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**Glyn Taff Solar Farm**  
on behalf of Renantis UK.  
Habitats and Species Baseline Report



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V1	26/07/2021	Draft for Client Review	Z. Hinchcliffe <i>MRes BSc (Hons.)</i>	H.Fearn <i>Msc MCIEEM</i>
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# CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.2	Site Overview.....	1
1.3	Scope of Assessment .....	1
1.4	Legislative Framework, Planning Policy and Guidance .....	1
<b>2</b>	<b>METHODOLOGY .....</b>	<b>3</b>
2.1	Desk Study .....	3
2.2	Extended Phase 1 Habitat Survey .....	3
2.3	Breeding Bird Survey.....	4
2.4	Great Crested Newt eDNA Survey.....	6
<b>3</b>	<b>BASELINE .....</b>	<b>8</b>
3.1	Designated and Sites for Nature Conservation .....	8
3.2	Protected and Notable Species .....	12
3.3	Invasive Non-native Species.....	15

## **FIGURES**

Figure 9B.1 : Non-Statutory Designated Sites Plan

Figure 9B.2 : Phase 1 Plan

## **APPENDICES**

Appendix 1: Site Photographs

Appendix 2: eDNA Survey Results

# 1 INTRODUCTION

- 1.1.1 Avian Ecology Ltd. was commissioned by Renantis UK on behalf of Potential Energy Ltd. to undertake baseline surveys in relation to a proposed solar development ('the Proposed Development') located on land at Bryntail Farm, Pontypridd, Mid-Glamorgan, Wales ('the Site').
- 1.1.2 The Proposed Development includes the construction, at least 40-year operation and subsequent decommissioning of a solar farm, plus associated infrastructure as illustrated on the *Design Map (Drwg No: NEO01437\_DRAFT)*.

## 1.2 Site Overview

- 1.2.1 The Site, as illustrated by the red-line application boundary shown on (**Figure 9B.1**), comprises an area of hillside arable and grazing pasture land of approximately 70.53ha, located to the south east of Pontypridd, Rhondda Cynon Taf, Wales at approximate central grid reference ST 0950 8974.
- 1.2.2 Habitats within the Site and immediately surrounding land include arable pasture fields, poor semi-improved grassland and pockets of ancient and semi-natural broadleaved woodland and plantation woodland, with field boundaries marked by ditches, hedgerows, stone walls and wire fencing. In addition, small sections of marshy grassland and bog/mire towards the northern boundary. No woodland is located within the redline boundary.
- 1.2.3 In the wider context the Site is surrounded by further extensive areas of pastoral farmland and open moorland to the north east of the Site and scattered pockets of deciduous woodland. To the west of the Site lies residential housing and urban developments associated with Pontypridd and Treforest.

## 1.3 Scope of Assessment

- 1.3.1 The objectives of this baseline report are to:
- Identify the proximity of any designated sites for nature conservation interest and provide an assessment of any potential effects the Proposed Development may have on these;
  - Provide baseline information on the current habitats and ecological features both within the Site and immediate surrounding area;
- 1.3.2 The assessment has comprised a desk study review, an extended Phase 1 habitat survey, Breeding Bird Survey and great crested newt *Triturus cristatus* Environmental DNA (eDNA) survey.

## 1.4 Legislative Framework, Planning Policy and Guidance

- 1.4.1 During the preparation of this report, reference has been made to the following key pieces of legislation, planning policy and guidance listed in **Table 1.1** below.

**Table 1.1: Key legislation, planning policy and guidance.**

International
<ul style="list-style-type: none"><li>• Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 ('the Ramsar Convention)</li><li>• Convention on the Conservation of European Wildlife and Natural Habitats 1979 ('the Bern Convention)</li><li>• UNESCO convention on the protection of the World Cultural and Natural Heritage (1972)</li></ul>

