and ditches are shown on **Plan EDP 23** and **24**.

3.60 Given this potential evidence of this species on-site and the local records suggesting otter is typically present in the wider area, this species is considered to occasionally use the Solar Site for commuting or some foraging. Otter is therefore judged to be of Local importance.

Water Vole

3.61 Water vole and their burrows receive protection under Schedule 5 of the *Wildlife and Countryside Act* 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take (capture) a water vole;

- Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a water vole uses for shelter or protection; and
- Intentionally or recklessly disturb water voles while they are in a place of shelter or protection.

3.62 Water vole is also listed as a priority species.

3.63 39 records of water vole were returned within 2km of the Solar Site boundary. One record, from 2009, is located within the Solar Site, located to the south-east along ditch **5.21** as labelled on **Plan EDP 23** and **24**. Additional records from 2009 are located immediately adjacent to the northern boundary of the Solar Site, along the Bodoryn Cut. The majority of the records within 2km are located north of the Solar Site, with several records along the Afon Gele, the most recent is from 2019.

3.64 One record of water vole was returned within 2km of the BESS Site, recorded in 2016 along a field boundary ditch located 0.7km north.

3.65 The habitats on within the Solar Site are of moderate suitability for water vole comprising field boundary ditches adjacent to hedgerows, with wider connectivity to the surrounding habitats. Many of the ditches have steep banks to support burrows. There is a mixture of bankside vegetation including hedgerows, scrub, dense reeds and grassland. The BESS Site is considered to be of negligible suitability due to the lack of suitable habitat. The detailed survey of suitable habitat found evidence of water vole in the form of feeding remains, latrines, and burrows along six ditches. The locations of these findings are shown on **Plans EDP 23** and **24** and detailed further within **Appendix EDP 8**.

3.66 Based on the survey results above, the population of water vole is judged to be of Local importance.

Badger

3.67 Badgers and their setts are protected under the *Protection of Badgers Act* 1992, which makes it an offence (*inter-alia*) to:

- Wilfully kill, injure, take, or cruelly ill-treat a badger; and
- Damage or interfere with a sett, by doing one of the following things:
    - Damage a badger sett or any part of it;
    - Destroy a badger sett;
    - Obstruct access to, or any entrance of, a badger sett;
    - Cause a dog to enter a badger sett; or
    - Disturb a badger when it is occupying a sett.

3.68 The 1992 Act defines a badger sett as "*any structure or place which displays signs indicating current use by a badger*".

3.69 The protection afforded to badgers is primarily due to animal welfare issues and history of persecution rather than concerns over their unfavourable nature conservation status.

3.70 There were 24 records of badger were returned within 2km of the Solar Site, 11 of which have been recorded in the last ten years. The closest record is located 0.13km south of the Solar Site.

3.71 There were 83 records of badger were returned within 2 km of the BESS Site, 18 of which have been recorded in the last ten years. The closest record is located 22 m north of the BESS Site, which was recorded in 2001. The most recent record is from 2024, located 1.1 km north of the BESS Site.

3.72 The mosaic of grassland, hedgerows and adjacent woodland offers foraging and sett building opportunities for badger across the Site. The detailed survey identified badger latrines in three separate locations within the Solar Site. These were located adjacent to a field boundary within the north-east field of the Solar Site and another two locations along a hedgerow in the northwest section of the Solar Site. A mammal hole was identified along the western edge of the on-site pond within the Solar Site. This hole is considered to be too small for badger and has collapsed internally. Mammal paths within hedgerows were identified throughout the Solar Site, however, these may be attributed to other mammals of similar size. **Image EDP 3.1** shows the mammal burrow identified.

Image EDP 3.1: Small mammal hole identified during the badger survey in October 2024. Not considered to be used by badger.

3.73 No evidence of badgers was identified within the BESS Site.

3.74 Taking into account the common status of badger within the country and district, and the limited extent of evidence of this species within the Site, the local population is considered to be of Site level importance.

Other Mammal Species

3.75 Records of the following priority mammal species were returned within 2km of the Site.

Polecat (Mustela putorius):

- There are ten records for polecat within 2km of the Solar Site. One record from 2020 is within the Solar Site boundary located south of the A547 along the woodland belt; and
- There are two records for polecat within 2km of the BESS Site, recorded in 2021 and 2007. The record from 2021 is located 1km north of the BESS Site.

European hedgehog (Erinaceus europaeus)[20]:

- 82 records of European hedgehog within 2km of the Solar Site. The most recent was recorded in 2022 and located 1.8km north of the Solar Site; and
- 17 records of European hedgehog within 2km of the BESS Site. The most recent was recorded in 2023 and located 1.6km north-east of the BESS Site.

Brown Hare (Lepus europaeus):

- Ten records for brown hare within 2km of the Solar Site. One of these records is located within the Solar Site boundary, south of the A547 and west of the woodland belt; and
- Three records of brown hare were returned within 2km of the BESS Site. The most recent from 2004 located 1.6km east.

American Mink

3.76 The data search returned 12 records for American mink (*Neovision vison*) within 2km of the Solar Site. The most recent records are from 2013. American mink is listed as an invasive non-native species under Schedule 9 to the *Wildlife and Countryside Act* 1981 (as amended).

3.77 The Solar Site encompasses a range of suitable foraging and breeding habitats for American mink and there is a reasonable likelihood that this species is present on this part of the Site. The BESS is not considered to support habitat suitable for American mink.

Great Crested Newt

3.78 Great crested newt is an EPS receiving strict protection under the Habitats Regulations as summarised above in respect of bats. Additional protection is also afforded to this species under the *Wildlife and Countryside Act* 1981 (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

[20] Hedgehog is also protected from capture or killing by specific methods under Schedule 6 of the *Wildlife and Countryside Act* 1981

3.79 18 records of great crested newt were returned within 2km of the Solar Site. Four of the records returned are located within the Solar Site, at the on-site waterbody, with the most recent recorded 16 years ago in 2009.

3.80 146 records of great crested newt were returned within 2km of the BESS Site, the nearest record being c. 90m north-east, recorded in 2004. More recently, in 2024, there are records for great crested newts located 150 m to the north-east.

3.81 The full results of the great crested newt surveys are detailed in **Appendix EDP 6** and summarised in **Table EDP 3.6**. The locations of the surveyed waterbodies are illustrated on **Plan EDP 22**. A copy of the eDNA results report has been provided in **Appendix EDP 7**. Those off-site ponds not listed below were not surveyed as permission to access the waterbody was not granted by the respective landowners.

Table EDP 3.6: Great Crested Newt Survey Results

Waterbody Ref. No.	Distance to Site	eDNA Result	Population Survey Results (Peak Survey Count21)
P1	On-site	Negative	Not surveyed
P4	180m	Negative	Not surveyed
P6	140m	Positive	6
P17	45m	Positive	2
P18	60m	Positive	1
P20	250m	Negative	Not surveyed
P21	140m	Negative	Not surveyed

3.82 As set out above, the one waterbody within the Site was found to no longer support great crested newt. Four of the off-site ponds that could be accessed were also found to not support this species. However, three off-site ponds were found to support low numbers of great crested newt, and given their presence in the area, great crested newt presence in those ponds that could not be accessed must be assumed on a precautionary basis.

3.83 In terms of terrestrial habitats, the Site contains hedgerows, scrub and ditches, with adjacent woodlands, which are of moderate suitability to support great crested newts in the terrestrial phase of their annual life cycle, and which are therefore likely to be used for foraging and dispersal or refuge and hibernation. However, the majority of the Site is grazed pasture or arable fields which is of limited suitability for great crested newt.

3.84 Based on the survey results above, a small population of great crested newt is using the Site, which is judged to be of Local importance.

[21] Peak survey count represents the maximum adult count per pond per night recorded through torch survey or bottle-trapping

Other Amphibian Species

3.85 Other legally protected amphibians are rare and have a very restricted distribution[22], however common toad (*Bufo bufo*) is a widespread species which is listed as a priority species.

3.86 There are 17 records for other amphibians within 2km of the Solar Site. This includes smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helveticus*), common frog (*Rana temporaria*) and Natterjack toad (*Epidalea calamita*). Although, Natterjack toad is an EPS receiving strict protection under the Habitats Regulations, as summarised above in respect of bats, there is only one record from 1995, and this species is now considered likely to be absent.

3.87 There are 303 records for other amphibians within 2km of the BESS Site. This includes smooth newt, palmate newt, common frog and common toad.

Reptiles

3.88 All species of common reptile, namely common lizard (*Zootoca vivipara*), slow-worm, grass snake (*Natrix helvetica*) and adder (*Vipera berus*), receive at least limited protection from harm under the *Wildlife and Countryside Act* 1981 (as amended), making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as priority species.

3.89 Nine reptile records were returned within 2km of the Solar Site, relating to grass snake and common lizard, the closest record is for common lizard, located 0.8km south-east.

3.90 Ten reptile records were returned within 2km of the BESS Site, relating to grass snake, slow-worm, common lizard and adder, the closest record is for grass snake, located 0.5km north-east.

3.91 In terms of terrestrial habitats, the Site contains hedgerows, scrub and ditches, with adjacent woodlands, which are of moderate suitability to support reptiles. However, the majority of the Site is grazed pasture or arable fields which is of limited suitability for reptiles. Presence of common reptile species within suitable habitats on the Site is assumed on a precautionary basis, and such populations are considered to be of Local level importance.

Invertebrates

3.92 Two records for white-letter hairstreak (*Satyrium w-album*) were returned within 2km of the Solar Site, however the most recent record is from 2005, white-letter hairstreak is listed on Schedule 5 of the *Wildlife and Countryside Act* 1981 (as amended) and Section 7 (S7) of the Biodiversity Action Plan (BAP). 37 additional species listed in S7 of the BAP were returned within 2km of the BESS, this includes small heath (*Coenonympha pamphilus*), cinnabar (*Tyria jacobaeae*), beaded chestnut (*Agrochola lychnidis*), green-brindled crescent (*Allophyes oxyacanthae*), mottled rustic (*Caradrina morpheus*), figure of eight (*Diloba caeruleocephala*) dingy skipper (*Erynnis tages*), shaded broad-bar (*Scotopteryx chenopodiata*),

[22] Natterjack toad (*Epidalea calamita*) and Northern pool frog (*Pelophylax lessonae*) are EPS, protected under *Wildlife and Countryside Act* 1981 and priority species

small pearl-bordered fritillary (*Boloria selene*), grayling (*Hipparchia semele*), dusky thorn (*Ennomos fuscantaria*), wall (*Lasiommata megera*) and blood-vein (*Timandra comae*).

3.93 Six records for white-letter hairstreak were returned within 2km of the BESS Site, the most recent record is from 2018, located 1.4km north-east. Eight additional species listed in S7 of the BAP were returned within 2 km of the BESS Site, this includes small heath, cinnabar, dingy skipper (*Erynnis tages*), shaded broad-bar, small pearl-bordered fritillary (*Boloria selene*), grayling, wall and blood-vein.

3.94 In terms of suitable habitats, the Site contains hedgerows, scrub and ditches, with adjacent woodlands, which are of moderate suitability to support a range of common and widespread invertebrates. However, the majority of the Site is grazed pasture or arable fields which is of limited suitability for invertebrates. As such, the assemblage of invertebrates supported by the Site is considered likely to be of Site level importance.

Rare/Scarce Plant Species

3.95 13 records for bluebell and one record for spiked speedwell were returned within 2 km of the Solar Site, both species are listed on Schedule 8 of the *Wildlife and Countryside Act* 1981 (as amended), spiked speedwell is also listed in S7 of the BAP. Seven additional species listed in S8 of the BAP were returned within 2km of the Solar Site, this includes small-flowered catchfly (*Silene gallica*), fly orchid (*Ophrys insectifera*), prickly saltwort (*Salsola kali subsp. kali*) and juniper (*Juniperus communis*).

3.96 13 records for bluebell and two records for spiked speedwell were returned within 2km of the BESS Site. Seven additional species listed in S8 of the BAP were returned within 2km of the Solar Site, this includes small-flowered catchfly (*Silene gallica*), fly orchid, prickly saltwort (*Salsola kali* subsp. kali) and juniper (*Juniperus communis*).

3.97 None of these species or other rare/scarce plant species were recorded during the Phase 1 Habitat survey.

Section 4
Summary of Important Ecological Features

4.1 Based on the results of the detailed baseline investigations described in **Section 3**, the following IEFs have been identified for the purposes of assessing potentially significant effects in the EcIA. These are made up of: seven statutory designated sites; 31 non-statutory designated sites; six habitats; and nine species/species assemblages.

4.2 These features, identified on the basis of being of Local level ecological importance or greater (or subject to legal protection), are summarised in **Table EDP 4.1**.

Table EDP 4.1: Important Ecological Features Identified Within the Site's Zones of Influence

Feature	Key Attributes	Level of Importance
Statutory Designations		
Liverpool Bay/Bae Lerpwl SPA	The site qualifies under SPA as it is used regularly by over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) in any season. In the non-breeding season, the site regularly supports at least 69,687 (2004/05 – 2010/11) individual waterbirds.	International
The Dee Estuary/ Aber Dyfrdwy SAC, SPA and Ramsar	One of the top ten estuaries in the UK for wintering and passage waterfowl populations. The estuary supports internationally important numbers of waterfowl and waders.	International
Coedwigoedd Dyffryn Elwy/ Elwy Valley Woods SAC	One of three sites selected to represent *Tilio-Acerion* forest across its geographic range on the Carboniferous limestone of north Wales.	International
Coedydd ac Ogofau Elwy a Meirchion SSSI	A component of Elwy Valley Woods SAC. Designated for the woodland species and habitats it supports. Additionally, bat roosts have been recorded in the caves.	National
Kinmel Dunes LNR	Dune grassland habitat.	County
Non-statutory Designations		
Wildlife Sites	Assemblage of 31 Wildlife Sites (two overlap the Site). Including habitats such as grazing marsh, ancient woodland, broadleaved woodland, coniferous woodland, calcareous grassland, coastal grassland, dune grassland, saltmarsh, running water and standing water.	County
Habitats		
Priority Habitat: Coastal Floodplain and Grazing Marsh	Overlaps the northern section of the Solar Site.	County

Feature	Key Attributes	Level of Importance
Priority Habitat: Wood-Pasture and Parkland	Present along parts of the proposed Cable Corridor, within Kinmel Park and Bodelwyddan Park.	County
Ancient Woodland	Restored ancient woodland sites are located immediately adjacent to the Solar Site boundary and parts of the Cable Corridor. Areas of plantation on ancient woodland sites are also located immediately adjacent along parts of the Cable Corridor.	County
Priority Habitat: Native Hedgerows and Mature Trees	There are 53 native hedgerows across the Site. All of which are species poor. Numerus hedgerows are associated with ditches and mature trees.	Local
Wet Ditches	Field boundaries within the Site are predominantly demarcated by ditches which are commonly associated along hedgerows.	Local
Priority Habitat: Pond (standing water)	Single pond **P1** within the Solar Site boundary.	Local
Species		
Breeding Birds	Relatively diverse breeding assemblage including 26 species of conservation concern, possibly breeding on-site in small numbers, except skylark (9-15 pairs). Also of note were lapwing (2-3 pairs), teal (2-4 pairs), meadow pipit (2-3 pairs), reed bunting (1-3 pairs), wheatear (2-3 pairs) and linnet (3-6 pairs).	Local
Wintering Birds	Diverse assemblage including some larger flocks of wetland waterfowl, waders and gull, albeit not on all visits. Most notably this included a large population of teal (described separately below) and smaller populations of jack snipe and snipe associated with the wet ditches on and adjacent to the Site.	County
Wintering Teal	Wet ditches on and adjacent to Site were found to support >1% of Dee Estuary SPA/Ramsar population on 4 of the 6 surveys. Owing to spatial separation from the estuary and teal being abundant in north-east Wales during winter, the population is likely to be independent. However, on a precautionary worst case basis, it has been assumed to be potentially functionally linked to The Dee Estuary SPA/Ramsar.	Up to International
Bats (roosting)	24 trees with Potential Roosting Features (PRFs) seen from the ground were identified within the Site. 17 of the trees supported PRFs that were estimated from the ground as suitable for individual bats (PRF-I) and seven trees supported PRFs that were estimated as being suitable for multiple bats (PRF-M). These threes are proposed to be retained.	Local

Feature	Key Attributes	Level of Importance
Bats (foraging/commuting)	At least ten bat species/species groups (*Myotis* and long-eared bat species were not identified to species level), were confirmed to be present foraging and/or commuting within the Site during the automated detector surveys.	Local
Otter	Several past records in the area north of the Solar Site, one record of otter spraints beside the ditch on the northern boundary of the Solar Site, and two potential otter prints recorded on-site during one of the surveys. With known presence in wider area, occasional use of the Solar Site for foraging/dispersal is assumed.	Local
Water Vole	Numerous records in the area north of the Solar Site; and evidence of water vole recorded in several ditches within the Solar Site, mainly in the south-east.	Local
Badger	No confirmed badger setts have been recorded within or around the Site, however some evidence of badger presence has been recorded suggesting foraging or dispersal within the Site.	Site
Great Crested Newt	The eDNA surveys returned positive results for three off site ponds, **P6**, **P17** and **P18**, within 250m of the Site. The on-site pond **P1**, returned a negative eDNA result. The desk study returned records for great created newts recorded within **P1** in 2009.	Local
Reptiles	Field margins and ditches provide potentially suitable habitat for common reptile species. Presence of these species assumed on precautionary basis.	Local

Appendix EDP 1
Extended Phase 1 Habitat Survey

METHODOLOGY

A1.1 The survey technique adopted for the Extended Phase 1 Habitat survey was at a level intermediate between a standard Phase 1 survey technique, involving habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey involved identifying and mapping the main habitat types (including priority habitats) and scoping any potential protected or priority species populations. This level of survey is not intended to compile a complete floral and faunal inventory for the Site.

A1.2 The Extended Phase 1 Habitat survey was undertaken by suitably experienced surveyors on 18 and 19 July 2024, the weather was overcast and mild on 18 July, and warm and sunny on 19 July.

Limitations

A1.3 There were some access restrictions due to livestock, specifically towards the northern section of the Solar Site. This is not considered to have significantly affected the survey results.

RESULTS

A1.4 The principal habitats within the Site together with their dominant/characteristic plant species identified during the survey are discussed in turn below. The type, distribution and species composition of the habitats present is discussed below.

A1.5 The following should be read in conjunction with **Plan EDP 1** and illustrative photographs provided where appropriate.

Arable

A1.6 In 2024, the following fields within the Site were managed for arable crop: field **F3.6**, **F4.1**, **F5.1** – **F5.6**, **F5.8**, **F5.9**, **F5.12** and **F5.14**.

A1.7 The arable fields within the Site are considered to be of limited ecological value given their poor botanical diversity and intensive management.

Image EDP A1.1: Arable Field (**F5.4**).

Improved Grassland

A1.8 The majority of the BESS Site and the northern section of the Solar Site comprises agricultural land dominated by improved grassland. At the time of survey in July 2024, the majority of the Site had been heavily grazed such that the sward was mostly <10cm high.

A1.9 The improved grassland habitat is characterised by a species-poor sward (circa 10cm high) with perennial rye-grass, Yorkshire fog (*Holcus lunatus*) and rough meadow grass (*Poa trivialis*) typically dominant and abundant white clover (*Trifolium repens*). Common nettles (*Urtica dioica*), creeping thistle (*Cirsium arvense*), creeping buttercup, curly dock (*Rumex crispus*) and broad-leaved dock (*Rumex obtusifolius*) occur occasionally. Additionally, crested dog's tail (*Cynosurus cristatus*), sweet vernal grass (*Anthoxanthum odoratum*), meadow buttercup (*Ranunculus acris*) and greater plantain (*Plantago major*) were recorded across the Site and silverweed (*Potentilla anserina*), pineappleweed (*Matricaria discoidea*), Shepard's purse (*Capsella bursa-pastoris*) and hard rush (*Juncus inflexus*) were recorded in localised patches.

A1.10 Improved grassland habitat is considered to be of limited ecological value given its poor floristic and structural diversity and regular management.

Image EDP A1.2: Improved grassland (**F3.1**).

Priority Habitat: Coastal Floodplain and Grazing Marsh

A1.11 The northern section of the Solar Site is overlapped by priority habitat: coastal floodplain and grazing marsh. Grazing marsh is defined as periodically inundated pasture, or meadow with ditches which maintain the water levels, containing standing brackish or fresh water, with ditches that are especially rich in plants and invertebrates.

A1.12 The fields within the Solar Site are a poor example of this habitat type, as they are grazed by livestock but consist of improved grassland characterised by a species-poor sward, with the field furthest east farmed as arable land at the time of survey. Furthermore, the majority of the ditches within this habitat have been degraded from livestock poaching, only occasionally holding water and predominantly supporting improved grassland, as shown in **Image EDP A1.4** below. Ditches that have been fenced are of higher quality and were holding water in July 2024 during the Phase 1 survey, this includes ditches **1.3**, **3.2**, **3.5** and **3.7** as referenced on **Plan EDP 23** and illustrated on **Image EDP A1.3** below.

A1.13 Nonetheless, as a habitat of principal importance for Wales, coastal floodplain and grazing marsh is considered to be of County level importance.

Image EDP A1.3: Ditch 3.7 fenced from livestock, supporting a more diverse range of botanical species.

Image EDP A1.4: Dry ditch 3.1 accessible to livestock and supporting improved grassland.

Broadleaved Semi-Natural Woodland and Ancient Woodland

A1.14 Although there is no broadleaved semi-natural woodland within the Site boundary, there are three woodland blocks that are located immediately adjacent to the Solar Site boundary, overhanging the Site. Woodland **W2** and **W3** both border sections of the Solar Site north of Rhuddlan Road and an existing solar site. Woodland **W4** comprises a belt that divides the southern section of the Solar Site in two and is classified as a Restored Ancient Woodland site. The woodlands are characterised by a canopy of a variety of semi-mature pedunculate oak (*Quercus robur*), sycamore (*Acer pseudoplatanus*), poplar species (*Populus* sp.), ash (*Fraxinus excelsior*), crack willow (*Salix × fragilis*), goat willow (*Salix caprea*). With an understorey represented by hawthorn (*Crataegus monogyna*). The ground flora comprises bramble (*Rubus fructinosus agg.*) and ivy (*Hedera helix*).

A1.15 Two further parcels of woodland designated as both Plantation on Ancient Woodland Site and Restored Ancient Woodland lie adjacent to sections of the Cable Corridor.

A1.16 Broadleaved woodland provides suitable cover for a range of protected species, including nesting habitat for birds, roosting and foraging bats, badger, dormouse, reptiles and amphibians. A habitat of principal importance for Wales, broadleaved woodland is considered to be of Local level ecological importance. The Ancient Woodland is of County level ecological importance.

Image EDP A1.5: Broadleaved semi-natural woodland (**W4**).

Mixed Semi-Natural Woodland

A1.17 Although there is no mixed semi-natural woodland within the Site boundary, there is a mixed woodland belt (**W1**) that is located immediately adjacent to the Solar Site boundary, overhanging the Site. Woodland **W1** divides fields **F3.2** and **F3.3** from an existing adjacent solar farm. The woodland is characterised by a canopy of a variety of pedunculate oak, pine (*Pinus* sp.) sycamore, poplar species, ash, crack willow, goat willow. With an understorey represented by hawthorn. The ground flora comprises bramble and ivy.

A1.18 Mixed woodland provides suitable cover for a range of protected species, including nesting habitat for birds, roosting and foraging bats, badger, dormouse, reptiles and amphibians. A habitat of principal importance for Wales, broadleaved woodland is considered to be of Local level importance.

Image EDP A1.6: Mixed semi-natural woodland (**W1**).

Priority Habitat: Wood-Pasture and parkland

A1.19 Wood-Pasture and parkland priority habitat is present along parts of the proposed Cable Corridor, within Kinmel Park and Bodelwyddan Park. Within this habitat is improved grassland, characterised by dominant perennial ryegrass, with scattered mature oak species.

A1.20 Wood-Pasture and parkland provides suitable cover for a range of protected species, including nesting habitat for birds, roosting and foraging bats and badger. A habitat of principal importance for Wales, broadleaved woodland is considered to be of County level importance.

Image EDP A1.7: Wood-Pasture and parkland priority habitat, present along parts of the proposed Cable Corridor, within Kinmel Park and Bodelwyddan Park.

Hedgerows

A1.21 Field boundaries within the Site are predominantly demarcated by native hedgerows. The majority appeared managed and intact, measuring c. 1.5m to 3m high and 2m to 5m wide, with semi-mature trees often recorded in association. Several of these hedgerows are associated with a wet ditch. All hedgerows are species-poor (containing on average less than five native woody species per 30m), dominated by hawthorn, with frequent blackthorn (*Prunus spinosa*), crack willow and dog rose (*Rosa canina*). Ten of the hedgerows support mature tree standards therein, including pedunculate oak, crack willow and goat willow. Hedgerow ground flora includes meadowsweet (*Filipendula ulmaria*), hedge woundwort (*Stachys sylvatica*), brambles, ivy, umbellifer species (*Apiaceae* sp.), common nettle, common hogweed (*Heracleum sphondylium*), field bindweed (*Convolvulus arvensis*), willow herb species (*Epilobium* sp), creeping thistle and herb Robert (*Geranium robertianum*).

A1.22 The Habitat Condition Assessment, which is based on a number of factors including hedgerow height, width, undisturbed ground flora, nutrient enrichment, invasive species and damage, identified the following hedgerows to be of 'good' condition: **H1.4**, **H1.5**, **H1.6**, **H2.2**, **H3.3**, **H3.4**, **H3.7**, **H5.2**, **H5.4**, **H5.18**, **H5.20**, **H5.21**, **H5.24**, **H5.26** and **H5.27**, while the following hedgerows were identified to be of 'moderate' condition: **H1.2**, **H1.3**, **H2.1**, **H3.1**, **H3.2**, **H3.5**, **H3.6**, **H3.8**, **H5.1**, **H5.3**, **H5.5**, **H5.6**, **H5.7**, **H5.8**, **H5.9**, **H5.10**, **H5.11**, **H5.12**, **H5.13**, **H14**, **H5.15**, **H5.16**, **H5.17**, **H5.19**, **H.22**, **H5.23, H5.25**, **H6.1**, **H6.2**, **H6.3**, **H6.4**, **H6.5**, **H6.6** and **H6.7**.

A1.23 The remaining four hedgerow sections, namely **H1.1**, **H2.3**, **H2.4** and **H5.22** were assessed as 'poor' condition. Hedgerows are described in more detail in **Appendix EDP 2**.

A1.24 Hedgerows provide suitable cover for a range of protected species, including nesting habitat for birds, roosting and foraging bats, badger, dormouse, reptiles and amphibians. A habitat of principal importance for Wales, hedgerows are considered to be of Local level importance.

Image EDP A1.8: Hedgerow **H3.3**.

Mature Trees

A1.25 Semi-mature trees are often recorded in association with field boundaries including hedgerows and ditches, additionally there is lines of trees forming the northern boundary of field **F2.1**, and the boundaries of fields **F4.1** and **4.2**. Mature tree standards include pedunculate oak, crack willow, goat willow and poplar species. The mature trees are considered to be of Local level importance.

Image EDP A1.9: Semi-mature tree standard associated with the central ditch within field **F1.1**.

Dense and Scattered Scrub

A1.26 There are localised areas of dense and scattered scrub across the Solar Site. Specifically, along the field boundaries of **F1.3**, **F3.5**, **F3.6**, **F4.2**, **F5.4** and **5.12** and around the pond located in field **F5.8**. Comprising predominantly bramble, other species include hawthorn, blackthorn, goat willow and dog rose. Tall ruderal vegetation within this habitat includes meadow sweet, hedge woundwort and willowherb species.

A1.27 Dense scrub provides suitable cover for a range of protected species, including nesting birds, foraging bats, badger, dormouse, reptiles and amphibians. Whilst extensive in nature, this habitat is otherwise species poor and homogenous, and thus of importance at the Site level only.

Image EDP A1.10: Dense scrub located in the north-east corner of field **F1.3**.

Ditches

A1.28 Field boundaries within the Site are predominantly demarcated by ditches which are commonly associated along hedgerows. Although the survey was undertaken in July, many of the ditches were still holding water, however, 2024 was a particularly wet year. Other ditches that were dry are likely to potentially hold water at other times of year. All ditches within the Site are c. 1.5m to 3m wide. Approximately half of the of ditches had been heavily cattle poached. However, those that were protected by fencing or adjacent to arable fields generally have steep intact banks. The Bodoryn Cut is a large ditch, circa 5m wide, located immediately north of the Solar Site boundary, which the onsite ditches drain into.

A1.29 Plant species with the ditches include common reed (*Phragmites australis*), bull rush (*Scirpoides holoschoenus*), soft rush (*Juncus effusus*), hard rush, water plantain (*Alisma plantago-aquatica*), common duckweed (*Lemna minor*), meadowsweet, water mint (*Mentha aquatica*), redshank (*Persicaria maculosa*), willowherb sp., yellow flag iris (*Iris pseudacorus*), umbellifer species, common nightshade (*Solanum nigrum*), cut leaved cranes bill (*Geranium dissectum*) and common nettle.

A1.30 The ditches provide suitable habitat for water voles, specifically in areas where there is no cattle poaching. Additionally, they provide foraging opportunities for a range of protected species, including birds, bats, badger, reptiles and amphibians. The extensive nature of the ditches on Site and the ditches connectivity to the wider landscape, are thus of importance at the Site level for dry ditches, and of Local level importance for wet ditches.

Image EDP A1.11: Ditch located along hedgerow **H5.4**.

Standing Water

A1.31 A single pond is located within the Site, **WB5.8**, occurring within field **F5.8** and adjacent to hedgerow **H5.18**. The pond is surrounded by dense scrub. At the time of survey, standing water (<10cm) was present, with damp ground conditions also noted, indicative of holding more water at other times of year.

A1.32 Areas of standing water have the potential to provide breeding opportunities for amphibians, along with suitability for invertebrates and water vole. A priority habitat, standing water is considered to be of ecological value at the Local level.

Appendix EDP 2
Hedgerow Survey

METHODOLOGY

A2.1 A survey of the hedgerow network was undertaken as part of the initial Phase 1 Habitat survey (methods detailed above in **Appendix EDP 1**). Separately, a Habitat Condition Assessment of the entire hedgerow network on-site was undertaken on 09 October 2024.

A2.2 The Site, being in Wales, is not subject to Biodiversity Net Gain (BNG), however, a Habitat Condition Assessment of the hedgerows was undertaken following the guidance for habitat surveys as set out in The Statutory Biodiversity Metric User Guide[23], for which the habitat definitions primarily rely on descriptions set out in the UK Habitat Classification[24] and habitat conditions as set out for the Statutory Biodiversity Metric[25]. The Habitat Condition Assessment is based on a number of factors including hedgerow height, width, undisturbed ground flora, nutrient enrichment, invasive species and damage to determine whether the habitat is of 'good', 'moderate' or 'poor' condition.

Limitations

A2.3 The optimum time of year for a Hedgerow Survey to be undertaken is between April and September, this survey was undertaken slightly outside of this optimum period, however, the hedgerows were still partly in leaf during the survey, and it was possible to complete a species list for the hedgerows. Therefore, there are no significant limitations to the survey.

RESULTS

A2.4 The detailed results of the hedgerow surveys undertaken are provided in **Table EDP A2.1**. The location of hedgerows assessed within the Site is shown in **Plan EDP 1**.

Phase 1 Habitat Survey

A2.5 Field boundaries within the Site are predominantly demarcated by native hedgerows. The majority appeared managed and intact, measuring c.1.5m to 3m high and 2m to 5m wide, with semi-mature trees often recorded in association. Several of these hedgerows are associated with a wet ditch. All hedgerows across the Site are considered to be species-poor (containing on average less than five native woody species per 30m). Hedgerows that are species-poor defunct comprise **H1.2**, **H1.4**, **H2.1**, **H2.3**, **H6.3** and **H6.6**, with all others being species-poor intact.

A2.6 All hedgerows are dominated by hawthorn, with frequent blackthorn (*Prunus spinosa*), crack willow (*Salix × fragilis*) and dog rose (*Rosa canina*) and occasional elder (*Sambucus nigra*), elm (*Ulmus procera*) and sycamore (*Acer pseudoplatanus*). 16 of the hedgerows within the Solar and BESS Sites support mature tree standards therein, including pedunculate oak

[23] DEFRA (February 2024) Statutory Biodiversity Metric User Guide
[24] UKHab Ltd (July 2023) UK Habitat Classification Version 2.0 [https://www.ukhab.org]
[25] DEFRA (February 2024) Statutory Biodiversity Metric Technical Annex 1: Condition Assessments

(*Quercus robur*), crack willow and goat willow (*Salix caprea*). Hedgerow ground flora includes meadowsweet (*Filipendula ulmaria*), hedge woundwort (*Stachys sylvatica*), brambles (*Rubus fruticosus*), common ivy (*Hedera helix*), umbellifer species (*Apiaceae* sp.), common nettle (*Urtica dioica*), common hogweed (*Heracleum sphondylium*), field bindweed (*Convolvulus arvensis*), willow herb species (*Epilobium* sp), creeping thistle (*Cirsium arvense*) and herb Robert (*Geranium robertianum*).

Habitat Condition Assessment

A2.7 The Habitat Condition Assessment, which is based on a number of factors including hedgerow height, width, undisturbed ground flora, nutrient enrichment, invasive species and damage, identified the following hedgerows to be of 'good condition'; **H1.4**, **H1.5**, **H1.6**, **H2.2**, **H3.3**, **H3.4**, **H3.7**, **H5.2**, **H5.4**, **H5.18**, **H5.20**, **H5.21**, **H5.24**, **H5.26** and **H5.27**. The following hedgerows were identified to be of 'moderate' condition'; **H1.2**, **H1.3**, **H2.1**, **H3.1**, **H3.2**, **H3.5**, **H3.6**, **H3.8**, **H5.1**, **H5.3**, **H5.5**, **H5.6**, **H5.7**, **H5.8**, **H5.9**, **H5.10**, **H5.11**, **H5.12**, **H5.13**, **H5.14**, **H5.15**, **H5.16**, **H5.17**, **H5.19**, **H5.22**, **H5.23**, **H5.25**, **H6.1**, **H6.2**, **H6.3**, **H6.4**, **H6.5**, **H6.6** and **H6.7**. The remaining four hedgerow sections, **H1.1**, **H2.3**, **H2.4**, **H5.22** were assessed as 'poor' condition.

A2.8 All hedgerows within the Site are considered to be priority habitats as consist predominantly (80% or more) of at least one woody UK native species.

A2.9 The hedgerows on-site have inherent ecological value and also have value because they support, or are likely to support, a range of protected and notable species. However, hedgerows of this nature are common within the region, so are only considered to have Local level importance.

Appendix EDP 3
Breeding Bird Survey

METHODOLOGY

A3.1 Survey visits across the Solar Site were spread evenly between late March and early July to cover the main bird breeding season. Visits were started within half an hour from dawn and timed to be completed prior to 11a.m. where possible to cover the peak activity period. The dates and timings of the six breeding bird survey visits, and the weather conditions encountered, are summarised in **Table EDP A3.1**. Owing to the size of the site, it was necessary to undertake each survey over two mornings in order to target the peak early morning activity period. .

Table EDP A3.1: Breeding Bird Survey Visit Details

Visit Number	Date	Timing of Survey	Wind Speed (Beaufort Scale)	Cloud Cover (%)	Precipitation
1	10/04/2025	06:00-12:00	2	0	Nil
1	11/04/2025	06:00-11:00	2	0	Nil
2	23/04/2025	06:30-12:30	1-4	60-100	Nil
2	24/04/2025	06:30-11:20	1-5	0-10	Nil
3	20/05/2025	05:40-11:00	1-2	30-100	Drizzle
3	21/05/2025	05:20-11:50	2-3	0-10	Nil
4	10/06/2025	05:15-11:00	0-2	0-10	Nil
4	11/06/2025	05:15-11:30	0-3	10-100	Nil
5	02/07/2025	05:10-12:10	4-5	5-100	Nil
5	03/07/2025	05:15-11:20	1-5	0-10	Nil
6	08/07/2025	05:30-09:20	2-3	60-90	Nil
6	09/07/2025	05:30-09:30	1-2	50-100	Nil

A3.2 During each visit the Solar Site was walked at a slow pace to enable all birds detected to be identified and located. Frequent stops were made to scan suitable habitats and to listen for singing and calling birds. All areas of suitable breeding habitat within the Site boundary and immediately adjacent areas were approached to within 50m.

A3.3 During the survey the location and activity of each bird detected (including those seen or heard) was recorded and mapped using standard two-letter British Trust for Ornithology (BTO) species codes. The breeding status of each bird species identified at the Site was determined according to the nature and frequency of the behavioural elements recorded, as set out in **Table EDP A3.2**.

Table EDP A3.2: Field Evidence Used to Determine Bird Breeding Status

Breeding Status	Examples of Behaviour Exhibited
Confirmed	• Distraction display; • Nest building; • Nest with eggs; • Nest with young; • Used nest; • Recently fledged young; and • Adult carrying faecal sac/food.
Probable	• Pair observed in suitable nesting habitat in breeding season; • Permanent territory presumed through registration of territorial behaviour (song, etc.) on at least two different occasions, a week or more apart at the same place; • Courtship and display; • Visiting a probable nest site; • Agitated behaviour or anxiety calls from adults; • Brood patch on adult examined in the hand; and • Nest building or excavating nest-hole.
Possible	• Species observed in breeding season in possible nesting habitat; • Male in song; and • Adult giving alarm call.
Non-breeder	• Feeding birds only; • Birds flying over only; and • Lack of suitable breeding habitat.

A3.4 To inform the assessment in this report, the numbers of potential territories identified, the abundance of species at the County and National level, the quality of the habitat present and the geographical range of the birds concerned have been considered, based on national and regional accounts.

A3.5 The conservation status of each species of bird was also taken into account and the following lists were considered:

- Schedule 1 of the *Wildlife and Countryside Act* 1981 (as amended) – affords greater protection to certain breeding species that are considered appropriately at risk nationally and are listed additional legal protection accordingly;

- Priority species identified under Section 7 of the Natural Environment and Rural Communities (NERC) Act 2006;

- Birds of Conservation Concern[26] - under this approach Wales bird populations are assessed, using quantitative criteria, to determine the population status of each species and then placed on one of three lists; Red, Amber or Green; and

- Local conservation status as listed in the North East Wales Bird Report[27].

Limitations

A3.6 As with all breeding bird surveys following this technique, the process is open to some subjectivity in interpretation except where active nests are located. Therefore, recorded locations indicate the 'centre' of a territory and not necessarily the breeding location.

A3.7 Following best practice, the survey visits were timed to start around first light, to coincide with the period of peak activity for birds, most particularly passerine songbird species. However, a small number of surveys continued slightly past the optimal finish time of 11am. As the survey was aimed at assessing farmland species, in particular skylark that sing throughout the day as well as the other surveys being completed within optimal timings, this is not considered to significantly constrain the survey results.

A3.8 During surveys two and five, the wind speed got high, which made it more difficult to hear and identify some singing birds at times and potentially reduced activity levels as birds sheltered. However, wind speeds fluctuated throughout the surveys meaning that this was only a temporary limitation. In addition, when wind speeds were high surveyors take more time to cover the areas in order to reduce the risk of missing singing birds. Due to this, and the other surveys being carried out in optimal conditions, it is not believed that the surveys were constrained by climatic factors.

A3.9 Owing to the mobile and territorial nature of skylark activity during the first two surveys there may have been some double counting of birds.

A3.10 The Ecological Mitigation and Enhancement Area was not part of the survey area during visits one and two, and as such was not covered during these two survey visits, although the northern part of both fields was. Given that the main breeding opportunities in this area are in relation to skylark, and the remaining four visits did cover the area (with four visits recommended for skylark monitoring within the Bird Monitoring Methods book[28]), this is not considered to have significantly impacted the survey results.

A3.11 From survey visit three onwards, cattle had been let out onto the fields and as such limited access to some areas of the Solar Site. However, with the cattle mainly being contained by fences, surveyors were able to survey around these areas and still point count the fields sufficiently. This is therefore not considered to be a significant limitation to the survey results.

[26] Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. 2022. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus 2:1.
[27] Clwyd Bird Recording Group, Wright, C., Smith, D., Brenchley, A. (eds.), (2024), Northeast Wales Bird Report 2023, Number 45, Mold: Clwyd Bird Recording Group
[28] Gilbert, G., Gibbons, D.W., & Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.

RESULTS

A3.12 A total of 69 bird species were recorded during the surveys. Those of conservation concern were assessed for their likelihood of breeding. 26 birds of conservation concern were considered to possibly/probably be breeding on-site with an additional 12 non-breeding. Of those 26, one was listed on Schedule 1 of the *Wildlife and Countryside Act* 1981 (as amended), 13 were Priority Species and 22 were included on the latest Red and Amber lists of Birds of Conservation Concern. Full details of each species recorded, including their conservation status, are provided in **Table EDP A3.3-A3.4** and the distribution species of conservation importance are shown on **Plan EDP 4 - 10**.

A3.13 Species of note in the context of the Proposed Development, owing to their dependence on open arable and grassland for breeding include:

- 2-3 pairs of Lapwing; and
- 9-15 pairs of Skylark.

A3.14 Due to the variability in numbers on-site, detailed analysis of the skylark data took place in order to better assess the likely breeding population:

- Territory analysis of the skylark population across the six visits resulted in an estimated population of between 9-15 pairs. The initial two surveys carried out in April recorded up to 37 and 30 skylarks respectively with a large proportion singing. However, a number of these were along the site boundaries and drifting from adjacent off-site field parcels was observed, alongside territorial interactions. Owing to this drifting, as the birds looked to establish territories early in the season, it is also considered likely that some double counting may have taken place. This behaviour is reflective of early season territory establishment before commencing breeding, with numbers over-inflated accordingly. This proved to be the case, with the subsequent visits in the main breeding season considered a better and more accurate indicator of territories and more consistent with the two surveys completed in 2024 but not presented here. Furthermore, visits 1 and 2 were undertaken before cattle had been let out into the Solar Site area. This may also have contributed to a higher number of skylark looking to establish territories that were later relocated due to presence of cattle and heavy grazing, and potentially representing an annual fluctuation in activity with standard seasonal land management; and

- Throughout the remaining four surveys, numbers were fairly consistent with a slight drop off in numbers recorded during the final survey when the majority of breeding will have been completed and singing less common. The other three surveys during peak breeding season considered to best indicate territory numbers recorded an average of nine individuals with an average of seven singing. The analysis, while giving more weight to the three surveys in the core breeding season, has still arrived at a higher number as a precaution, given the initial two survey findings.

A3.15 While Amber Listed and a Priority Species, Skylark are common and widespread breeding residents in North East Wales and Wales. As such, while a relatively large population is present, this is only considered to be significant in the local context and population densities are relatively low given the Solar Site size.

A3.16 The diversity of bird species recorded on-site is relatively high reflecting the range of grassland, ditch, woodland and farmland present. However, the populations are relatively small for the size of the Solar Site (with the possible exception of skylark, for which numbers are considered typical for the size of the area and habitats present), which is likely a result of the dominance of intensively farmed arable land. Taking this into account, the breeding bird assemblage is judged to be of Local ecological importance.

Table EDP A3.3: Results of the Breeding Bird Survey 2024-2025 Species of Conservation Concern

Common Name	Scientific Name	Welsh Status	Regional Status[29]	Estimated No. Breeding Pairs	Survey Observations
Bullfinch	*Pyrrhula pyrrhula*	S7, Amber	Common breeding resident and winter visitor.	0-1	Only a single individual recorded.
Black-headed gull	*Chroicocephalus ridibundus*	S7, Red	Uncommon breeding resident and abundant winter visitor.	Non-breeder	Recorded on two surveys in low numbers.
Chaffinch	*Fringilla coelebs*	Amber	Very common breeding resident and winter visitor.	4-6	Recorded on all surveys on low numbers.
Common gull	*Larus canus*	Amber	Abundant winter visitor and passage migrant.	Non-breeder	Four recorded on a single survey.
Curlew	*Numenius arquata*	S7, Red	Uncommon breeding resident and common winter visitor to wetlands.	Non-breeder	One recorded on a single survey.
Dunnock	*Prunella modularis*	S7, Amber	Very common breeding resident.	7-13	Recorded on all surveys in low numbers.
Great black-backed gull	*Larus marinus*	Amber	Uncommon breeding resident and common winter visitor	Non-breeder	Recorded on two surveys in low numbers.
Goldcrest	*Regulus regulus*	Red	Very common breeding resident.	0-1	One recorded on a single survey.
Grasshopper warbler	*Locustella naevia*	S7, Red	Local breeding summer visitor and uncommon passage migrant (April/May and Sep).	0-1	Recorded on two surveys in low numbers.
Greenfinch	*Chloris chloris*	Red	Very common breeding resident and winter visitor.	1-2	Recorded on all surveys in low numbers.
Grey heron	*Ardea cinerea*	Amber	Fairly-common resident, breeding at a few sites.	Non-breeder	Recorded on two surveys in low numbers.

[29] Clwyd Bird Recording Group, Wright, C., Smith, D., Brenchley, A. (eds.), (2024), Northeast Wales Bird Report 2023, Number 45, Mold: Clwyd Bird Recording Group

Common Name	Scientific Name	Welsh Status	Regional Status[29]	Estimated No. Breeding Pairs	Survey Observations
Herring gull	*Larus argentatus*	S7, Red	Common breeding resident and abundant winter visitor.	Non-breeder	Recorded on all surveys in moderate to high numbers but not breeding on-site due to lack of suitable nesting habitat.
House martin	*Delichon urbicum*	Amber	Common breeding summer visitor.	Non-breeder	Recorded on three of the surveys in low numbers. Lack of suitable nesting habitat on-site.
House sparrow	*Passer domesticus*	S7, Amber	Very common breeding resident.	Non-breeder	Recorded on five surveys in low to moderate numbers. Likely breeding in off-site houses adjacent to the Site.
Kestrel	*Falco tinnunculus*	S7, Red	A familiar, but still uncommon, breeding resident.	0-1	Recorded on two surveys. Could be breeding within woodland adjacent with the Site boundary.
Red kite	*Milvus milvus*	Sch 1	Visitor and breeding resident, now more common and widespread, although numbers are still small in the north.	0-1	Recorded on one survey. Could be breeding within woodland adjacent with the Site boundary.
Lapwing	*Vanellus vanellus*	S7, Red	A declining breeding resident and abundant winter visitor.	2-3	Recorded on four of the surveys in low numbers for all except one survey where a larger flock was recorded.
Lesser black-backed gull	*Larus fuscus*	Red	Common breeding resident and very common winter visitor.	Non-breeder	Recorded in moderate to high number on the first survey and low numbers in four of the remaining five. No suitable nesting habitat on-site.
Linnet	*Linaria cannabina*	S7, Red	Common breeding resident and winter visitor.	3-6	Recorded on four surveys in low to moderate numbers.
Mistle thrush	*Turdus viscivorus*	Amber	Common breeding resident.	1-2	Recorded on four surveys in low to moderate numbers.

Common Name	Scientific Name	Welsh Status	Regional Status[29]	Estimated No. Breeding Pairs	Survey Observations
Magpie	*Pica pica*	Amber	Very common breeding resident.	10-13	Recorded on five surveys in low to moderate numbers.
Meadow pipit	*Anthus pratensis*	Red	Common breeding upland resident, passage migrant and winter visitor.	2-3	Recorded on two surveys. Survey one in large flocks unlikely to be breeding or to have established territories yet and survey two in low numbers when territories are more likely to have formed.
Reed bunting	*Emberiza schoeniclus*	S7	Fairly common, but local, breeding resident.	1-3	Recorded on four of the surveys in low numbers.
Rook	*Corvus frugilegus*	Red	Common breeding resident.	Non-breeder	Recorded on five of the surveys generally in low numbers. If present a rookery would have been visually obvious.
Skylark	*Alauda arvensis*	S7, Amber	Common breeding resident and winter visitor.	9 - 15	Recorded on all six surveys spread throughout the arable and grazed fields of the Site. Number significantly higher on first two surveys with lack of cattle, lots of territorial encounters and birds drifting from offsite fields. Later numbers were almost a third of these and therefore the middle ground, using analysis across visits and professional judgement has been adopted with regards to number of pairs.
Spotted flycatcher	*Muscicapa striata*	S7, Red	Uncommon breeding summer visitor.	0-1	A single recording on survey four.
Starling	*Sturnus vulgaris*	S7, Red	Very common breeding resident and winter visitor.	0-2	Recorded in low numbers on two surveys.
Swift	*Apus apus*	Red	Common but decreasing summer visitor.	Non-breeder	Recorded in low numbers on two surveys. No suitable nesting habitat on Site.