National
<ul style="list-style-type: none"> <li>• The Conservation of Habitats and Species Regulations 2017 (as amended);</li> <li>• The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;</li> <li>• The Wildlife and Countryside Act 1981 (as amended);</li> <li>• Environment (Wales) Act 2016;</li> <li>• The Environment Act 2021;</li> <li>• Countryside and Rights of Way Act 2000;</li> <li>• Protection of Badgers Act 1992;</li> <li>• Hedgerow Regulations 1997;</li> <li>• ‘Birds of Conservation Concern 5’ (Stanbury <i>et al.</i>, 2021)<sup>1</sup>;</li> <li>• The UK Post – 2010 Biodiversity Framework<sup>2</sup>;</li> <li>• The Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Ed.)<sup>3</sup>;</li> <li>• Planning Policy Wales (PPW11, 2021);</li> <li>• The Nature Recovery Plan for Wales; and,</li> <li>• BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.</li> </ul>
Local
<ul style="list-style-type: none"> <li>• Rhondda Cynon Taf Biodiversity Action Plan<sup>4</sup>.</li> </ul>

1.4.1 The ‘UK Post-2010 Biodiversity Framework’ succeeds the UK Biodiversity Action Plan (UK BAP) and ‘Conserving Biodiversity – the UK Approach’. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work and are therefore considered within this report in the context of the objectives of the Biodiversity Framework. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. UK BAPs formed the basis for statutory lists of priority species and habitats in Wales under Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006 and in now generally replaced in Wales under Section 7 of the Environment (Wales) Act 2016. For the purposes of this assessment, Section 7 is considered relevant in the context of this legislation.

1.4.2 This report is provided in accordance with the provisions of British Standard 42020:2013 Biodiversity: *Code of practice for planning and development*.

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<sup>1</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747. Available online at <https://britishbirds.co.uk/content/status-our-bird-populations>.

<sup>2</sup> <https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/>.

<sup>3</sup> Collins *et al.* (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3<sup>rd</sup> edition, BCT: London.

<sup>4</sup> <https://www.rctcbc.gov.uk/EN/Resident/PlanningandBuildingControl/LocalDevelopmentPlans/LDPEvidenceBaseLibraryandAnnualMonitoringRe/RelateddocumentsEvidenceBase/EB47a.pdf>

## 2 METHODOLOGY

### 2.1 Desk Study

2.1.1 A desk study was undertaken to identify existing information on the presence of designated sites for nature conservation, protected and notable species and habitats within proximity to the Site as follows:

- Non-statutory Designated Sites for Nature Conservation within 2km of the Site;
- Statutory Designated Sites for Nature Conservation, within 5km of the Site, extended to 10km for European sites; and,
- Existing records of protected and notable faunal species, within 2km of the Site.

The following key sources were consulted:

- Natural Resources Wales (NRW) and JNCC websites;
- The Multi Agency Geographic Information for the Countryside (MAGIC) website; and,
- South East Wales Biological Records Centre (SEWBReC).

2.1.2 Reference was also made to Ordnance Survey maps of the wider area and online aerial images ([www.google.co.uk/maps](http://www.google.co.uk/maps)) in order to determine any features of nature conservation interest in the wider area.

### 2.2 Extended Phase 1 Habitat Survey

2.2.1 An extended Phase 1 habitat survey of the Site was undertaken 30<sup>th</sup> June 2021 by Z. Hinchcliffe *MRes BSc (Hons.)*, a suitably qualified and experienced ecologist. An update survey was carried out on 30<sup>th</sup> August 2023 by D. Rouse and on 10<sup>th</sup> June 2024 by Z. Hinchcliffe.

2.2.2 The survey followed UK industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology (JNCC, 2010<sup>5</sup>) with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM), Technical Guidance Series *Guidelines for Preliminary Ecological Appraisal – Version 2* (CIEEM, 2017<sup>6</sup>).

2.2.3 The survey area comprised all areas within the Site, with additional notes made on any habitats of interest immediately adjacent to the Site.

2.2.4 Habitats were mapped and described using a series of ‘target notes’ (TNs).

2.2.5 The survey was extended to include the additional recording of specific features indicating the presence, or likely presence, of protected species, invasive species and other species of conservation significance.

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<sup>5</sup> <https://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b-47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.pdf>

<sup>6</sup> CIEEM (2017) Guidelines for Preliminary Ecological Appraisal – Second Edition - <https://cieem.net/resource/guidance-on-preliminary-ecological-appraisal-gpea/>

## ***Limitations of Survey***

- 2.2.6 An extended Phase 1 habitat survey does not constitute a detailed botanical survey or faunal species list or provide a full protected species survey but, enables competent ecologists to ascertain an understanding of the ecology of the Site in order to:
- Broadly identify the nature conservation value of a site and assess the significance of any potential impacts on habitat/species recorded; and/or,
  - Confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site (if any).
- 2.2.7 The Extended Phase 1 habitat survey visit was undertaken in June 2021, August 2023 and June 2024 and therefore within the optimal period for botanical surveys (approximately April to September).