Common Name	Scientific Name	Welsh Status	Regional Status[29]	Estimated No. Breeding Pairs	Survey Observations
Snipe	*Gallinago gallinago*	Amber	Scarce breeding resident locally and common winter visitor.	0-1	Recorded in low numbers on two surveys. Unlikely to be nesting in the habitats present but possible.
Song thrush	*Turdus philomelos*	S7	Common breeding resident and winter visitor.	2-4	Recorded in low numbers on five surveys.
Shelduck	*Tadorna tadorna*	Red	A fairly-common breeding resident locally and very common year-round visitor, with peak numbers during the summer moult on the Dee estuary.	0-1	Recorded in low numbers on three surveys early in the season and in different locations so breeding considered unlikely.
Teal	*Anas crecca*	Amber	A rare breeding resident and an abundant winter visitor to estuaries and wetlands.	2-4	Recorded on low numbers on three of the surveys. Possibly breeding in the Bodoryn Cut, immediately adjacent to the Solar Site boundary.
Wheater	*Oenanthe oenanthe*	Amber	Scarce and declining breeding summer visitor and fairly common passage migrant.	2-3	Recorded in low numbers on two surveys.
Whitethroat	*Curruca communis*	Red	Common breeding summer visitor.	2-3	Recorded in low numbers in five of the surveys.
Willow warbler	*Phylloscopus trochilus*	Red	Very common breeding summer visitor.	0-1	One recorded on a single survey.
Yellowhammer	*Emberiza citrinella*	S7, Red	Uncommon and declining breeding resident.	0-1	Two recorded on a single survey.
Yellow wagtail	*Motacilla flava flavissima*	S7, Red	Scarce passage migrant and rare breeding summer visitor.	0-1	One recorded on a single survey.

Table EDP A3.4: Breeding Bird Survey Results 2024-2025, Unlisted Species

Common Name	Scientific Name
Blackbird	*Turdus merula*
Blackcap	*Sylvia atricapilla*
Blue tit	*Cyanistes caeruleus*
Buzzard	*Buteo buteo*
Carrion crow	*Corvus corone*
Cormorant	*Phalacrocorax carbo*
Chiffchaff	*Phylloscopus collybita*
Collard dove	*Streptopelia decaocto*
Canada Goose	*Branta canadensis*
Little egret	*Egretta garzetta*
Goldfinch	*Carduelis carduelis*
Great spotted woodpecker	*Dendrocopos major*
Great tit	*Parus major*
Jay	*Garrulus glandarius*
Jackdaw	*Coloeus monedula*
Long-tailed tit	*Aegithalos caudatus*
Lesser whitethroat	*Motacilla curruca*
Mallard	*Anas platyrhynchos*
Moorhen	*Gallinula chloropus*
Pheasant	*Phasianus colchicus*
Pied wagtail	*Motacilla alba*
Robin	*Erithacus rubecula*
Raven	*Corvus corax*
Redstart	*Phoenicurus phoenicurus*
Reed warbler	*Acrocephalus scirpaceus*
Stonechat	*Saxicola rubicola*
Stock dove	*Columba oenas*
Swallow	*Hirundo rustica*
Sedge warbler	*Acrocephalus schoenobaenus*
Tree creeper	*Certhia familiaris*
Woodpigeon	*Columba palumbus*
Wren	*Troglodytes troglodytes*

Appendix EDP 4
Winter Bird Survey

METHODOLOGY

A4.1 The species targeted were those of nature conservation importance (i.e. *Wildlife and Countryside Act* 1981 (as amended) Schedule 1, priority species and Red and Amber listed species of conservation concern), including the species whose main habitat is farmland, but also those species that use farmland in large numbers in winter but for which it is not necessarily their main habitat. Additionally, the surveys also targeted species for which for the Dee Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site is designated and Liverpool Bay/Bae Lerpwl SPA.

A4.2 Surveys were conducted across the Solar Site by experienced surveyors and involved the completion of six visits, undertaken monthly between November 2024 and February 2025. The surveys were conducted pre-defined transect routes designed to take surveyors to within 75m of the suitable habitats for the target species. However, there was some variation to these, at the discretion of the surveyor, according to the nature of the habitat present and the influence this had on bird detectability (e.g., height of grassland). Surveyors used binoculars and telescopes. Each surveyor recorded any Amber and Red list species encountered, along with any notable behaviour.

A4.3 Each survey visit was carried out by a single experienced surveyor over two days. It is considered that this level of repetition provides an adequate estimate for the total count of the core winter population. It is also considered that such repetition is important as some fields will potentially change habitat type during the survey period, for example when tilled and sown fields develop a covering of germinated winter cereal. This potentially could have an impact on the suitability of such a field to support specific over-wintering bird species.

A4.4 The dates and timings of the survey visits each of which took two days to complete, and the weather conditions encountered, are summarised in **Table EDP A4.1**.

Table EDP A4.1: Winter Bird Survey Visit Details

Visit Number	Date	Timing of Survey	Wind Speed (Beaufort Scale)	Cloud Cover (%)	Precipitation/ Visibility
1	05/11/2024	08:00–14:00	1	90	0
1	06/11/2024	08:00-12:00	1	80	0
2	03/12/2024	08:30–15:30	1	20 to 35	0
2	04/12/2024	08:30-15:45	1 to 4	5 to 65	0
3	16/01/2025	08:45-16:00	1 to 2	5 to 19	0
3	17/01/2025	09:00-12:00	1 to 5	1 to 5	0
4	30/01/2025	08:30-16:30	3 to 4	10 to 75	0
4	31/01/2025	08:50-12:45	1 to 5	15 to 100	0
5	18/02/2025	08:30-16:30	4	90	0

Visit Number	Date	Timing of Survey	Wind Speed (Beaufort Scale)	Cloud Cover (%)	Precipitation/ Visibility
5	19/02/2025	08:45-12:15	3	90	0
6	27/02/2025	08:45-16:30	1 to 2	15 to 60	0
6	28/02/2025	08:45-12:15	1	1 to 5	0

A4.5 Registrations of target bird species were recorded and assigned to the location where they were first detected (if flushed). Flying birds were only recorded if they were clearly associated with the Site (e.g. just flushed or about to land).

A4.6 Following completion of all survey visits, an average (mean) count and maximum count of each species of conservation concern was calculated for the Site.

A4.7 To inform the assessment in this report, the abundance of species on-site, the abundance of species at the County and National level, the quality of the habitat present and the geographical range of the birds concerned have been considered, based on national and regional accounts.

A4.8 The conservation status of each species of bird was also taken into account and the following lists were considered:

- Schedule 1 of the *Wildlife and Countryside Act* 1981 (as amended) – affords greater protection to certain breeding species that are considered appropriately at risk nationally and are listed additional legal protection accordingly;
- Priority species identified under Section 7 of the NERC Act;
- Birds of Conservation Concern[30] - under this approach Wales bird populations are assessed, using quantitative criteria, to determine the population status of each species and then placed on one of three lists; Red, Amber or Green; and
- Local conservation status as listed in the North East Wales Bird Report[31].

Limitations

A4.9 Survey visits were completed on calm days with good visibility, and avoiding periods of heavy rain where possible, although some days of higher wind speed are expected due to the time of year. It is therefore considered that the results provide a representative overview of the wintering bird interest at the Site and have not been limited by seasonal or climatic factors.

A4.10 A limitation with surveying birds on arable land in winter is that birds vary in detectability. This is typically a function of the species size, species behaviour (including 'flushing' distance, flocking behaviour, crypticity), foraging ecology and field characteristics (including vegetation

[30] Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. 2022. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus 2:1.
[31] Clwyd Bird Recording Group, Wright, C., Smith, D., Brenchley, A. (eds.), (2024), Northeast Wales Bird Report 2023, Number 45, Mold: Clwyd Bird Recording Group

density and height, area of the field)[32]. As such, a simple 'field perimeter' based count can miss significant numbers of birds, particularly where the field vegetation is tall or dense. This is particularly true for certain bird species, including the Red-listed skylark, and the Amber-listed meadow pipit.

A4.11 It should be noted that for a large number of species, including thrushes, sparrows, finches and buntings in most field types, the overall majority (i.e. >90%) can be recorded using a 'perimeter count'. However, where detectability may be an issue, comparisons of bird densities or total numbers between fields will not be possible purely from using perimeter counts as the field characteristics, and hence detectability, vary between field parcels.

A4.12 The survey methodology therefore involved, where access allowed, walking to within a maximum distance of 75m of all suitable habitats for the target wintering bird species. However, with regard to the effect of vegetation density and height on the ability to record birds, the survey method relies on the judgement of an experienced surveyor to assess when a count is complete. As such, in fields with more ground cover, a greater frequency of transects across open areas (and hence reduced maximum distance) is required.

A4.13 'Double counting' could also affect results, particularly with the whole-area search approach where birds could be flushed from one field to another. With reference to Wilson *et al*. (1996)[33], although this source of error cannot be eliminated, it can be minimised by taking account of birds flushed to fields yet to be counted (namely through the detailed recording of bird movements on site plans).

A4.14 The Ecological Mitigation and Enhancement Area was not part of the survey area at the time of the winter bird surveys, and as such was not covered in detail during these visits. However, the northern part of both fields was covered, and any significant adjacent activity was noted. This is therefore not considered to have significantly impacted the survey results.

RESULTS

A4.15 A total of 33 bird species of nature conservation importance were recorded during the course of the winter bird survey (see **Table EDP A4.2**), with a further 28 species not of conservation importance also recorded (see **Table EDP A4.3**). The results are illustrated on **Plans EDP 11-16**.

A4.16 The diversity and abundance of species varied significantly across the surveys and was generally relatively high. Of particular note was the presence of various waders and waterfowls associated with the wet fields and ditches particularly within the north of the Site. The sporadic use of the Solar Site by the majority of species is likely reflective of the availability of similar

[32] Atkinson, P.W., Fuller, R.A., Gillings, S. & Vickery, J.A. (2006). Counting birds on farmland habitats in winter. *Bird Study*, 53:3, 303-309

[33] Wilson, J.D., Taylor, R. & Muirhead, L.B. (1996) Field use by farmland birds in winter: an analysis of field type preferences using re-sampling methods. Bird Study, 43, 320–332

foraging opportunities across the wider landscape of which the Solar Site makes up a small part of this available resource.

A4.17 Species of particular note are discussed below:

- Teal – the estimated population of the Dee Estuary SPA and Ramsar Site for this species is 5251[34]. Based on other studies of functionally linked land[35] which have been applied for the purposes of this assessment, if a site supports at least 1% of this population across the majority of visits, it could be considered as functionally linked. In this case, the threshold was exceeded on 4 of the 6 surveys and both the average of 125 individuals and max count of 244 individuals were over the 1% threshold of 53. However, it should be noted that a large proportion of the recordings related to birds using the wet ditches bounding or outside of the north of the Solar Site. Furthermore, given the spatial separation of the Site from the Dee Estuary (approximately 9.9km at its closest point) it is considered more likely that it is an independent population from the SPA. Particularly as teal are not uncommon on inland waters in winter. However, given uncertainty in this regard, a precautionary approach is taken and the population of this species is considered as a worst case to be potentially functionally linked and therefore of up to International level importance;

- Shelduck, curlew, redshank – although only recorded in small numbers and sporadically using the site (recorded on three surveys, one survey and one survey respectively), these species are qualifying species of the Dee Estuary SPA and Ramsar Site. As such, these more specialist wetland species, are considered to be of at least Local Level importance;

- Lapwing – only recorded on three of the six visits in flocks moving between fields both on- and off-site. However, due to being a Priority Species and recorded in flocks of up to 100, this species is considered to be of at least Local importance;

- Snipe and jack snipe – both recorded fairly regularly across the survey visits in small numbers primarily associated with the wet ditches. They appear to be more resident on Site than some of the other wetland species and are both on the Amber list. As such the populations are of Local to County importance; and

- Gulls - including black-headed and herring gull were recorded in large flocks utilising the site for foraging opportunities. Given the large numbers but relatively common nature of the species in the region, these species are considered of local ecological importance.

A4.18 Low numbers of other priority species or Birds of Conservation Concern were also recorded including bullfinch, dunnock, kingfisher, reed bunting and yellowhammer.

A4.19 In summary, the diversity and abundance of over-wintering birds is relatively high reflecting the proximity to coastal areas and nature of habitats present, including the large expanse of grazed and arable fields and their boundary habitats which support populations of farmland birds as well as various waterfowl and waders, particularly in association with wetter areas and ditches.

[34] Population estimates from the SPAs Natura 2000 Data Form

[35] Palmer, E. and Smart, M. (2021) Identification of wintering and passage roosts on Functionally Linked Land of the Severn Estuary - Gloucestershire and Worcestershire (Phase 5). Natural England Commissioned Reports. NECR401

Use of the Solar Site by flocking species varied across the survey visits reflecting their use of the wider landscape for foraging. The population of teal is significant with numbers recorded suggesting a possible functional link to the Dee Estuary SPA and Ramsar Site.

A4.20 Overall, given this diversity of species and presence of larger flocks, albeit sporadically, the winter bird assemblage present, as a collective, within the Solar Site is judged to be of County ecological importance. The exception is the teal population which is considered to be of up to International importance, assuming on a precautionary worst case basis that it forms part of the wider Dee Estuary SPA population.

Table EDP A4.2: Winter Bird Survey Results 2024-2025, Notable Species Only

Common Name	Scientific Name	UK Status	Regional Status[36]	Distribution On-site	Abundance On-site	
					Mean Count	Max. Count
Black-headed gull	*Chroicocephalus ridibundus*	Red List Priority Species	Uncommon breeding resident and abundant winter visitor.	Recorded within both arable and grazed fields. Numbers recorded range from single individuals to large flocks of up to 180.	93.33333333	260
Bullfinch	*Pyrrhula pyrrhula*	Amber List Priority species	Common breeding resident and winter visitor.	Three individuals recorded during survey four, in the southern BESS section.	0.5	3
Cetti's warbler	*Cettia cetti*	Schedule 1 species	Increasing breeding resident.	Recorded twice on separate surveys within woodland adjacent to the Site.	0.333333333	1
Chaffinch	*Fringilla coelebs*	Amber List	Very common breeding summer visitor and scarce winter visitor.	Recorded on all surveys within hedgerows.	5.166666667	13
Coal tit	*Periparus ater*	Amber List	Very common breeding resident.	Recorded within hedgerows.	0.666666667	2
Common gull	*Larus canus*	Amber list	Abundant winter visitor and passage migrant.	Eight individuals recorded on the fourth survey within arable fields.	1.333333333	8
Curlew	*Numenius arquata*	Red List Priority species	Uncommon breeding resident and common winter visitor to wetlands.	A single individual recorded on the third survey on the northern boundary next to a stream.	0.166666667	1
Dunnock	*Prunella modularis*	Amber List Priority Species	Very common breeding resident.	Recorded on all surveys within hedgerows.	6.833333333	18
Goldcrest	*Regulus regulus*	Red list	Very common breeding resident.	Only recorded on survey six, the majority within woodland habitat.	0.833333333	5

[36] Clwyd Bird Recording Group, Wright, C., Smith, D., Brenchley, A. (eds.), (2024), Northeast Wales Bird Report 2023, Number 45, Mold: Clwyd Bird Recording Group

Common Name	Scientific Name	UK Status	Regional Status[36]	Distribution On-site	Abundance On-site	
					Mean Count	Max. Count
Greenfinch	*Chloris chloris*	Red list	Very common breeding resident and winter visitor.	Recorded within hedgerows.	0.166666667	1
Fieldfare	*Turdus pilaris*	*Wildlife and Countryside Act* 1981 Schedule 1 species Amber list	Fairly common winter visitor.	Recorded on the majority of surveys, interacting with woodland and trees within hedgerows. Some flocks recorded of up to 22 individuals.	12.5	61
Herring gull	*Larus argentatus*	Red List Priority Species	Common breeding resident and abundant winter visitor.	Flocks recorded within arable and grazed fields of up to 90 individuals.	50.16666667	176
House sparrow	*Passer domesticus*	Amber List Priority Species	Very common breeding resident.	Majority recorded adjacent to the Site within hedgerows or gardens of offsite buildings.	6.833333333	22
Jack snipe	*Lymnocryptes minimus*	Amber list	A scarce winter visitor.	Recorded throughout the site btu with the majority nearby to watercourse or ditch habitats.	9	28
Kestrel	*Falco tinnunculus*	Red list Priority species	A familiar, but still uncommon, breeding resident	Two individuals recorded on the sixth survey interacting with arable fields.	0.333333333	2
Kingfisher	*Alcedo atthis*	*Wildlife and Countryside Act* 1981 Schedule 1 species	Scarce breeding resident and winter visitor	Two individuals recorded on the third survey interacting with watercourse habitat.	0.333333333	2
Lapwing	*Vanellus vanellus*	Red List Priority Species	A declining breeding resident and abundant winter visitor.	Large majorities were recorded on the first survey only, these were recorded within arable fields with flocks numbering up to 100 individuals.	31.66666667	182

Common Name	Scientific Name	UK Status	Regional Status[36]	Distribution On-site	Abundance On-site	
					Mean Count	Max. Count
Lesser black-backed gull	*Larus fuscus*	Red list	Common breeding resident and very common winter visitor.	A single individual was recorded on the sixth survey within an arable field.	0.166666667	1
Magpie	*Pica pica*	Amber List	Very common breeding resident.	Individuals recorded throughout the Site, mostly within hedgerows and woodland.	9.666666667	17
Meadow pipit	*Anthus pratensis*	Red List	Common breeding upland resident, passage migrant and winter visitor.	Recorded throughout the Site, interacting with the arable and grazed fields.	46.83333333	112
Mistle thrush	*Turdus viscivorus*	Amber list	Common breeding resident.	A single individual was recorded adjacent to watercourse habitat on the fourth survey.	0.166666667	1
Redshank	*Tringa totanus*	Red List	Very local breeding visitor, abundant passage migrant and fairly common winter visitor.	Nine individuals were recorded on the fifth survey within an arable field.	1.5	9
Redwing	*Anthus pratensis*	*Wildlife and Countryside Act* 1981 Schedule 1 species Amber list	Common winter visitor.	Flocks recorded throughout the Site within hedgerow and woodland habitats.	123.3333333	269
Reed bunting	*Emberiza schoeniclus*	Priority Species Amber list	Fairly common, but local, breeding resident.	Recorded nearby to watercourse habitat.	1.333333333	5
Rook	*Corvus frugilegus*	Red List	Common breeding resident.	Recorded within arable and grazed fields with flocks up to 120 individuals.	42.33333333	153

Common Name	Scientific Name	UK Status	Regional Status[36]	Distribution On-site	Abundance On-site	
					Mean Count	Max. Count
Shelduck	*Tadorna tadorna*	Red List	A fairly common breeding resident locally and very common year-round visitor, with peak numbers during the summer moult on the Dee estuary.	Small numbers recorded within the arable and grazed fields.	2.5	6
Skylark	*Alauda arvensis*	Amber List Priority species	Common breeding resident and winter visitor.	Flocks were recorded within the arable fields.	28.16666667	81
Snipe	*Gallinago gallinago*	Amber List	Scarce breeding resident locally and common winter visitor.	Recorded within the arable fields in small flocks.	7.333333333	23
Song thrush	*Turdus philomelos*	Priority Species Amber list	Common breeding resident and winter visitor.	Recorded within hedgerow and woodland habitat.	1.666666667	5
Starling	*Sturnus vulgaris*	Red List Priority Species	Very common breeding resident and winter visitor.	Small to medium sized flocks recorded interacting with the arable and grazed fields.	42.66666667	97
Teal	*Anas crecca*	Amber List	A rare breeding resident and an abundant winter visitor to estuaries and wetlands.	A large majority of the individuals were recorded adjacent to the watercourse adjacent to the northern Solar Site boundary (Bodoryn Cut). However, some recordings found them within the arable and grazed fields.	125.1666667	244
Wigeon	*Mareca penelope*	Amber List	An abundant winter visitor to estuaries and wetlands.	A single individual recorded on the second survey nearby to watercourse habitat.	0.166666667	1
Yellowhammer	*Emberiza citrinella*	Red list Priority species	Uncommon and declining breeding resident.	Two recorded on the final survey with hedgerow.	0.333333333	2

Table EDP A4.3: Winter Bird Survey Results 2024-2025, Unlisted Species

Common Name	Scientific Name
Blackbird	*Turdus merula*
Blackcap	*Sylvia atricapilla*
Blue tit	*Cyanistes caeruleus*
Buzzard	*Buteo buteo*
Carrion crow	*Corvus corone*
Collared dove	*Streptopelia decaocto*
Gadwall	*Mareca strepera*
Goldfinch	*Carduelis carduelis*
Great-spotted woodpecker	*Dendrocopos major*
Great tit	*Parus major*
Green woodpecker	*Picus viridis*
Greylag goose	*Anser anser*
Jackdaw	*Coloeus monedula*
Little egret	*Egretta garzetta*
Long-tailed tit	*Aegithalos caudatus*
Mallard	*Anas platyrhynchos*
Moorhen	*Gallinula chloropus*
Pheasant	*Phasianus colchicus*
Pied wagtail	*Motacilla alba*
Raven	*Corvus corax*
Robin	*Erithacus rubecula*
Sparrowhawk	*Accipiter nisus*
Stock dove	*Columba oenas*
Stonechat	*Saxicola rubicola*
Treecreeper	*Certhia familiaris*
Tufted duck	*Aythya fuligula*
Woodpigeon	*Columba palumbus*
Wren	*Troglodytes troglodytes*

Appendix EDP 5
Bat Surveys

METHODOLOGY

A5.1 The scope of bat surveys undertaken at the Site was determined following completion of the Extended Phase 1 Habitat survey and review of relevant desk study findings and with reference to best practice guidelines published by the Bat Conservation Trust[37].

Tree Roost Surveys

Ground Level Tree Assessment

A5.2 Owing to the presence of suitably mature trees within or adjacent to the Site, a Ground Level Tree Assessment (GLTA) of these trees was undertaken to record any external evidence of roosting bats or any features capable of supporting roosting bats that can be seen from the ground.

A5.3 The survey was completed on 15 and 16 April 2025 by a bat licensed ecologist in accordance with the good practice guidelines referred to above. A survey of the trees within the Ecological Mitigation and Enhancement Area, brought into the survey scope at a later date, was undertaken on 07 July 2025. The trees were searched as thoroughly as possible from ground level with all elevations covered where these could be accessed.

A5.4 Suitable features for roosting bats (Potential Roost Features - PRFs) recorded (where present) include features formed by disease, decay, damage and association as listed within the guidelines published by the Bat Conservation Trust and detailed within the 'Bat Roosts in Trees[38] book. In addition, bat, bird and dormouse boxes are also considered to provide potentially suitable roosting opportunities.

A5.5 Signs of roosting bat presence recorded (where present) include seeing a bat within a PRF, or finding bat droppings within, around or beneath a PRF. Other signs which could indicate a roost include smoothing of the entrance to a PRF, staining around or beneath a feature, audible squeaking from the roost at dusk or during warm weather, and large/regularly used roosts may produce a distinctive odour.

A5.6 The roost suitability of each tree was categorised as either:

- None - Either no PRFs in the tree or highly unlikely to be any;
- Further Assessment Required (FAR) - Tree is of a size, age or condition that is likely to have PRFs, further assessment is therefore required to establish if PRFs are present in the tree;
- PRF - Tree supports at least one PRF which is visible from the ground; and

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

[38] Bat Tree Habitat Key (2018), Bat Roosts in Trees – A Guide to Identification and Assessment for Tree-Care and Ecology Professionals. Exeter: Pelagic Publishing.

- Confirmed roost - Signs of roosting bat presence were found within or around a PRF.

A5.7 For those trees categorised as having a 'PRF', an estimate was made as to whether each PRF visible from the ground was likely to suitable for individual bats (PRF-I) or multiple bats (PRF-M). It should be noted that this categorisation from ground level is an estimate only, as it is often not possible to establish the internal extent of a tree feature from ground level.

Limitations

A5.8 As with any ground level assessments of trees, certain features may not be visible or fully visible from the ground. Assessment of trees can be undertaken at any time of year but is best undertaken in winter/early spring. At the time of the main survey (April) trees were not in full leaf which allowed for good visibility into the crown of the tree.

A5.9 Some trees located on the Site boundary were only assessed from one side, therefore features on the opposite side may have been missed.

A5.10 It should be noted that this type of assessment is based on features visible from ground level and is not considered to be a definitive bat roosting survey.

Bat Activity Surveys

A5.11 During the Extended Phase 1 Habitat survey in July 2024, an initial assessment was undertaken of suitability of the habitats within and immediately adjacent to the Site for foraging and commuting bats. In accordance with the good practice guidelines referred to above, the Site was assigned to one of the following categories:

- High suitability - Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, treelined watercourses and grazed parkland. Site is close to and connected to known roosts;

- Moderate suitability - Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water;

- Low suitability - Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub;

- Negligible suitability - No obvious habitat features on Site likely to be used by commuting or foraging bats; and

- None - No habitat features on Site likely to be used by any commuting or foraging bats at any time of year.

A5.12 Having determined that the overall suitability of the Site is Moderate, a proportionate level of survey effort was expended in terms of the number and frequency of NBW surveys and automated detector surveys. These are described in further detail below.

Nighttime Bat Walkover Surveys

A5.13 NBW surveys were undertaken across the Site with the objective of identifying important roosting and commuting behaviour as well as foraging areas used by bats. A total of three NBW surveys were undertaken over the course of the active bat season in 2024 and 2025.

A5.14 Details of the date, timing, and weather conditions during each of the NBW surveys are given in **Table EDP A5.1**. All visits were completed in weather conditions that were generally suitable for such surveys.

Table EDP A5.1: Date, Timing and Weather Conditions during NBW Surveys

Survey Date	Sunset Time	Start - Finish Time	Weather Conditions			
			Temperature (ºC)	Cloud Cover (%)	Wind (Beaufort Scale)	Precipitation
21.08.24	20:29	Start: 20:29	15	40	5	0
		Finish: 22:29	14	30	4	0
08.10.24	18:33	Start: 18:33	16	40	1 - 2	0
		Finish: 20:47	12	25	1 - 2	0
23.04.25	20:29	Start: 20:29	13	100	1	0
		Finish: 22.29	10	100	1	0

A5.15 During the NBW surveys, a total of four stationary observation points were surveyed across all NBW surveys, with surveyors positioned along potential flight lines close to potential roost sources. Following the stationary part of the NBW survey, a total of four transect routes were walked simultaneously within the Site by different surveyors, with the routes designed to provide coverage of all habitats within the Site. The stationary observation points and transect routes are illustrated on **Plans EDP 18-20**. The NBW surveys were carried out by experienced bat surveyors and an assistant, with the stationary part of the NBW survey starting at sunset and continuing for a minimum of 30 minutes followed by a walked transect part of the survey, carried out until two-three hours after sunset. The walked part of the NBW survey was carried out at a slow and steady pace and where appropriate surveyors stopped temporarily or took detours from the route to observe bat behaviour.

A5.16 All bat calls were recorded, time-stamped and location tagged using Elekon Batlogger M bat detectors, and any observed behaviour described on survey forms, in order to characterise the value of the Site and its component habitats for foraging and commuting bats.

A5.17 Bats were identified on the basis of their characteristic echolocation calls, which analysed using computer sonogram analysis Kaleidoscope to confirm species identification. Species of Myotis bat and long-eared bat are difficult to tell apart solely from their echolocation calls and were therefore grouped as such.

Limitations

A5.18 Some fields were not able to be accessed during the Summer and Autumn NBWs due to the presence of cattle.

A5.19 Flooding of the Solar Site fields occurred in October 2024, therefore, some areas were not accessed during the Autumn NBW. Additionally, poor ground conditions created time constraints for the surveyors and therefore the BESS Site was not surveyed during this visit. Due to the overall coverage of the Site across the transect and with automated detectors, this is not considered to have significantly limited the results.

Automated Detector Surveys

A5.20 Bat activity within the Site was also sampled using Anabat Express detectors (hereafter referred to as 'automated detectors'), which are deployed in fixed locations to automatically trigger and record bat echolocation calls over multiple nights at a time. In this case, automated detectors were deployed at six locations across the Site, this included five across the Solar Site and one at the BESS Site, as shown on **Plan EDP 21**, covering all habitat types within the Site and concentrating on locations of known/anticipated higher impacts. The automated detectors were fixed in secure locations, with an external microphone attached circa 1-2 m above ground, where possible, and the microphone directed away from the tree/branch to maximise detection sensitivity. In total, seven surveys were completed over the course of the active bat season in 2024 and 2025, each comprising sampling by automated detectors for at least five consecutive nights. Details of dates, sampling locations and weather conditions during each of the surveys are given in **Table EDP A5.2**.

Table EDP A5.2: Automated Detector Survey Details

Sampling Period Dates	Location	Microphone	
	Reference Number and OS Grid Reference	Height	Direction
18/07/24 – 22/07/24	L1: SH96763 77405 L2: SH97680 77719 L3: SH98522 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01317 73453	L1: 2m L2: 1.5m L3: 2m L5a:1m L5b: 1m L6: 2m	L1: W L2: S L3: NE L5a: SE L5b: E L6: S
15/08/24 – 20/08/24	L1: SH96762 77409 L2: SH97680 77716 L3: SH98552 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01317 73458	L1: 1.5m L2: 1.3m L3: 1.3m L5a:1.2m L5b: 1m L6: 1m	L1: SW L2: E L3: N L5a: S L5b: E L6: S

Sampling Period Dates	Location	Microphone	
	Reference Number and OS Grid Reference	Height	Direction
18/09/24 – 24/09/24	L1: SH96762 77409 L2: SH97680 77716 L3: SH98552 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01390 73655 (moved location due to cattle)	L1: 1.5m L2: 1.5m L3: 1.5m L5a:1.5m L5b: 1m L6: 1m	L1: NW L2: SW L3: NE L5a: S L5b: E L6: SE
08/10/24 – 14/10/24	L1: SH96762 77409 L2: SH97680 77716 L3: SH98552 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01317 73453	L1: 1.5m L2: 1m L3: 1.5m L5a:1.5m L5b: 0.75m L6: 1.5m	L1: NW L2: W L3: NE L5a: S L5b: NE L6: S
16/04/25 – 23/04/25	L1: SH96762 77409 L2: SH97680 77716 L3: SH98552 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01317 73453	L1: 2m L2: 2m L3: 2m L5a:1.5m L5b: 1.5m L6: 2m	L1: W L2: S L3: NE L5a: SE L5b: E L6: SE
08/05/25 – 14/05/25	L1: SH96762 77409 L2: SH97680 77716 L3: SH98552 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01317 73453	L1: 1.75m L2: 1.75m L3: 1.75m L5a:1.5m L5b: 0.75m L6: 1.5m	L1: NW L2: SW L3: NE L5a: SW L5b: SE L6: S
11/06/25 – 16/06/25	L1: SH96762 77409 L2: SH97680 77716 L3: SH98552 78121 L5a: SH98508 77457 L5b: SH99409 76785 L6: SJ01390 73655 (moved location due to cattle)	L1: 2m L2: 1.5m L3: 1.5m L5a:1.25m L5b: 0.5m L6: 1.5m	L1: W L2: SE L3: NE L5a: S L5b: NE L6: W

A5.21 The sound files recorded by the automated detectors were filtered for each of the UK's bat species/species groups using Analook software's filter function. The parameters for the species filters are based on those proposed by Chris Corben and Kim Livengood[39] and have been fine-tuned using known call parameters for each of the species. Except for common and soprano pipistrelles, for which the filters are more accurate, all files passing the various filters plus approximately 10% of files that did not pass any species filters (noise files) were checked

[39] Taken from Analook W training course and workshop, September 2013

manually using sonogram analysis in accordance with published guides to confirm the species identification of each bat call.

Limitations

A5.22 The identification of calls and species using Analook software is dependent upon the quality of the recording made which can be influenced by the following factors, which may limit levels of activity and species recorded:

- Weather conditions - rainfall and wind;
- Distance of bat from the detector's microphone;
- Presence of obstructions through which the noise must pass i.e., trees/leaves; and
- Proximity of other noise sources such as roads.

RESULTS

Tree Roost Surveys

Ground Level Tree Assessment

A5.23 A total of 24 trees were identified during the GLTA as having Potential Roosting Features (PRF) for bats that could be seen from the ground. 17 of the trees supported PRFs that were estimated from the ground as suitable for individual bats (PRF-I) and seven trees supported PRFs that were estimated as being suitable for multiple bats (PRF-M). Further details on each of these trees are provided in **Table EDP A5.3** and their locations are shown on **Plan EDP 17**.

A5.24 All other trees were found to either be of no suitability for roosting bats, or require further survey to determine suitability (FAR), and due to the lack of impacts on these trees, further survey was not undertaken and these trees have not been mapped/described.

Table EDP A5.3: Details of Trees with Bat Roost Suitability

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
G201a		Goat willow	• Split in stem, 2.5m high and east facing. No evidence of bats present. **PRF-I**; and • Rot hot in tree, 2m high and east facing, doesn't appear to go further into tree cavity **PRF-I.**	PRF-I
G201b		Willow sp.	• Stem split leading to trunk cavity. 10cm wide x 12cm wide. **PRF-M.** Bird droppings were identified around feature, but no owl pellets.	PRF-M

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
G201c		Willow sp.	• Small rot hole 3cm x 6cm but possibly leading into larger cavity within main stem. Located 2m high and east facing. **PRF-I.**	PRF-I
G201d		Willow sp.	• Trunk cavity located 1m high and east facing. **PRF-M**.	PRF-M

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
G201e		Willow sp.	• Split in stem located 2m high on the north side of the tree but feature is east facing. **PRF-I**.	PRF-I
G201f (T6)		Willow sp.	• Trunk cavity which is east facing and 1.5m high. **PRF-I**.	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T99 (T7)		Poplar sp.	• Dead branch with possible cavity in stem. Located 43m high and on the east side of the tree with feature facing south. **PRF-I**.	PRF-I
T100 (T8)		Poplar sp.	• Trunk cavity located 2m high and south facing. **PRF-I**	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T103 (T9)		Poplar sp.	• Large opening, but leading to smaller trunk cavity. 1.5m high and east facing. **PRF-I**.	PRF-I
135a (T10)		Poplar sp.	• Trunk split located 3m high and south facing. **PRF-I**.	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
135b		Pine sp.	• Tree with woodcrete bird box.	PRF-M
135c	No photo.	Pine sp.	• Tree with bat box.	PRF-M
135d	No photo.	Pine sp.	• Tree with wooden bird/bat box.	PRF-M

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
135e		Pine sp.	• Tree with woodcrete bat box.	PRF-M

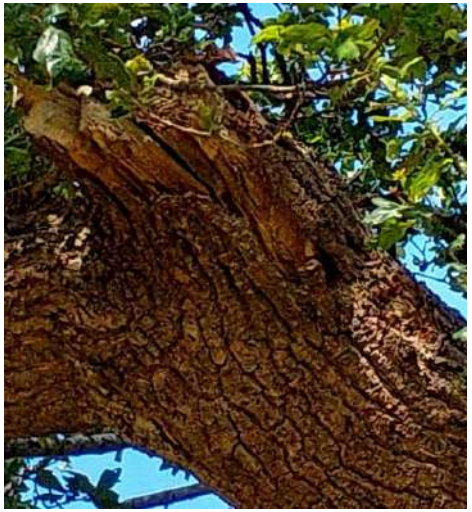
Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T235	PRF-M:  PRF-I: 	Pedunculate oak	• Mature oak with rot hole next to dead limb, measuring circa 15cm x 8cm, located circa 4.5m high and facing northwest. **PRF-M**; and • Other smaller feature on the same tree, possible rot hole with callus roll, circa 5cm x 5cm. Located 5m high and west facing. **PRF-I**.	PRF-M

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T240		Pedunculate oak	• Mature oak with possible features within deadwood in northern limb, feature facing west. Located 8 - 9m high. **PRF-I**.	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T249	 	Pedunculate oak	• Mature oak, with rot hole at end of limb where limb has been cut. Located circa 7m high and north facing. **PRF-I**; and • Another rot hole in main stem, although could be superficial. Located 6m high and west facing. **PRF-I**.	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T274	 	Pedunculate oak	• Loose bark in main trunk, located circa 3m high and north facing. **PRF-I**; and • Loose bark in east limb, located circa 6m high and northeast facing. **PRF-I.**	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T282		Pedunculate oak	• Small rot hole in trunk, located circa 2m high and north facing. **PRF-I**.	PRF-I
T14		Oak species	• Four knotholes circa 5m high and south facing, with clear drop zone. **PRF-I**.	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T18		Oak species	• Knothole circa 8m high and east facing. Also lifting bark. **PRF-I**.	PRF-I
T19		Oak species	• Pruning cut feature with clear drop zone. **PRF-I**.	PRF-I

Tree/Group Ref. No.	Photograph	Tree Species	Potential Roost Features and their Estimated Suitability	Estimated Maximum Roosting Suitability of Tree
T20		Oak species	• Knot holes with clear drop zone. **PRF-I.**	PRF-I
T21		Oak species	• Vertical crack from base up to 1.5m. **PRF-I.**	PRF-I

Bat Activity Surveys

Nighttime Bat Walkover

A5.25 As noted above in relation to the scope/design of the bat activity surveys, the initial habitat assessment of the Site found the Site to be of moderate suitability for foraging and commuting bats. This is due to the dominance of species-poor agricultural fields providing a limited foraging resource. Hedgerows, mature tree lines and woodland boundaries do, however, provide optimal habitat for a bat assemblage, facilitating their dispersal between the Site and suitable habitat predominantly to the south. Mature trees and woodland also provide roosting opportunities for an assemblage whilst the Site is subject to minimal disturbance and not artificially lit.

A5.26 The results of the NBW surveys are illustrated on **Plans EDP 18** - **20**. Habitat references are detailed on **Plan EDP 1**.

Purple Route

A5.27 In Summer 2024, common pipistrelle was recorded at 21:04 (35 minutes after sunset), which was foraging along hedgerow **H2.4**. Foraging activity for soprano pipistrelle was otherwise recorded along the ditch between **F3.2** and **F3.3** and along woodland **W4**.

A5.28 In Autumn 2025, no bats were seen at the initial observation point, the first recorded registration was that of a soprano pipistrelle at 18:56 (33 minutes after sunset), located along the edge of woodland **W1**. Thereafter, activity was dominated by common and soprano pipistrelle foraging with occasional passes by *Myotis* with no discernible emergence of commuting behaviour.

A5.29 In Spring 2025, the purple route also included the northern section of the Solar Site. No bats were seen at the initial observation point. Common and soprano pipistrelle were recorded throughout the walked route, specifically towards the northern section of the Solar Site foraging along ditches. A Nathusius registration was recorded along the northern ditch of the Solar Site and a single *Myotis sp* registration was recorded in the western section of field **F3.1**.

A5.30 Activity was limited to two registrations for soprano pipistrelle and one for common pipistrelle, the latter observed heading in an easterly direction 30 minutes before sunrise. No roost swarming behaviour was recorded.

Pink Route

A5.31 In Summer 2024, no bats were seen at the initial observation point, a Myotis species was recorded along hedgerow **H3.5** towards the north of the Site. Further south along the route, foraging activity for soprano and common pipistrelle was recorded within field **F5.1** and along the edge of woodland **W4**.

A5.32 In Autumn 2025, a Myotis species of bat was recorded at the observation point at 18:56 (23 minutes after sunset), located along the edge of woodland **W4**, indicating a possible roost nearby. Thereafter, activity was dominated by common and soprano pipistrelle foraging along the field boundaries of fields **F5.1**, **F5.2** and **F5.3** and **F5.4**, with occasional passes by soprano pipistrelle in the northern section of the pink route.

A5.33 In Spring 2025, the pink route was modified to include less fields north of Rhuddlan Road and more fields to the south. A soprano pipistrelle was recorded at the observation point at 20:56 (27 minutes after sunset), commuting along hedgerow **H5.4**. Along the pink route, south of Rhuddlan Road, common and soprano pipistrelles were recorded foraging and commuting along the hedgerows and woodland edge. Additionally, a noctule was recorded near to hedgerow **H5.2** and species of Myotis were recorded along hedgerows **H5.2**, **H5.5**, **H5.6** and **H5.13** and along the eastern edge of woodland **W4**.

Blue Route

A5.34 In Summer 2024, noctule was recorded at 20:58 (29 minutes after sunset) in field **F5.7**. Foraging activity for common and soprano pipistrelles were recorded across the blue route with the main activity concentrated along hedgerow **H5.21**. Additionally, a serotine was recorded along hedgerow **H5.24** and another noctule in field **F5.8**.

A5.35 In Autumn 2025, noctule was recorded at 18:47 (14 minutes after sunset), indicating a possible roost nearby, which was commuting in a southwest direction over in field **F5.11**, followed by a second noctule at 18.50 (17 minutes after sunset) commuting in a northwest direction over in field **F5.11**. Common and soprano pipistrelles were recorded across the blue route with the main activity concentrated along the north-east corner and the southern fields. Myotis was recorded, along hedgerows **H5.8** and **H5.23**.

A5.36 In Spring 2025, noctule was recorded at 20:42 (13 minutes after sunset), indicating a possible roost nearby, foraging over the southern boundary of Field **F5.14**. Additionally, at the observation point, passes by common and soprano pipistrelle were recorded, the earliest by common pipistrelle at 20:52 (23 minutes after sunset). Common and soprano pipistrelles were recorded throughout the survey, primarily associated with hedgerow and ditch habitats.

Green Route

A5.37 In Summer 2024, soprano pipistrelle was recorded at 20:57 (28 minutes after sunset), Soprano pipistrelle passes were otherwise recorded along the boundaries of Fields **F6.1** and **F6.2**, with foraging activity noted where hedgerows **H6.1**, **H6.2** and **H6.5** meet and along the western boundary of field **F1.1**. A lesser horseshoe pass was recorded in the southeast corner of field **F6.2**, but not seen by surveyors.

A5.38 In Autumn 2025, at the observation point, noctule was recorded at 18:50 (17 minutes after sunset), indicating a possible roost nearby, commuting over hedgerow **H1.2** in a northeast direction. Soprano pipistrelle was recorded foraging along the hedgerow of Fields **F1.1** and **F1.2**. Common pipistrelle was recorded in the southern section of field **F1.1** and a Myotis was recorded along hedge **H1.2**.

A5.39 In Spring 2025, a soprano pipistrelle was recorded at 20:47 (18 minutes after sunset), commuting west along hedgerow **H6.5**. Surveyors headed east along the hedge and observed soprano pipistrelle foraging along hedgerow **H6.5**. A Myotis species was also recorded along hedgerow **H6.5**. Soprano pipistrelle was recorded throughout the survey at the BESS Site. Common pipistrelle was recorded along hedge **H6.1** and the track immediately north of the BESS Site.

Automated Detector Surveys

A5.40 As the Site was found to be of moderate suitability for foraging and commuting bats, six automated detectors were left out for five consecutive nights on seven occasions across the bat active season.

A5.41 With reference to the automated detector data tables, the vast majority of recorded bat calls, between April and October inclusive, were of common and soprano pipistrelle, accounting for 74.46% at location **L1**, 79.98% at location **L2**, 84.58% at location **L3**, 77.91% at location **L5a**, 87.16% at location **L5b** and 92.38% at location **L6.**

A5.42 Noctule accounted for between 12.61% and 1.43%, whilst *Myotis* sp. accounted for between 16.79% and 2.30% of total calls at the six different locations. Nathusius pipistrelle, *Plecotus* sp., *Nyctalus* sp., serotine, lesser horseshoe, greater horseshoe and barbastelle bats each represent less than 1% of total calls at each location. Activity was largely comparable across locations in terms of total percentage of species passes. Across the different locations the total number of bat calls vary greatly, with location **L6** recording the highest amount of bat passes, a total of 14,966, followed by location **L1** with 8,804 bat passes, location **L5b** with 6,415 bat passes, location **L3** with 5,598 bat passes, location **L5a** with 4,481 bat passes and location **L2** recording the fewest bat passes with 3,602 recorded.

A5.43 Three Annex II species were recorded during the automated detector surveys, including greater and lesser horseshoes and barbastelle bats. Greater horseshoe was recorded at locations **L1**, **L2**, **L3** and **L5a**, consisting of no more than two passes at any one location. Lesser horseshoe was recorded at all six locations, with the most amount of passes by this species at location **L6**, 232 passes in total. The third Annex II species, barbastelle was recorded at locations **L1** and **L6**, with only a single pass at each location.

A5.44 The results of the automated detector surveys are provided, in detailed and summary form, within **Tables EDP A5.4** to **A5.11**. These results are also described below for the assemblage as whole and on a species-by-species basis. The species accounts also draw upon information collated during the desk study.

Overall Diversity, Abundance and Distribution

A5.45 At least ten bat species/species groups (Myotis and long-eared bat species were not identified to species level), were confirmed to be present foraging and/or commuting within the Site during the automated detector surveys. The vast majority of recorded bat calls were of common and soprano pipistrelle, occasional calls from *Myotis sp*, noctule and the remaining species making up a small minority of the total calls, including Nathusius pipistrelle, *Plecotus sp*., Nyctalus sp., serotine, lesser horseshoe, greater horseshoe and barbastelle bats

A5.46 Three Annex II species were recorded during the automated detector surveys, namely greater and lesser horseshoes and barbastelle bats. Individual registrations of barbastelle recorded in two different location **L1** and **L6** indicate that this species is therefore not reliant on the habitats within the Site, and is only an occasional visitor. Additionally, greater horseshoe was recorded at each location but consisted of no more than two passes at any one location, indicating that this species is also not reliant on the habitats within the Site. Lesser horseshoe was recorded at location **L6** during the Summer NBW and had the highest number of passes recorded but the

automated detector at location **L6**, indicating regular, but not frequent use of the BESS Site by lesser horseshoe.

A5.47 Levels of bat activity recorded during the automated surveys were generally moderate, with relatively higher levels recorded in July 2024 and August 2024 and relatively lower levels recorded in October 2024 and May 2024. The distribution of this activity was generally evenly spread, concentrated on field boundaries including hedgerows and woodland edges. Overall, the importance of the bat assemblage recorded within the Site is of Local importance.

Species/Species Groups Recorded

Common Pipistrelle and Soprano Pipistrelle

A5.48 Common pipistrelle and soprano pipistrelle bats are common and widespread across the UK, representing the most, and second most, abundant bat species in the UK respectively. Whilst having suffered significant historic declines, national population monitoring indicates that common pipistrelle and soprano pipistrelle bats are increasing nationally.

A5.49 No records of common or soprano pipistrelle were identified within the Site as part of the desk study. However, a record of a common pipistrelle maternity roost was identified approximately 1.7m south-east of the Solar Site, just south of Bodelwyddan. The closest known soprano roost is located 1.5km south-east from the BESS Site. Common and soprano pipistrelle were the most common species recorded on-site, with soprano pipistrelle accounting for 48.19% of all registrations and common pipistrelle accounting for 37.76%, recorded during the automated detector surveys.

A5.50 Soprano pipistrelle was commonly recorded during the NBW surveys during the initial observation period in the first 30 minutes of the survey and were observed commuting along hedgerows within the Site and foraging adjacent to woodlands. Given the early recordings of soprano pipistrelle following sunset, it is possible that this species may be roosting nearby. As with soprano pipistrelle, common pipistrelle bats were frequently observed foraging along hedgerows and adjacent to woodland edges of the Site during NBW surveys.

A5.51 Common pipistrelle registrations were high across the automated detector survey period but peaked in July 2024 with 2,470 registrations recorded at location **L6**. Given this increase in activity, there is potential that this habitat corridor is of value for bats foraging during the maternity season.

A5.52 Given their common and widespread distribution, albeit combined with the relatively moderate levels of activity recorded during NBW an automated survey, common pipistrelle and soprano pipistrelle bats using the Site are considered to be of Site level importance.

Myotid Bat Species

A5.53 Myotid (*Myotis* sp.) bat species occur throughout most of the UK, their populations considered to be either stable or increasing, with the exception of Bechstein's (*Myotis bechsteinii*) bat, which is listed in Annex II of the European Commission Habitats Directive and is considerably rarer.

A5.54 No records of *Myotis* sp. were identified within the Site as part of the desk study. The desk study returned a total of 28 records of *Myotis* sp. within 2km of the Site, including records for Natterer's bat (*Myotis natteri*), Daubenton's bat (*Myotis daubentonii*) and whiskered/ Brandt's bat (*Myotis mystacinus/Myotis brandti*). Of the records, eight of these were for roosts located between 460m - 2km from the Site. However, all of these records are historical, with the most recent record being from 2006.

A5.55 *Myotis sp*. were the third most recorded bat during the automated detector surveys, with 2,643 registrations representing 6.88% of the total bat registrations. *Myotis sp*. were recorded across the entirety of the survey period, with activity levels for this species group peaking in August at location **L2** and **L5b** with 204 and 200 registrations respectively. The majority of total registrations were recorded at locations **L1**, **L2**, **L5a** and **L6**.

A5.56 During the NBW, there were only two registrations of *Myotis sp*. during the Summer 2025 survey, located in the northern section of the Solar Site. In Autumn 2024 and Spring 2025, low numbers of *Myotis sp*. were recorded across the Site, with a concentration of activity along the edge of woodland **W4**.

A5.57 While *Myotis sp*. were the third mostly commonly recorded species on the Site, the numbers of registrations recorded were relatively low. Given the Site sits outside of the ranges of the rare *Myotis sp*. species, it is assumed that the *Myotis sp*. recorded within the Site were likely one of the more common species such as Natterer's bat, Daubenton's bat, or whiskered/Brandt's bat. Given the more widespread nature of these particular species, and the moderate number of registrations recorded, the Site is considered to be of Local importance for the species.

Noctule

A5.58 Uncommon, but considered to be widespread in the UK with population levels stable since 1999, noctule bats are listed as a species of principal importance for conservation in Wales.

A5.59 No records of noctule were identified within the Site during the desk study. However, several records of noctule were returned located around St Asaph to the north of the BESS Site. One returned record, is for a noctule maternity roost within two oak trees, located circa 220m east of the BESS Site, although this record is from 2009.

A5.60 Noctule were mostly recorded in low numbers across the surveys during the automated detector surveys. However, there was a peak in noctule activity in July 2024 at location **L3**, where 503 registrations were recorded. This contributed to the highest total registrations for a location, which were recorded at location **L3**, with a total of 706. This was followed by location **L5b** and **L5a**, with 449 and 379 registrations respectively. Noting the record of a maternity roost, located c.220m east of the BESS Site, 214 registrations were recorded at location **L6** in total over the survey period, with a peak in September 2024 of 138 registrations.

A5.61 Noctule was consistently recorded within the southern section of the Solar Site during all three NBW surveys. Elsewhere, noctule was only recorded in the eastern section of the Solar Site in Autumn 2024.

A5.62 Given the moderate number of registrations of this species recorded across the Site and its widespread status across the UK and Wales, noctule is considered to be of Local level importance.

Lesser Horseshoe

A5.63 Lesser horseshoe bats are rare and endangered species in the UK, being predominantly confined to the west/south-west of England and South Wales, though their population status is understood to have increased since 1999.

A5.64 The data returned only three records of lesser horseshoe bats within 2km of the Solar Site, with the closest being 1.2km south-west. The data returned only nine records of lesser horseshoe bats within 2km of the BESS Site, with the closest being within 1.1km south-west. The data includes records for multiple hibernation roosts, one of which, located c.1.9km south of the BESS Site included a count of 68 hibernating lesser horseshoe bats, indication a roost of significant importance. This is assumed to be a roost within the Coedydd ac Ogofau Elwy a Meirchion SSSI.

A5.65 Lesser horseshoe was recorded at all six locations, activity peaked across all locations in April 2025 with a total of 180 registrations, and specifically at **L6** in April 2025 with 139 registrations. It is possible that the peak at this time of year is due to the emergence of hibernating bats and their initial foraging near their hibernation roosts, followed by dispersal to transitional and summer roosts.

A5.66 Based on the survey results above, a small population of lesser horseshoe bats are considered to be foraging and commuting within and around the BESS Site, which is of particular importance to this species in Spring. The Site is considered to otherwise support a small number of opportunistic individuals at other times of year, and across the Solar Site. Therefore, for this species the Site is judged to be of Local importance.

Long-eared Bats

A5.67 Brown long-eared bat (*Plecotus auritus*) is found throughout the UK, its population considered to remain stable nationally. In contrast, the grey long-eared bat (*Plecotus austriacus*) is considerably rarer, and its population appears to be declining. This species is primarily confined to the extreme south of the British Isles, from Sussex to Devon.

A5.68 The data returned only two records of brown long-eared bats within 2km of the Solar Site, with the closest being 1.2km to the west. The data returned six records brown long-eared bats within 2km of the BESS Site, with the closest being within 1km northeast.

A5.69 *Plecotus* sp. represents <1% of the bat registrations recorded during the automated detector surveys, with a total of 145 registrations recorded. *Plecotus sp.* were recorded throughout the year, with a slight peak in May 2025, with 45 registrations. The highest number of registrations for *Plecous* sp., was at location **L6**, with 75 registrations.

A5.70 There were no recordings for *Plecotus* sp. during the NBW surveys.

A5.71 Grey long-eared bats (*Plecotus austriacus)* have not been found in mid or north Wales, whereas brown long-eared bats are common and widespread across the UK and Wales. Given the very limited distribution of grey long-eared bats, it is assumed that the *Plecotus sp.* recorded within the Site were brown long-eared bats.

A5.72 Given the very low numbers of *Plecotus sp.* registrations across the survey period, and the common nature of the species across the UK and Wales, the Site is considered to be of Site importance for brown long-eared bat.

Serotine

A5.73 Serotine bats are rarely recorded in Wales, to the extent that there is insufficient data available to understand their current population trend (albeit with populations considered to remain stable in England).

A5.74 The data search returned no records for serotine within 2km of the Solar Site or BESS Site.

A5.75 Serotine was recorded throughout the automated detector surveys albeit in low numbers. Of these registrations, a minor peak was recorded in August at location **L6**, with 21 registrations. A total of 133 registrations of serotine was recorded in total over the survey period across all six locations.

A5.76 A single registration for serotine was recorded during the Summer 2024 NBW survey, located to the southern section of the Solar Site.

A5.77 Given their rarity (in conservation status terms), serotine bats using the Site are considered to be of Local importance.

Nathusius' Pipistrelle

A5.78 Nathusius' pipistrelle are widespread across the UK, but generally less common in Wales. An assessment of the population trends is not available for the species, although records are known to be increasing.

A5.79 The data search returned no records for Nathusius' pipistrelle within 2km of the Solar Site and BESS Site.

A5.80 Nathusius' pipistrelle were only rarely recorded during the automated detector surveys, with a total of 26 registrations, representing <0.1% of total activity. Nathusius' pipistrelle was recorded once during the NBW surveys. Nathusius' pipistrelle was recorded at all locations apart from location **L3**, the majority of registrations were at location **L6** with 10 registrations.

A5.81 Given this species was rarely recorded during the surveys, albeit accounting for its greater rarity, Nathusius' pipistrelle is considered to be of Local level importance.

Greater Horseshoe

A5.82 The data search returned no records for greater horseshoe within 2km of the Solar Site and BESS Site.

A5.83 Greater horseshoe bats are a rare species in the UK, being predominantly confined to the west/south-west of England and South Wales, though their population status is understood to have increased since 1999.

A5.84 Greater horseshoe represents <0.1% of the bat registrations recorded during the automated detector surveys, with a total of five registrations recorded.

A5.85 Greater horseshoe was recorded at locations **L1**, **L2**, **L3** and **L5a**, consisting of no more than two passes at any one location.

A5.86 There were no recordings for greater horseshoe made during the NBW surveys.

A5.87 Given the very low levels of activity recorded, this species is considered likely to use the Site for foraging and commuting intermittently only and is considered unlikely to be roosting near to the Site. The greater horseshoe assemblage identified is considered to be of no greater than Local value.

Barbastelle

A5.88 Barbastelle bat is listed in Annex II of the *EC Habitats Directive* and is limited to Wales and southern and central England and is considered to be rare nationally.

A5.89 Only very low levels of barbastelle activity have been recorded within the Site, including one registration in July 2024 at location **L6** and one registration in April 2025 at location **L1**.

A5.90 There were no recordings for barbastelle during the NBW surveys.

A5.91 Barbastelle is typically recorded in association with woodland and river corridors. Given the very low levels of activity recorded, this species is considered likely to use the Site for foraging and commuting intermittently only and is considered unlikely to be roosting within or adjacent to the Site. The barbastelle assemblage identified is considered to be of no greater than Local value.

Automated Detector Data Tables

Table EDP A5.4: Automated Detector Survey Results July 2024 – October 2024 and April 2025 – June 2025.

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		19/07/24	20/07/24	21/07/24	22/07/24	23/07/24	
1	Soprano pipistrelle	56	38	89	72	18	**273 (58.58%)**
	Common pipistrelle	31	17	16	21	4	**89 (19.10%)**
	Myotis species	17	11	6	16	7	**57 (12.23%)**
	Noctule	16	3	19	2	-	**40 (8.58%)**
	Plecotus spp.	1	-	-	1	-	**2 (0.43%)**
	Serotine	-	1	1	-	-	**2 (0.43%)**
	Greater horseshoe	2	-	-	-	-	**2 (0.43%)**
	Nathusius pipistrelle	-	1	-	-	-	**1 (0.21%)**
	Total	**123**	**71**	**131**	**112**	**29**	**466 (100%)**
2	Soprano pipistrelle	122	195	275	128	41	**761 (51.63%)**
	Common pipistrelle	111	211	32	102	65	**521 (35.35%)**
	Myotis spp.	54	14	33	19	10	**130 (8.82%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		19/07/24	20/07/24	21/07/24	22/07/24	23/07/24	
	Noctule	15	23	6	7	1	**52 (3.53%)**
	Serotine	3	-	-	1	-	**4 (0.27%)**
	Plecotus spp.	1	1	1	-	-	**3 (0.20%)**
	Nathusius' pipistrelle	1	-	1	1	-	**3 (0.20%)**
	Total	**307**	**444**	**348**	**258**	**117**	**1474 (100%)**
3	Noctule	226	106	46	105	20	**503 (65.67%)**
	Common pipistrelle	33	14	17	39	47	**150 (19.58%)**
	Soprano pipistrelle	28	8	14	20	24	**94 (12.27%)**
	Myotis spp.	4	2	2	2	4	**14 (1.83%)**
	Serotine	1	-	-	-	2	**3 (0.39%)**
	Plecotus spp.	-	-	1	-	-	**1 (0.13%)**
	Greater horseshoe	-	-	1	-	-	**1 (0.13%)**
	Total	**292**	**130**	**81**	**166**	**97**	**766 (100%)**
5a	Common pipistrelle	30	241	617	29	3	**920 (48.29%)**
	Soprano pipistrelle	40	226	475	47	3	**791 (41.52%)**
	Myotis spp.	15	50	41	6	7	**119 (6.25%)**
	Noctule	26	10	13	11	1	**61 (3.20%)**
	Serotine	4	-	2	-	-	**6 (0.31%)**
	Lesser horseshoe	-	-	4	-	2	**6 (0.31%)**
	Plecotus spp.	-	-	2	-	-	**2 (0.10%)**
	Total	**115**	**527**	**1154**	**93**	**16**	**1905 (100%)**
5b	Soprano pipistrelle	270	64	34	50	1	**419 (50.48%)**
	Common pipistrelle	192	125	15	22	-	**354 (42.65%)**
	Noctule	19	24	-	-	-	**43 (5.18%)**
	Myotis spp.	3	2	-	1	1	**7 (0.84%)**
	Serotine	3	-	1	1	-	**5 (0.60%)**
	Greater horseshoe	-	-	1	-	-	**1 (0.12%)**
	Nathusius' pipistrelle	-	-	-	1	-	**1 (0.12%)**
	Total	**487**	**215**	**51**	**75**	**2**	**830 (100%)**
6	Soprano pipistrelle	498	234	299	826	613	**2470 (73.45%)**
	Common pipistrelle	187	118	79	316	92	**792 (23.55%)**
	Myotis spp.	7	10	21	9	10	**57 (1.69%)**
	Noctule	4	1	5	6	-	**16 (0.48%)**
	Plecotus spp.	3	4	6	2	-	**15 (0.45%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		19/07/24	20/07/24	21/07/24	22/07/24	23/07/24	
	Serotine	1	2		2	1	**6 (0.18%)**
	Lesser horseshoe	1	-	1	1	-	**3 (0.09%)**
	Nathusius' pipistrelle	1	1	-	-	1	**3 (0.09%)**
	Barbastelle	-	-	-	-	1	**1 (0.03)**
	Total	**702**	**370**	**411**	**1162**	**718**	**3363 (100%)**

Table EDP A5.5: Automated Detector Survey Results August 2024.

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		16/08/24	17/08/24	18/08/24	19/08/24	20/08/24	
1	Soprano pipistrelle	45	57	92	45	89	**328 (71.93%)**
	Common pipistrelle	-	11	22	6	27	**66 (14.47%)**
	Myotis spp.	11	7	5	19	6	**48 (10.53%)**
	Noctule	1	5	5		1	**12 (2.63%)**
	Lesser horseshoe	-	-	-	1	-	**1 (0.22%)**
	Nathusius' pipistrelle	1	-	-	-	-	**1 (0.22%)**
	Total	**58**	**80**	**124**	**71**	**123**	**456 (100%)**
2	Common pipistrelle	17	63	71	44	102	**297 (40.19%)**
	Soprano pipistrelle	33	30	41	47	73	**224 (30.31%)**
	Myotis spp.	31	86	41	23	23	**204 (27.60%)**
	Noctule	2	-	1	4	2	**9 (1.22%)**
	Plecotus spp.	-	-	1	1	-	**2 (0.27%)**
	Nyctalus spp.	-	-	1	-	-	**1 (0.14%)**
	Serotine	-	1	-	-	-	**1 (0.14%)**
	Nathusius' pipistrelle	-	1	-	-	-	**1 (0.14%)**
	Total	**83**	**181**	**156**	**119**	**200**	**739 (100%)**
3	Soprano pipistrelle	75	197	455	238	261	**1226 (52.13%)**
	Common pipistrelle	12	261	380	294	117	**1064 (45.24%)**
	Myotis spp.	6	15	27	9	2	**59 (2.51%)**
	Noctule			2		1	**3 (0.13%)**
	Total	**93**	**473**	**864**	**541**	**381**	**2352 (100%)**
5a	Soprano pipistrelle	62	68	146	38	45	**359 (47.05%)**
	Common pipistrelle	12	41	104	31	25	**213 (27.92%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		16/08/24	17/08/24	18/08/24	19/08/24	20/08/24	
	Noctule	16	78	18	17	6	**135 (17.69%)**
	Myotis spp.	8	6	28	9	-	**51 (6.68%)**
	Serotine	-	2	1	-	-	**3 (0.39%)**
	Plecotus spp.	-	-	-	-	2	**2 (0.26%)**
	Total	**98**	**195**	**297**	**95**	**78**	**763 (100%)**
5b	Common pipistrelle	48	502	278	458	72	**1358 (45.13%)**
	Soprano pipistrelle	225	484	325	156	87	**1277 (42.44%)**
	Myotis spp.	20	58	44	73	5	**200 (6.65%)**
	Noctule	15	34	57	29	32	**167 (5.55%)**
	Serotine	-	2	2	-	-	**4 (0.13%)**
	Plecotus spp.	-	1	-	1	-	**2 (0.07%)**
	Nathusius' pipistrelle	-	1	-	-	-	**1 (0.03%)**
	Total	**308**	**1082**	**706**	**717**	**196**	**3009 (100%)**
6	Soprano pipistrelle	138	154	122	562	669	**1645 (76.98%)**
	Common pipistrelle	71	45	20	78	65	**279 (13.06%)**
	Myotis spp.	2	29	43	51	15	**140 (6.55%)**
	Lesser horseshoe	5	5	7	9	4	**30 (1.40%)**
	Serotine	3	3	2	6	7	**21 (0.98%)**
	Noctule	1	2	1	4	1	**9 (0.42%)**
	Plecotus spp.	1	-	2	4	-	**7 (0.33%)**
	Nathusius' pipistrelle	-	-	-	2	4	**6 (0.28%)**
	Total	**221**	**238**	**197**	**716**	**765**	**2137 (100%)**

Table EDP A5.6: Automated Detector Survey Results September 2024.

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		18.09.24	19.09.24	20.09.24	21.09.24	22.09.24	
1	Soprano pipistrelle	30	29	50	196	46	**351 (42.75%)**
	Common pipistrelle	12	24	61	84	17	**198 (24.12%)**
	Myotis spp.		6	34	87	37	**164 (19.98%)**
	Noctule	7	10	10	50	23	**100 (12.18%)**
	Serotine	-	-	2	1	2	**5 (0.61%)**
	Nathusius' pipistrelle	-	1	1	-	-	**2 (0.24%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		18.09.24	19.09.24	20.09.24	21.09.24	22.09.24	
	Plecotus spp.	-	1	-	-	-	**1 (0.12%)**
	Total	**49**	**71**	**158**	**418**	**125**	**821 (100%)**
2	Common pipistrelle	7	17	26	93	9	**152 (45.24%)**
	Soprano pipistrelle	10	24	24	54	9	**121 (36.01%)**
	Myotis spp.	2	6	18	21	2	**49 (14.58%)**
	Noctule	4	2	1	3	-	**10 (2.98%)**
	Serotine	-	1	-	2	-	**3 (0.89%)**
	Nathusius' pipistrelle	-	-	1	-	-	**1 (0.30%)**
	Total	**23**	**50**	**70**	**173**	**20**	**336 (100%)**
3	Common pipistrelle	17	64	307	101	47	**536 (45.39%)**
	Soprano pipistrelle	12	40	84	284	58	**478 (40.47%)**
	Noctule	10	21	26	54	23	**134 (11.35%)**
	Myotis spp.	-	3	23	2	-	**28 (2.37%)**
	Plecotus spp.	-	-	2	2	-	**4 (0.34%)**
	Serotine	-	1	-	-	-	**1 (0.08%)**
	Total	**39**	**129**	**442**	**443**	**128**	**1181 (100%)**
5a	Soprano pipistrelle	25	28	30	23	-	**106 (34.98%)**
	Noctule	15	26	19	16	3	**79 (26.07%)**
	Common pipistrelle	3	10	32	23	-	**68 (22.44%)**
	Myotis spp.	3	13	15	8	-	**39 (12.87%)**
	Serotine	-	-	7	1		**8 (2.64%)**
	Nathusius' pipistrelle	-	-	2	-	-	**2 (0.66%)**
	Lesser horseshoe	-	-	1	-	-	**1 (0.33%)**
	Total	**46**	**77**	**106**	**71**	**3**	**303 (100%)**
5b	Common pipistrelle	17	26	273	319	6	**641 (70.05%)**
	Noctule	24	19	29	44	26	**142 (15.52%)**
	Soprano pipistrelle	8	24	50	14	6	**102 (11.15%)**
	Myotis spp.	3	2	7	-	5	**17 (1.86%)**
	Serotine	-	1	1	2	-	**4 (0.44%)**
	Plecotus spp.	1	1	1	-	-	**3 (0.33%)**
	Nyctalus spp.	1	-	1	-	-	**2 (0.22%)**
	Lesser horseshoe	-	-	1	1	-	**2 (0.22%)**
	Nathusius' pipistrelle	1	1	-	-	-	**2 (0.22%)**
	Total	**55**	**74**	**363**	**380**	**43**	**915 (100%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		18.09.24	19.09.24	20.09.24	21.09.24	22.09.24	
6	Soprano pipistrelle	206	464	188	134	83	**1075 (51.26%)**
	Common pipistrelle	221	249	119	143	34	**766 (36.53%)**
	Noctule	12	43	56	20	7	**138 (6.58%)**
	Myotis spp.	19	44	12	10	2	**87 (4.15%)**
	Lesser horseshoe	5	3	2	3	-	**13 (0.62%)**
	Plecotus spp.	3	-	5	1	2	**11 (0.52%)**
	Serotine	-	3	4	-	-	**7 (0.33%)**
	Total	**466**	**806**	**386**	**311**	**128**	**2097 (100%)**

Table EDP A5.7: Automated Detector Survey Results October 2024

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		09/10/24	10/10/24	11/10/24	12/10/24	13/10/24	
1	Myotis spp.	36	2	3	1	75	**117 (59.69%)**
	Soprano pipistrelle	27	2	3	-	30	**62 (31.63%)**
	Lesser horseshoe	2	-	-	-	5	**7 (3.57%)**
	Common pipistrelle	-	-	-	-	5	**5 (2.55%)**
	Noctule	4	-	-	-	-	**4 (2.04%)**
	Nathusius' pipistrelle	-	-	-	-	1	**1 (0.51%)**
	Total	**69**	**4**	**6**	**1**	**116**	**196 (100%)**
2	Soprano pipistrelle	16	14	-	-	3	**33 (50.77%)**
	Myotis spp.	5	19	-	1	1	**26 (40.00%)**
	Common pipistrelle	2	-	-	-	3	**5 (7.69%)**
	Noctule	1	-	-	-	-	**1 (1.54%)**
	Total	**24**	**33**		**1**	**7**	**65 (100%)**
3	Soprano pipistrelle	1	1	-	-	2	**4 (50.00%)**
	Myotis spp.	1	-	-	-	1	**2 (25.00%)**
	Serotine	-	1	-	-	-	**1 (12.50%)**
	Noctule	-	-	-	-	1	**1 (12.50%)**
	Total	**2**	**2**			**4**	**8 (100%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		09/10/24	10/10/24	11/10/24	12/10/24	13/10/24	
5a	Common pipistrelle	49	6	1	1	262	**319 (83.07%)**
	Soprano pipistrelle	12	15	1	-	10	**38 (9.90%)**
	Myotis spp.	6	-	1	-	20	**27 (7.03%)**
	Total	**67**	**21**	**3**	**1**	**292**	**384 (100%)**
5b	Soprano pipistrelle	24	11	20	2	61	**118 (48.56%)**
	Myotis spp.	7	-	2	1	65	**75 (30.86%)**
	Common pipistrelle	15	2	12	1	9	**39 (16.05%)**
	Noctule	6	-	-	-	4	**10 (4.123%)**
	Lesser horseshoe	-	1	-	-	-	**1 (0.41%)**
	Total	**52**	**14**	**34**	**4**	**139**	**243 (100%)**
6	Soprano pipistrelle	132	101	20	61	192	**506 (71.57%)**
	Common pipistrelle	96	-	3	3	4	**106 (14.99%)**
	Myotis spp.	51	3	4	-	4	**62 (8.77%)**
	Lesser horseshoe	2	7	-	-	19	**28 (3.96%)**
	Plecotus spp.	2	-	-	-	-	**2 (0.28%)**
	Noctule	1	1	-	-	-	**2 (0.28%)**
	Serotine	1	-	-	-	-	**1 (0.14%)**
	Total	**285**	**112**	**27**	**64**	**219**	**707 (100%)**

Table EDP A5.8: Automated Detector Survey Results April 2025.

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		18/04/25	19/04/25	20/04/25	21/04/25	22/04/25	
1	Soprano pipistrelle	3	95	86	150	76	**410 (64.57%**
	Common pipistrelle	7	22	20	68	21	**138 (21.73%)**
	Myotis spp.	4	7	9	8	5	**33 (5.20%)**
	Noctule	-	14	7	4	6	**31 (4.88%)**
	Lesser horseshoe	1	7	6	-	-	**14 (2.20%)**
	Plecotus spp.	-	5	1	1	-	**7 (1.10%)**
	Serotine	-	-	-	1	-	**1 (0.16%)**
	Barbastelle	-	1	-		-	**1 (0.16%)**
	Total	**15**	**151**	**129**	**232**	**108**	**635 (100%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		18/04/25	19/04/25	20/04/25	21/04/25	22/04/25	
2	Common pipistrelle	3	21	42	65	42	**173 (50.3%)**
	Soprano pipistrelle	1	15	30	27	21	**94 (27.49%)**
	Noctule	2	11	33	4	9	**59 (17.25%)**
	Myotis spp.	-	4	2	4	-	**10 (2.92%)**
	Lesser horseshoe	-	-	2	-	1	**3 (0.88%)**
	Serotine	-	-		1	1	**2 (0.58%)**
	Plecotus spp.	-	-	1	-	-	**1 (0.29%)**
	Total	**6**	**51**	**110**	**101**	**74**	**342 (100%)**
3	Common pipistrelle	3	8	29	80	13	**133 (52.57%)**
	Soprano pipistrelle	2	5	21	51	14	**93 (36.76%)**
	Noctule	-	1	1	9	1	**12 (4.74%)**
	Myotis spp.	1	4	2	5		**12 (4.74%)**
	Lesser horseshoe	-	-	1	1	1	**3 (1.19%)**
	Total	**6**	**18**	**54**	**146**	**29**	**253 (100%)**
5a	Common pipistrelle	7	15	24	59	17	**122 (39.87%)**
	Soprano pipistrelle	3	10	10	38	15	**76 (24.84%)**
	Noctule	2	4	10	24	6	**46 (15.03%)**
	Myotis spp.	1	2	2	20	9	**34 (11.11%)**
	Lesser horseshoe	4		1	7	4	**16 (5.23%)**
	Plecotus spp.	1	1	3	4	2	**11 (3.59%)**
	Serotine			1			**1 (0.33%)**
	Total	**18**	**32**	**51**	**152**	**53**	**306 (100%)**
5b	Soprano pipistrelle	3	4	14	43	7	**71 (35.32%)**
	Noctule	1	8	6	38	7	**60 (29.85%)**
	Common pipistrelle	3	-	5	43	4	**55 (27.36%)**
	Myotis spp.	1	4	-	2	1	**8 (3.98%)**
	Lesser horseshoe	2	-	-	2	1	**5 (2.49%)**
	Serotine	1	-	1	-	-	**2 (1.00%)**
	Total	**11**	**16**	**26**	**128**	**20**	**201 (100%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		18/04/25	19/04/25	20/04/25	21/04/25	22/04/25	
6	Soprano pipistrelle	78	430	364	662	531	**2065 (62.39%)**
	Common pipistrelle	27	263	166	491	117	**1064 (32.15%)**
	Lesser horseshoe	15	16	54	11	43	**139 (4.20%)**
	Myotis spp.	3	3	3	4	3	**16 (0.48%)**
	Noctule	1	8	2	-	-	**11 (0.33%)**
	Plecotus spp.	1	1	-	3	3	**8 (0.24%)**
	Serotine	-	2	1	3	1	**7 (0.21%)**
	Total	**125**	**723**	**590**	**1174**	**698**	**3310 (100%)**

Table EDP A5.9: Automated Detector Survey Results May 2025

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		10/05/25	11/05/25	12/05/25	13/05/25	14/05/25	
1	Soprano pipistrelle	28	32	73	35	38	**65.81**
	Myotis spp.	3	13	13	25	1	**17.57**
	Common pipistrelle	6	9	4	11	9	**12.46**
	Noctule	-	3	1	-	4	**2.56**
	Serotine	-	1	-	-	2	**0.96**
	Plecotus spp.	-	2	-	-	-	**0.64**
	Total	**37**	**60**	**91**	**71**	**54**	**100**
2	Common pipistrelle	10	20	40	65	18	**53.87**
	Soprano pipistrelle	3	9	25	23	22	**82 (28.87%)**
	Myotis spp.	5	3	7	4	10	**29 (10.21%)**
	Noctule	-	-	4	4	2	**10 (3.52%)**
	Plecotus spp.	-	-	5	1	1	**7 (2.46%)**
	Serotine	-	-	2	-	-	**2 (0.70%)**
	Greater horseshoe	-	-	-	-	1	**1 (0.35%)**
	Total	**18**	**32**	**83**	**97**	**54**	**284 (100%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and percentage)
		10/05/25	11/05/25	12/05/25	13/05/25	14/05/25	
3	Soprano pipistrelle	7	15	8	5	79	**114 (59.07%)**
	Common pipistrelle	10	11	5	16	10	**52 (26.94%)**
	Noctule	-	1	1	12	1	**15 (7.77%)**
	Plecotus spp.	-	-	-	2	4	**6 (3.11%)**
	Myotis spp.	-	-	2	-	2	**4 (2.07%)**
	Serotine	-	-	-	1	1	**2 (1.04%)**
	Total	**17**	**27**	**16**	**36**	**97**	**193 (100%)**
5a	Common pipistrelle	13	68	16	13	49	**159 (40.36%)**
	Myotis spp.	7	23	27	17	35	**109 (27.66%)**
	Soprano pipistrelle	14	21	15	15	31	**96 (24.37%)**
	Noctule	2	8	6	8	3	**27 (6.85%)**
	Serotine	2	1	-	-	-	**3 (0.76%)**
	Total	**38**	**121**	**64**	**53**	**118**	**394 (100%)**
5b	Common pipistrelle	8	97	103	251	41	**500 (74.52%)**
	Soprano pipistrelle	5	18	20	50	36	**129 (19.23%)**
	Noctule	1	2	13	2	3	**21 (3.13%)**
	Myotis spp.	1	5	6	3	-	**15 (2.24%)**
	Plecotus spp.	-	1	1	-	1	**3 (0.45%)**
	Lesser horseshoe	-	-	1	1	1	**3 (0.45%)**
	Total	**15**	**123**	**144**	**307**	**82**	**671 (100%)**
6	Soprano pipistrelle	202	359	161	303	247	**1272 (66.42%)**
	Common pipistrelle	109	87	64	114	56	**430 (22.45%)**
	Myotis spp.	7	62	51	24	8	**152 (7.94%)**
	Plecotus spp.	11	2	8	4	1	**26 (1.36%)**
	Serotine	1	6	4	7	-	**18 (0.94%)**
	Lesser horseshoe	6	-	3	-	-	**9 (0.47%)**
	Noctule	1	1	3	1	1	**7 (0.37%**
	Nathusius' pipistrelle	-	-	-	1	-	**1 (0.05%)**
	Total	**337**	**517**	**294**	**454**	**313**	**1915 (100%)**

Table EDP A5.10: Automated Detector Survey Results June 2025

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and Percentage)
		12/06/25	13/06/25	14/06/25	15/06/25	16/06/25	
1	Soprano pipistrelle	44	29	31	70	17	**191 (39.46%)**
	Common pipistrelle	42	5	21	56	30	**154 (31.82%)**
	Myotis spp.	9	28	13	11	31	**92 (19.01%)**
	Noctule	24	4	7	4	6	**45 (9.30%)**
	Plecotus spp.	-	1	-	-	-	**1**
	Lesser horseshoe	-	-	-	1	-	**1 (0.21%)**
	Total	**119**	**67**	**72**	**142**	**84**	**484 (100%)**
2	Common pipistrelle	30	16	17	82	23	**168 (46.41%)**
	Soprano pipistrelle	15	4	9	30	39	**97 (26.80%)**
	Myotis spp.	5	9	8	40	8	**70 (19.34%)**
	Noctule	6	2	2	5	2	**17 (4.70%)**
	Plecotus spp.	-	1	-	5	-	**6 (1.66%)**
	Serotine	2	-	-	2	-	**4 (1.10%)**
	Total	**58**	**32**	**36**	**164**	**72**	**362 (100%)**
3	Common pipistrelle	11	64	140	276	62	**553 (65.44%)**
	Soprano pipistrelle	19	13	99	65	42	**238 (28.17%)**
	Noctule	17	5	3	10	3	**38 (4.50%)**
	Myotis spp.	1	3	-	2	4	**10 (1.18%)**
	Plecotus spp.	3	-	-	-	1	**4 (0.47%)**
	Lesser horseshoe	-	-	-	2	-	**2 (0.24%)**
	Total	**51**	**85**	**242**	**355**	**112**	**845 (100%)**
5a	Myotis spp.	82	14	4	33	37	**170 (39.91%)**
	Soprano pipistrelle	35	7	15	48	9	**114 (26.76%)**
	Common pipistrelle	21	9	7	35	38	**110 (25.82%)**
	Noctule	8	6	3	5	9	**31 (7.28%)**
	Serotine	-	-	-	1	-	**1 (0.23%)**
	Total	**146**	**36**	**29**	**122**	**93**	**426 (100%)**
5b	Common pipistrelle	44	-	46	244	65	**399 (73.08%)**
	Soprano pipistrelle	12	2	16	85	14	**129 (23.63%)**
	Myotis spp.	5	1	-	4	2	**12 (2.20%)**
	Noctule	6	-	-	-	-	**6 (1.10%)**
	Total	**67**	**3**	**62**	**333**	**81**	**546 (100%)**

Location	Bat Species	Number of Bat Passes Recorded per Night					Total (and Percentage)
		12/06/25	13/06/25	14/06/25	15/06/25	16/06/25	
6	Common pipistrelle	123	19	377	557	98	**1174 (81.70%)**
	Soprano pipistrelle	17	17	37	80	30	**181 (12.60%)**
	Myotis spp.tis spp.	9	3	11	4	6	**33 (2.30%)**
	Noctule	10	2	9	8	2	**31 (2.16%)**
	Lesser horseshoe	3	-	1	2	4	**10 (0.70%)**
	Plecotus spp.	2	2	1	-	1	**6 (0.42%)**
	Serotine	-	1	1	-	-	**2 (0.14%)**
	Total	**164**	**44**	**437**	**651**	**141**	**1437 (100%)**

Table EDP A5.11: Summary of Automated Detector Surveys by Location

Survey Area	Species	Number of Passes	% of Area Total
Area 1	Soprano pipistrelle	1821	54.02
	Myotis spp.	566	16.79
	Common pipistrelle	689	20.44
	Noctule	240	7.12
	Lesser horseshoe bat	23	0.68
	Plecotus spp.	13	0.39
	Serotine	11	0.33
	Nathusius' pipistrelle	5	0.15
	Greater horseshoe bat	2	0.06
	Barbastelle	1	0.03
	Grand Total	**8804**	**100%**
Area 2	Soprano pipistrelle	1412	39.20
	Common pipistrelle	1469	40.78
	Myotis spp.	518	14.38
	Noctule	158	4.39
	Plecotus spp.	19	0.53
	Serotine	16	0.44
	Nathusius' pipistrelle	5	0.14
	Lesser horseshoe bat	3	0.08
	Nyctalus spp.	1	0.03
	Greater horseshoe bat	1	0.03
	Grand Total	**3602**	**100%**
Area 3	Soprano pipistrelle	2247	40.14

Survey Area	Species	Number of Passes	% of Area Total
	Common pipistrelle	2488	44.44
	Noctule	706	12.61
	Myotis spp.	129	2.30
	Plecotus spp.	15	0.27
	Serotine	7	0.13
	Lesser horseshoe bat	5	0.09
	Greater horseshoe bat	1	0.02
	Total	**5598**	**100%**
Area 5NW	Common pipistrelle	1911	42.65
	Soprano pipistrelle	1580	35.26
	Noctule	379	8.46
	Myotis spp.	549	12.25
	Serotine	22	0.49
	Lesser horseshoe bat	23	0.51
	Plecotus spp.	15	0.33
	Nathusius' pipistrelle	2	0.04
	Total	**4481**	**100.00**
Area 5SE	Common pipistrelle	3346	52.16
	Soprano pipistrelle	2245	35.00
	Noctule	449	7.00
	Myotis spp.	334	5.21
	Serotine	15	0.23
	Lesser horseshoe bat	11	0.17
	Plecotus spp.	8	0.12
	Nathusius' pipistrelle	4	0.06
	Nyctalus spp.	2	0.03
	Greater horseshoe bat	1	0.02
	Total	**6415**	**100%**
Area 6	Soprano pipistrelle	9214	61.57
	Common pipistrelle	4611	30.81
	Myotis spp.	547	3.65
	Noctule	214	1.43
	Lesser horseshoe bat	232	1.55
	Plecotus spp.	75	0.50
	Serotine	62	0.41
	Nathusius' pipistrelle	10	0.07
	Barbastelle	1	0.01
	Total	**14966**	**100%**

Appendix EDP 6
Great Crested Newt Survey

METHODOLOGY

Environmental DNA Sampling of Waterbodies

A6.1 Environmental DNA (eDNA) is DNA that is collected from the environment in which an organism lives. In aquatic environments, animals including amphibians shed cellular material into the water via their saliva, urine, faeces, skin cells, etc. This eDNA may persist for several weeks, and can be collected through a water sample, and analysed to determine if the target species of interest is/has been present in the water body. eDNA sampling of waterbodies between 15 April and 30 June (inclusive) gives a highly reliable indication of the presence or likely absence of great crested newt.

A6.2 eDNA sampling was undertaken of the single waterbody on-site, and those within 250m of the Site (but not separated from the Site by significant dispersal barriers) to which access was granted. With reference to **Plan EDP 22**, the waterbodies sampled are **P1**, **P4**, **P6**, **P17**, **P18**, **P20** and **P21**. The sampling was undertaken by a suitably experienced ecologist on 23 April and 08 May 2025, using sampling kits obtained from SureScreen Scientifics and following a standard protocol set out by the Freshwater Habitats Trust[40] which is approved by Natural England. Briefly, this protocol involves (per pond):

- Collecting 20 water samples from selected areas evenly spread around the accessible perimeter of the waterbody, including both open water and vegetated areas;
- Collecting a ladle of water at each sampling location, stirring the water column without stirring up sediment during collection;
- Shaking and inverting the combined samples thoroughly once all 20 ladles are collected; and
- Extracting 15ml of this mixed sample into six conical tubes, each containing preservative fluid, a shaking thoroughly to homogenize the sample.

A6.3 The water samples were then sent to SureScreen Scientifics be analysed for great crested newt eDNA, using real-time Polymerase Chain Reaction (PCR). The report was returned on the 01 and 15 May 2025.

Limitations

A6.4 A number of offsite ponds within 250m of the Solar Site and BESS Site and 100m from the Cable Corridor could not be surveyed due to access not being granted. As such, presence of great crested newt must precautionarily be assumed within these ponds.

[40] Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 2014. Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA. Freshwater Habitats Trust, Oxford.

Population Survey

A6.5 The standard presence/absence (and population assessment) survey procedure is described in the best practice guidelines published by English Nature[41] (now Natural England). This involves a minimum of four survey visits to each waterbody to confirm the presence/likely absence of great crested newts, between mid-March and mid-June, with a minimum of two between mid-April and mid-May to coincide with the typical peak breeding season. If evidence is found of great crested newts during any of these four visits, then a further two survey visits are required to allow for an estimate of population size; six surveys in total, three of which must be between the mid-April and mid-May period.

A6.6 The population surveys were undertaken by a licensed ecologist from Clarkson & Woods Limited and assistant, with reference to the guidelines described above, of all waterbodies to which access was granted that tested positive for great crested newt eDNA. With reference to **Plan EDP 22**, the waterbodies sampled are **P6**, **P17** and **P18**.

A6.7 In accordance with the guidelines, the following three preferred survey techniques were employed to determine the presence/absence and relative abundance of great crested newts within the surveyed waterbodies:

- Torching – This involves searching water bodies by torchlight between dusk and midnight and is an effective means of detecting adult newts. Each surveyor used a 1,000,000 candle power torch during this part of the survey;
- Bottle Trapping – This involves the use of funnel traps (made from 2-litre plastic bottles) that are inserted into the water along the margin of the water bodies during the evening and checked the following morning. Access permitting, the traps are spaced at roughly 2m intervals around the margins of the ponds; and
- Egg Searching – A search of any suitable aquatic vegetation to check for great crested newt eggs.

A6.8 Details of each survey visit, including pond conditions and number of bottle traps used, are provided in **Table EDP A6.1**.

Table EDP A6.1: Great Crested Newt Population Survey Visit Details

Visit No.	Date	Weather	Waterbody	No. Bottle Traps
1	08/05/25 - 09/05/25	Temp (Deployment End): 8°C Wind: 1 Rain: 0	**P17**	30
			P18	20
			P6	30

[41] English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough

Visit No.	Date	Weather	Waterbody	No. Bottle Traps
2	12/05/25 - 13/05/25	Temp (Deployment End): 11°C Wind: 1 Rain: 0	**P17**	30
			P18	20
			P6	30
3	14/05/25 –15/05/25	Temp (Deployment End): 10°C Wind: 1 Rain: 0	**P17**	30
			P18	20
			P6	30
4	21/05/2025 (torch only)	Temp (Torch End): 12°C Wind: 1 Rain: 0	**P17**	N/A
			P18	N/A
			P6	N/A
5	27/05/2025 - 28/05/2025	Temp (Deployment End): 14°C Wind: 0 Rain: 0	**P17**	30
			P18	30
			P6	26
6	04/06/2025 -05/06/2025	Temp (Deployment End): 12°C Wind: 0 Rain: 0	**P17**	25
			P18	25
			P6	16
7	11/06/2025 -12/06/2025	Temp (Deployment End): 15°C Wind: 6 Rain: 0	**P17**	20
			P18	30
			P6	0

A6.9 The population is estimated by taking the highest count ('peak count') of adults from one survey event and using this count to classify the population as either small, medium or high in accordance with the following criteria:

- Small population: peak count up to 10;
- Medium population: peak count between 11-100; and
- High population: peak count greater than 100.

Limitations

A6.10 Torching was not undertaken during visits 5, 6 and 7 due to high turbidity, and bottle trapping was not undertaken at pond **P6** during visit 7 due to low water levels. This is not considered to have significantly impacted the overall survey results.

RESULTS

A6.11 The results of the eDNA surveys of waterbodies are set out in **Table EDP A6.2**. Of the seven ponds tested, three returned positive results for great created newt, namely ponds **P6**, **P17** and **P18**. A copy of the eDNA analysis reports is provided separately in **Appendix EDP 7**.

A6.12 The results of the population surveys of waterbodies are set out in **Table EDP A6.3** and the Peak Total Site Count Calculation is set out in **Table EDP A6.4**. These should be read in conjunction with **Plan EDP 22**. In summary, great crested newt presence was confirmed in all three ponds that were surveyed, namely **P6**, **P17** and **P18**, additionally there was evidence of breeding in two ponds, **P17** and **P18**. The population survey results had a peak survey count of 6 individuals in pond **P6** during visit 2 and a total peak site count of 8 during visit 2.

A6.13 In terms of terrestrial habitats, the Site contains hedgerows, scrub and ditches, with adjacent woodlands, which are of moderate suitability to support great crested newts in the terrestrial phase of their annual life cycle, and which therefore have potential to be used for foraging and dispersal or refuge and hibernation. However, the majority of the Site is grazed pasture or arable fields which are of limited suitability for great crested newts.

Table EDP A6.2: Great crested newt eDNA Survey Results

Waterbody Ref. No.	Distance to Site	eDNA Result
P1	On-site	Negative
P4	180m	Negative
P6	140m	Positive
P17	45m	Positive
P18	60m	Positive
P20	250m	Negative
P21	140m	Negative

Table EDP A6.3: Great crested newt Survey Results Summary

Waterbody Ref. No.	Distance to Site	eDNA Result	Population Survey Results (Peak Survey Count[42])
P1	On-site	Negative	Not surveyed
P4	180m	Negative	Not surveyed
P6	140m	Positive	6
P17	45m	Positive	2
P18	60m	Positive	1
P20	250m	Negative	Not surveyed
P21	140m	Negative	Not surveyed

[42] Peak survey count represents the maximum adult count per pond per night recorded through torch survey or bottle-trapping

Table EDP A6.4: Great Crested Newt Population Survey Results

Waterbody	eDNA	Population Survey	
		Peak Adult Count[43] (Visit No.)	Eggs (Y/N)
P1	Negative	Not surveyed	Not surveyed
P4	Negative	Not surveyed	Not surveyed
P6	Positive	6 (visit 2)	N
P17	Positive	2 (visit 2 & 3)	Y
P18	Positive	1 (visit 1 & 5)	Y
P20	Negative	Not surveyed	Not surveyed

Table EDP A6.5: Great Crested Newt Survey Total Site Count Calculation

Visit No.	Waterbody (peak visit count[44])			Visit Total (Peak Total Site Count[45] in bold)
	P17	P18	P6	
1	0	1	3	4
2	2	0	6	**8**
3	2	0	0	2
4 (torch only)	0	0	0	0
5	0	1	0	1
6	0	0	0	0

Evaluation of Population

A6.14 Great crested newts were recorded in waterbodies **P6**, **P17** and **P18** with a peak count of eight individuals observed across all ponds during the second visit.

A6.15 Pond **P6** is located approximately 135 m north of the Site and it is therefore possible that great crested newts utilising this pond could also be present within the terrestrial habitats within the northern section of the Solar Site.

A6.16 Ponds **P17** and **P18** are located 45 m and 65 m south of the Cable Corridor respectively and ponds at the Asaph Business Park approximately 130 m north of the BESS Site are known to support a large population of the species. This section of the Cable Corridor could therefore support great crested newt within suitable terrestrial habitats.

[43] Peak survey count represents the maximum adult count per pond per night recorded through torch survey or bottle-trapping
[44] Peak visit count represents the maximum adult count per pond recorded through torch survey or bottle-trapping
[45] Peak total site count represents the highest aggregate maximum adult count across all ponds on the same visit. This assumes there is reasonable certainty that there is regular interchange of animals between ponds (typically, within 250m and with an absence of barriers to dispersal).

A6.17 Great crested newts were confirmed to be absent from ponds **P1**, **P4**, **P20** and **P21**. Other ponds within 250m of the Solar Site and BESS Site and 100m from the Cable Corridor could not be surveyed due to access not being granted.

A6.18 Overall, it is possible that the great crested newt population within the local area would utilise the terrestrial habitats of high value across the Site that are in proximity to waterbodies, including hedgerows, ditch banks, scrub and adjacent woodlands. The modified grasslands and arable fields are sub-optimal terrestrial habitats for great crested newts due to their limited structural diversity owing to intensive management and grazing, being suitable for occasional foraging and dispersal only.

A6.19 Based on the survey results above, a small population of great crested newt is considered to be potentially using certain parts of the Site in proximity to waterbodies, which is judged to be of Local level importance.

Other Amphibians Recorded

A6.20 During the great crested newt surveys a number of other amphibians were recorded including smooth newts, palmate newt, common toad and common frogs. In particular, the Priority Species, common toad, was recorded at ponds **P6** and **P17**.

Appendix EDP 7
Great Crested Newt eDNA Analysis Report

Folio No:	872-2025
Purchase Order:	edp 8841
Contact:	EDP Ltd
Issue Date:	
Received Date:	29.04.2025

GCN Report

Technical Report

SureScreen Scientifics

Folio No: 872-2025
Purchase Order: edp 8841
Contact: EDP Ltd
Issue Date:
Received Date: 29.04.2025

SureScreen Scientifics

GCN eDNA Analysis

Summary

When great crested newts (GCN), *Triturus cristatus* , inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analyzing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

Results

Lab ID	Site Name	OS Reference	Degradation Check	Inhibition Check	Result	Positive Replicates
GCN25 1368	Bodelwyddan 8841 - Pond 4	SH 99243 77697	Pass	Pass	Negative	0/12
GCN25 3250	Bodelwyddan 8841 - P6	SH 98252 78567	Pass	Pass	Positive	2/12
GCN25 3258	8841 - Pond 1	SH 98999 77098	Pass	Pass	Negative	0/12
GCN25 3259	8841 - N Wales Pond 17	SJ 01087 73862	Pass	Pass	Positive	6/12
GCN25 3260	8841 - Pond 18	SJ 01095 73851	Pass	Pass	Positive	5/12

Matters affecting result: none

Reported by: Chelsea Warner

Approved by: -

Folio No: 872-2025
Purchase Order: edp 8841
Contact: EDP Ltd
Issue Date:
Received Date: 29.04.2025

SureScreen Scientifics

Methodology

The samples detailed above have been analyzed for the presence of GCN eDNA following the protocol stated in DEFRA WC1067 'Analytical and methodological development for improved surveillance of the Great Crested Newt, Appendix 5.' (Biggs et al. 2014). Each of the 6 sub-sample tubes are first centrifuged and pooled together into a single sample tube which then undergoes DNA extraction. The extracted sample is then analyzed using real-time PCR (qPCR), which uses species-specific molecular markers to amplify GCN DNA within a sample. These markers are unique to GCN DNA, meaning that there should be no detection of closely related species.

If GCN DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If GCN DNA is not present then amplification does not occur, and a negative result is recorded. Analysis of eDNA requires attention to detail to prevent the risk of contamination. True positive controls, negative controls, and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared and reported. Stages of the DNA analysis are also conducted in different buildings at our premises for added analytical security.

SureScreen Scientifics Ltd is ISO9001 accredited and participates in Natural England's proficiency testing scheme for GCN eDNA testing.

Interpretation of Results

Sample Integrity Check: When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results. Any samples which fail this test are rejected and eliminated before analysis.

Degradation Check: **Pass/Fail**. Analysis of the spiked DNA marker to see if there has been degradation of the kit or sample between the date it was made to the date of analysis. Degradation of the spiked DNA marker may lead indicate a risk of false negative results.

Inhibition Check: **Pass/Fail.** The presence of inhibitors within a sample is assessed using a DNA marker. If inhibition is detected, samples are purified and re-analyzed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result: **Presence of GCN eDNA (Positive/Negative/Inconclusive)**
Positive: GCN DNA was identified within the sample, indicative of GCN presence within the sampling location at the time the sample was taken or within the recent past at the sampling location.
Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for GCN presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. In accordance with the WC1067 Natural England protocol, even a score of 1/12 is declared positive. 0/12 indicates negative GCN presence.
Negative: GCN eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of GCN absence, however, does not exclude the potential for GCN presence below the limit of detection.
Inconclusive: Controls indicate inhibition or degradation of the sample, resulting in the inability to provide conclusive evidence for GCN presence or absence.

Appendix EDP 8
Otter and Water Vole Survey

METHODOLOGY

4.3 An initial assessment of the Site's suitability to support otter (*Lutra lutra*) and water vole (*Arvicola amphibius*) was undertaken during the baseline habitat survey. A detailed survey of the watercourses and ditches on-site (where accessible) was undertaken by two experienced surveyors on the 18 and 19 September 2024, 08 and 09 May 2025 and 17 and 18 June 2025.

A8.1 Each survey was undertaken with reference to published methodologies on surveying otter[46] and water vole[47]. The surveys involved a visual inspection of the entire watercourse for characteristic signs of otter, including evidence of feeding remains, prints, tracks, spraints and resting sites including lay-ups and holts. Features considered to have the potential to be used as holts were also documented during the survey. In respect of water vole, the survey included a search for burrows, feeding stations (including feeding stations and grazed lawns), faeces (latrines and droppings), footprints, and possible runs.

A8.2 The locations of the habitats surveyed for otter and water vole are shown on **Plan EDP 23** - **24**.

Limitations

A8.3 Weather conditions during and prior to the survey were suitable, with no heavy rainfall recorded in the days leading up to the survey.

A8.4 During the September 2024 survey, vegetation cover along the watercourses was dense, limiting surveyors' ability to see burrows and nests. As such, where other evidence of water vole presence was identified, it is assumed there may be potential for burrows and nests to be present in the watercourse and any connecting watercourses.

A8.5 Due to health and safety constraints associated with steep banks, deep water and/or livestock some areas of banks were not able to be fully accessed. Where possible these areas were surveyed from a distance using binoculars. While this poses a limitation to the findings of the survey, given the extensive area of survey conducted and surveys of connecting habitat completed, the findings of this survey are considered to be valid.