## **2.3 Breeding Bird Survey**

- 2.3.1 Three breeding bird surveys were undertaken between May and July 2021. Surveys intended on being completed by 11:00am, however due to the large size of the Site, the first survey in May ceased at 15:00. Subsequently the remaining surveys were and completed over consecutive days ensuring a finish time of 11:00am. All surveys were carried out in conditions conducive for breeding bird surveys (avoiding heavy rain and strong winds). The survey area for the breeding bird survey was the Site, and adjoining habitats to the Site (for example hedgerows and watercourses along Site boundaries) were included. The survey area was also extended to a 100m buffer for inclusion of breeding Schedule 1 species, where recorded.
- 2.3.2 Four breeding bird surveys were undertaken between May and July 2024. Three of the four surveys were carried out in the morning, starting within one hour of sunrise and ceasing by 15:00. The fourth survey was carried out in the late-PM starting at 13:00 and ceasing by 21:00. All surveys were carried out in conditions conducive for breeding bird surveys (avoiding heavy rain and strong winds). The survey area for the breeding bird survey was the Site, and adjoining habitats to the Site (for example hedgerows and watercourses along Site boundaries) were included. The survey area was also extended to a 100m buffer for inclusion of breeding Schedule 1 species, where recorded.
- 2.3.3 Breeding bird surveys were undertaken by N. Saunders *BSc (Hons.)*, who is an experienced ornithologist.
- 2.3.4 The methodology employed was based upon a scaled-down version of the British Trust for Ornithology (BTO) Common Bird Census (CBC) technique, as detailed in Gilbert *et al.* (1998<sup>7</sup>). All bird registrations were recorded on suitably scaled field maps using standard BTO species codes and behaviour notations (such as singing, carrying food, active nest). The approximate locations of bird territories within the Survey Area were determined using standard territory mapping techniques to identify and isolate areas within which birds consistently displayed breeding behaviours (following Gilbert *et al.* 1998). The territory mapping method is based on the observation that many species during the breeding season are territorial. This is most marked in passerines where territories are often determined by conspicuous song, display and territorial disputes with neighbouring conspecifics. The expected outcome of this technique is that mapped registrations fall into clusters, approximately coinciding with territories. Records of birds just visiting the Survey Area (e.g. gulls feeding in fields) and birds flying over the Site were also made and the records of these summarised, however these have been discounted from further analysis, given they are not breeding within the Survey Area and are therefore not considered relevant to the assessment.

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<sup>7</sup> Gilbert, G., Gibbons, D.W & Evans, J. (1998) *Bird monitoring methods*. A manual of techniques for key UK species. RSPB.



2.3.5 For the purposes of the assessment, although the estimated number of breeding territories for all species is provided only the breeding territories of Notable Species are mapped, given these are the most relevant species to the assessment. Notable Species consist of Birds of Conservation Concern (BoCC Amber and Red List Species (Stanbury *et al.* 2021<sup>8</sup>) and Annex 1<sup>9</sup>/Schedule 1<sup>10</sup> raptors and owls. Additionally, species listed as Rhondda Cynon Taf Local Biodiversity Action Plan<sup>9</sup> species are also included.

2.3.6 Details of the surveys are summarised in **Table 2.1** and presented in further detail in **Annex 9B2** of **Appendix 2C**.