REUSLTS

A8.6 In September 2024, evidence of water voles was recorded along one of the ditches **5.15** within the Solar Site, this included a concentration of recent latrines and feeding remains. No burrows were located in this area, but this is likely due to the dense vegetation.

[46] Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.
[47] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series) Mammal Society, London.

A8.7 Photographs of the latrines and feeding evidence are shown below.

Image EDP A8.1: Water vole feeding station.

Image EDP A8.2: Water vole latrine and feeding evidence.

A8.8 Burrows of a suitable size, shape and location to be used by water vole were identified along four other ditches within the Solar Site, **1.3**, **3.13**, **5.3** and **5.6**. However, given the limited evidence of water vole along the ditch, it was not possible to confirm the use of the burrow by water vole.

A8.9 It is worth noting that footprints of a suitable size and shape for American mink were identified along ditches **1.3** and **5.7**. If present, American mink can be detrimental to a water vole population.

A8.10 No evidence of otter was identified during the September 2024 survey.

A8.11 In May/June 2025, evidence of water voles was recorded along one of the ditches **1.1**, **1.3** and **5.14** within the Solar Site, this included a concentration of recent latrines and feeding remains, potential water vole burrows were also identified near to this evidence, along ditches **1.2**, **1.3** and **5.14**.

A8.12 Additional burrows of a suitable size, shape and location to be used by water vole were identified along three other ditches within the Solar Site, **3.7**, **3.13** and **4.1**. However, given the limited evidence of water vole along the ditch, it was not possible to confirm the use of the burrow by water vole.

A8.13 Two potential otter footprints were identified along ditch **5.16**, during the May/June 2025 survey. As a precaution and given the known presence of this species in the wider area, these prints are therefore presumed to be otter prints.

Plans

Plan EDP 1: Phase 1 Habitat Plan
(edp8841_d008a 01 September 2025 PDr/KWi)

Plan EDP 2: Phase 1 Habitat Survey (Cable Corridor)
(edp8841_d027a 01 September 2025 PDr/JCo)

Plan EDP 3: International Statutory Designated Sites
(edp8841_d010a 28 July 2025 PDr/TWi)

Plan EDP 4: Non-statutory Designated Sites
(edp8841_d011a 28 July 2025 PDr/TWi)

Plan EDP 5: Breeding Bird Survey - 10/11 April 2025
(edp8841_d040a 01 September 2025 VMS/LBT)

Plan EDP 6: Breeding Bird Survey – 23/24 April 2025
(edp8841_d041a 01 September 2025 VMS/LBT)

Plan EDP 7: Breeding Bird Survey - 20/21 May 2025
(edp8841_d042a 01 September 2025 VMS/LBT)

Plan EDP 8: Breeding Bird Survey – 10/11 June 2025
(edp8841_d051a 01 September 2025 PDr/KWi)

Plan EDP 9: Breeding Bird Survey - 02/03 July 2025
(edp8841_d052a 01 September 2025 PDr/KWi)

Plan EDP 10: Breeding Bird Survey – 08/09 July 2025
(edp8841_d047a 01 September 2025 PDr/KWi)

Plan EDP 11: Winter Bird Survey - November 2024
(edp8841_d034a 01 September 2025 VMS/LBT)

Plan EDP 12: Winter Bird Survey - December 2024
(edp8841_d035a 01 September 2025 VMS/LBT)

Plan EDP 13: Winter Bird Survey – Mid-January 2025
(edp8841_d036a 01 September 2025 VMS/LBT)

Plan EDP 14: Winter Bird Survey - Late January 2025
(edp8841_d037a 01 September 2025 VMS/LBT)

Plan EDP 15: Winter Bird Survey - February 2025
(edp8841_d038a 01 September 2025 VMS/LBT)

Plan EDP 16: Winter Bird Survey - Late February 2025
(edp8841_d039a 01 September 2025 VMS/LBT)

Plan EDP 17: Ground Level Tree Roost Assessment
(edp8841_d046a 01 September 2025 PDr/KWi)

Plan EDP 18: Nighttime Bat Walkover Survey Plan Summer 2024
(edp8841_d025a 01 September 2025 VMS/KWi)

Plan EDP 19: Nighttime Bat Walkover Survey Plan Autumn 2024
(edp8841_d026a 01 September 2025 VMS/KWi)

Plan EDP 20: Nighttime Bat Walkover Survey Plan Spring 2025
(edp8841_d045a 01 September 2025 PDr/KWi)

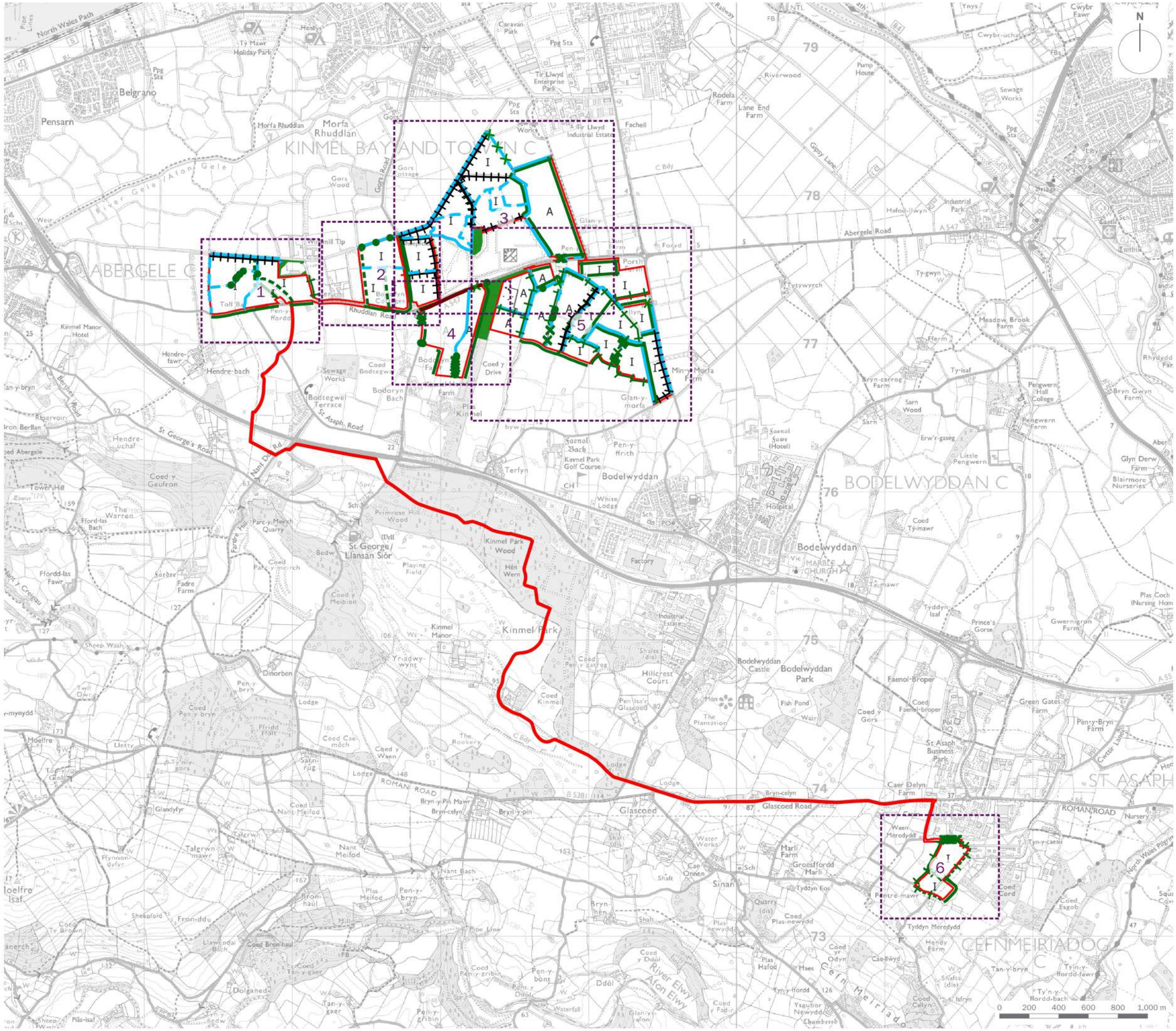
Plan EDP 21: Automated Bat Detector Location Plan
(edp8841_d024a 01 September 2025 VMS/KWi)

Plan EDP 22: Pond Location Plan
(edp8841_d022b 01 September 2025 GYo/KWi)

Plan EDP 23: Otter and Water Vole Survey Results September 2024
(edp8841_d028a 01 September 2025 DJo/KWi)

Plan EDP 24: Otter and Water Vole Survey Results June 2025
(edp8841_d043a 01 September 2025 VMS/KWi)

Plan EDP 25: Badger Survey Results (Overview)
(edp8841_d029a 01 September 2025 DJo/KWi)



- Site Boundary
- Broadleaved Semi-natural Woodland
- Semi-natural Mixed Woodland
- Dense Continuous Scrub
- A — Arable
- I — Improved Grassland
- Standing Water
- Hardstanding
- Bare Ground
- Intact Species-poor Hedgerow and Trees
- Intact Species-poor Hedgerow
- Defunct Species-poor Hedgerow and Trees
- Defunct Species-poor Hedgerow
- Scattered Trees/Parkland (Broadleaved)
- Scattered Scrub
- Wet Ditch
- Dry Ditch
- Fence
- Wall
- Scattered Trees (Broadleaved)
- Scattered Scrub

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Plan - Overview

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d008a**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

Site Boundary

Broadleaved Semi-natural Woodland

Dense Continuous Scrub

I Improved Grassland

Standing Water

Intact Species-poor Hedgerow and Trees

Intact Species-poor Hedgerow

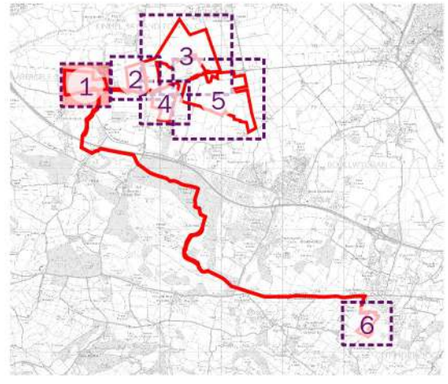
Defunct Species-poor Hedgerow

Wet Ditch

Dry Ditch

Fence

Scattered Trees (Broadleaved)



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Plan (Sheet 1 of 6)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d008a**	checked	**KWi**
scale	**1:2,500 @ A3**	QA	**DJo**

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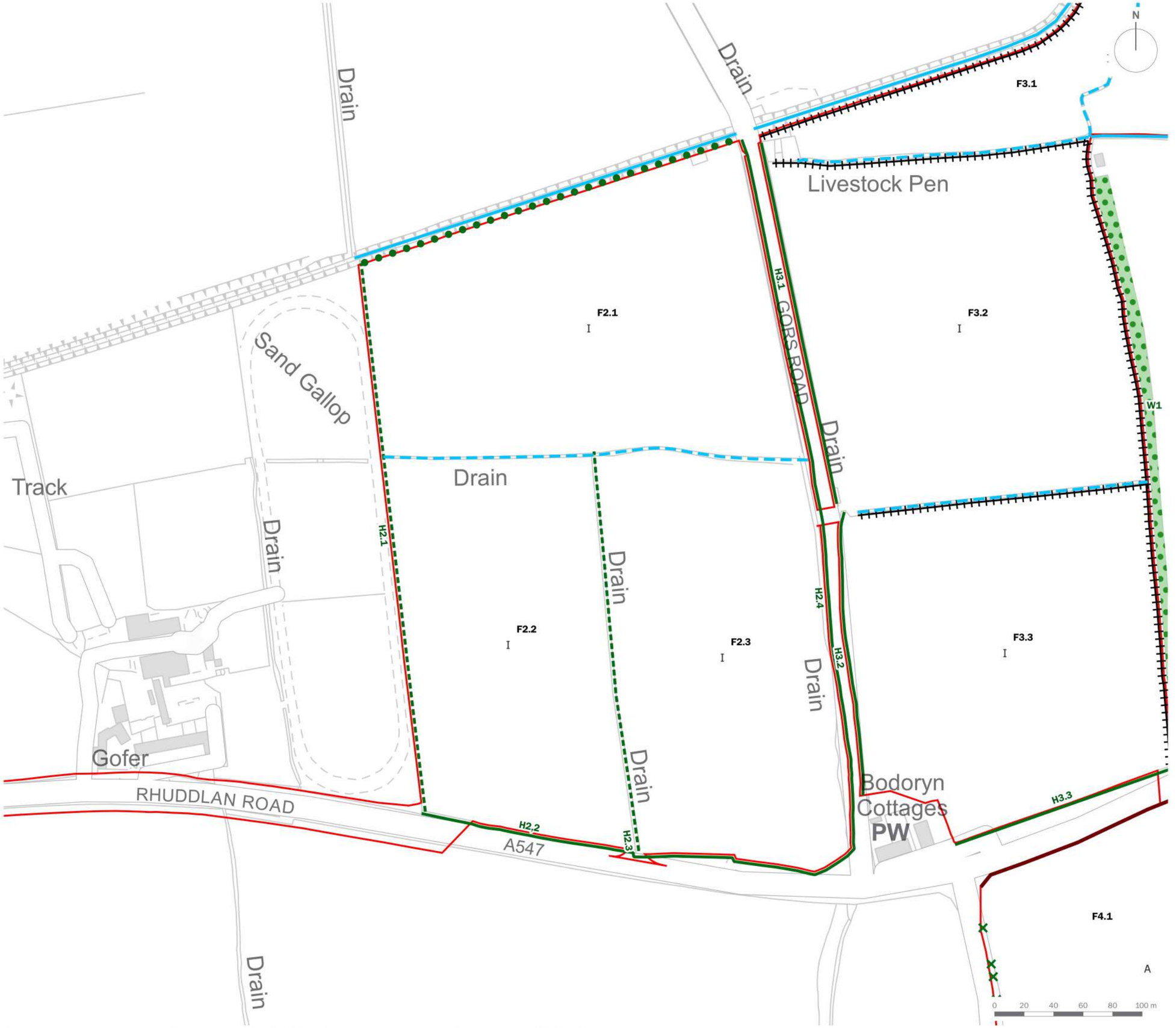
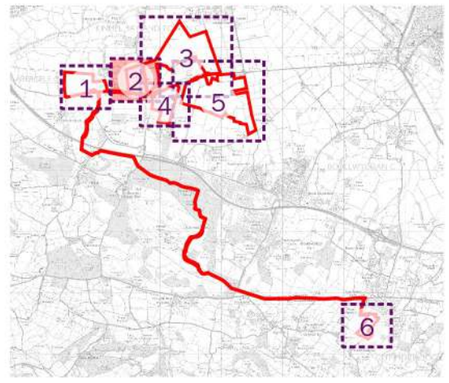


Site Boundary
Semi-natural Mixed Woodland
A Arable
I Improved Grassland
Intact Species-poor Hedgerow
Defunct Species-poor Hedgerow
Scattered Trees/Parkland (Broadleaved)
Wet Ditch
Dry Ditch
Fence
Wall
Scattered Scrub



client
Bodelwyddan Solar and Energy Storage Ltd

project title
Bodelwyddan Solar and Energy Storage

drawing title
Phase 1 Habitat Plan (Sheet 2 of 6)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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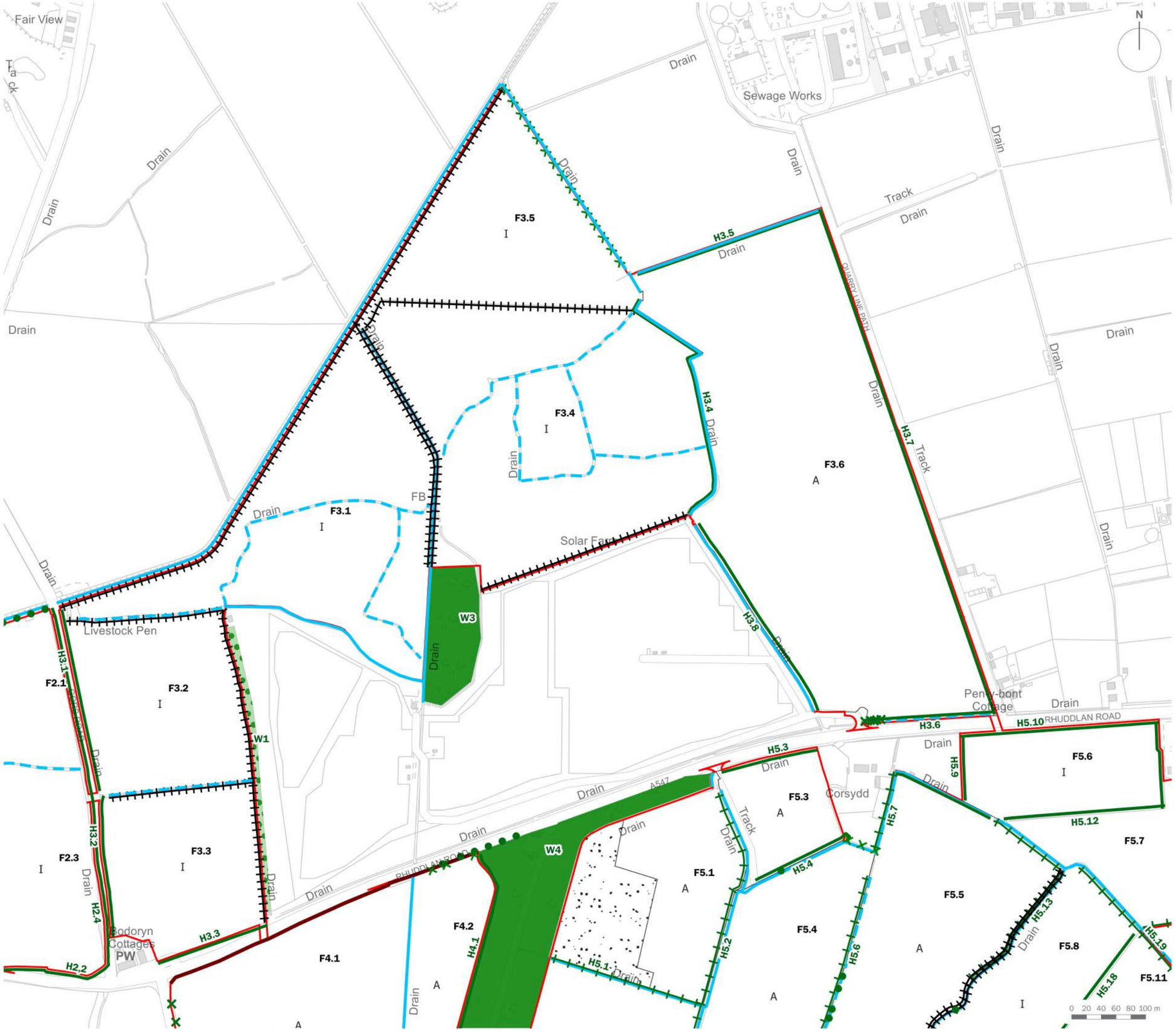

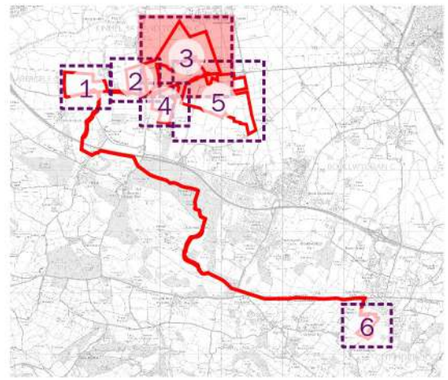

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Bodelwyddan Solar and Energy Storage Ltd

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Phase 1 Habitat Plan (Sheet 3 of 6)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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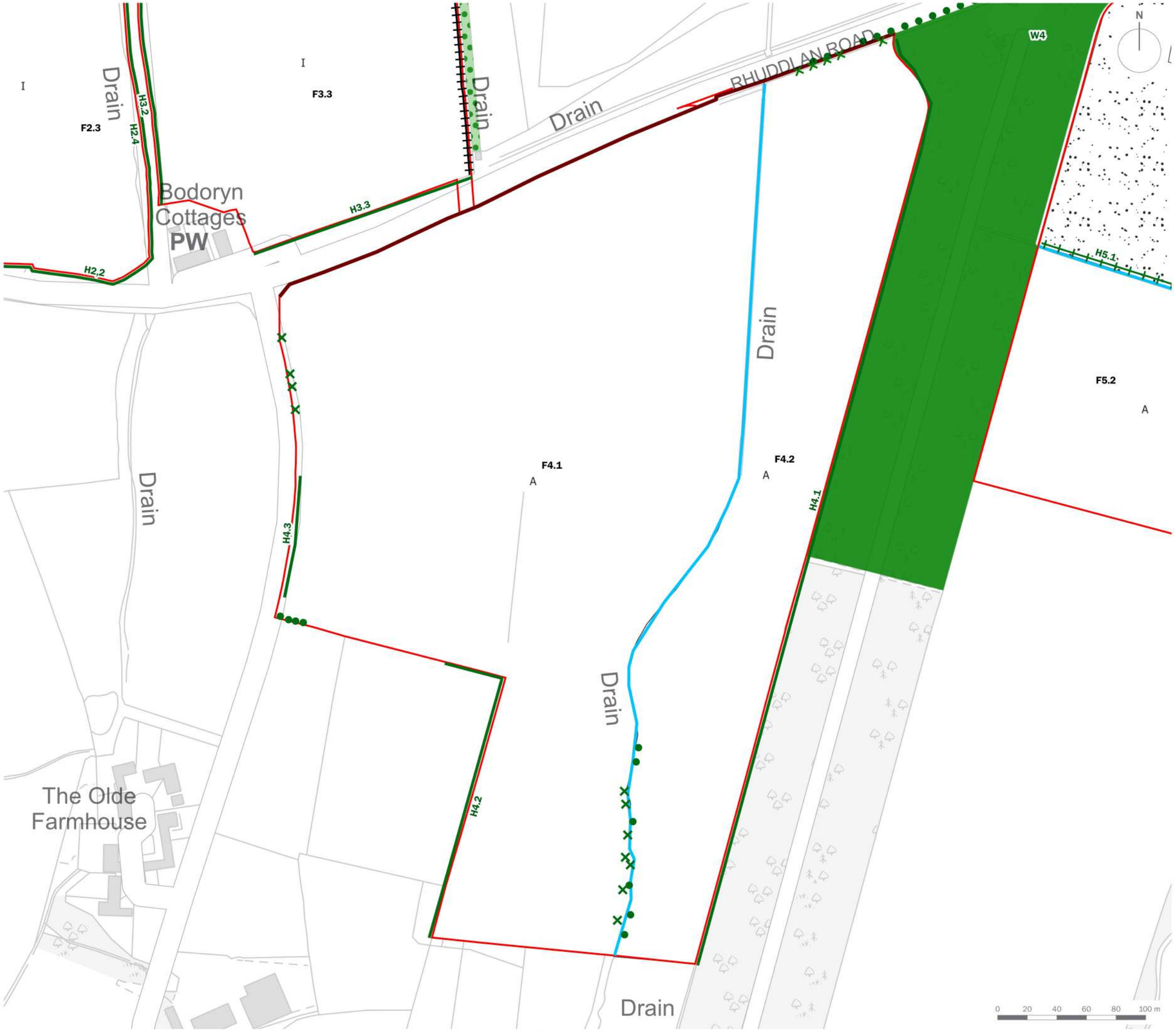
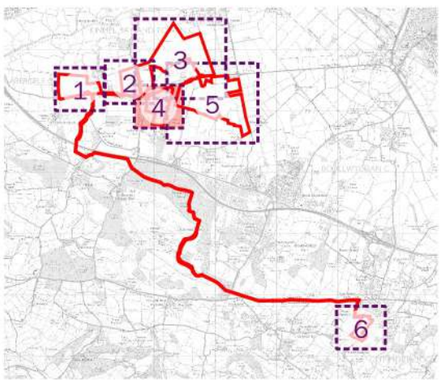


Site Boundary
Broadleaved Semi-natural Woodland
Semi-natural Mixed Woodland
A Arable
I Improved Grassland
Bare Ground
Intact Species-poor Hedgerow and Trees
Intact Species-poor Hedgerow
Scattered Trees/Parkland (Broadleaved)
Scattered Scrub
Wet Ditch
Fence
Wall
Scattered Trees (Broadleaved)
Scattered Scrub



client

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Phase 1 Habitat Plan (Sheet 4 of 6)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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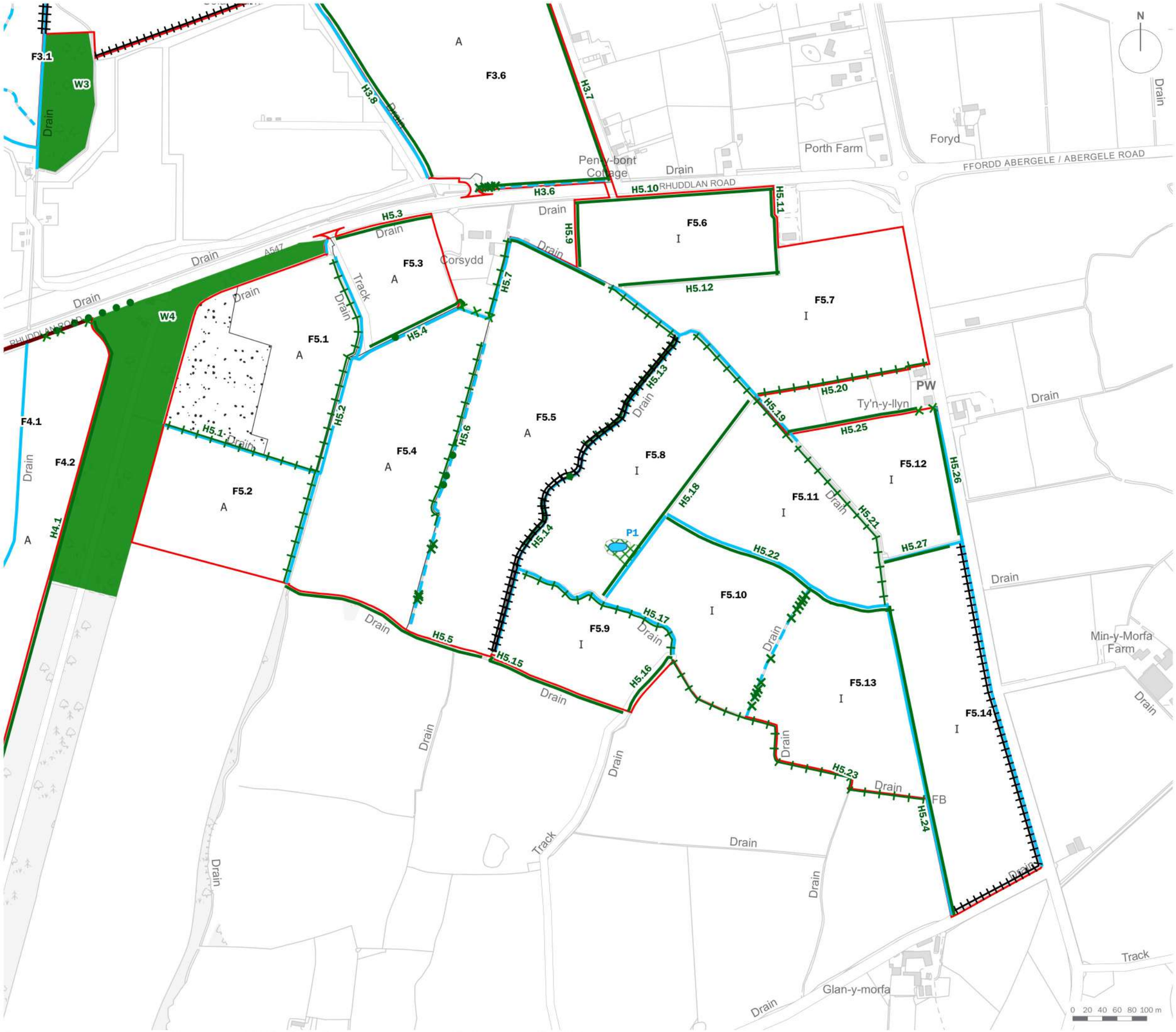
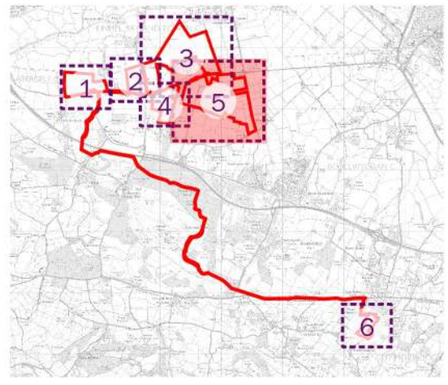


Site Boundary
Broadleaved Semi-natural Woodland
Dense Continuous Scrub
A Arable
I Improved Grassland
Standing Water
Bare Ground
Intact Species-poor Hedgerow and Trees
Intact Species-poor Hedgerow
Scattered Trees/Parkland (Broadleaved)
Scattered Scrub
Wet Ditch
Dry Ditch
Fence
Wall
Scattered Trees (Broadleaved)
Scattered Scrub



client
Bodelwyddan Solar and Energy Storage Ltd

project title
Bodelwyddan Solar and Energy Storage

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Phase 1 Habitat Plan (Sheet 5 of 6)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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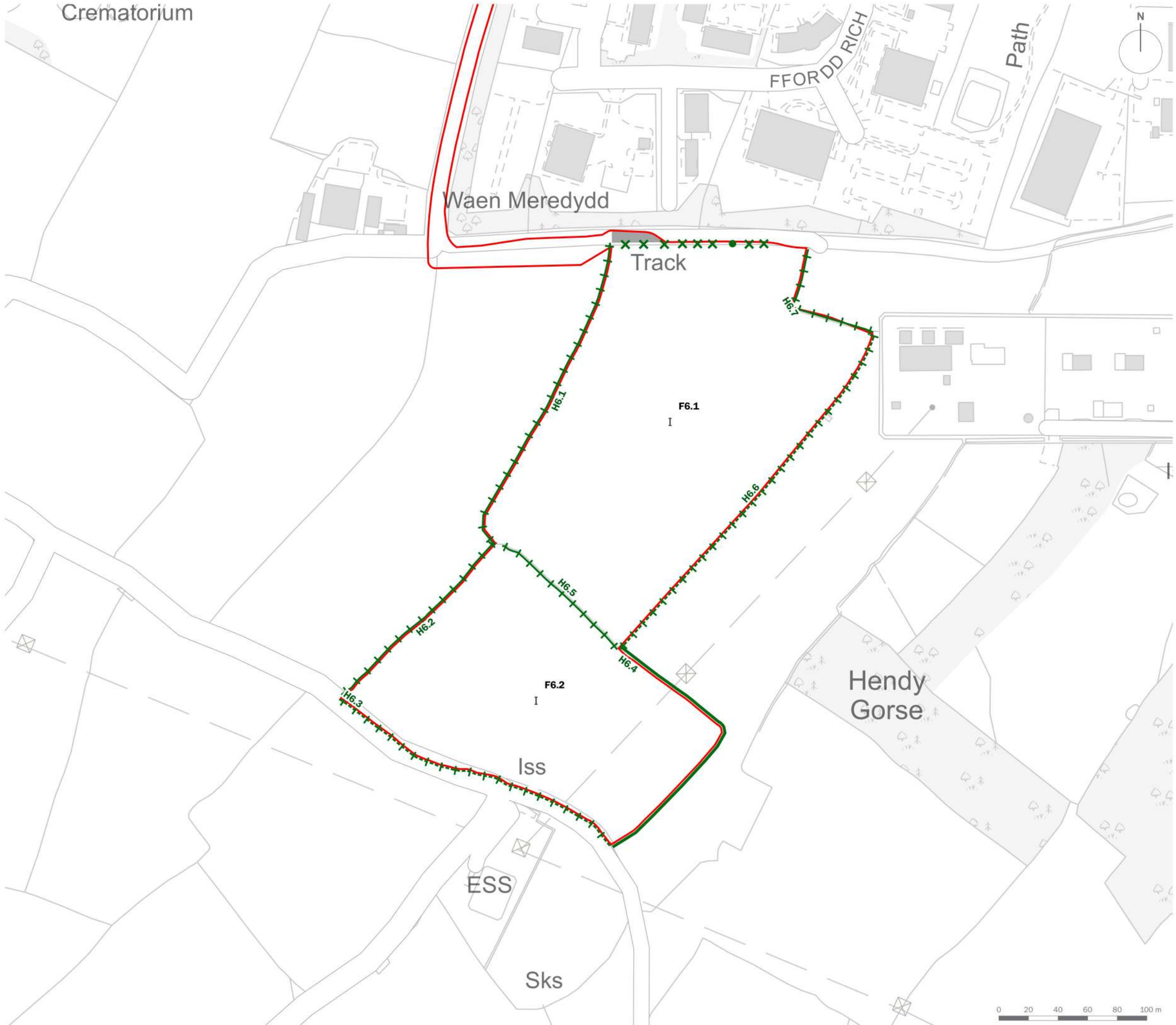
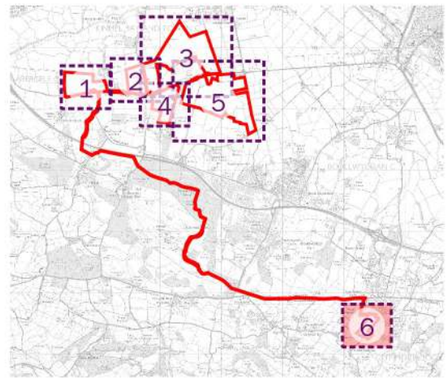


- Site Boundary
- I Improved Grassland
- Hardstanding
- Intact Species-poor Hedgerow and Trees
- Intact Species-poor Hedgerow
- Defunct Species-poor Hedgerow and Trees
- Scattered Trees (Broadleaved)
- Scattered Scrub



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Phase 1 Habitat Plan (Sheet 6 of 6)

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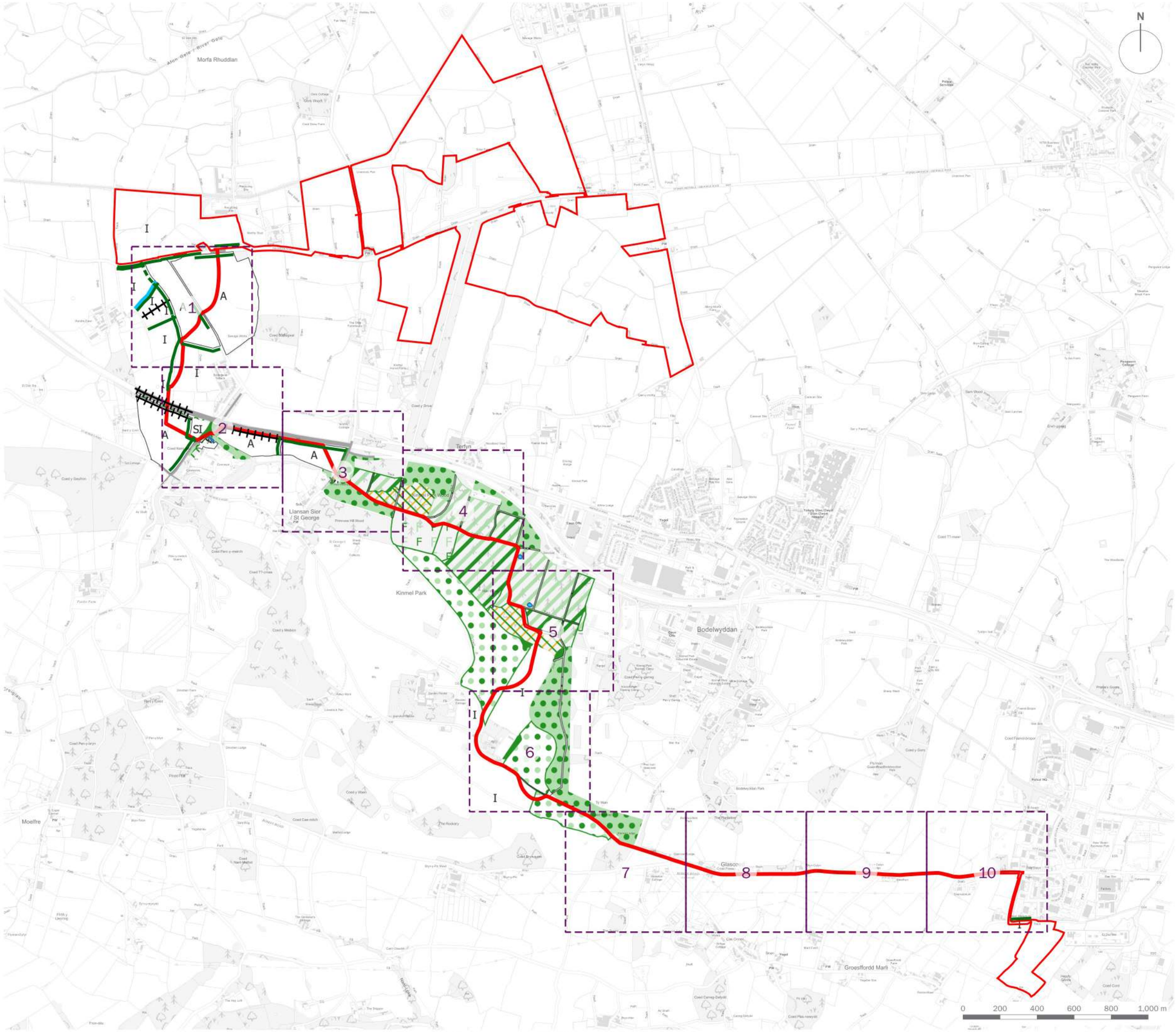

- Site Boundary
- Broadleaved Semi-natural Woodland
- Coniferous Plantation Woodland
- Semi-natural Mixed Woodland
- Plantation Mixed Woodland
- Scattered Trees/Parkland (Mixed)
- Recently Felled Woodland (Mixed)
- Dense Continuous Scrub
- Scrub and Tall Ruderal
- A — Arable
- I — Improved Grassland
- SI — Poor Semi-improved Grassland
- Standing Water
- Building
- Hardstanding
- Bare Ground
- Intact Species-poor Hedgerow
- Defunct Species-poor Hedgerow
- Coniferous Hedgerow
- Wet Ditch
- Fence

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Survey (Cable Corridor) (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d027a**	checked	**JCo**
scale	**1:20,000 @ A3**	QA	**DJo**

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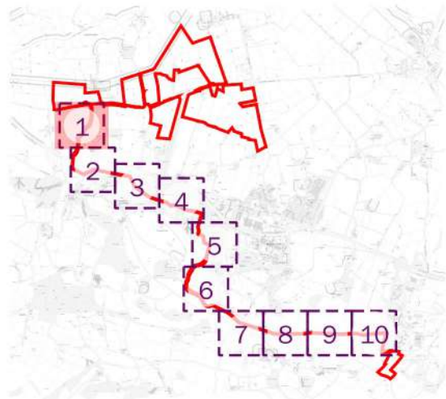
Site Boundary
A Arable
I Improved Grassland
Hardstanding
Bare Ground
Intact Species-poor Hedgerow
Defunct Species-poor Hedgerow
Wet Ditch
Fence



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Bodelwyddan Solar and Energy Storage Ltd

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Phase 1 Habitat Survey (Cable Corridor) (Sheet 1 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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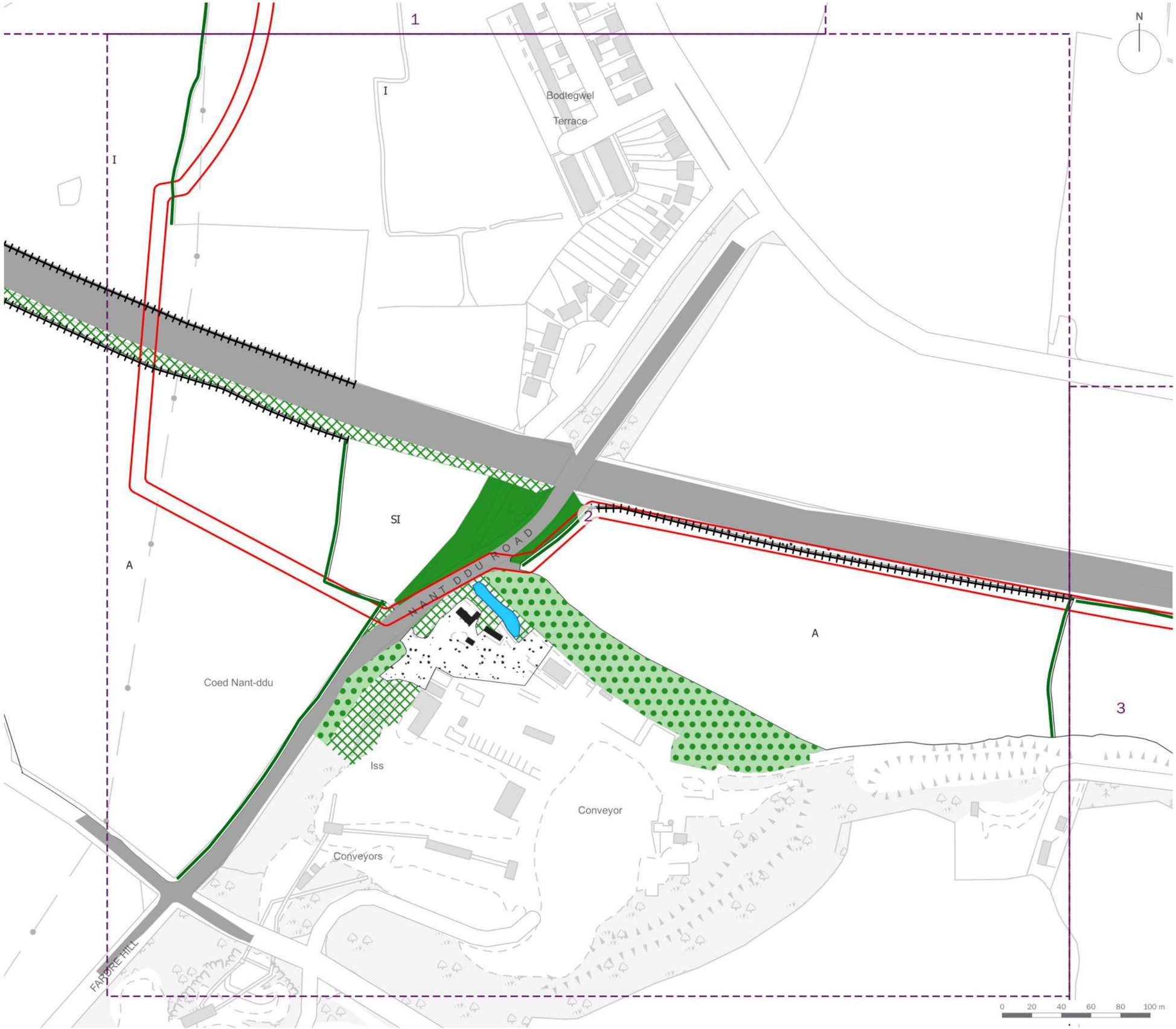
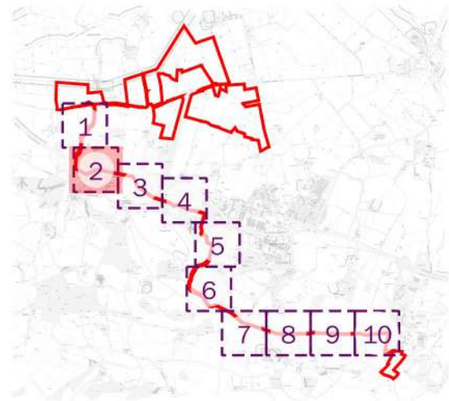


Site Boundary
Broadleaved Semi-natural Woodland
Semi-natural Mixed Woodland
Dense Continuous Scrub
A Arable
I Improved Grassland
SI Poor Semi-improved Grassland
Standing Water
Building
Hardstanding
Bare Ground
Intact Species-poor Hedgerow
Fence



client
Bodelwyddan Solar and Energy Storage Ltd

project title
Bodelwyddan Solar and Energy Storage

drawing title
Phase 1 Habitat Survey (Cable Corridor) (Sheet 2 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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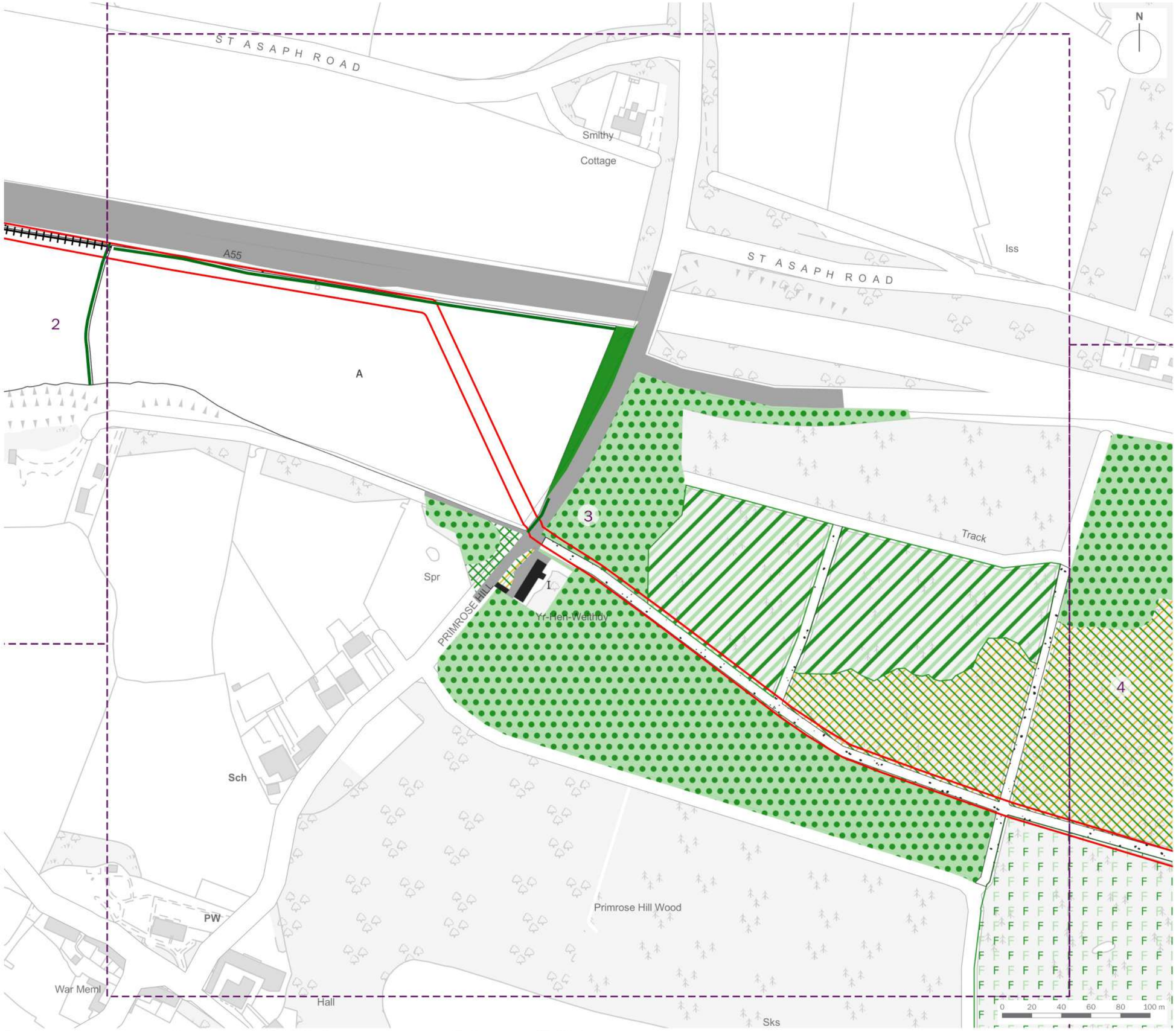
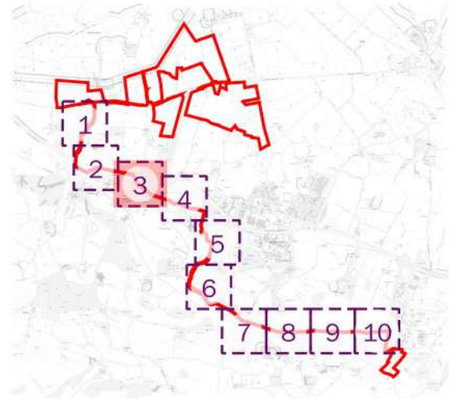


Site Boundary
Broadleaved Semi-natural Woodland
Semi-natural Mixed Woodland
Plantation Mixed Woodland
Recently Felled Woodland (Mixed)
Dense Continuous Scrub
Scrub and Tall Ruderal
A — Arable
I — Improved Grassland
Building
Hardstanding
Bare Ground
Intact Species-poor Hedgerow
Coniferous Hedgerow
Fence



client
Bodelwyddan Solar and Energy Storage Ltd

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Bodelwyddan Solar and Energy Storage

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Phase 1 Habitat Survey (Cable Corridor) (Sheet 3 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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scale	**1:2,500 @ A3**	QA	**DJo**

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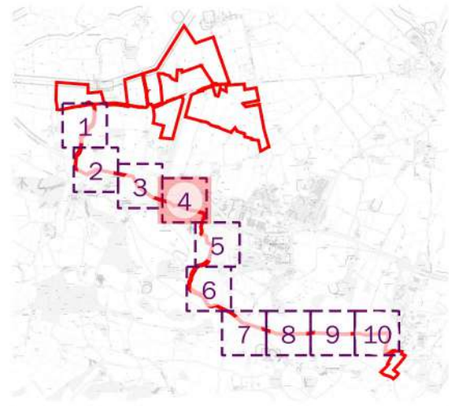
Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

- Site Boundary
- Coniferous Plantation Woodland
- Semi-natural Mixed Woodland
- Plantation Mixed Woodland
- Scattered Trees/Parkland (Mixed)
- Recently Felled Woodland (Mixed)
- Scrub and Tall Ruderal
- Standing Water
- Bare Ground



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Survey (Cable Corridor) (Sheet 4 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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scale	**1:2,500 @ A3**	QA	**DJo**

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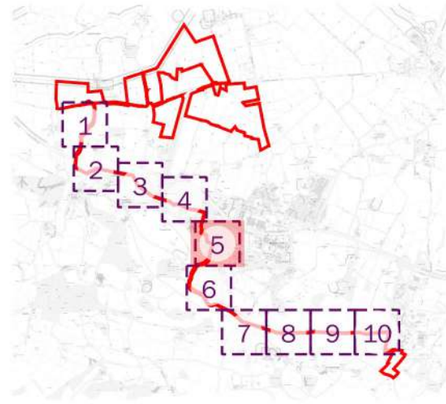
Site Boundary
Broadleaved Semi-natural Woodland
Coniferous Plantation Woodland
Semi-natural Mixed Woodland
Plantation Mixed Woodland
Scattered Trees/Parkland (Mixed)
Scrub and Tall Ruderal
I Improved Grassland
Standing Water
Bare Ground



client
Bodelwyddan Solar and Energy Storage Ltd

project title
Bodelwyddan Solar and Energy Storage

drawing title
Phase 1 Habitat Survey (Cable Corridor) (Sheet 5 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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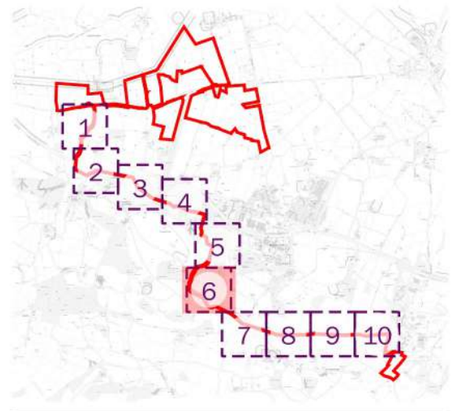
scale	**1:2,500 @ A3**	QA	**DJo**

the environmental dimension partnership
Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

Site Boundary
Broadleaved Semi-natural Woodland
Semi-natural Mixed Woodland
Scattered Trees/Parkland (Mixed)
I Improved Grassland
Bare Ground

N



client
Bodelwyddan Solar and Energy Storage Ltd

project title
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drawing title
Phase 1 Habitat Survey (Cable Corridor) (Sheet 6 of 10)

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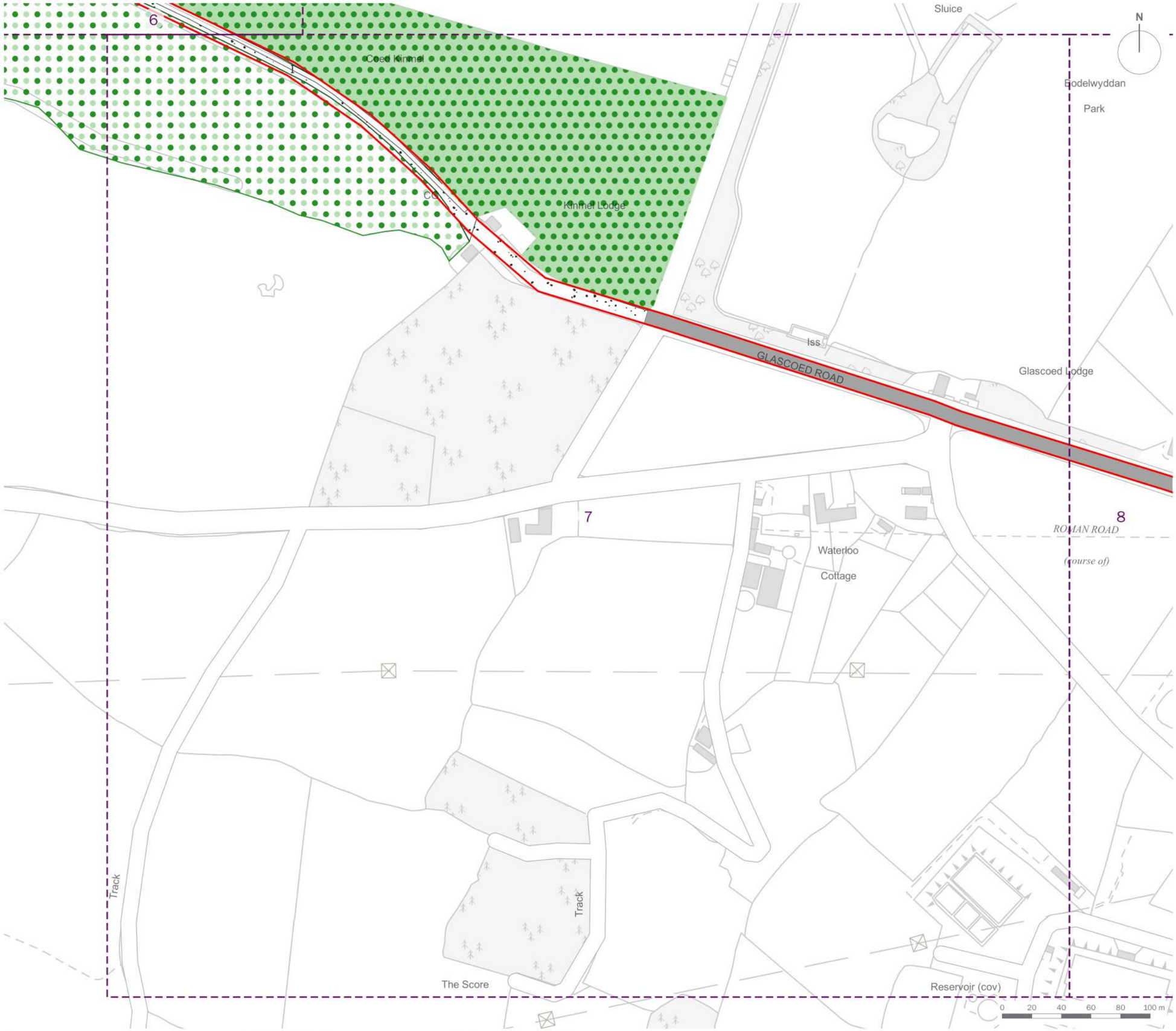


Site Boundary

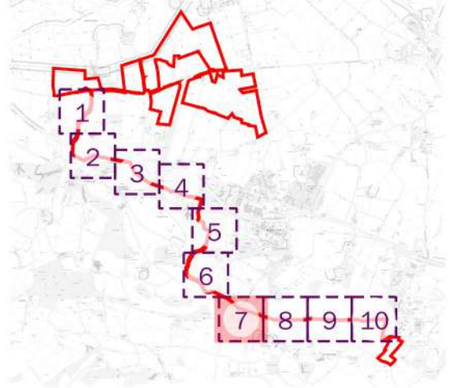
Semi-natural Mixed Woodland

Scattered Trees/Parkland (Mixed)

I Improved Grassland

Hardstanding

Bare Ground



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Survey (Cable Corridor) (Sheet 7 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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scale	**1:2,500 @ A3**	QA	**DJo**

the environmental dimension partnership

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Site Boundary

Hardstanding

N

Bodelwyddan Park

The Plantation

Glascoed Lodge

Cross Foxes

Lodge Bach

Bryn-Celyn

7

8

9

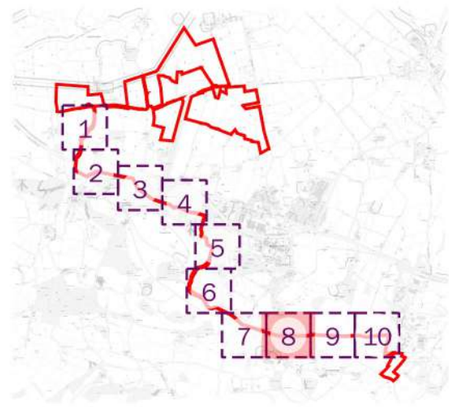
ROMAN ROAD

(course of)

B5381

Sewage Works

0 20 40 60 80 100 m



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Survey (Cable Corridor) (Sheet 8 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d027a**	checked	**JCo**
scale	**1:2,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

N

Site Boundary

Hardstanding

Iss

Bryn-Celyn

Bryn Celyn

Lodge

8

B5381

GLASCOED ROAD

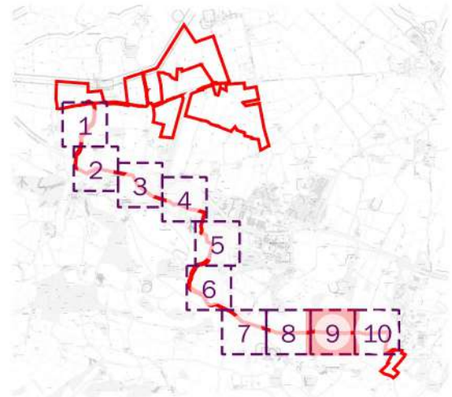
9

10

Gwelfryn

Path

0 20 40 60 80 100 m



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Phase 1 Habitat Survey (Cable Corridor) (Sheet 9 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d027a**	checked	**JCo**
scale	**1:2,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

Business Park

N

FFORDD WILLIAM MO

LLYS EDMUND PRYS

Caer Delyn

Iss

ROMAN ROAD

9

10

GLASCOED ROAD

Drain

Crematorium

Drain

FFORDD

Waen Meredydd

I

Track

Path

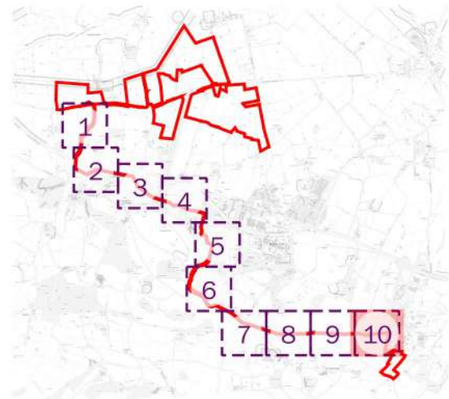
0 20 40 60 80 100 m

Site Boundary

I Improved Grassland

Hardstanding

Intact Species-poor Hedgerow



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

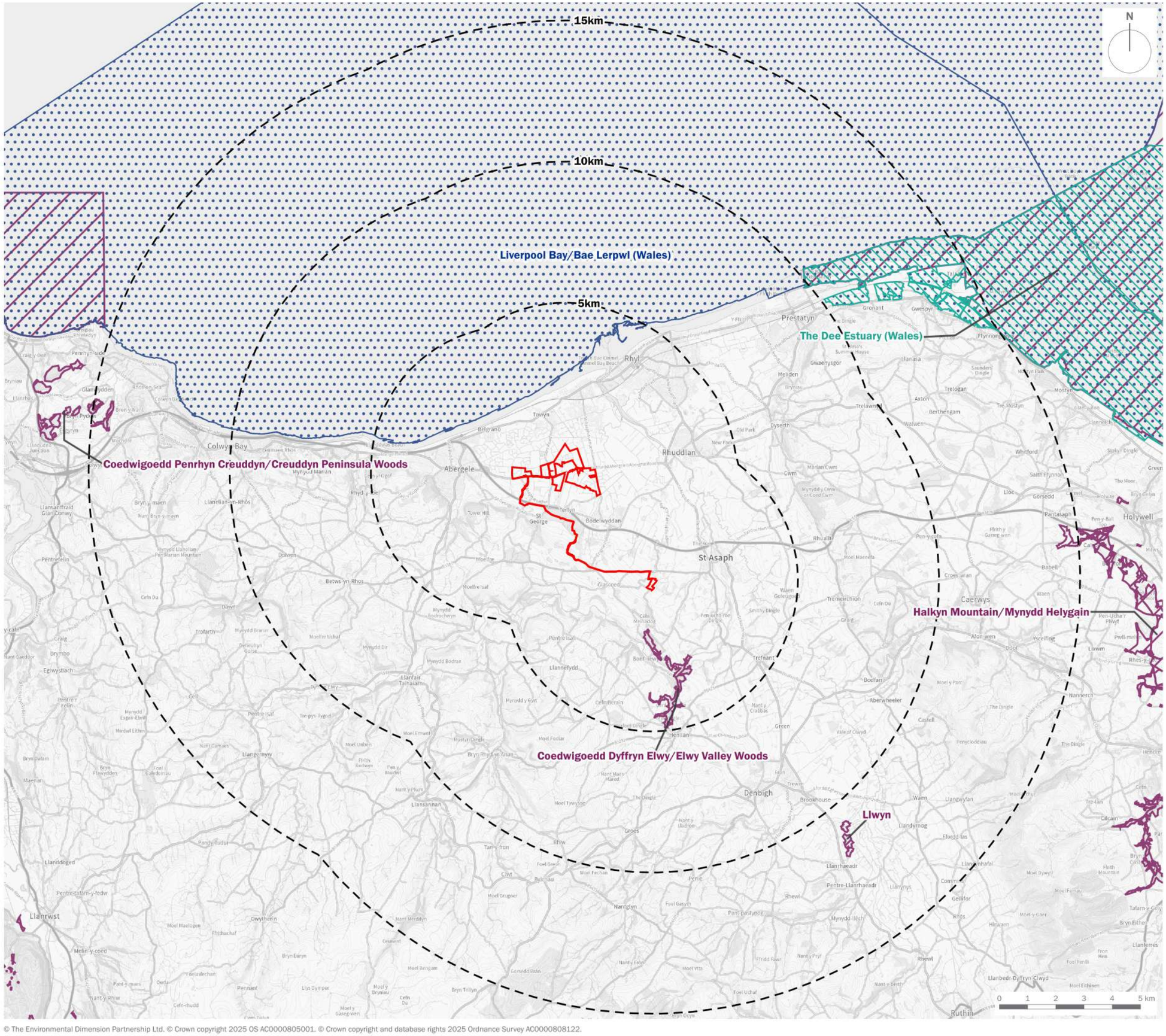
drawing title

Phase 1 Habitat Survey (Cable Corridor) (Sheet 10 of 10)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d027a**	checked	**JCo**
scale	**1:2,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

Range Rings (at 5km intervals)

Ramsar Site

Special Area of Conservation (SAC)

Special Protection Area (SPA)

client

Bodelwyddan Solar and Energy Storage Ltd.

project title

Bodelwyddan Solar and Energy Storage

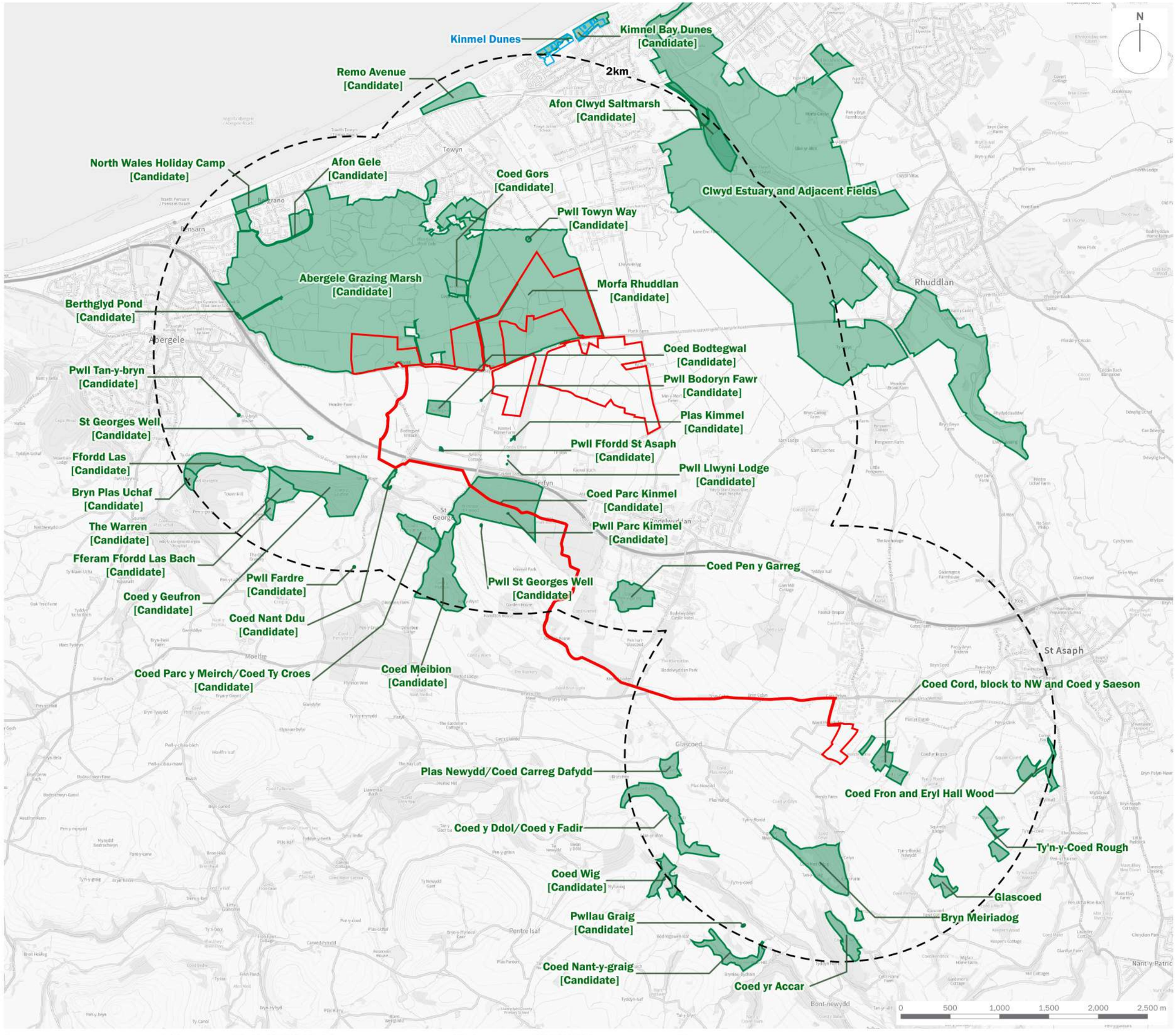
drawing title

International Statutory Designated Sites

date	**28 JULY 2025**	drawn by	**PDr**
drawing number	**edp8841_d010a**	checked	**TWi**
scale	**1:130,000 @ A3**	QA	**GYo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

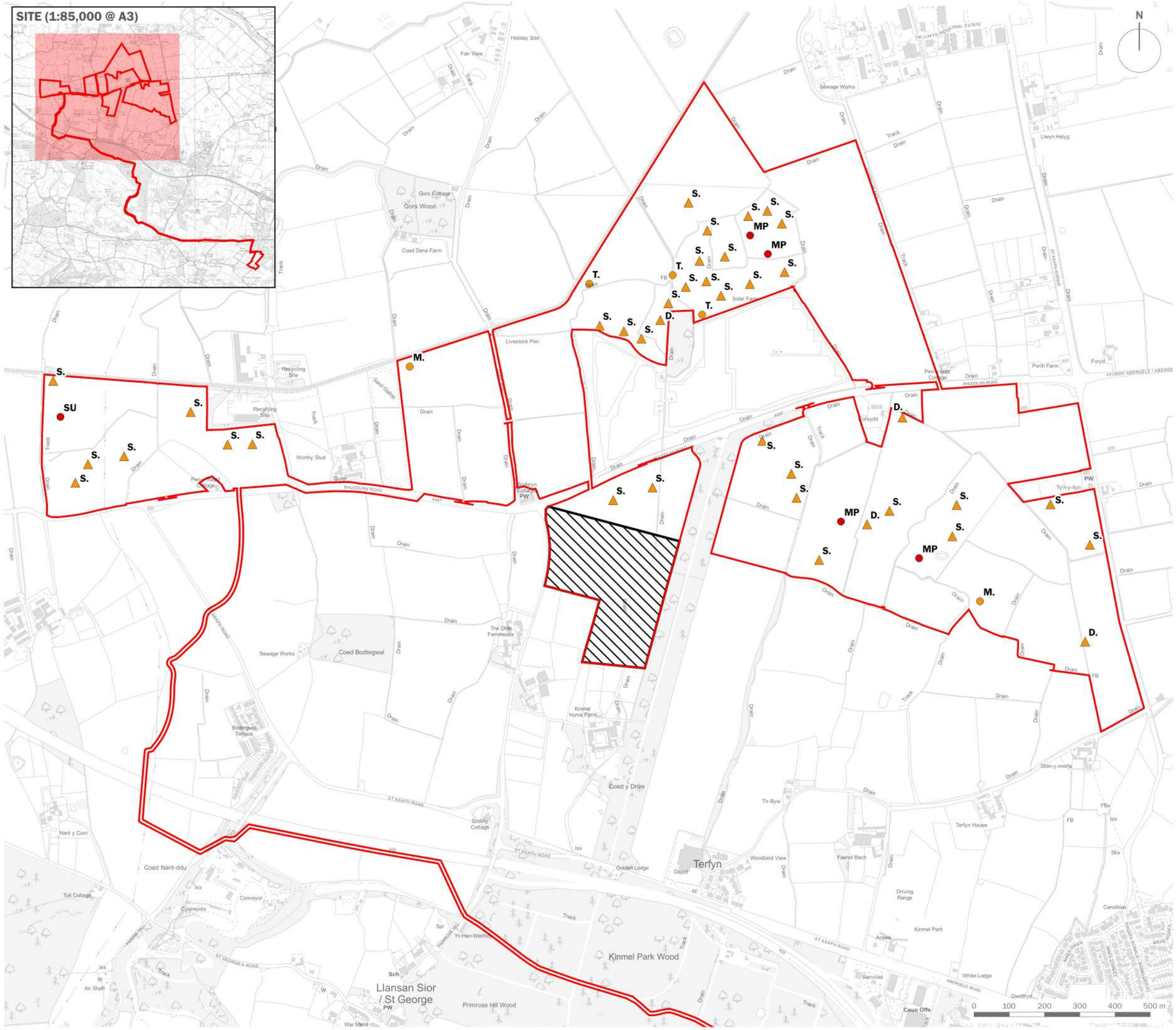
drawing title

Non-statutory Designated Sites

date	**28 JULY 2025**	drawn by	**PDr**
drawing number	**edp8841_d011a**	checked	**TWi**
scale	**1:37,500 @ A3**	QA	**GYo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

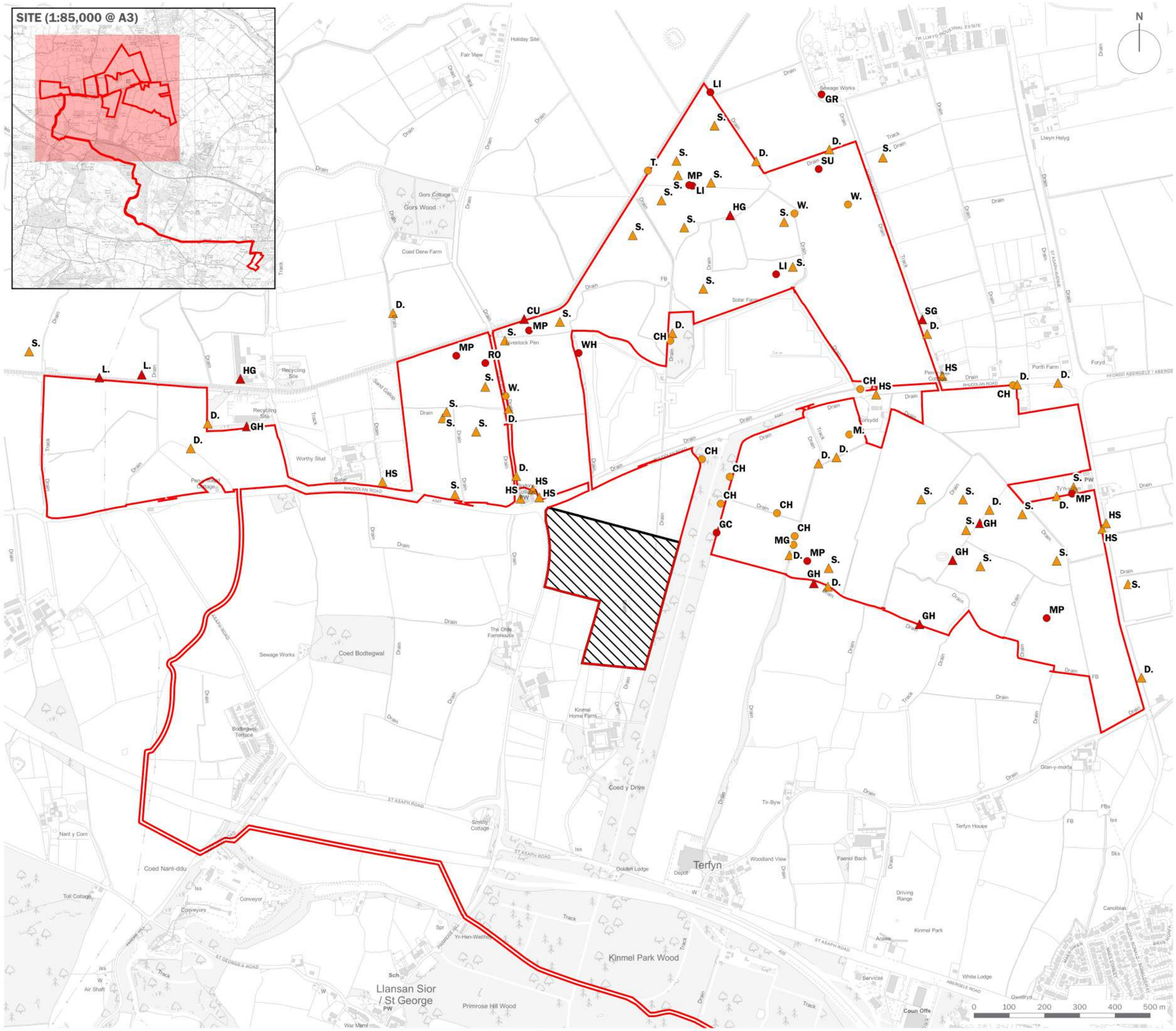
drawing title

Breeding Bird Survey - 10/11 April 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d040a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



BTO Code	Common Name
CH	Chaffinch
CU	Curlew
D.	Dunnock
GC	Goldcrest
GH	Grasshopper Warbler
GR	Greenfinch
HG	Herring Gull
HS	House Sparrow
L.	Lapwing
LI	Common Linnet
M.	Mistle Thrush
MG	Magpie
MP	Meadow Pipit
RO	Rook
S.	Skylark
SG	Common Starling
SU	Common Shelduck
T.	Common Teal
W.	Northern Wheatear
WH	Common Whitethroat

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

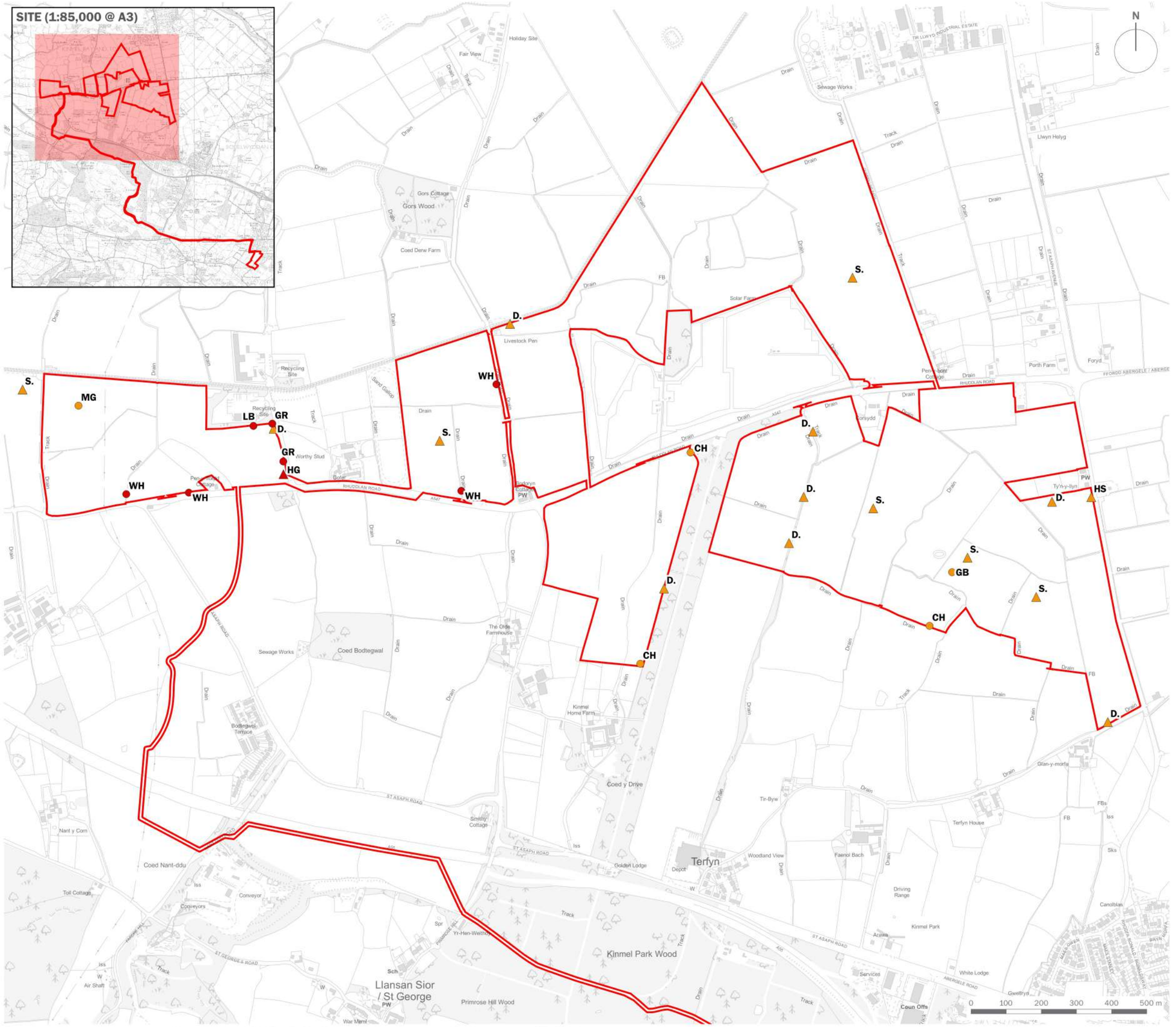
drawing title

Breeding Bird Survey - 23/24 April 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d041a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

Conservation Status

△ Species of Principal Importance

○ Not Listed as Schedule 1 or SPI

Birds of Conservation Concern

Red List

Amber List

BTO Code	Common Name
CH	Chaffinch
D.	Dunnock
GB	Great Black-backed Gull
GR	Greenfinch
HG	Herring Gull
HS	House Sparrow
LB	Lesser Black-backed Gull
MG	Magpie
S.	Skylark
WH	Common Whitethroat

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

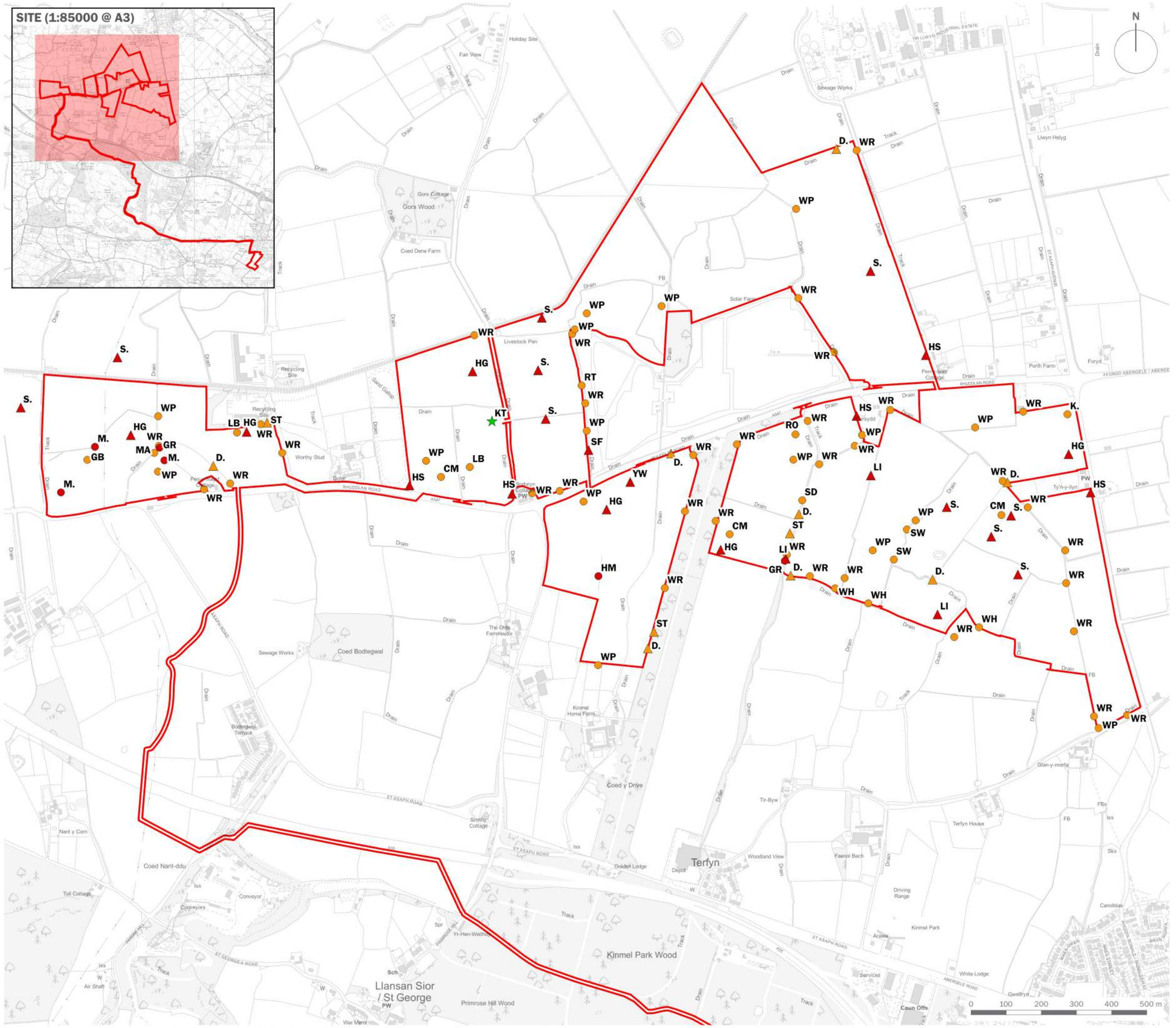
drawing title

Breeding Bird Survey - 20/21 May 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d042a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



BTO Code	Common Name
CH	Chaffinch
CM	Common Gull
D.	Dunnock
GB	Great Black-backed Gull
GR	Greenfinch
HG	Herring Gull
HM	House Martin
HS	House Sparrow
K.	Common Kestrel
KT	Red Kite
LB	Lesser Black-backed Gull
LI	Common Linnet

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

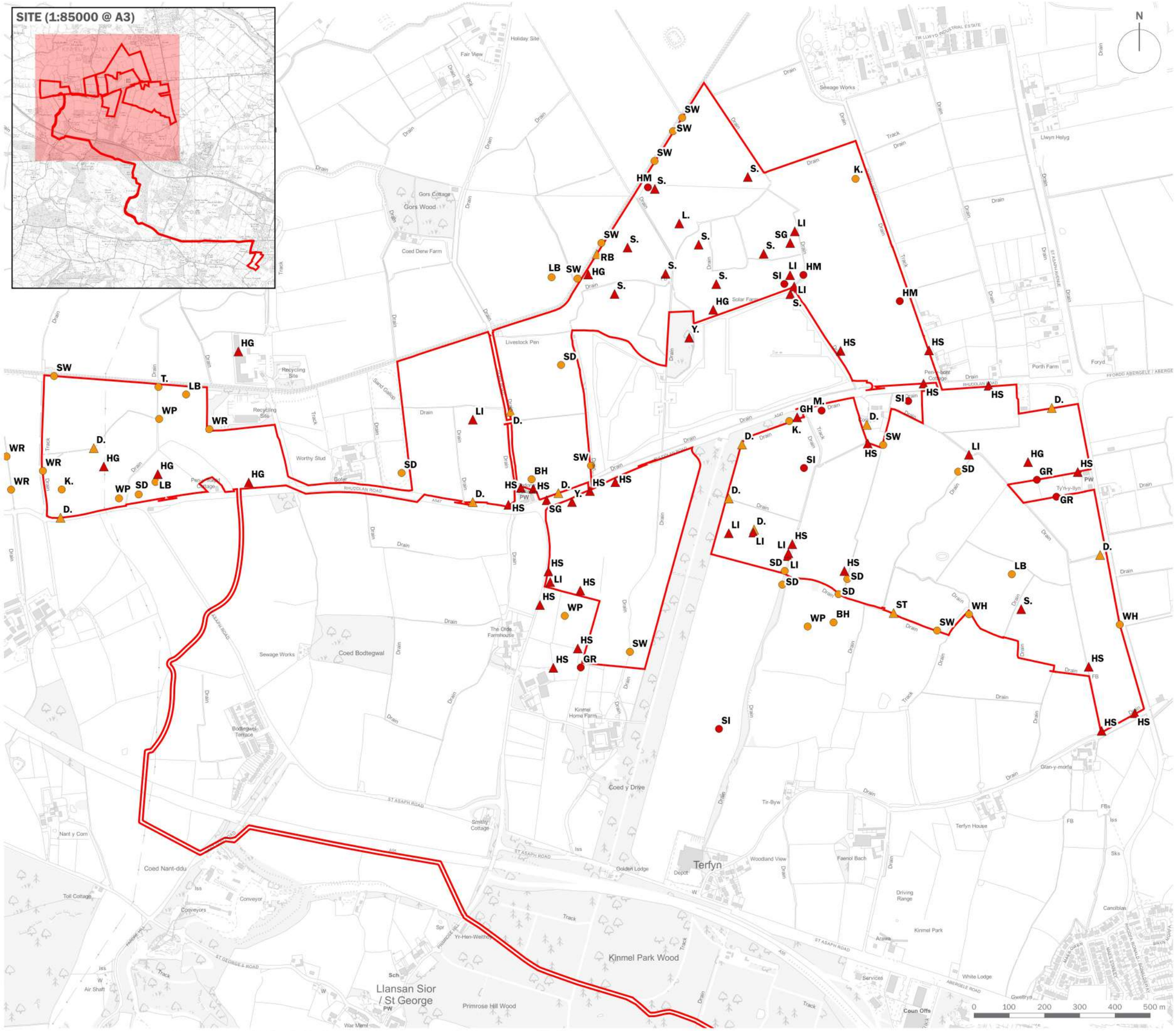
drawing title

Breeding Bird Survey 10/11 June 2025

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d051a**	checked	**KWi**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

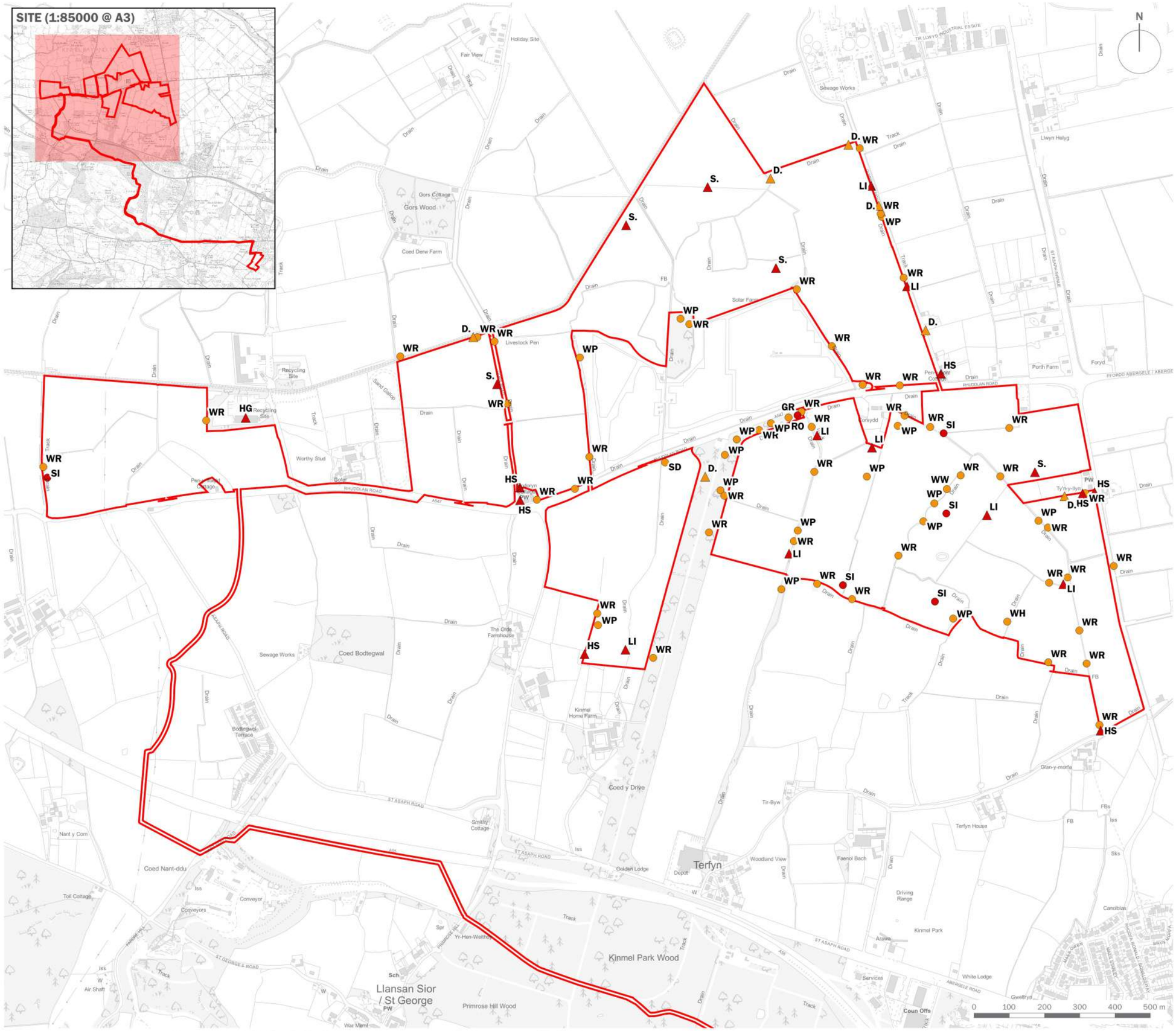
drawing title

Breeding Bird Survey 02/03 July 2025

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d052a**	checked	**KWi**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

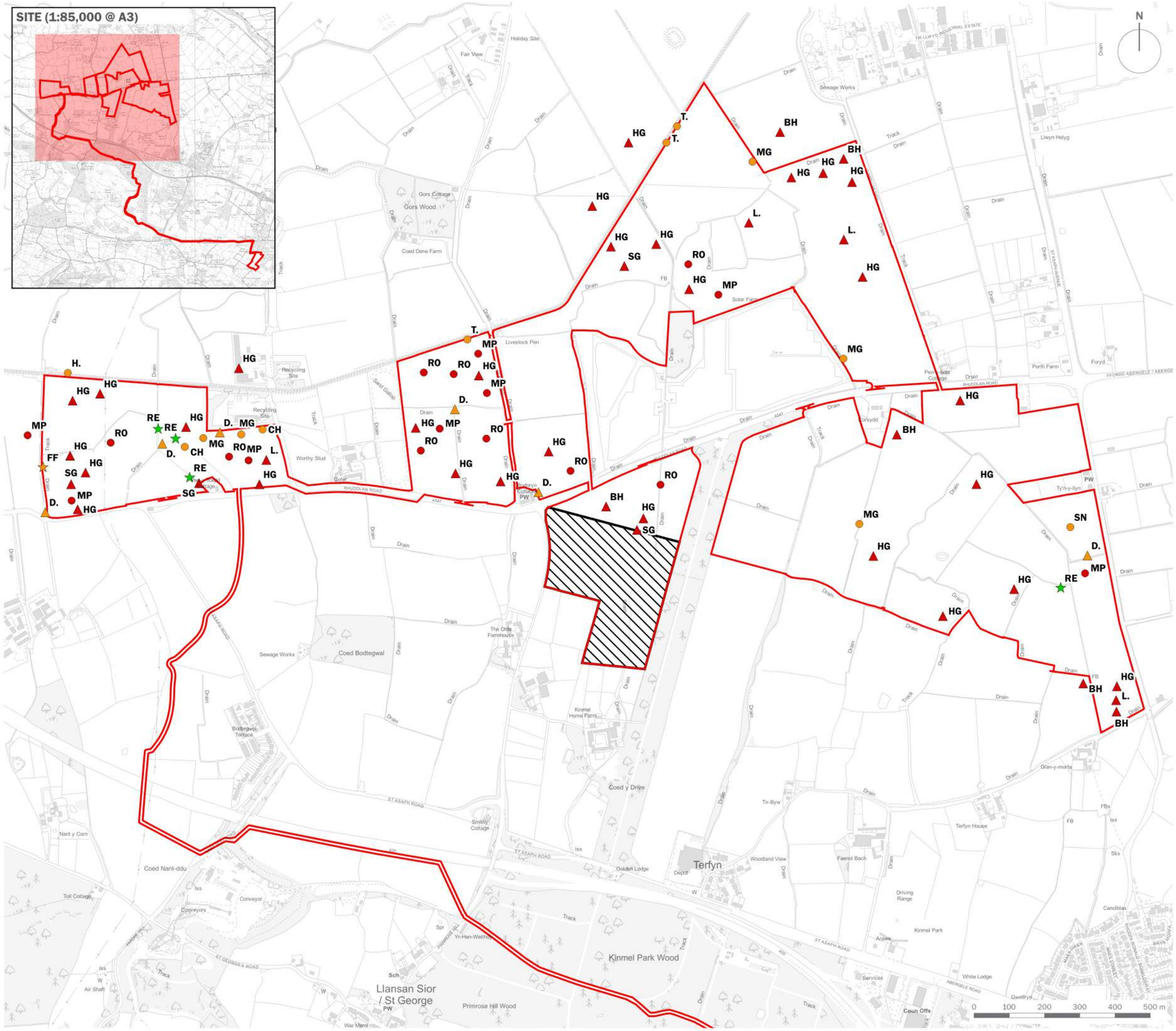
drawing title

Breeding Bird Survey 08/09 July 2025

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d047a**	checked	**KWi**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

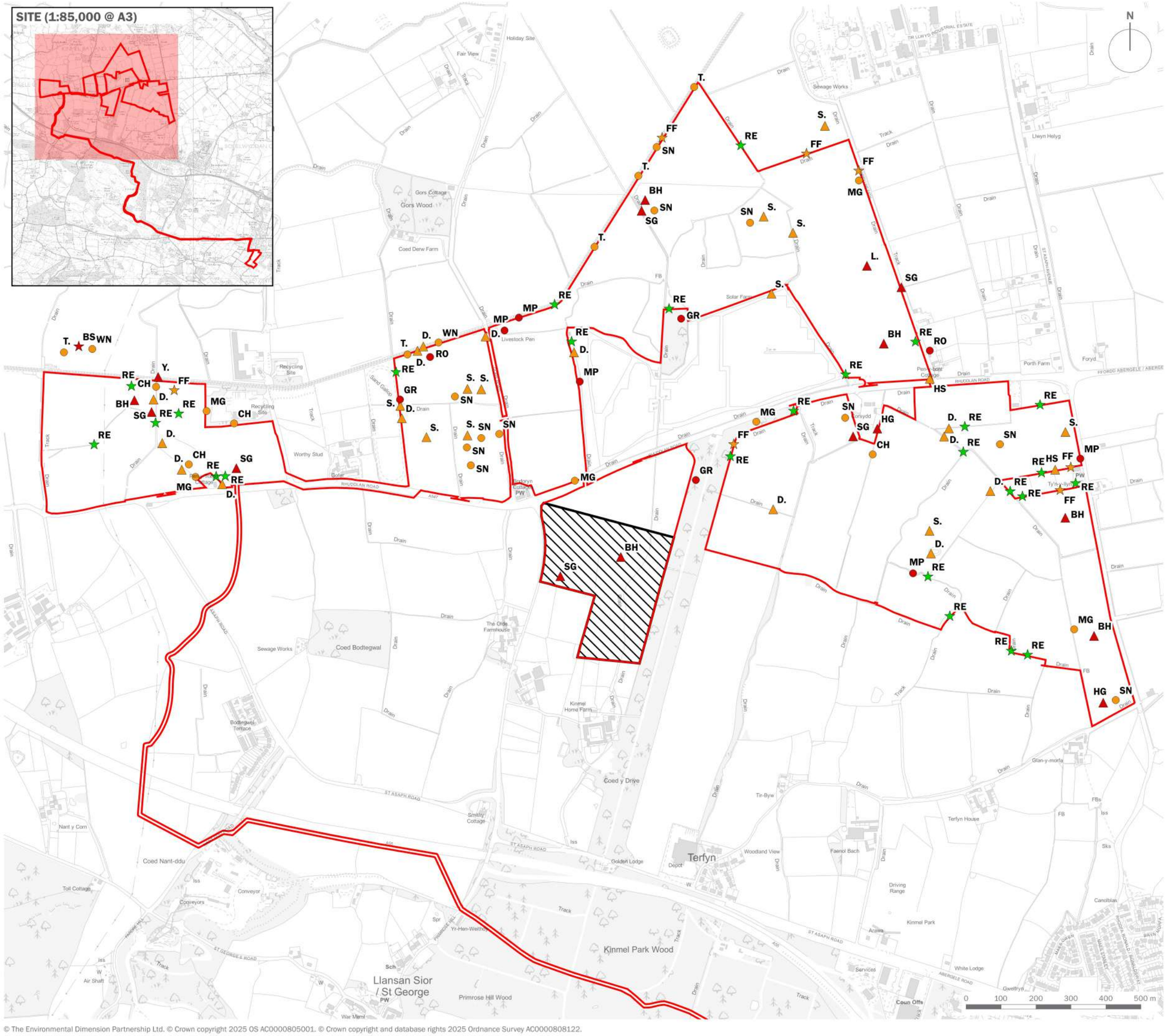
drawing title

Winter Bird Survey - November 2024

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d034a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