**Table 2.1: Breeding bird survey effort.**

Survey	Date	Start time (24hrs)	End time (24hrs)	Sunrise/Sunset times (24hrs)	Survey conditions
May 2021	25/05/2021	07:00	15:00	<b>05:08</b>	Moderate westerly breeze (3 on the Beaufort scale). Dry, broken cloud and good visibility.
June 2021	16/06/2021	06:30	11:00	<b>04:55</b>	Light south westerly (1 on the Beaufort scale) Dry, clear and good visibility.
	17/06/2021	06:00	11:00	<b>04:55</b>	Light north westerly (2 on the Beaufort scale) Dry, broken cloud and good visibility.
July 2021	07/07/2021	06:00	11:00	<b>05:05</b>	Light south westerly (1 on the Beaufort scale) Mostly dry with brief showers at the start of survey, broken cloud and good visibility.
	08/07/2021	06:00	10:30	<b>05:06</b>	Light westerly breeze (2 on the Beaufort scale) Dry, broken cloud and good visibility.
May 2024	29/05/2024	06:00	15:00	<b>05:04</b>	Moderate southerly breeze (2 on the Beaufort scale). Mostly dry with brief light shower and overcast with good visibility.
June 2024	10//06/2024	06:00	15:00	<b>04:56</b>	Moderate northerly breeze (4 on the Beaufort scale). Brief light shower and broken cloud with good visibility.
June 2024	27/06/2024	05:00	13:00	<b>04.57</b>	Light west south westerly breeze (2-4 on the Beaufort scale). Dry and cloudy with good visibility.
July 2024	23/07/2024	13:00	21:00	21:15	Moderate north easterly breeze (3 of the Beaufort scale). Dry and sunny with good visibility.

### Limitations of survey

<sup>8</sup> Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747

<sup>9</sup> Annex 1 – Species listed in Annex 1 of the European Bird Directive - [https://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index\\_en.htm](https://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm)

<sup>10</sup> Listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)

- 2.3.7 The results of the surveys are only a snap-shot of the habitat use and activity of the bird assemblage within the Site. However, the surveys have provided indicative evidence of the breeding and wintering bird assemblages within the Site.
- 2.3.8 It is appreciated that factors, including the cropping and grazing regimes will influence habitat use within the Site by birds. It is an assumption that the cropping and grazing regimes during the survey period is typical for the Site.
- 2.3.9 Dawn-based breeding bird surveys are usually completed by 10:00am for most lowland habitats. Due to the large size of the Site, several surveys continued to after midday. Based on the upland adjacent habitats and evidence showing birds singing and displaying long after midday, this was not thought to have a significant impact on the results of the surveys.
- 2.3.10 Access was permitted to all parts of the Site during all surveys. All habitats within 100m of the Site were visible from the Site boundaries, including within the Bryn Tail Farm buildings.
- 2.3.11 No disturbance events which could have affected the survey results were recorded during the surveys.

## 2.4 Great Crested Newt eDNA Survey

- 2.4.1 Ponds within the Site and within 250m of its boundaries were identified from aerial imagery and OS mapping; see **Figure 9B.2**. One pond (Pond 1) was located within the Site and no other wet ponds were present within 250m of the Site. One dry or former pond was present within the grounds of Bryn Tail Farm buildings. Pond 1 was visited and assessed for its suitability to support great crested newt (GCN) following the Habitat Suitability Index (HSI) assessment methodology following the Amphibian and Reptile Groups of the United Kingdom (ARG UK) methodology (ARG UK, 2010)<sup>11</sup>. The results of the HSI assessment provide a useful indication of GCN presence and help assess any likely impacts of a development.
- 2.4.2 eDNA is nuclear or mitochondrial DNA that is released from an organism into the environment. In aquatic environments, eDNA is diluted and distributed in the water where it persists for 7–21 days, depending on the conditions (Biggs *et al.*, 2014a<sup>12</sup>). The technique for determining presence/absence of GCN uses Polymerase Chain Reaction (PCR) laboratory techniques to detect the species eDNA within water samples.
- 2.4.3 NRW accepts the use of environmental DNA surveys as evidence of presence or absence of GCN, provided samples are taken when newts are likely to be present (this depends on location and conditions like the weather). NRW will only accept eDNA survey results undertaken between mid-April and 30<sup>th</sup> June, in strict accordance with the published technical advice note, by suitably trained, experienced and licensed GCN surveyors.

### **Field Sampling Technique**

- 2.4.4 Pond 1 was visited sampled on **30<sup>th</sup> June 2021**.
- 2.4.5 The sample was collected by Z. Hinchcliffe *MRes BSc (Hons.)* (NE Licence No. 2019-44230-CLS-CLS) and S. Viles *BSc (Hons.)* attending as a safety second.
- 2.4.6 Additionally Pond 1 was reassessed for HSI on 10<sup>th</sup> June 2024 by Z. Hinchcliffe.