Area Not Subject to Detailed Survey

Conservation Status

Schedule 1

Species of Principal Importance

Not Listed as Schedule 1 or SPI

Birds of Conservation Concern

Red List

Amber List

Green List

BTO Code	Common Name
BH	Black-headed Gull
BS	Bewick's Swan
CH	Chaffinch
D.	Dunnock
FF	Fieldfare
GR	Greenfinch
HG	Herring Gull
HS	House Sparrow
L.	Lapwing
MG	Magpie
MP	Meadow Pipit
RE	Redwing
RO	Rook
S.	Skylark
SG	Common Starling
SN	Common Snipe
T.	Common Teal
WN	Eurasian Wigeon
Y.	Yellowhammer

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

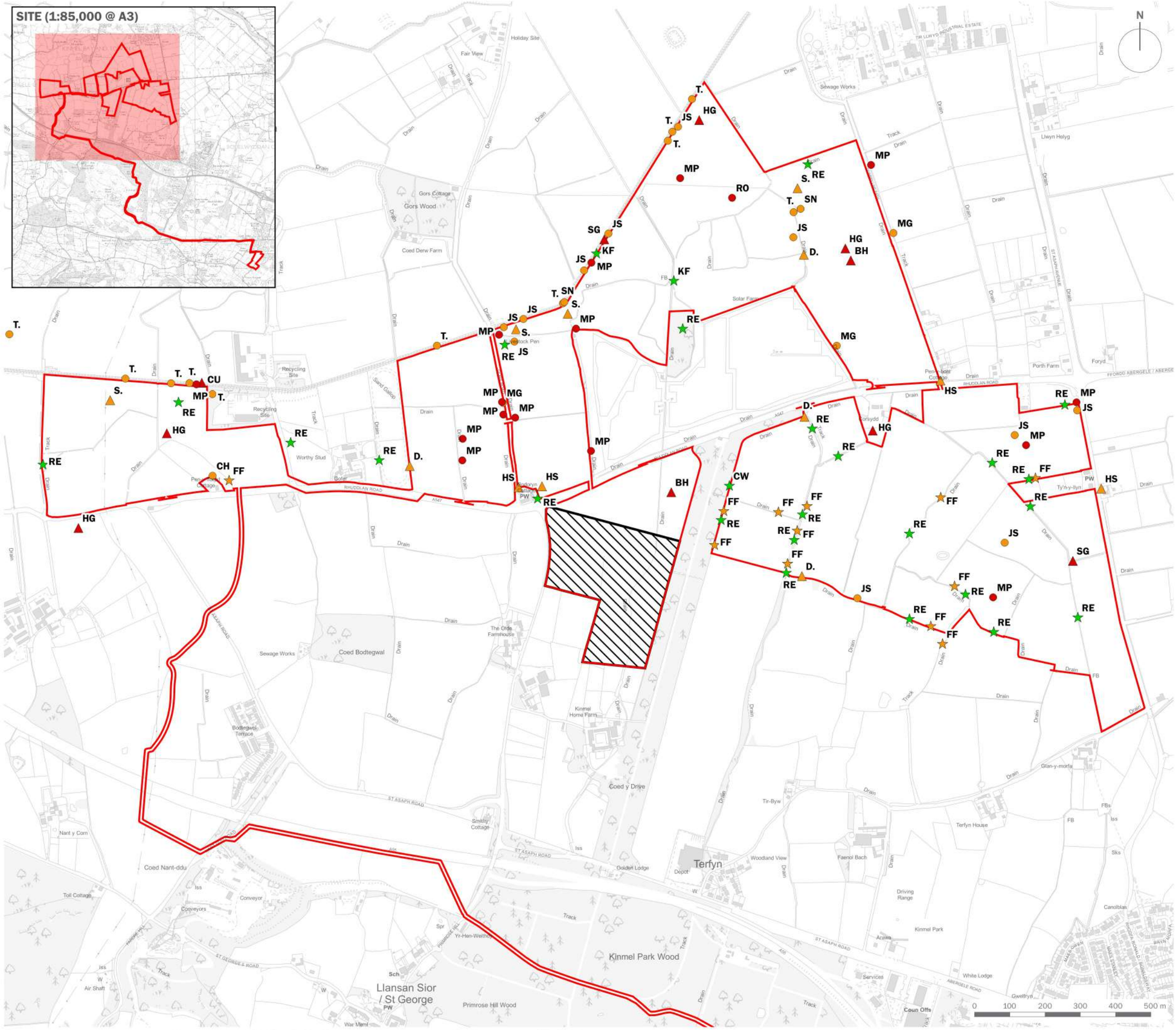
drawing title

Winter Bird Survey - December 2024

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d035a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

Area Not Subject to Detailed Survey

Conservation Status

☆ Schedule 1

△ Species of Principal Importance

○ Not Listed as Schedule 1 or SPI

Birds of Conservation Concern

Red List

Amber List

Green List

BTO Code	Common Name
BH	Black-headed Gull
CH	Chaffinch
CU	Curlew
CW	Cetti's Warbler
D.	Dunnock
FF	Fieldfare
HG	Herring Gull
HS	House Sparrow
JS	Jack Snipe
KF	Common Kingfisher
MG	Magpie
MP	Meadow Pipit
RE	Redwing
RO	Rook
S.	Skylark
SG	Common Starling
SN	Common Snipe
T.	Common Teal

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

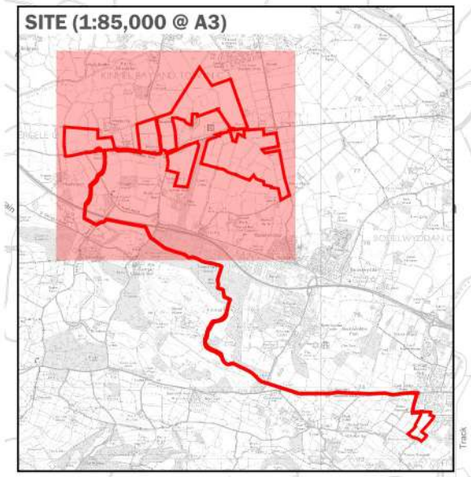
drawing title

Winter Bird Survey - Mid-January 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d036a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



N

0 100 200 300 400 500 m

Site Boundary

Area Not Subject to Detailed Survey

Conservation Status

☆ Schedule 1

△ Species of Principal Importance

○ Not Listed as Schedule 1 or SPI

Birds of Conservation Concern

Red List

Amber List

Green List

BTO Code	Common Name
BH	Black-headed Gull
CH	Chaffinch
CM	Common Gull
CT	Coal Tit
CW	Cetti's Warbler
D.	Dunnock
FF	Fieldfare
G.	Green Woodpecker
GC	Goldcrest
GR	Greenfinch
HG	Herring Gull
HS	House Sparrow
JS	Jack Snipe
LB	Lesser Black-backed Gull
M.	Mistle Thrush
MG	Magpie
MP	Meadow Pipit
RE	Redwing
RO	Rook
S.	Skylark
SG	Common Starling
SN	Common Snipe
SU	Common Shelduck
T.	Common Teal

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

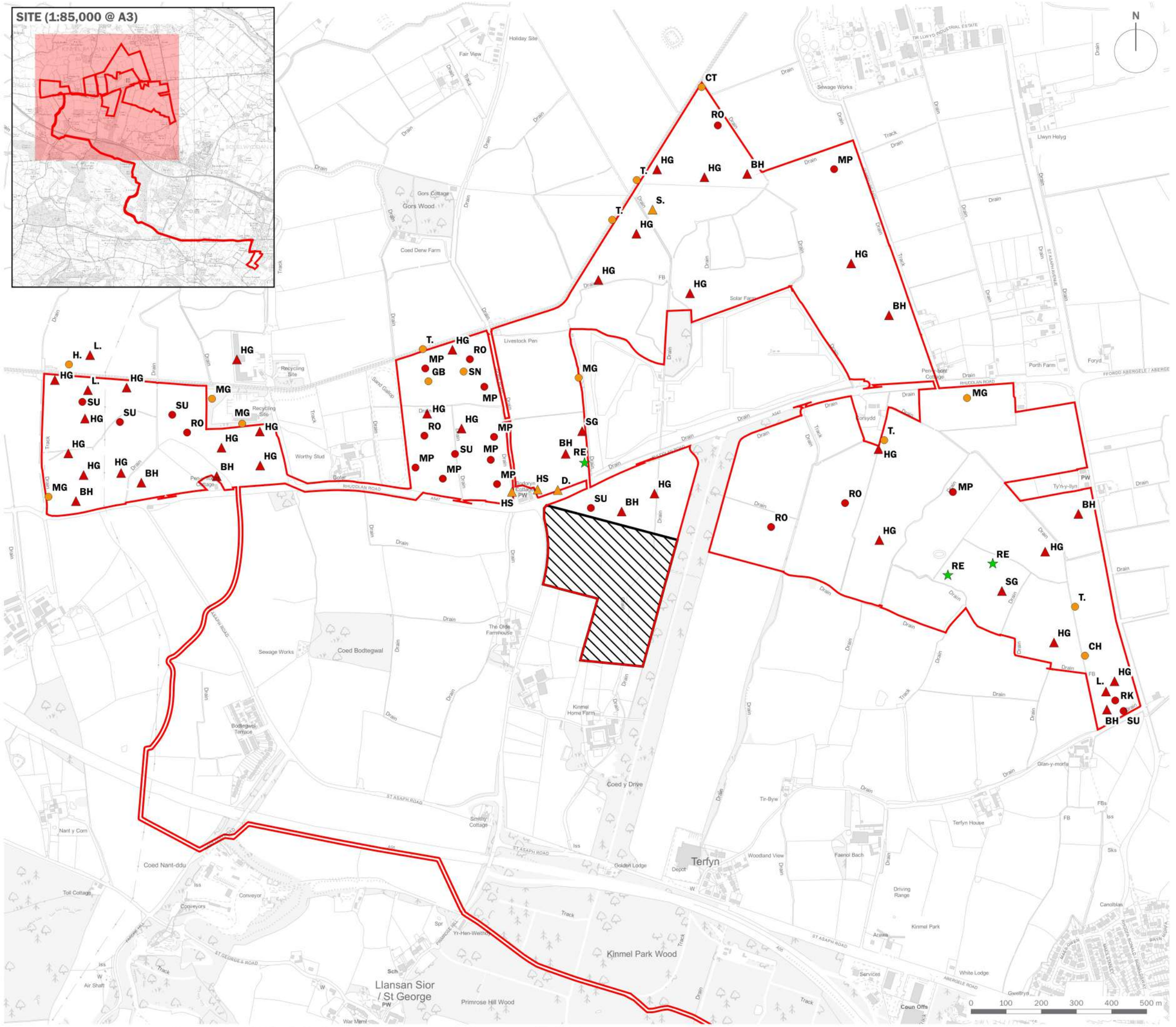
drawing title

Winter Bird Survey - Late January 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d037a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



BTO Code	Common Name
BH	Black-headed Gull
CH	Chaffinch
CT	Coal Tit
D.	Dunnock
GB	Great Black-backed Gull
H.	Grey Heron
HG	Herring Gull
HS	House Sparrow
L.	Lapwing
MG	Magpie
MP	Meadow Pipit
RE	Redwing
RK	Common Redshank
RO	Rook
S.	Skylark
SG	Common Starling
SN	Common Snipe
SU	Common Shelduck
T.	Common Teal

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

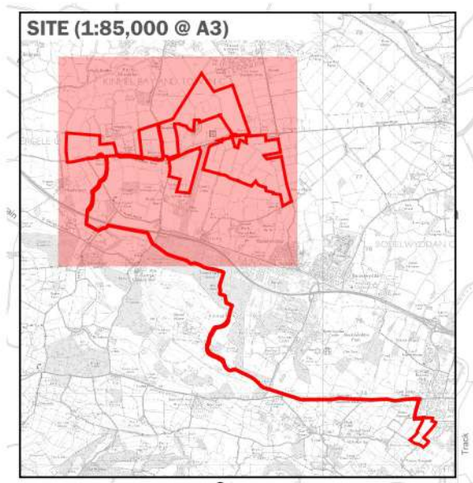
drawing title

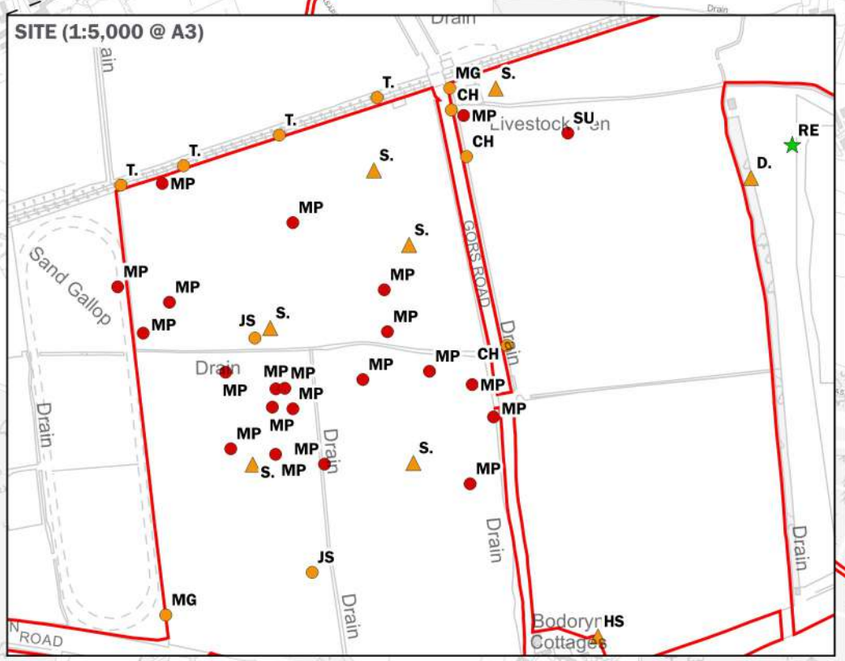
Winter Bird Survey - February 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d038a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk





Site Boundary

Area Not Subject to Detailed Survey

Conservation Status

☆ Schedule 1

△ Species of Principal Importance

○ Not Listed as Schedule 1 or SPI

Birds of Conservation Concern

Red List

Amber List

Green List

BTO Code	Common Name
BH	Black-headed Gull
CH	Chaffinch
CT	Coal Tit
D.	Dunnock
GC	Goldcrest
HG	Herring Gull
HS	House Sparrow
JS	Jack Snipe
K.	Common Kestrel
L.	Lapwing
LB	Lesser Black-backed Gull
MG	Magpie
MP	Meadow Pipit
RE	Redwing
RO	Rook
S.	Skylark
SG	Common Starling
SN	Common Snipe
SU	Common Shelduck
T.	Common Teal

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

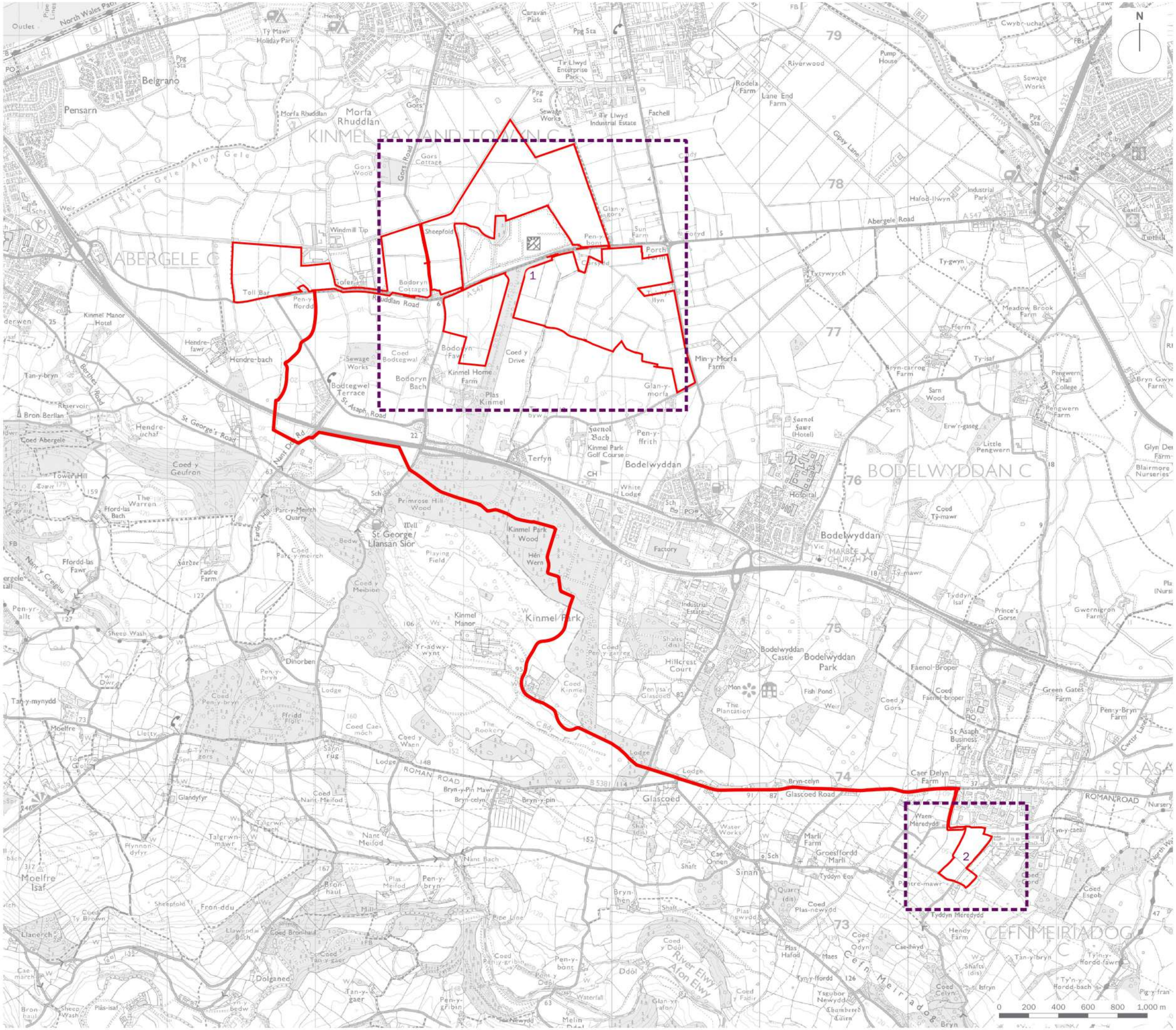
drawing title

Winter Bird Survey - Late February 2025

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d039a**	checked	**LBT**
scale	**1:10,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

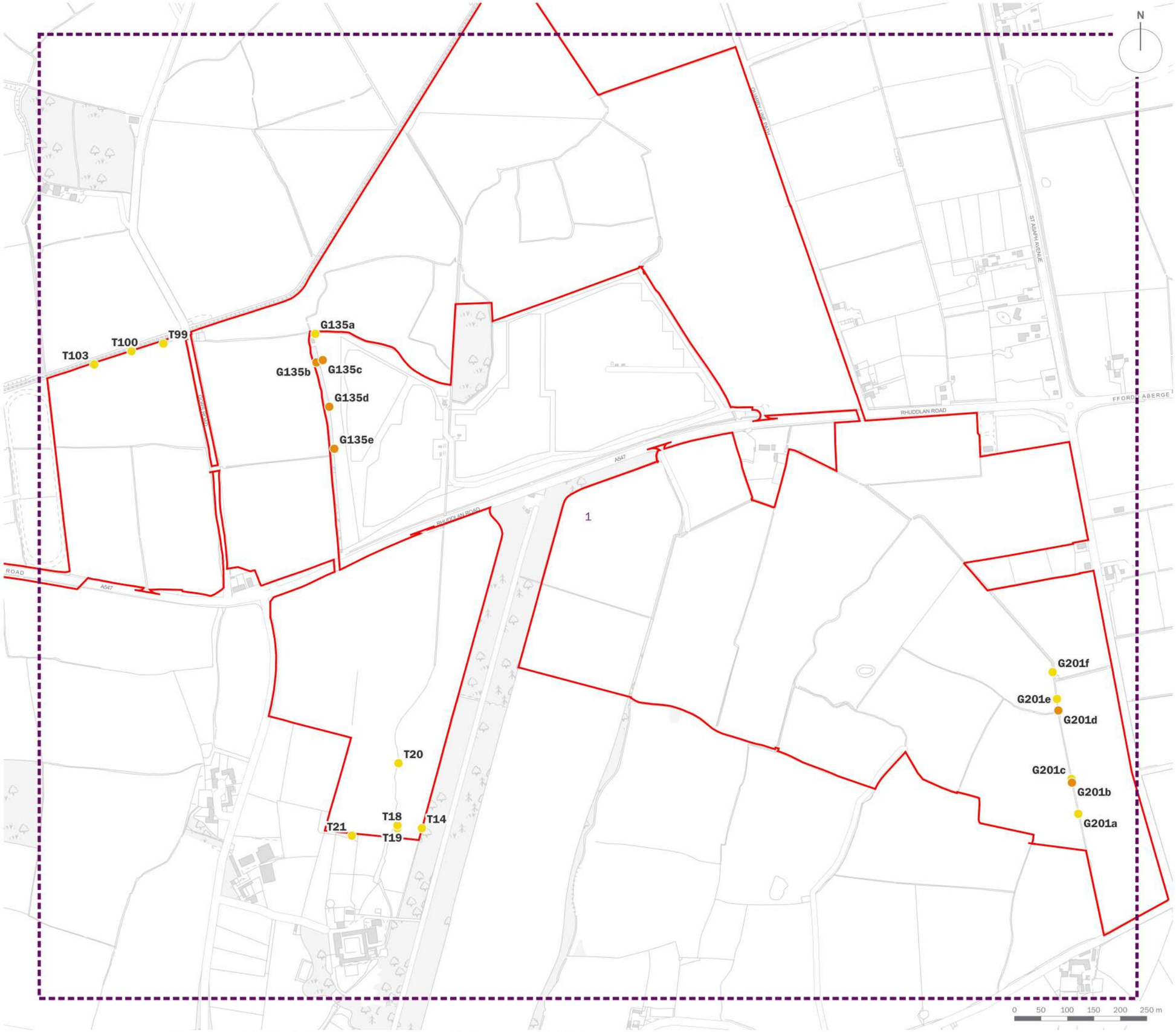
drawing title

Ground Level Tree Roost Assessment (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d046a**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

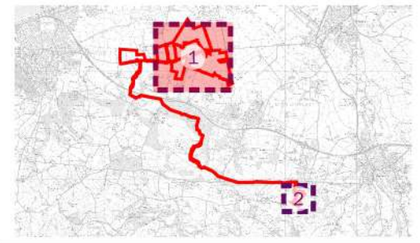


Site Boundary

Ground Level Tree Roost Assessment

- Potential Roost Feature - For Multiple Bats (PRF-M)
- Potential Roost Feature - For Individual Bats (PRF-I)

Potential roost feature (PRF) type estimated from the ground. A close inspection survey of any trees to be affected would be required to confirm PRF type. PRF shown is the maximum level for any PRF on a tree.



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Ground Level Tree Roost Assessment (Sheet 1 of 2)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d046a**	checked	**KWi**
scale	**1:7,000 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

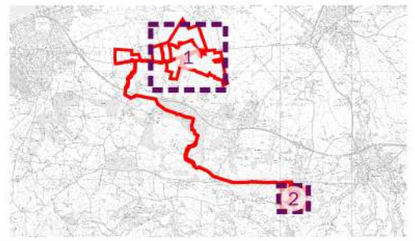
Site Boundary

Ground Level Tree Roost Assessment

Potential Roost Feature - For Multiple Bats (PRF-M)

Potential Roost Feature - For Individual Bats (PRF-I)

Potential roost feature (PRF) type estimated from the ground. A close inspection survey of any trees to be affected would be required to confirm PRF type. PRF shown is the maximum level for any PRF on a tree.



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

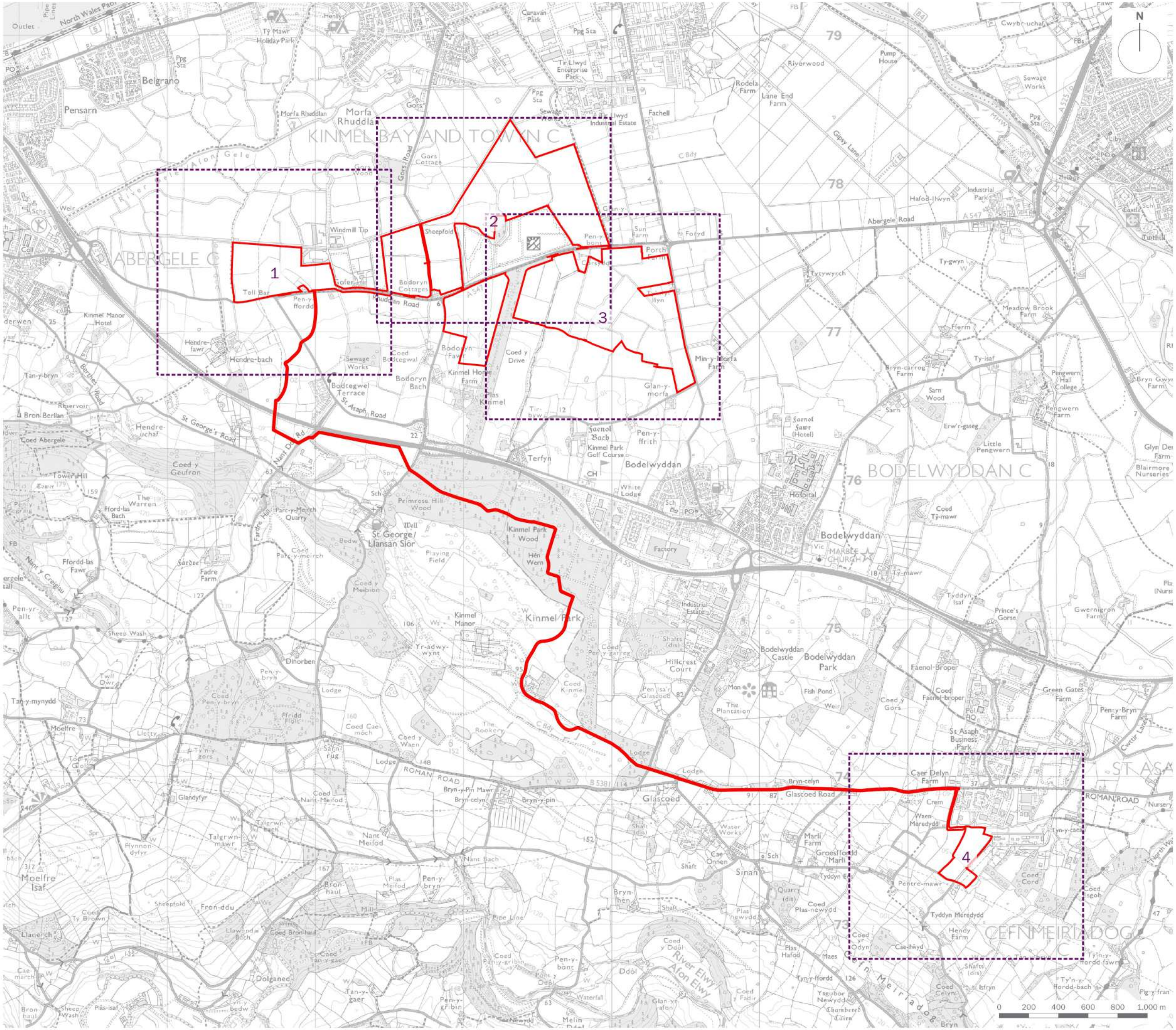
drawing title

Ground Level Tree Roost Assessment (Sheet 2 of 2)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
drawing number	**edp8841_d046a**	checked	**KWi**
scale	**1:2,500 @ A3**	QA	**DJo**

the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

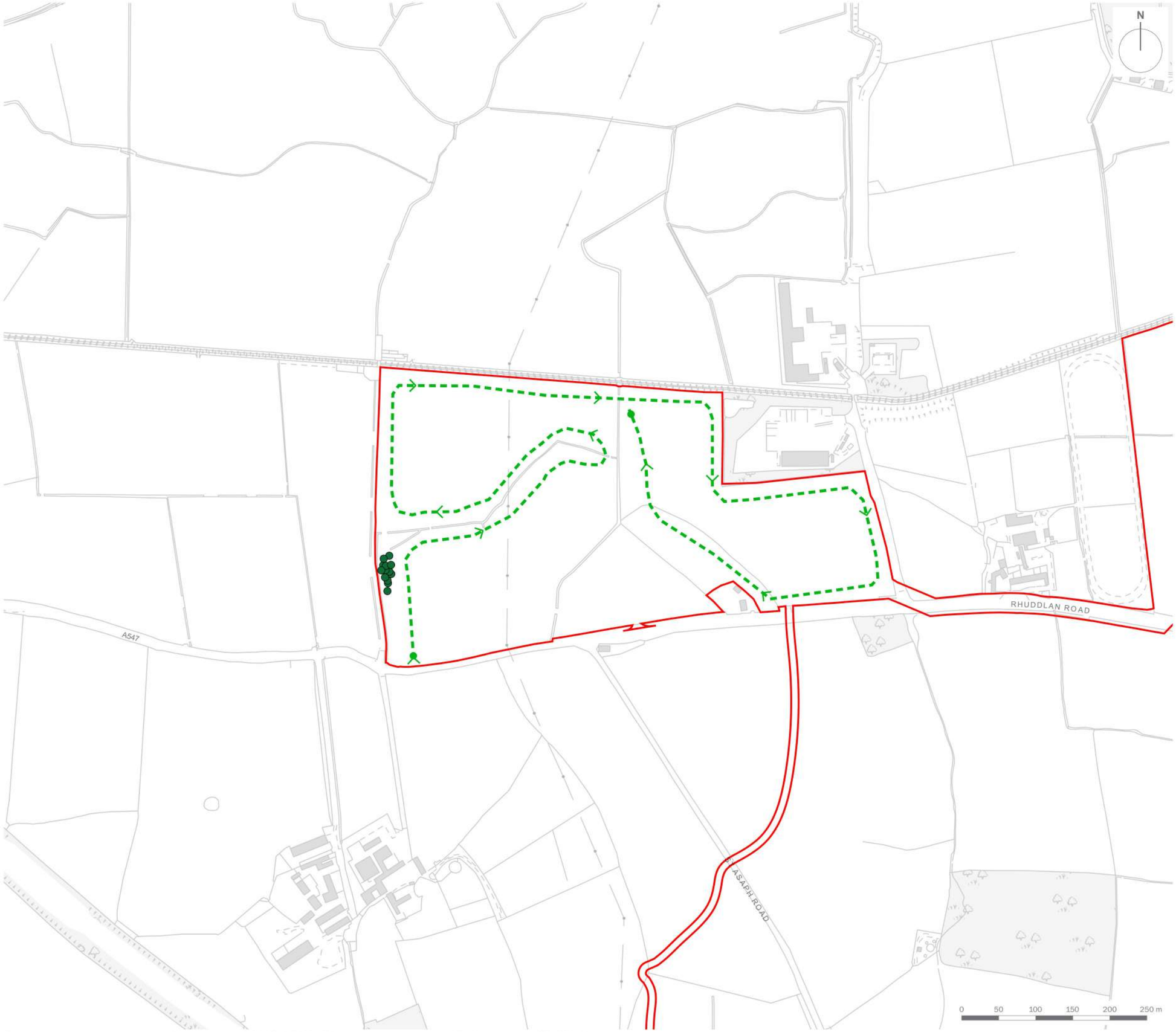
drawing title

Nighttime Bat Walkover Survey Plan Summer 2024 (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d025a**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**DJo**

edp the environmental dimension partnership

Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

Transect Routes

Purple Route

Pink Route

Blue Route

Green Route

Stationary Observation Point

Bat Survey Results

Common Pipistrelle

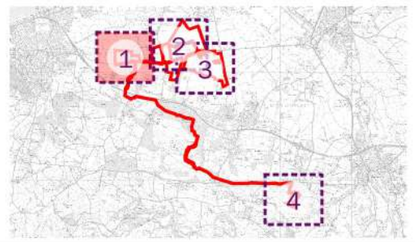
Soprano Pipistrelle

Myotis spp.

Serotine

Noctule

Lesser Horseshoe Bat



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Nighttime Bat Walkover Survey Plan Summer 2024 (Sheet 1 of 4)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d025a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**DJo**

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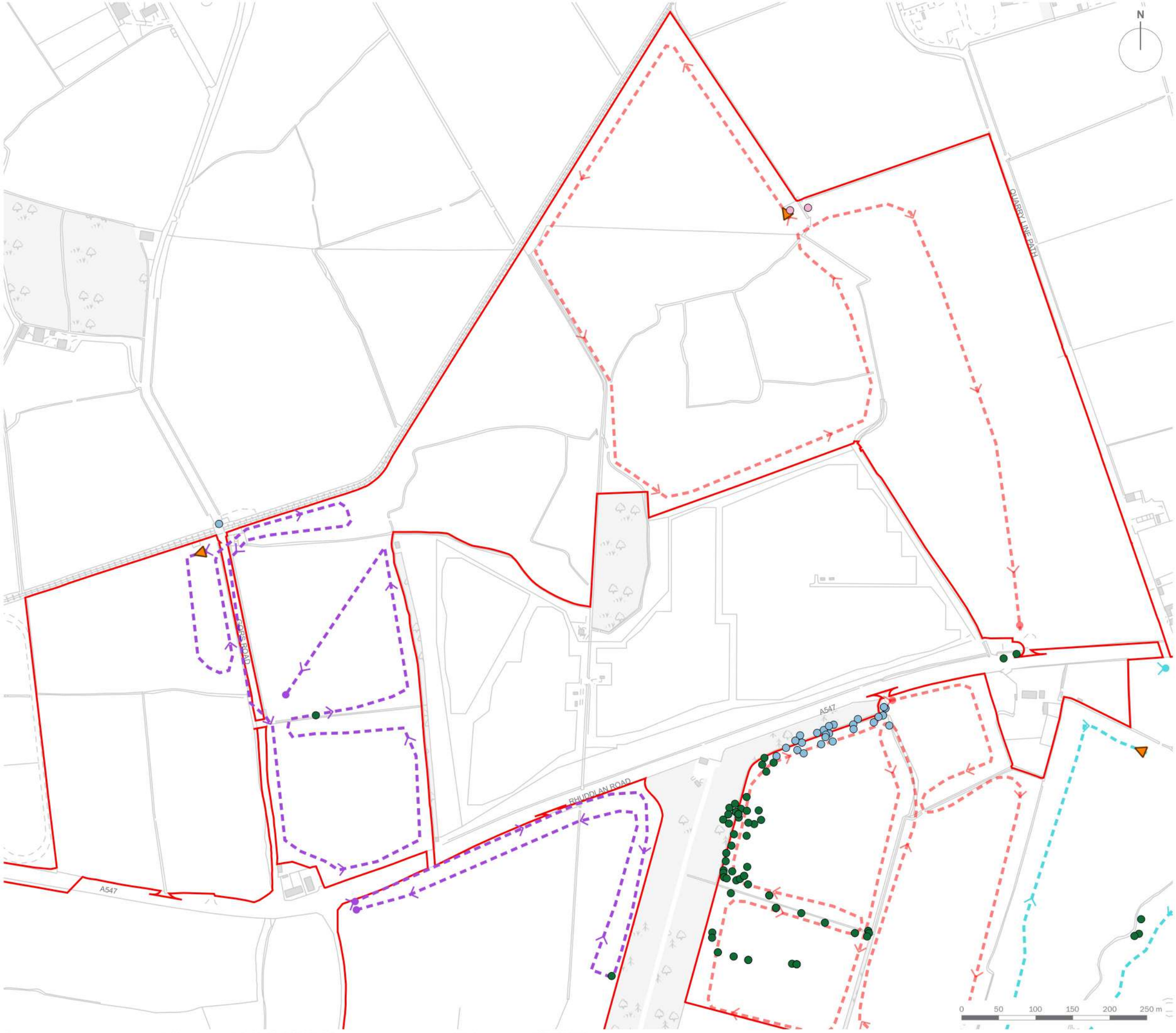

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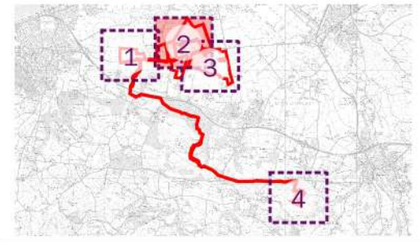

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Nighttime Bat Walkover Survey Plan Summer 2024 (Sheet 2 of 4)

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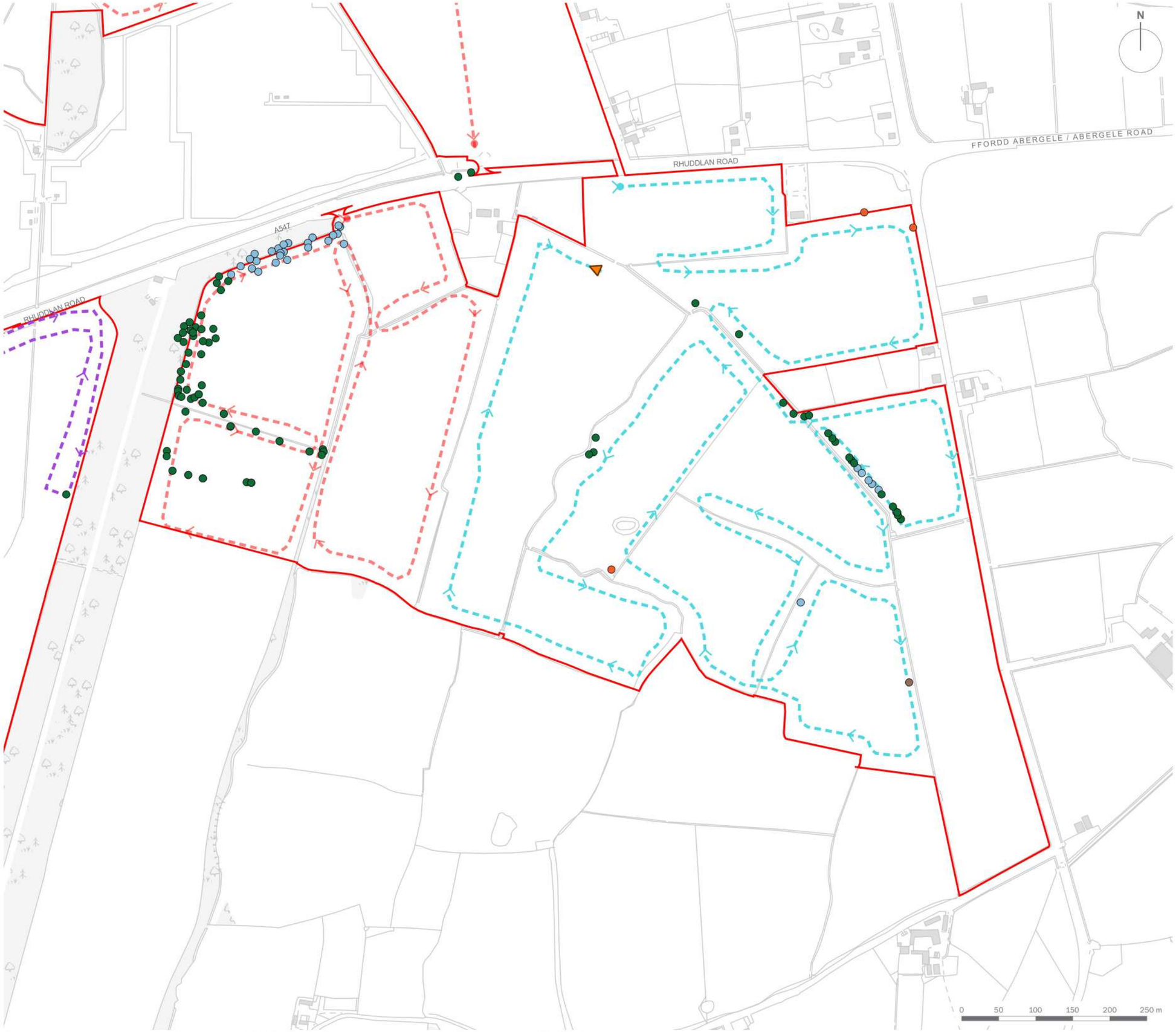

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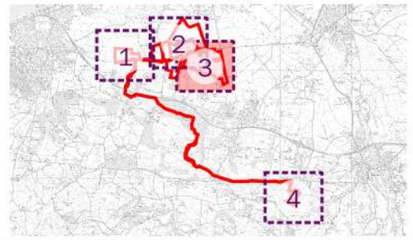

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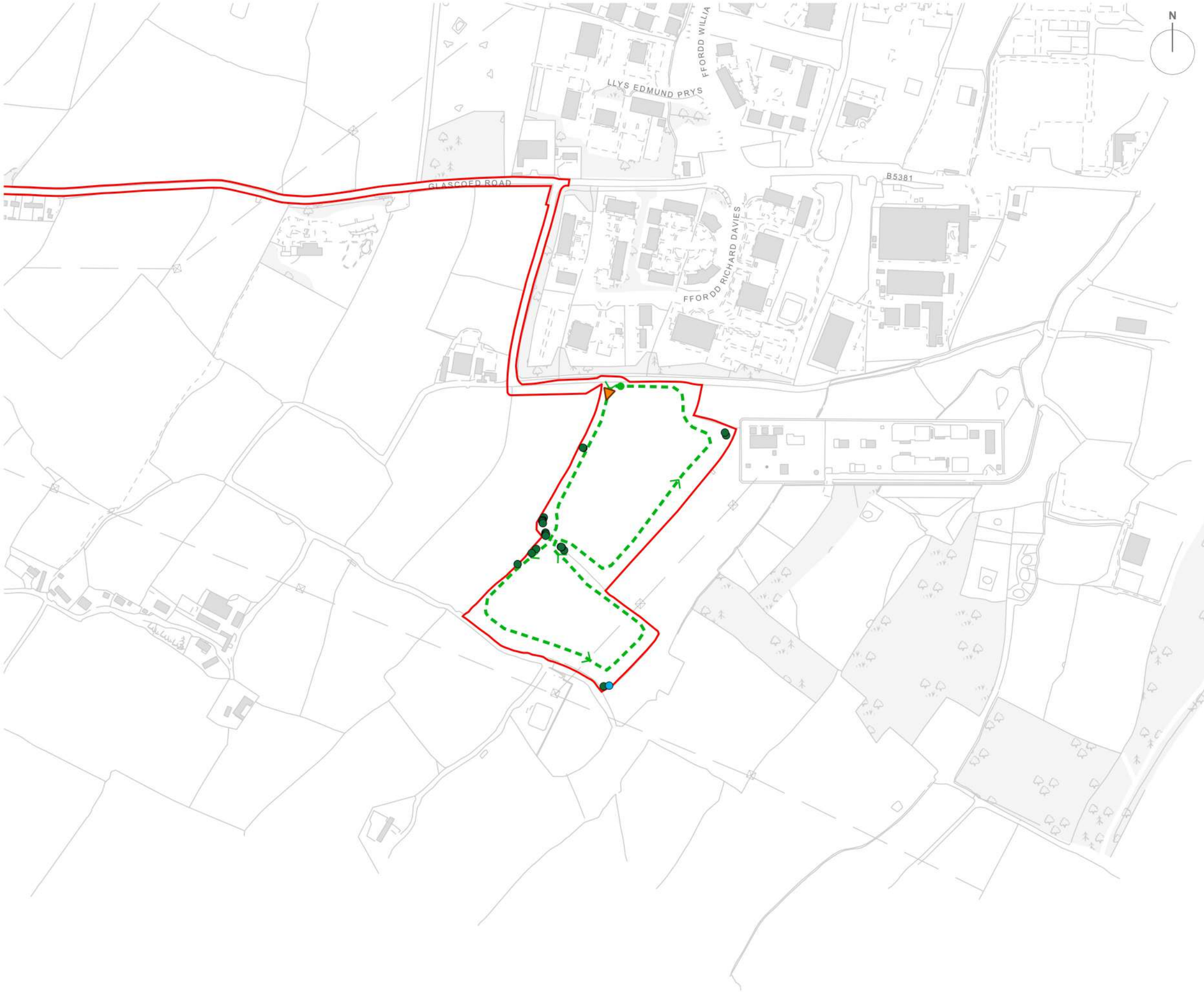

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Serotine

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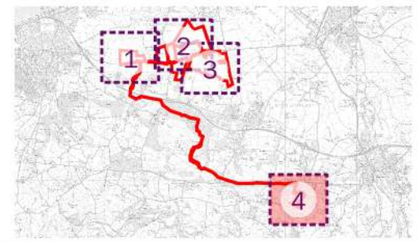

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Nighttime Bat Walkover Survey Plan Summer 2024 (Sheet 4 of 4)

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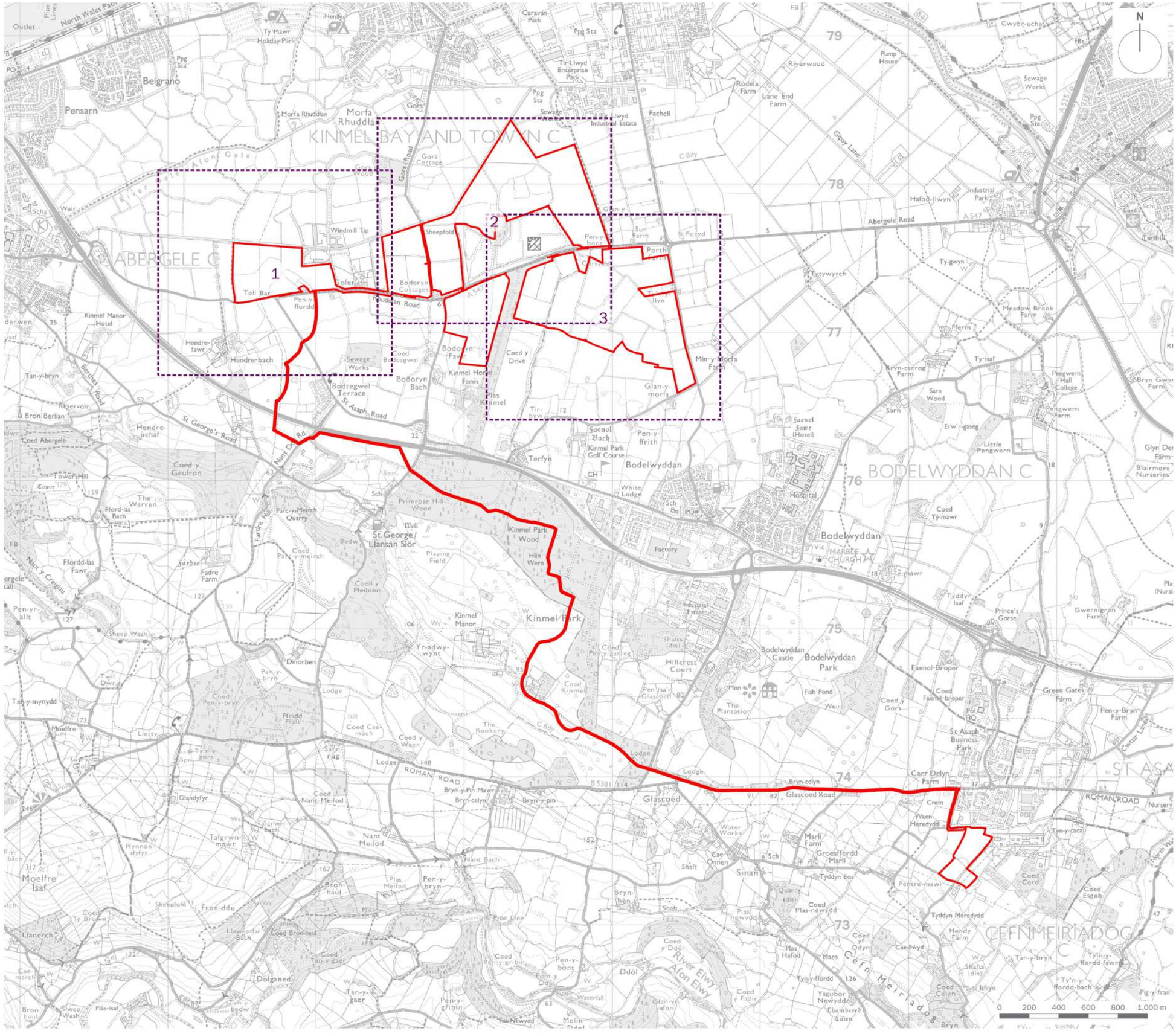

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Nighttime Bat Walkover Survey Plan Autumn 2024 (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
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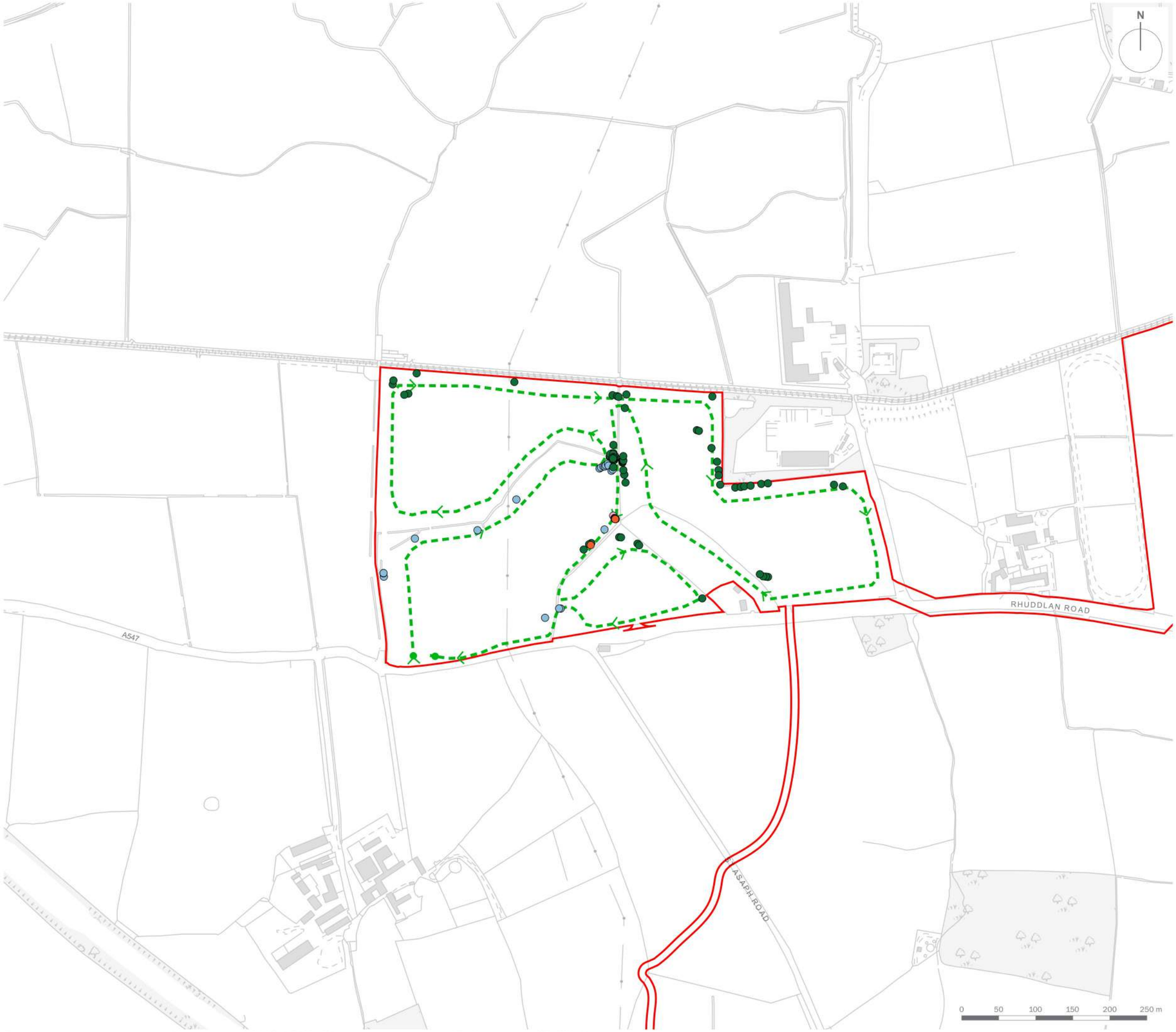

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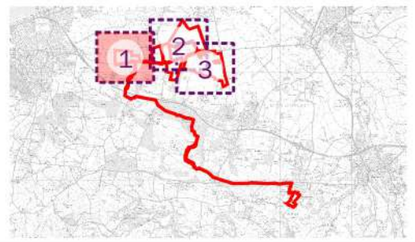
Myotis spp.

Noctule



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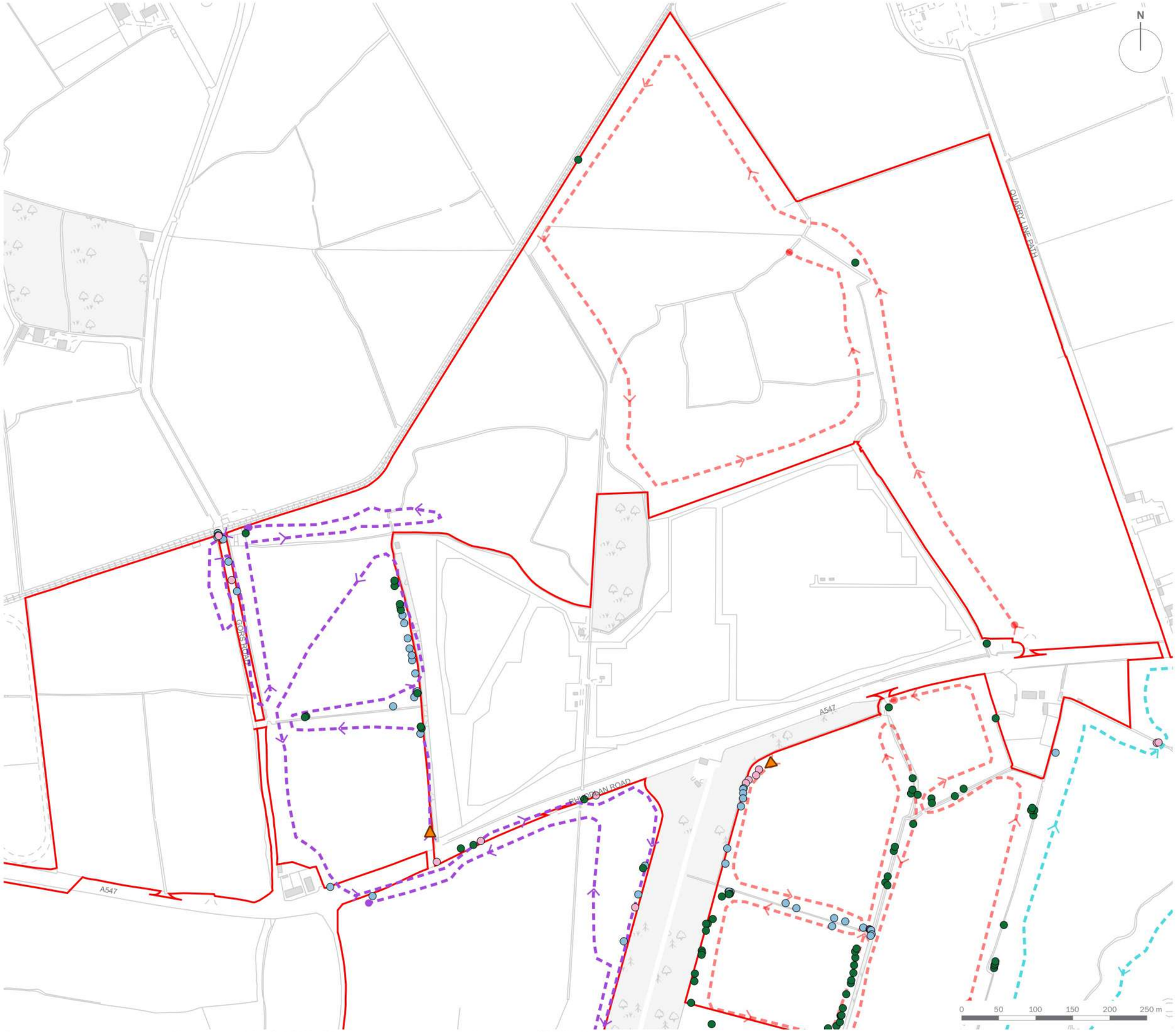

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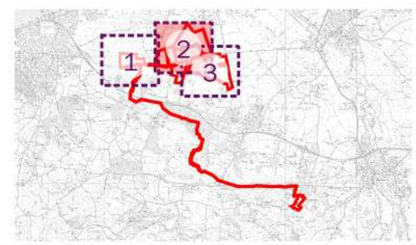
Noctule



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Nighttime Bat Walkover Survey Plan Autumn 2024 (Sheet 2 of 3)

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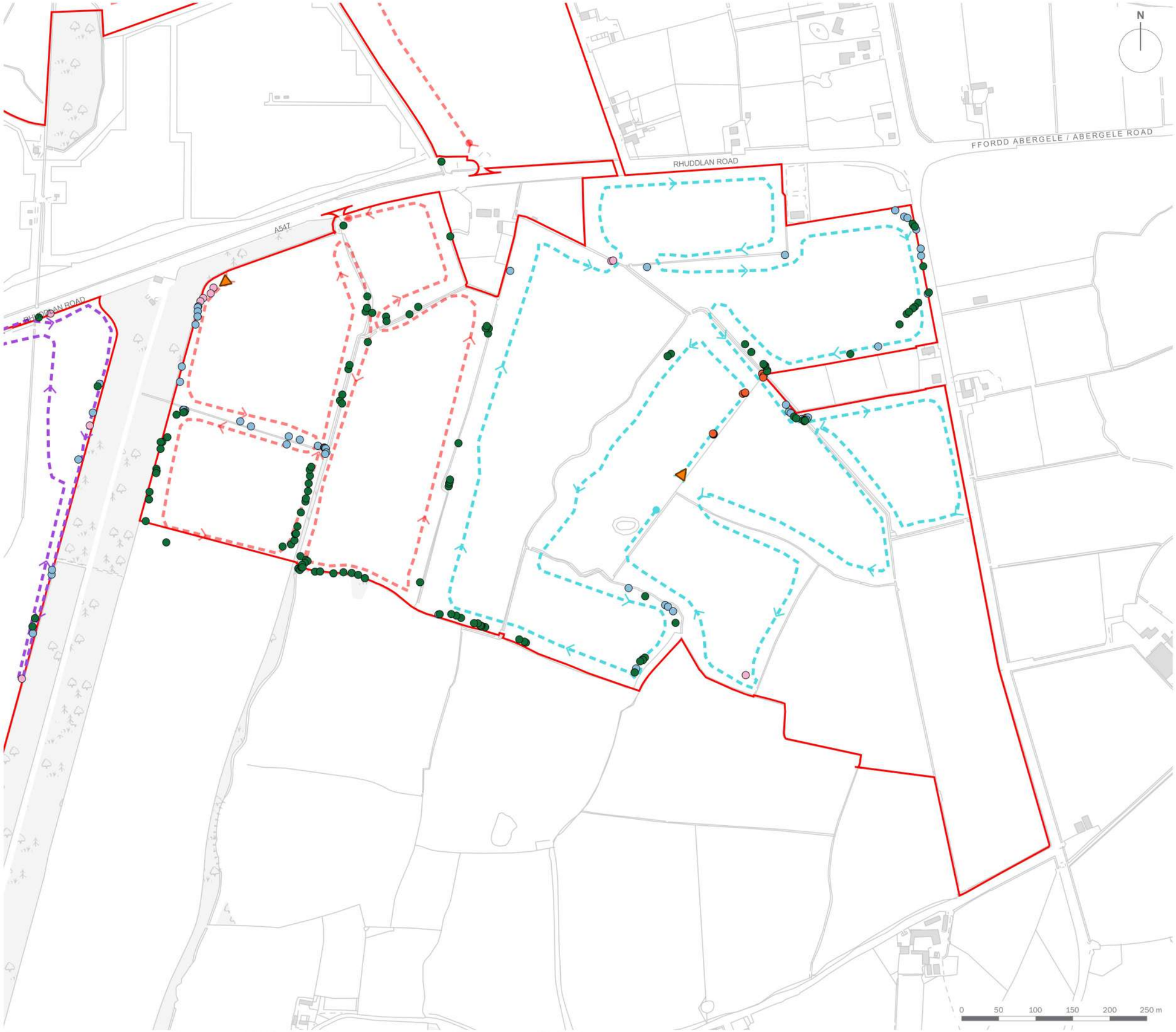

Site Boundary

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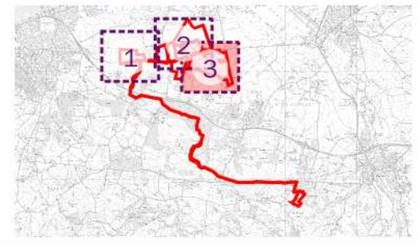
Soprano Pipistrelle

Myotis spp.

Noctule



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Nighttime Bat Walkover Survey Plan Autumn 2024 (Sheet 3 of 3)

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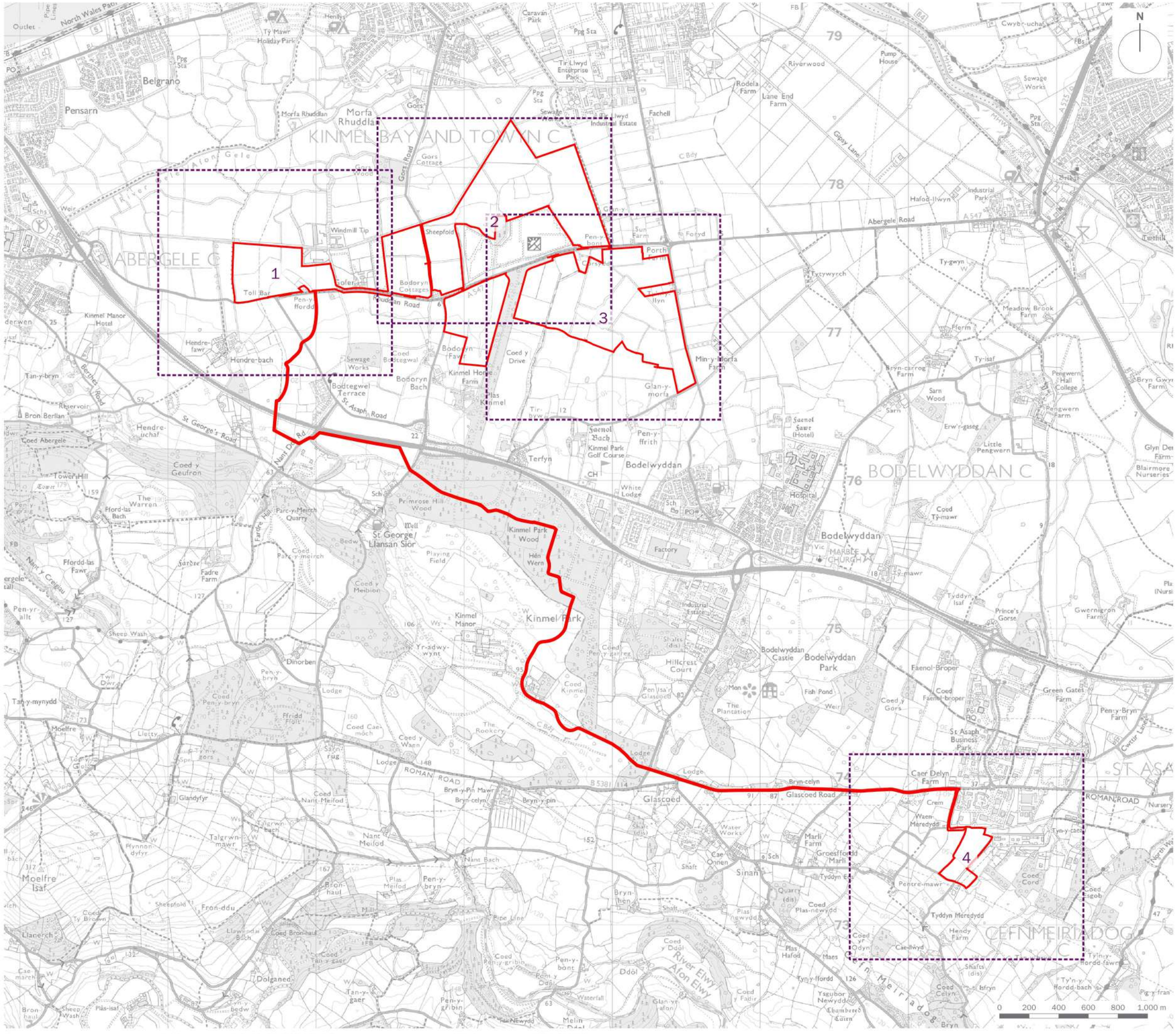

Site Boundary

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Nighttime Bat Walkover Survey Plan Spring 2025 (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**PDr**
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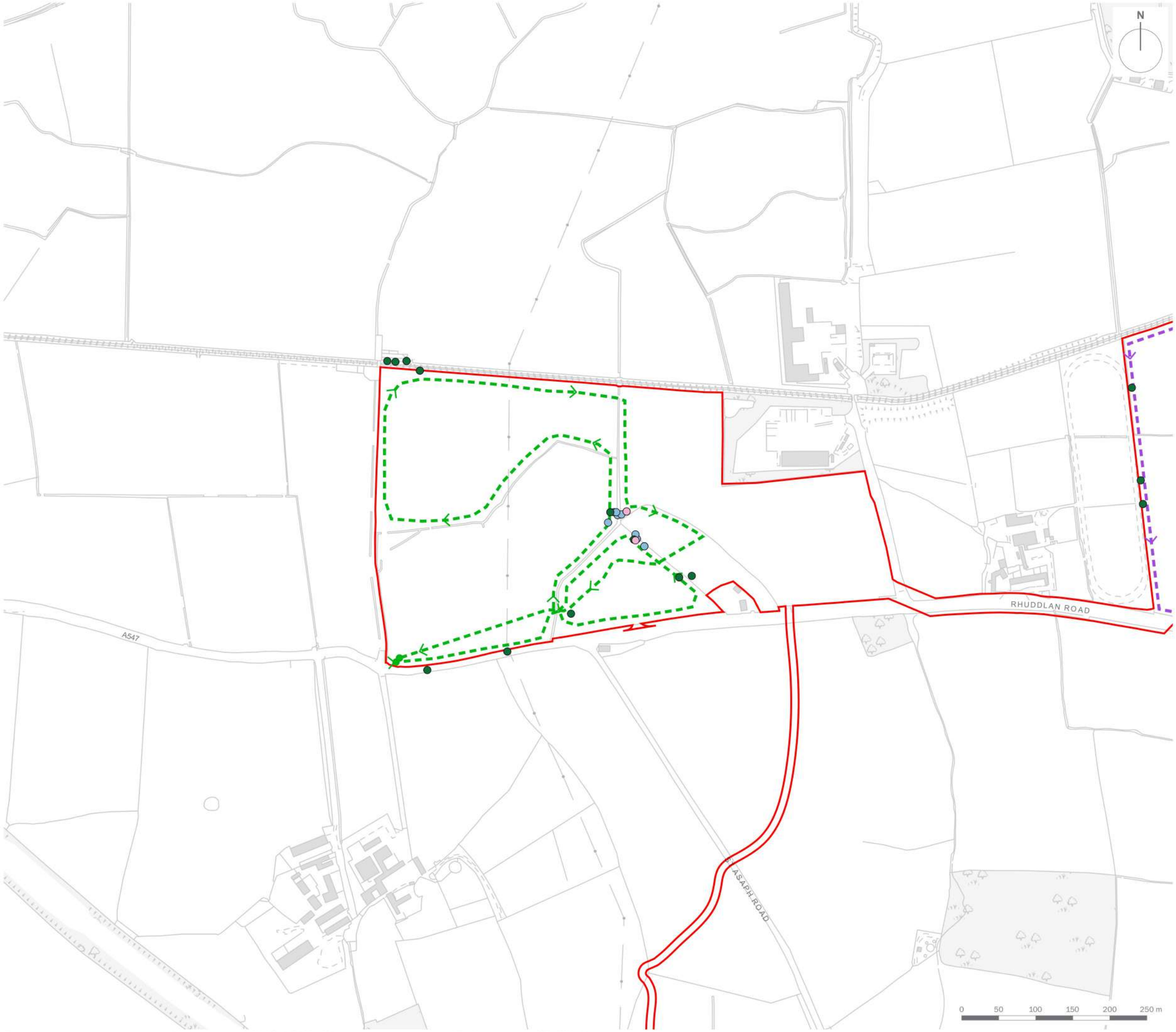

Site Boundary

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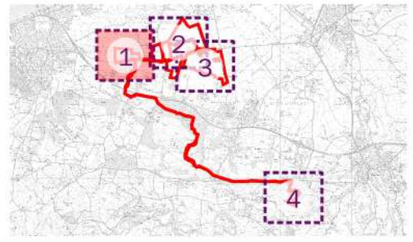
Common Pipistrelle

Soprano Pipistrelle

Nathusius' Pipistrelle

Myotis spp.

Noctule



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Nighttime Bat Walkover Survey Plan Spring 2025 (Sheet 1 of 4)

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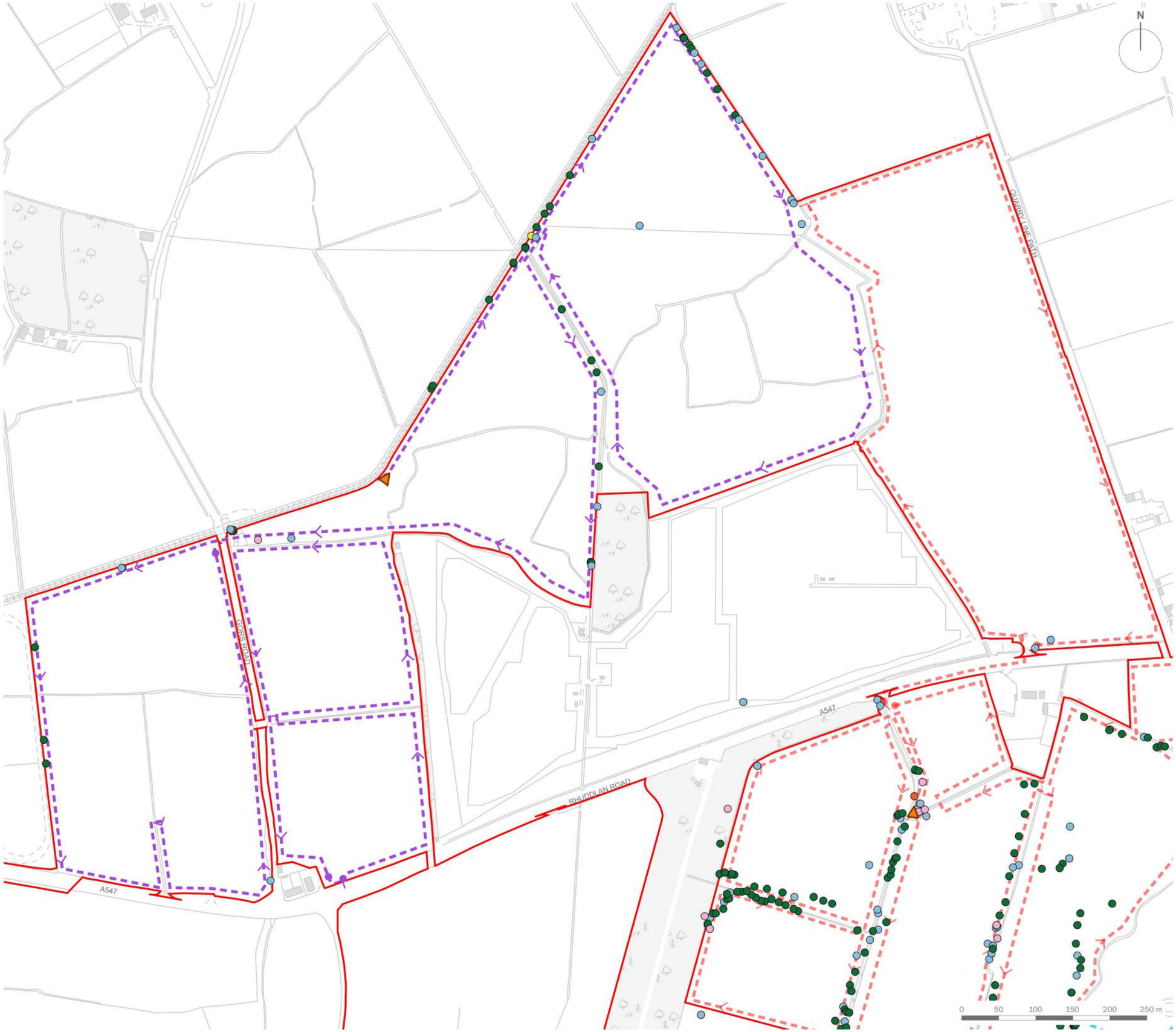

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Common Pipistrelle

Soprano Pipistrelle

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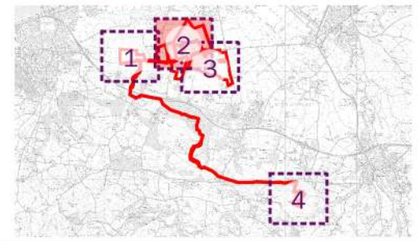

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Nighttime Bat Walkover Survey Plan Spring 2025 (Sheet 2 of 4)

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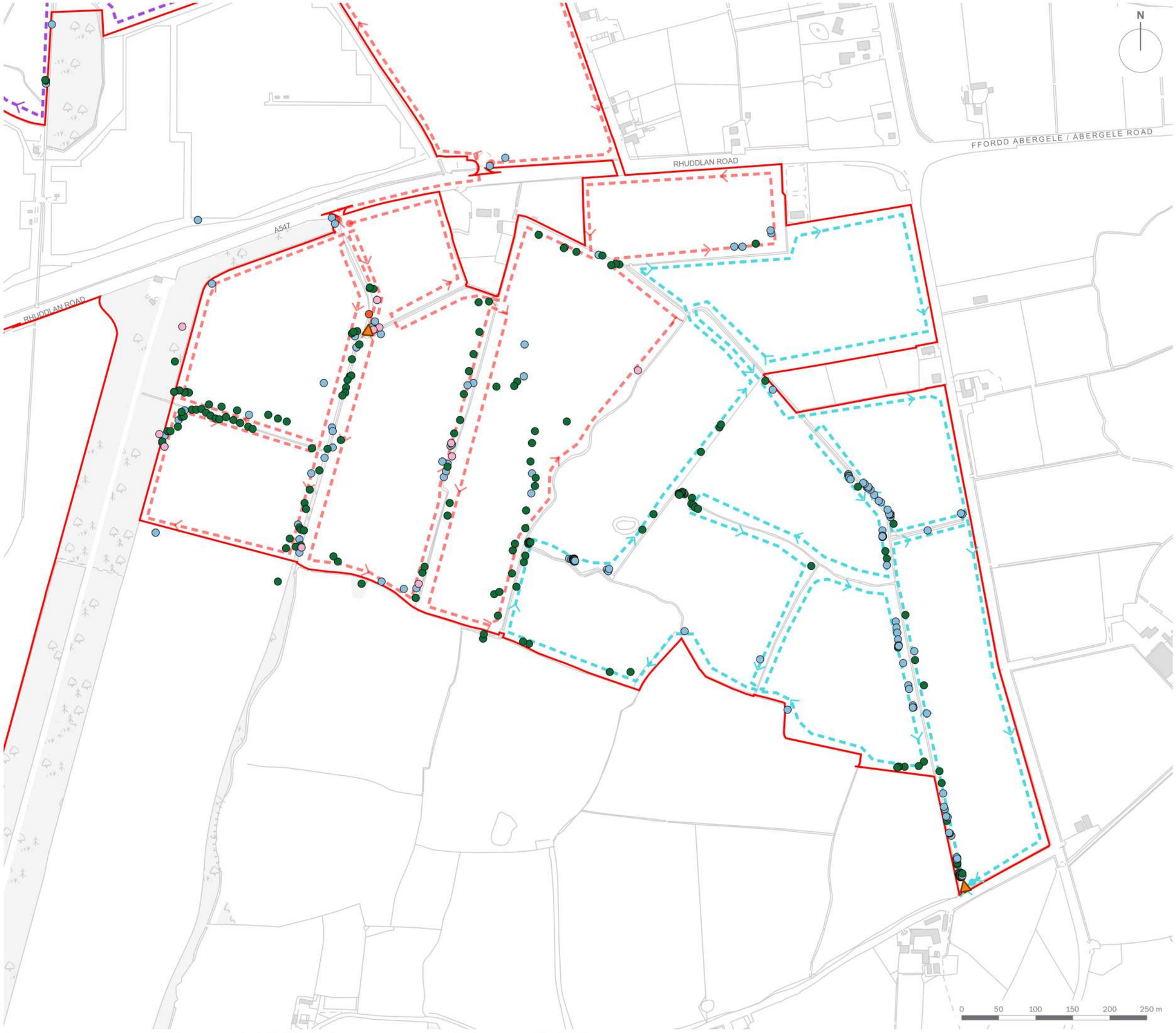

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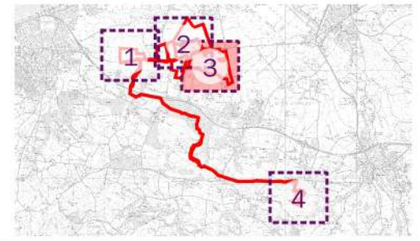

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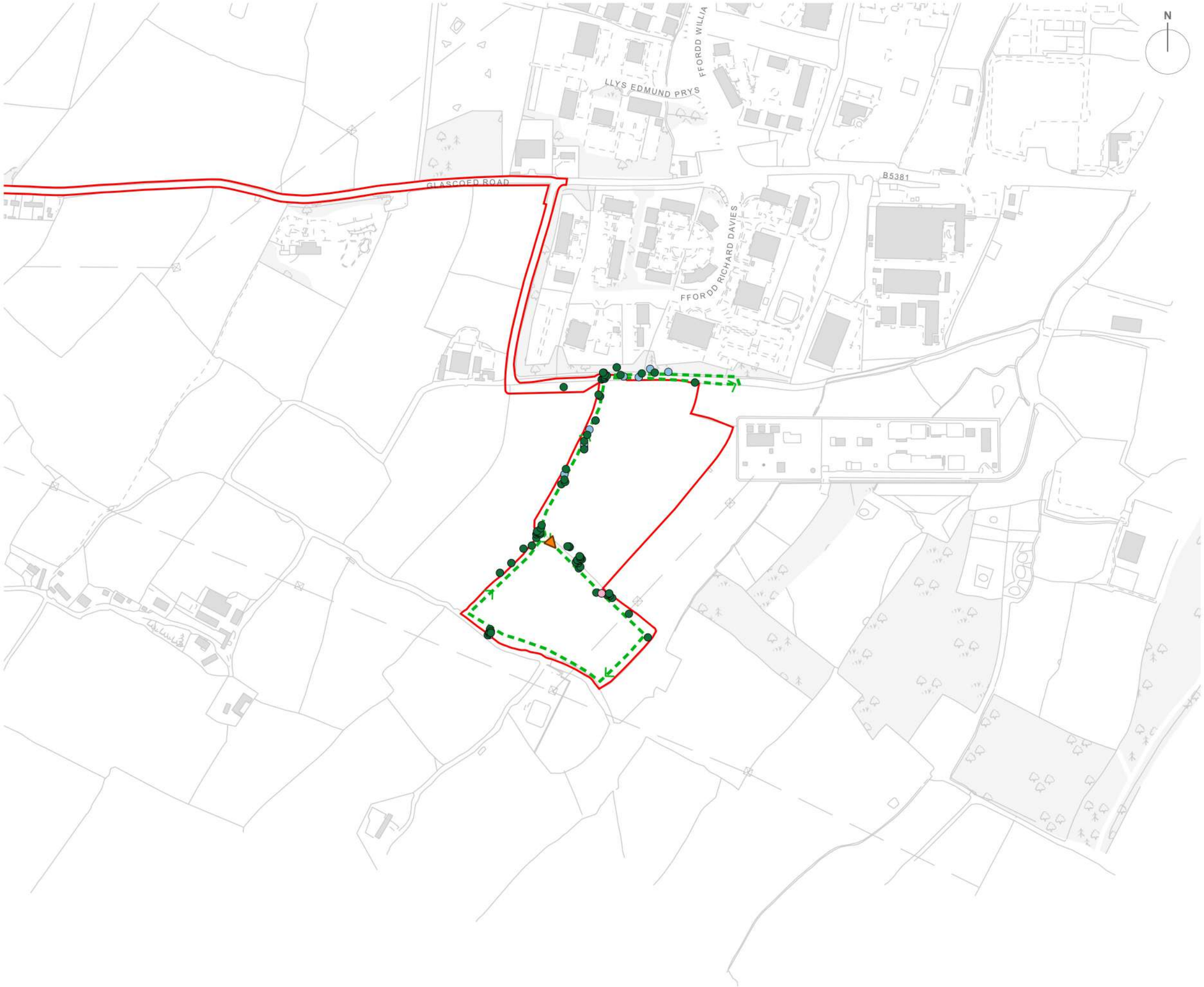

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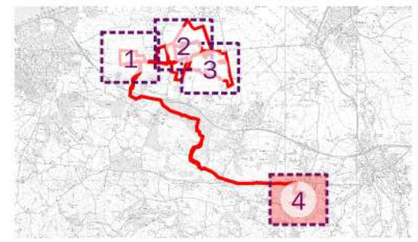

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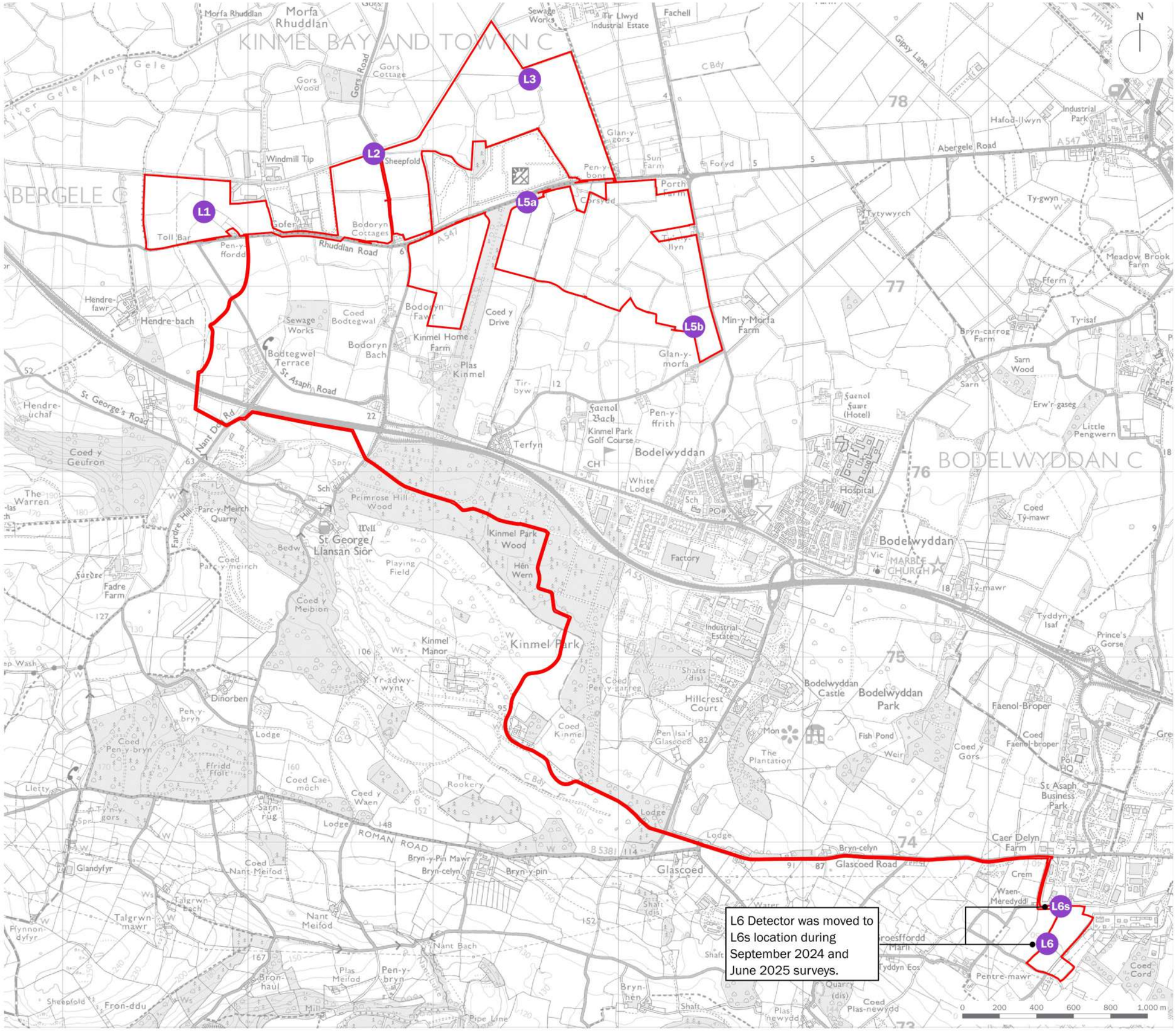

Site Boundary

L1 Static Bat Detector Location

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Automated Bat Detector Location Plan

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
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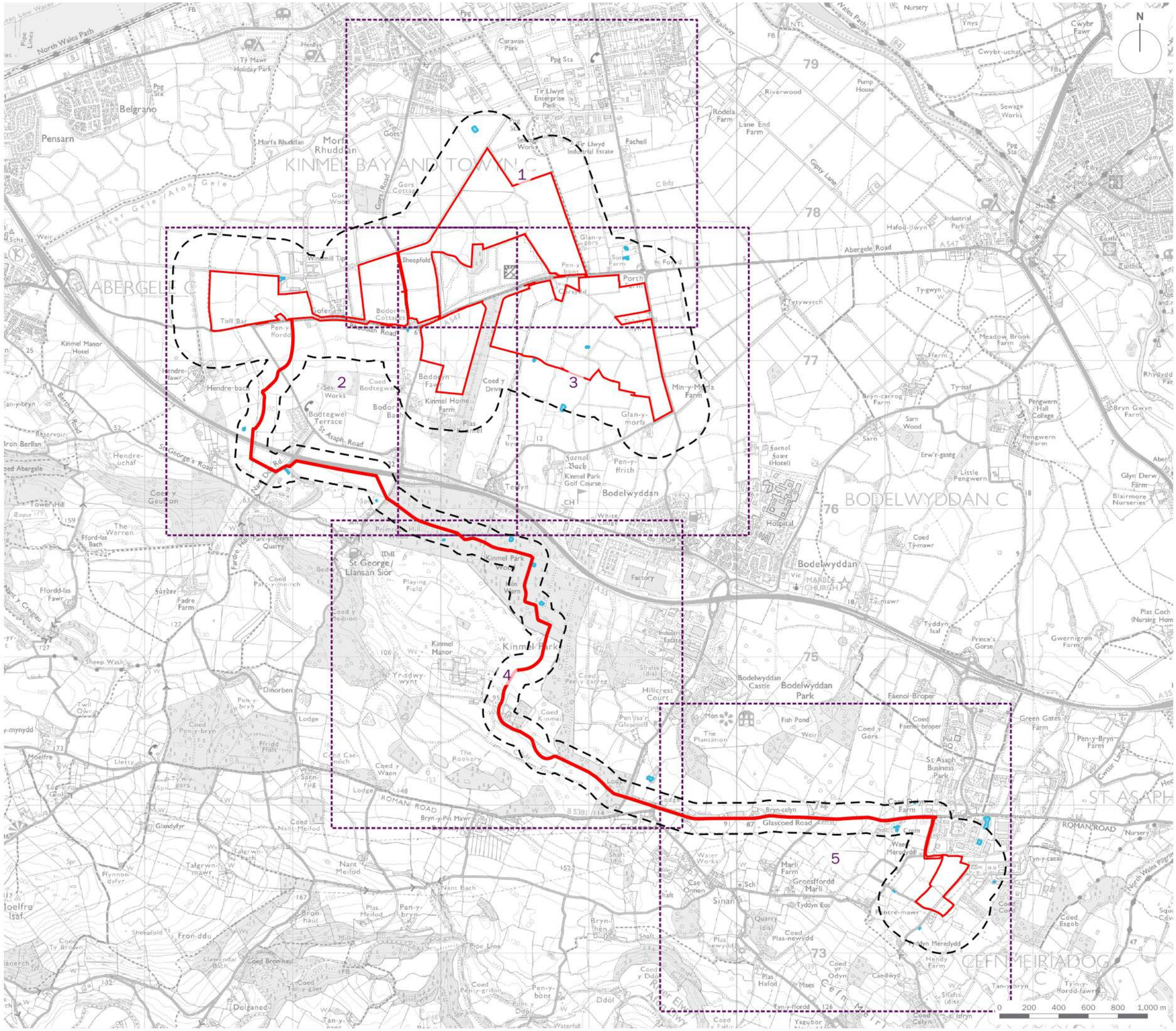

Site Boundary

250m Buffer from Solar and Battery Sites and 100m Buffer from Cable Route

Pond

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Pond Location Plan (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**GYo**
drawing number	**edp8841_d022b**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**DJo**

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client

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Pond Location Plan (Sheet 1 of 5)

date	**01 SEPTEMBER 2025**	drawn by	**GYo**
drawing number	**edp8841_d022b**	checked	**KWi**
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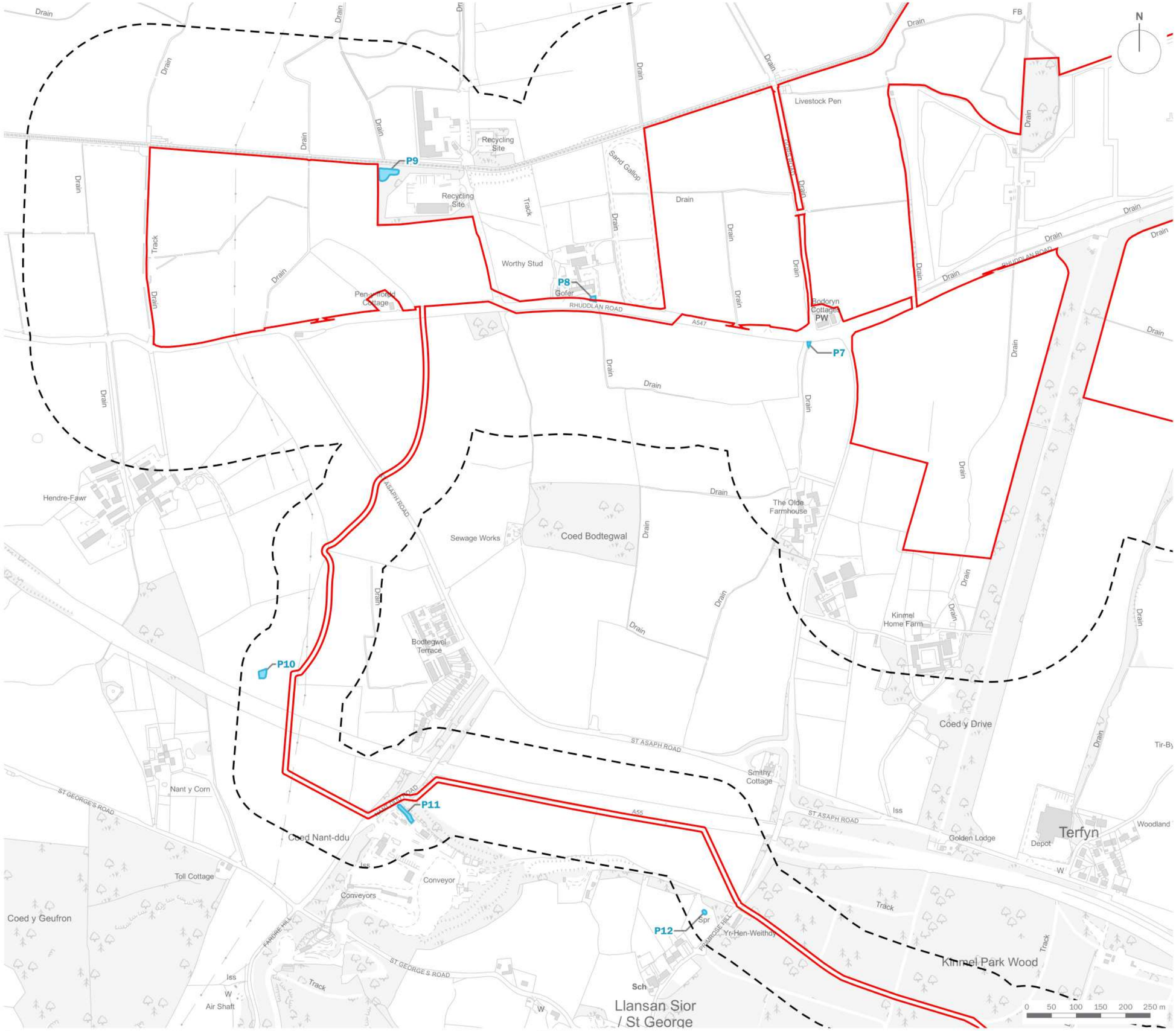

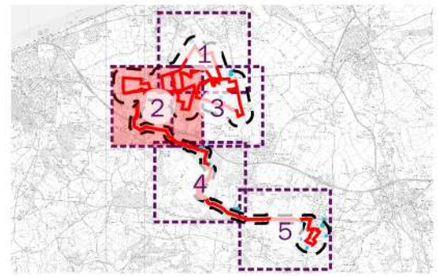

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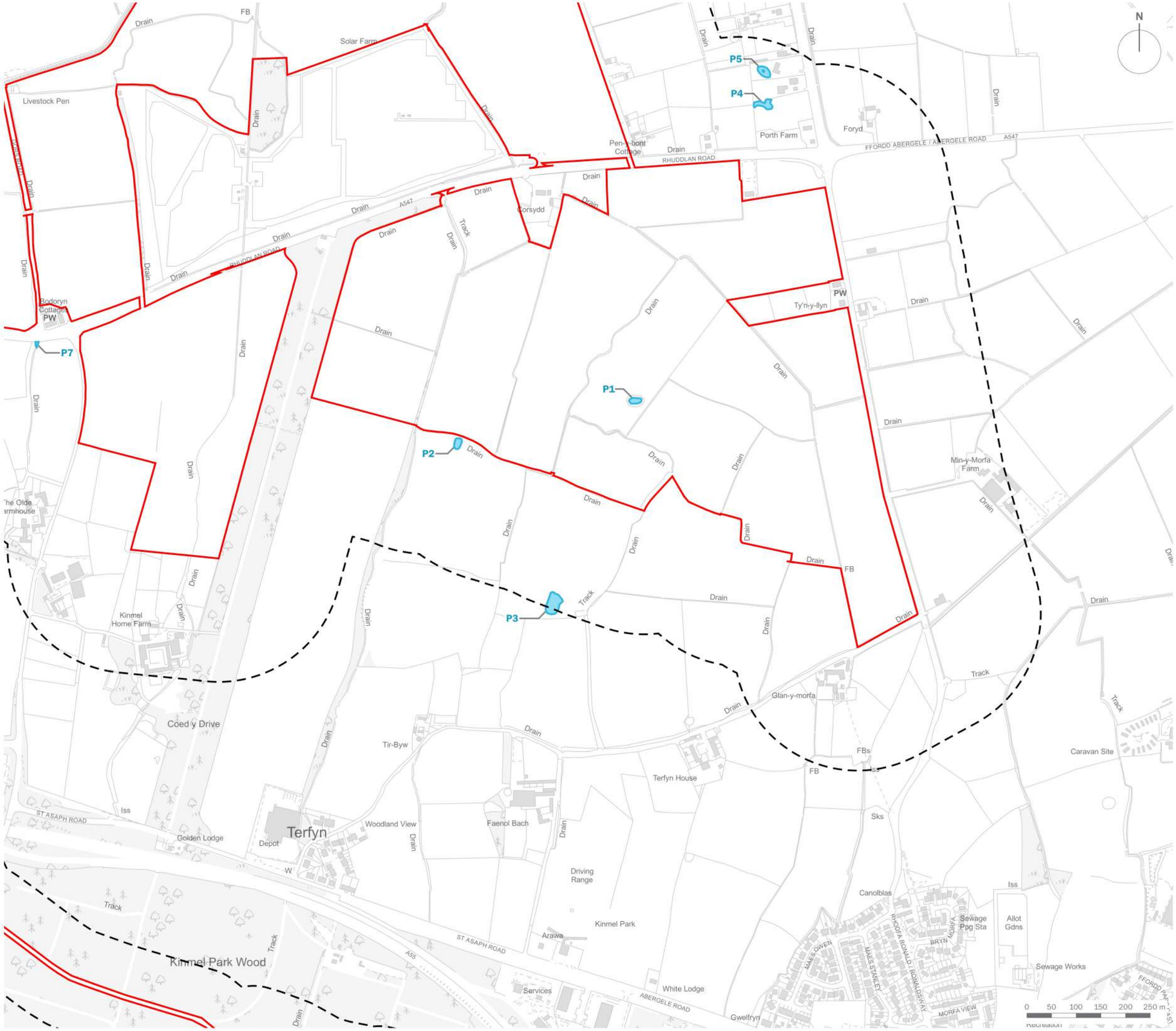

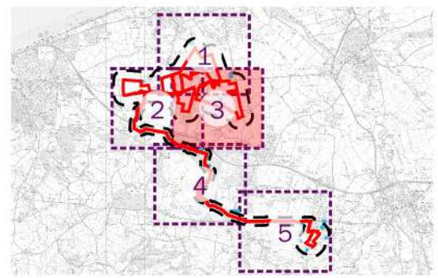

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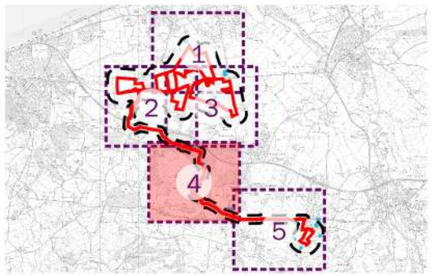
Site Boundary

250m Buffer from Solar and Battery Sites and 100m Buffer from Cable Route

Pond



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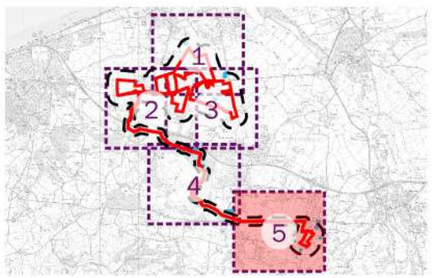

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Bodelwyddan Solar and Energy Storage

drawing title

Pond Location Plan (Sheet 5 of 5)

date	**01 SEPTEMBER 2025**	drawn by	**GYo**
drawing number	**edp8841_d022b**	checked	**KWi**
scale	**1:7,500 @ A3**	QA	**DJo**

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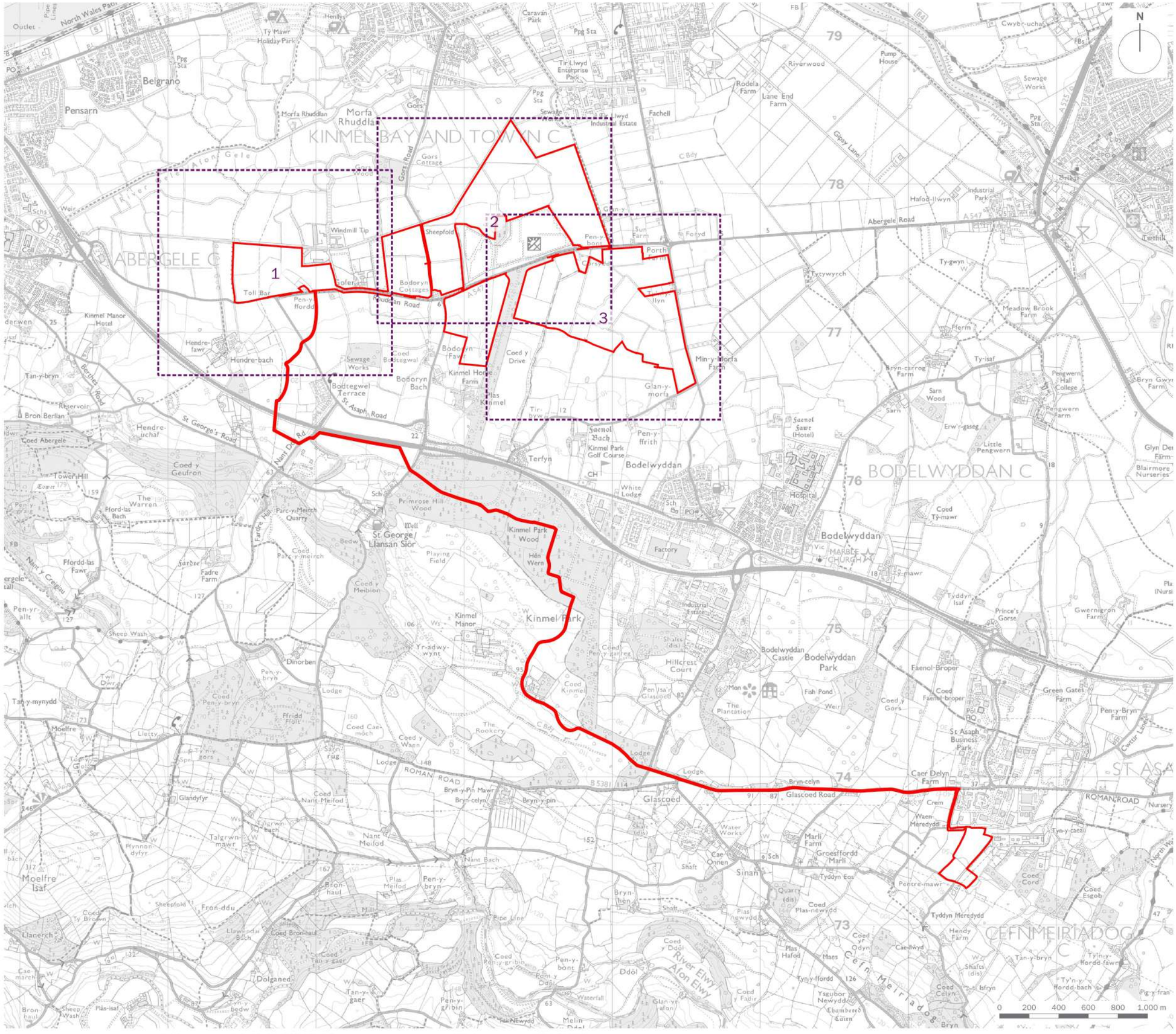

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Otter and Water Vole Survey Plan September 2024 (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d028a**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**JFr**

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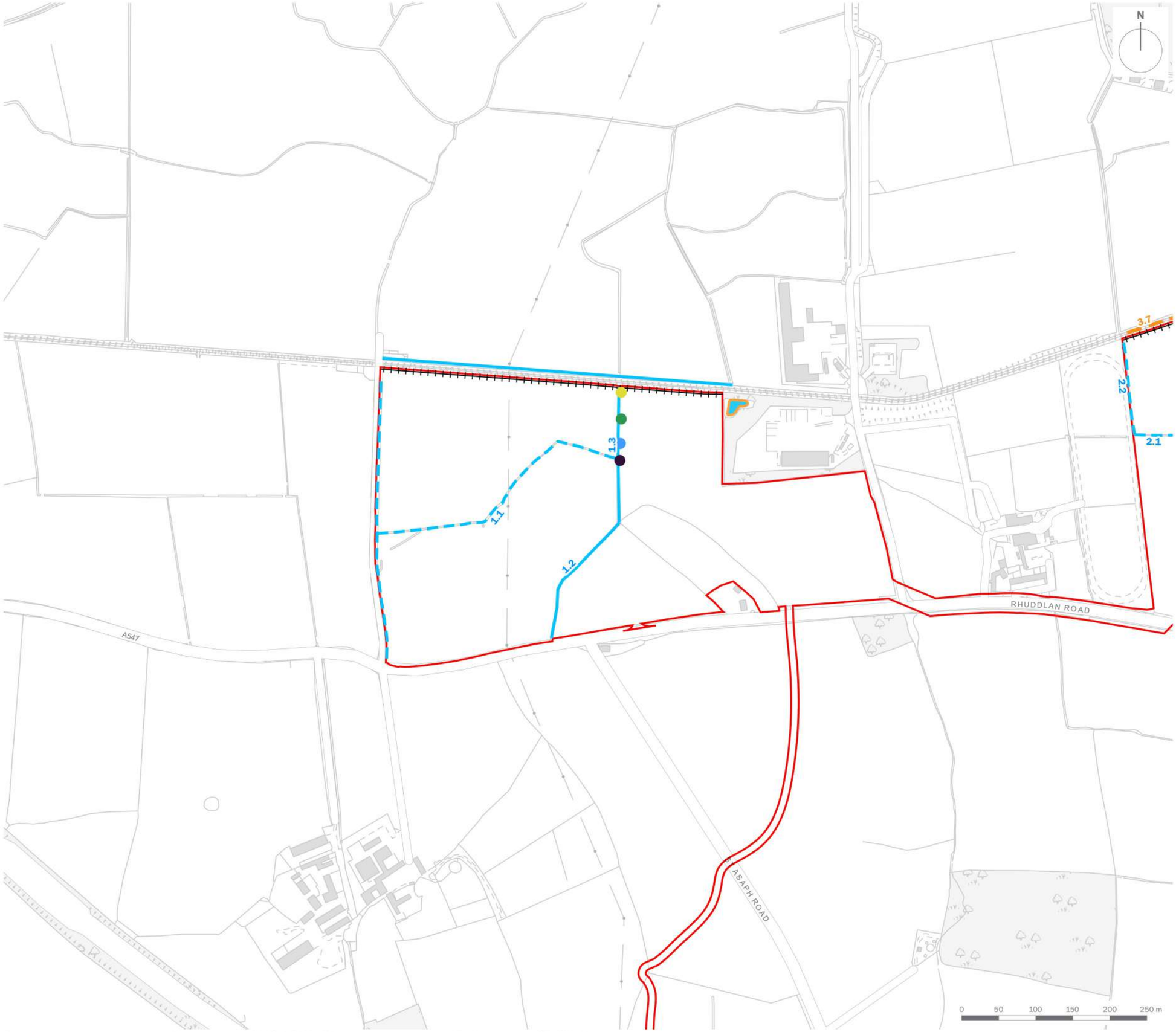


Site Boundary

Standing Water

Standing Water No Access

Wet Ditch

Dry Ditch

No Access

Fence

Survey Results

Footprints (American Mink Size)

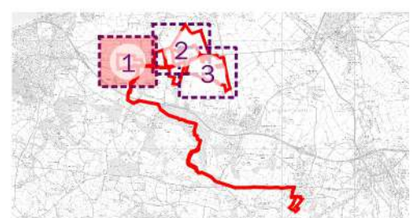
Footprints (Water Vole / Rat Sized)

Possible Water Wole Burrow

Rat Droppings

Water Vole Feeding Remains

Water Vole Latrine



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Otter and Water Vole Survey Plan September 2024 (Sheet 1 of 3)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d028a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**JFr**

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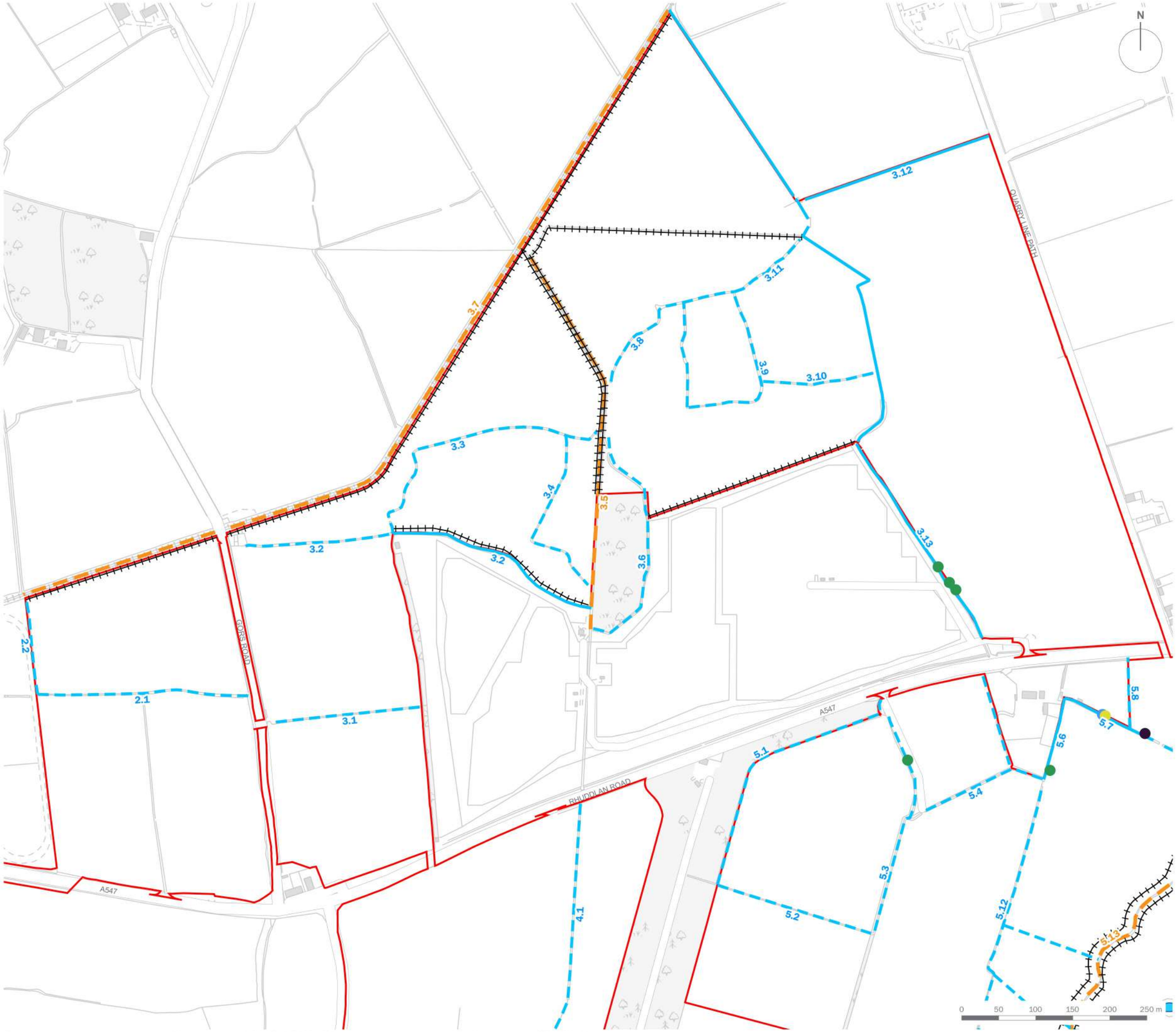


Site Boundary

Standing Water

Standing Water No Access

Wet Ditch

Dry Ditch

No Access

Fence

Survey Results

Footprints (American Mink Size)

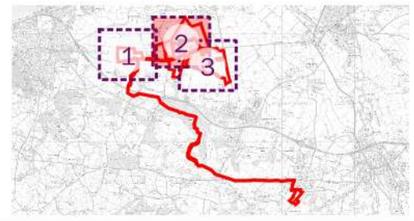
Footprints (Water Vole / Rat Sized)

Possible Water Wole Burrow

Rat Droppings

Water Vole Feeding Remains

Water Vole Latrine



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Otter and Water Vole Survey Plan September 2024 (Sheet 2 of 3)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d028a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**JFr**

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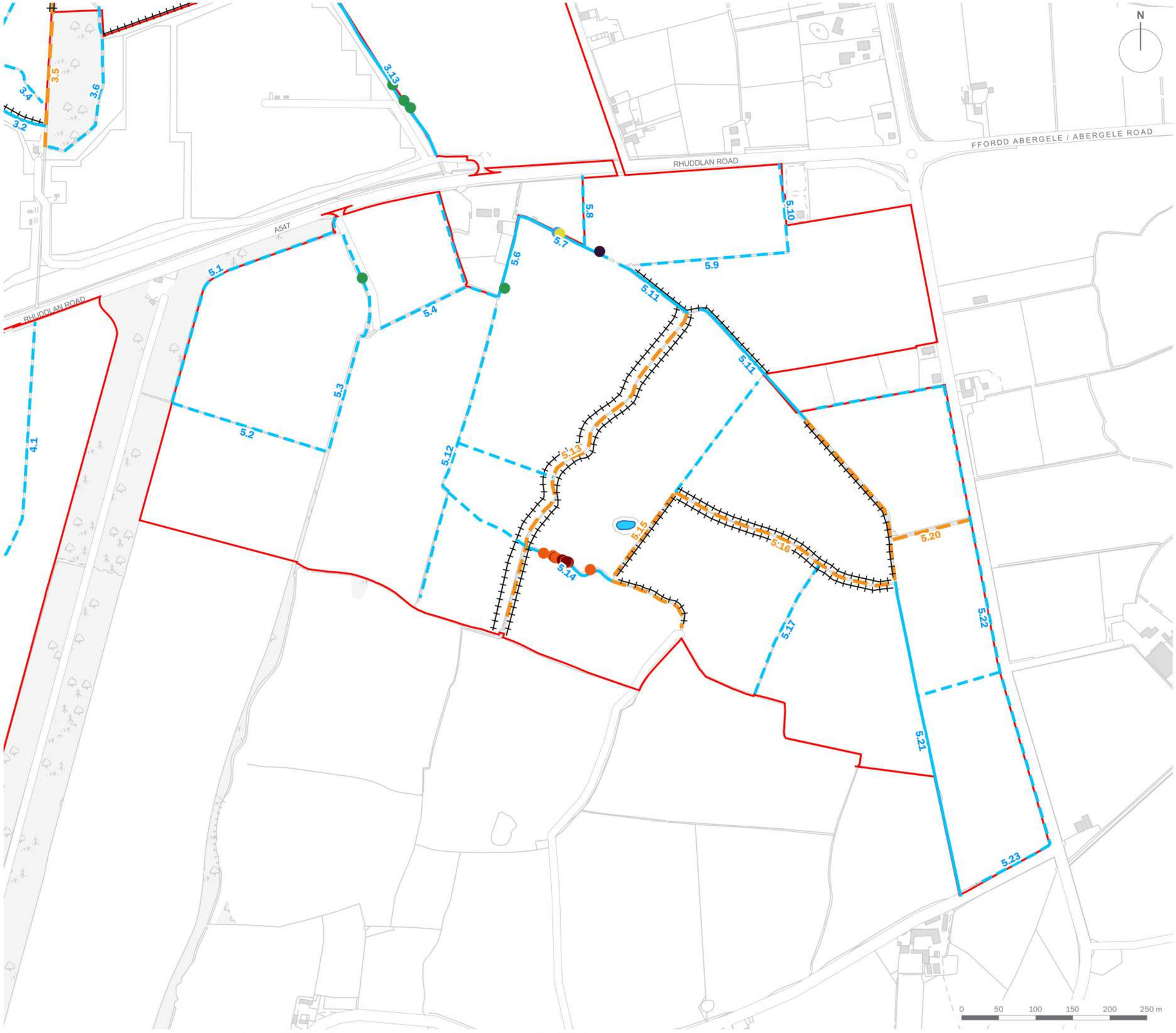


Site Boundary

Standing Water

Standing Water No Access

Wet Ditch

Dry Ditch

No Access

Fence

Survey Results

Footprints (American Mink Size)

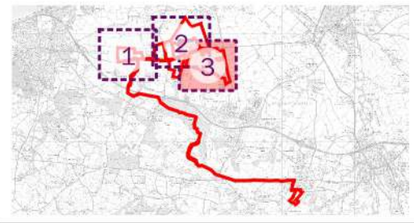
Footprints (Water Vole / Rat Sized)

Possible Water Wole Burrow

Rat Droppings

Water Vole Feeding Remains

Water Vole Latrine



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Otter and Water Vole Survey Plan September 2024 (Sheet 3 of 3)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d028a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**JFr**

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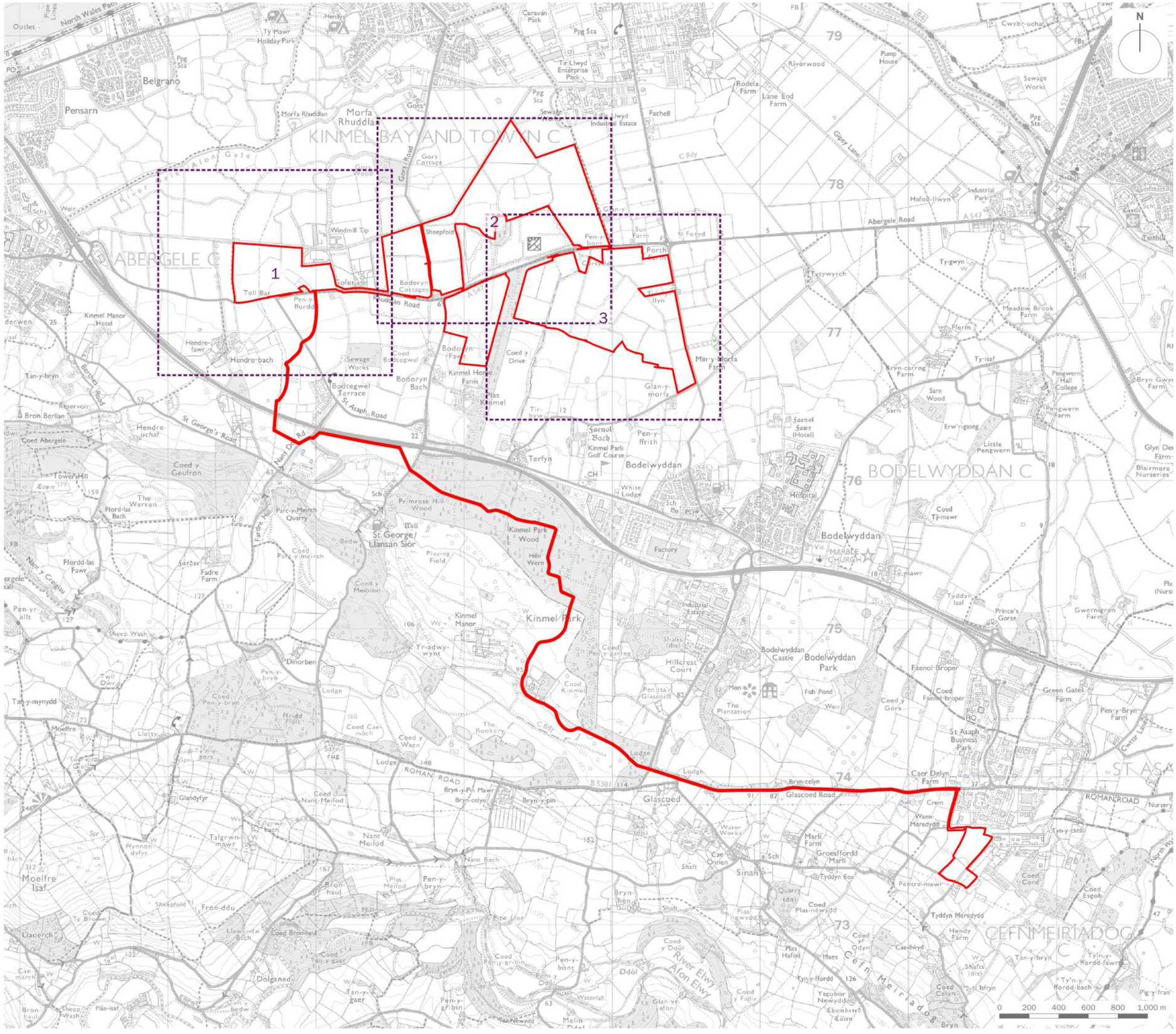

client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Otter and Water Vole Survey Plan June 2025 (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d043a**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**DJo**

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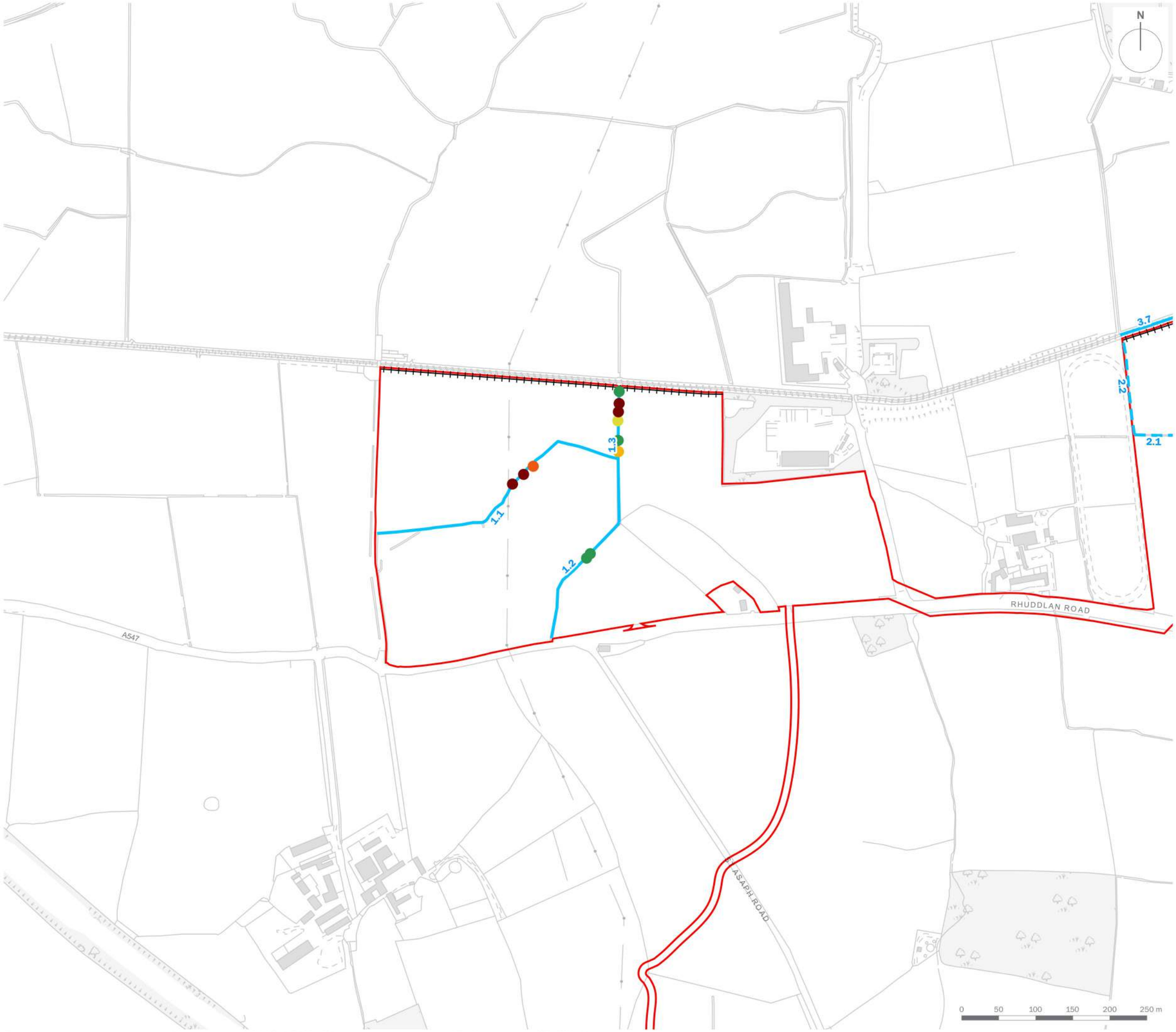


Site Boundary

Wet Ditch

Dry Ditch

No Access

Fence

Survey Results

Water Vole Feeding Remains

Water Vole Latrine

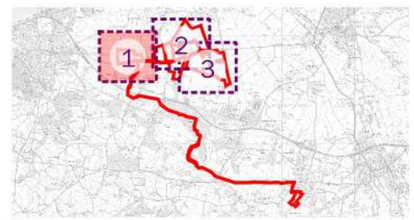
American Mink/Polecat Droppings

Otter Footprints

Potential Water Vole Burrow

Rat Footprints

Rat Droppings



client

Bodelwyddan Solar and Energy Storage Ltd

project title

Bodelwyddan Solar and Energy Storage

drawing title

Otter and Water Vole Survey Plan June 2025 (Sheet 1 of 3)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
drawing number	**edp8841_d043a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**DJo**

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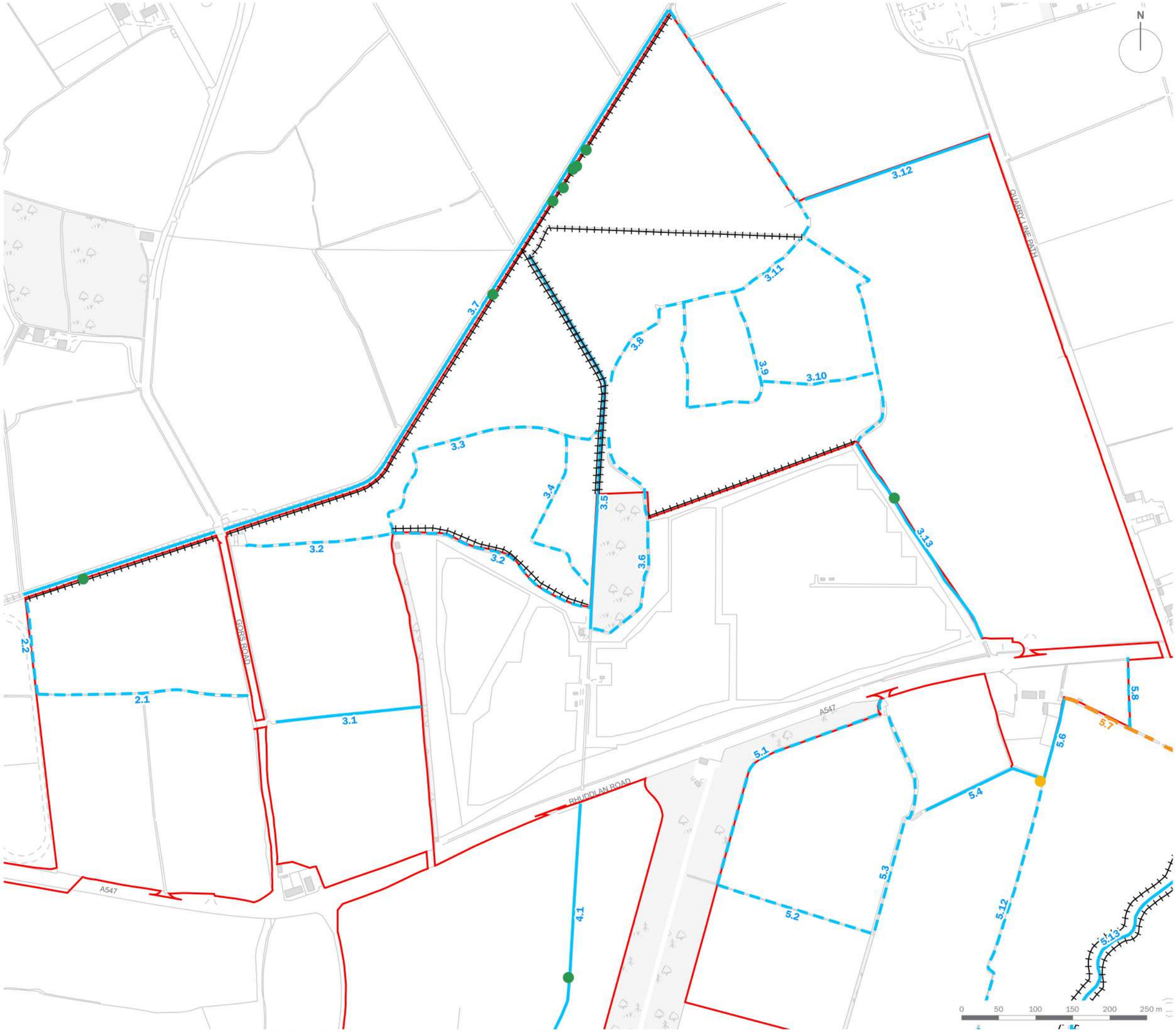


Site Boundary

Wet Ditch

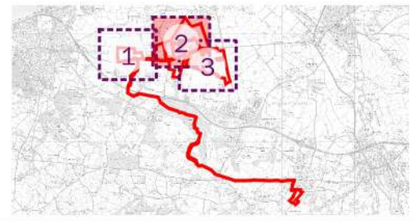
Dry Ditch

No Access

Fence

Survey Results

- Water Vole Feeding Remains
- Water Vole Latrine
- American Mink/Polecat Droppings
- Otter Footprints
- Potential Water Vole Burrow
- Rat Footprints
- Rat Droppings



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Bodelwyddan Solar and Energy Storage Ltd

project title

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Otter and Water Vole Survey Plan June 2025 (Sheet 2 of 3)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
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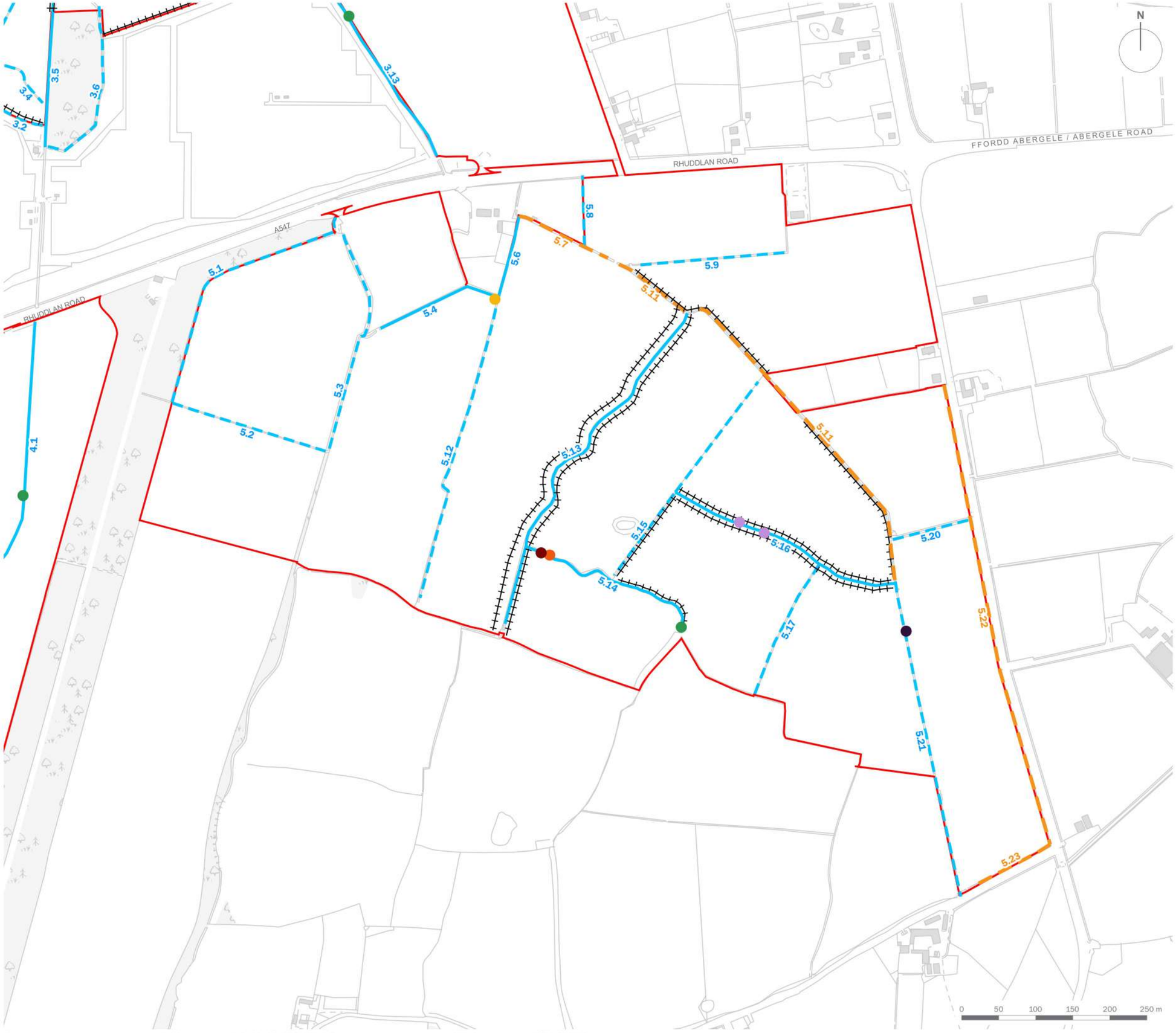

Site Boundary

Wet Ditch

Dry Ditch

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Survey Results

Water Vole Feeding Remains

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American Mink/Polecat Droppings

Otter Footprints

Potential Water Vole Burrow

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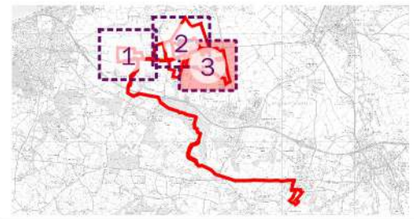
Rat Droppings



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Bodelwyddan Solar and Energy Storage Ltd

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Otter and Water Vole Survey Plan June 2025 (Sheet 3 of 3)

date	**01 SEPTEMBER 2025**	drawn by	**VMS**
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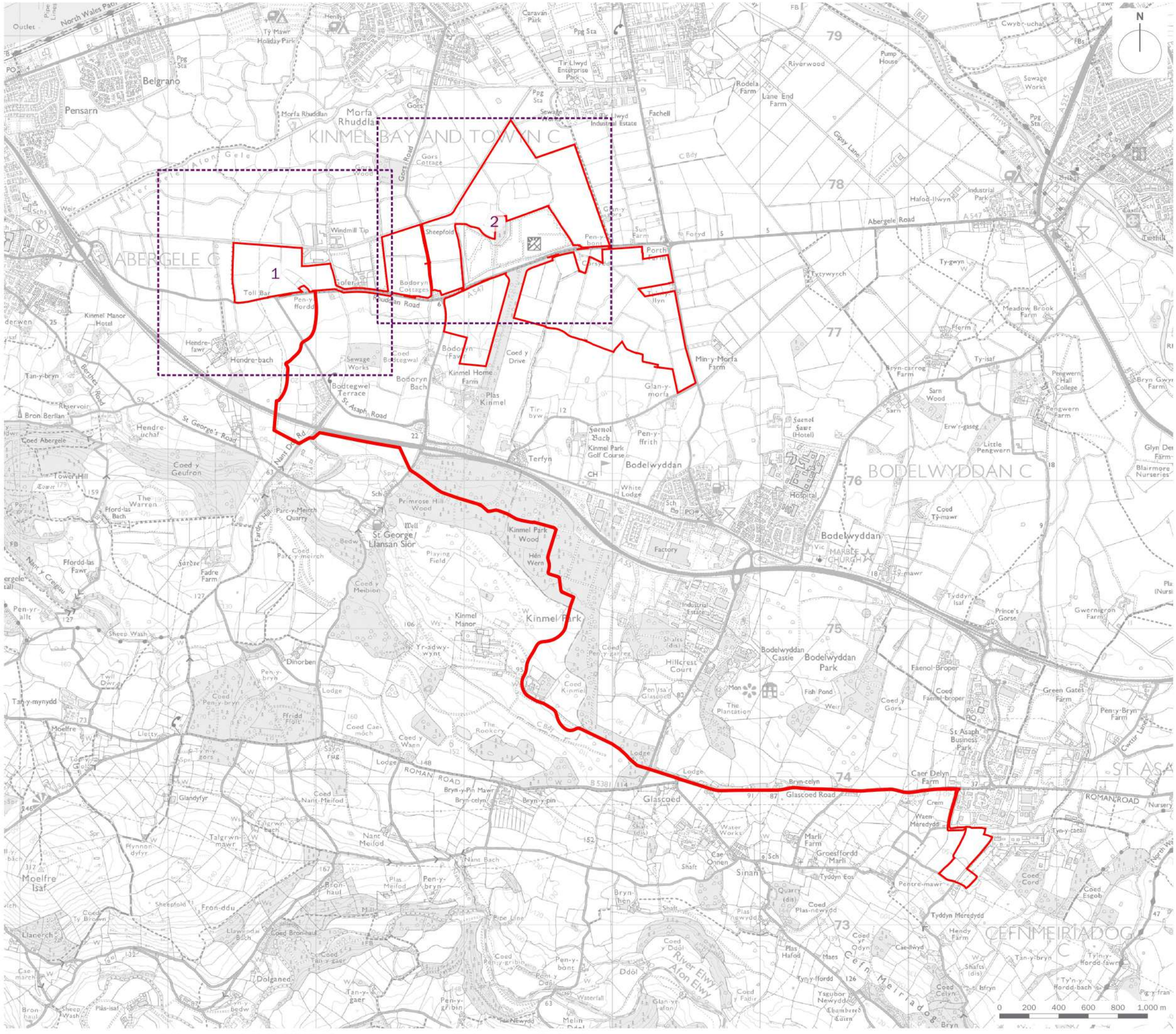

client

Bodelwyddan Solar and Energy Storage Ltd

project title

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drawing title

Badger Survey Results (Overview)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d029a**	checked	**KWi**
scale	**1:25,000 @ A3**	QA	**JFr**

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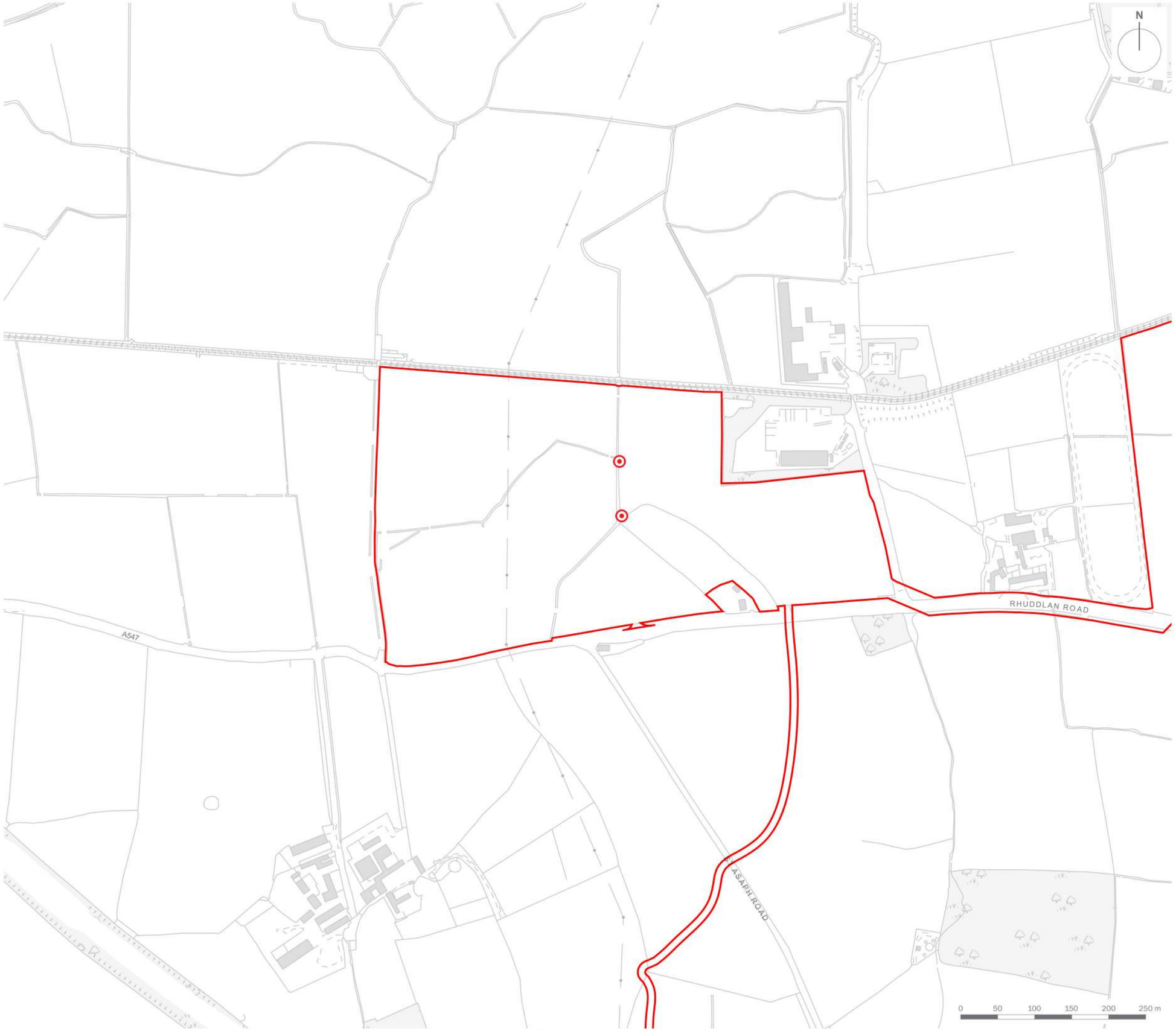

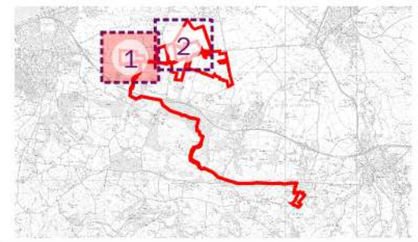

client

Bodelwyddan Solar and Energy Storage Ltd

project title

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drawing title

Badger Survey Results (Sheet 1 of 2)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d029a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**JFr**

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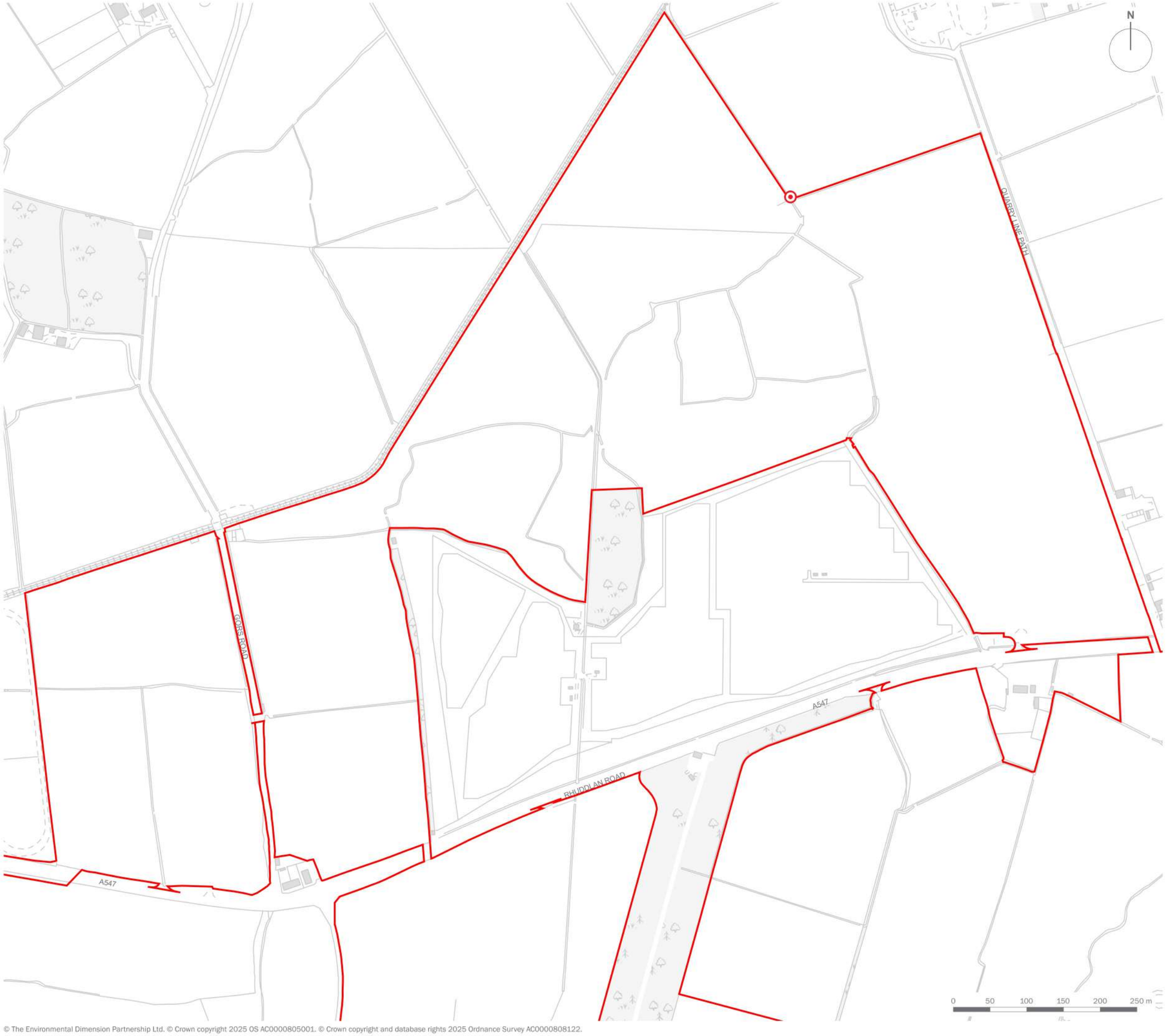

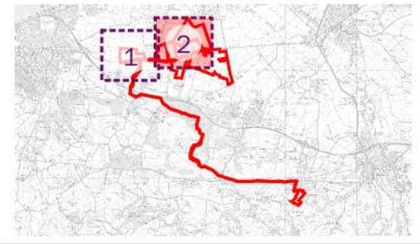

client

Bodelwyddan Solar and Energy Storage Ltd

project title

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drawing title

Badger Survey Results (Sheet 2 of 2)

date	**01 SEPTEMBER 2025**	drawn by	**DJo**
drawing number	**edp8841_d029a**	checked	**KWi**
scale	**1:5,000 @ A3**	QA	**JFr**

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REGISTERED ORGANISATION CIfA

URBAN DESIGN GROUP REGISTERED PRACTICE

IEMA CORPORATE PARTNER

Landscape Institute
Registered practice