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<sup>11</sup> ARG UK. (2010). *ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index*. Available at: <https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file>

<sup>12</sup> Biggs J., Ewald N., Valentini A., Gaboriaud C., Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P and Dunn F (2014). Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067. Freshwater Habitats Trust: Oxford.

2.4.7 The protocol for sampling followed that outlined within the technical advice note for field and laboratory sampling of GCN (Biggs *et al.*, 2014).

***Laboratory Analysis***

2.4.8 Laboratory analysis was undertaken by SureScreen Scientifics:

SureScreen Scientifics Division Ltd,  
Morley Retreat,  
Church Lane,  
Morley,  
Derbyshire,  
DE7 6DE  
Tel: +44 (0)1332 292003  
Email: scientifics@surescreen.com

*Limitations of survey*

2.4.9 Surveys were carried out within the appropriate survey window, accepted by Natural Resources Wales, for eDNA surveys between 15<sup>th</sup> April to 30<sup>th</sup> June.

2.4.10 No survey constraints were encountered.

### 3 BASELINE

#### 3.1 Designated and Sites for Nature Conservation

##### *Non-statutory Designated Sites*

- 3.1.1 This Section should be read with reference to **Figure 9B.1**.
- 3.1.2 A summary of non-statutory designated sites for nature conservation located within 2km of the Site is provided in **Table 3.1**.
- 3.1.3 A review of the data provided by SEWBReC identified three Sites of Importance for Nature Conservation (SINC) within a 2km radius of the Site boundaries.
- 3.1.4 A small section of the Clydach Vale SINC is present immediately adjacent to the south western section of the Site.

**Table 3.1.: Non Statutory designated sites.**  
(SINC: Site of Importance for Nature Conservation.)

Site Name	Distance and Direction from Site	Description
Cyldach Vale (Pontypridd Golf Course) SINC	Immediately adjacent to the Site	Qualifying features: <ul style="list-style-type: none"> <li>• Woodlands</li> <li>• Scrub</li> <li>• Neutral grasslands</li> <li>• Acid grasslands</li> <li>• Marshy grasslands</li> <li>• Ffridd communities</li> <li>• Heathland communities</li> <li>• Bog communities</li> <li>• Watercourses</li> <li>• Mineral spoil tips</li> <li>• Mosaic habitats</li> <li>• Rock exposures</li> <li>• Reptiles</li> <li>• Vascular plants</li> </ul>
Mynydd Eglwysilan, North of Senghenydd SINC	Immediately adjacent to the north eastern boundary	Qualifying features: <ul style="list-style-type: none"> <li>• Acid grassland- At least 7 indicator species,</li> <li>• Marshy grassland-At least 12 indicator species,</li> <li>• Ancient woodland with an assemblage of semi-natural indicator species,</li> <li>• Presence of Cornish Moneywort</li> </ul>
Nant Cae'r-Moel Swamp and Woodland, Senghenydd SINC	1.1km east	Qualifying features: <ul style="list-style-type: none"> <li>• Wet woodland,</li> <li>• Acid grassland- At least 7 indicator species,</li> <li>• Marshy grassland-At least 12 indicator species,</li> </ul>
Ty'n-y-Parc, Abertridwr SINC	1.43km east	Qualifying features: <ul style="list-style-type: none"> <li>• Acid grassland- At least 7 indicator species,</li> <li>• Neutral grassland-At least 8 indicator species</li> <li>• Semi-natural woodland</li> </ul>

### **Priority Habitats – Existing Records**

- 3.1.5 In review of MAGIC, ten habitats of Principal Importance (also known as priority habitats) under Section 7 of the Environment (Wales) Act 2016 (S7), Section 42 of the NERC Act 2006 (NERC) and/or listed on the UKBAP were identified within 2km of the Site.
- 3.1.6 The Lle Geo-Portal for Wales, Ordnance Survey Maps provided no records of priority habitats within the Site boundaries.
- 3.1.7 Information on priority habitats within 2km of the Site is presented in **Table 3.2** below. Where numerous records of a particular habitat were recorded, only the closest record to the Site has been provided, in order to provide context for the Site and surrounding area.

**Table 3.2: Priority habitats – existing records.**

Priority habitat name	Designation	Distance from site
Upland heathland	NERC S.42 EW S.7.	Adjacent to the east
Lowland dry acid grassland	NERC S.42, EW S.7.	Adjacent in three locations to the western boundary
Lowland meadows	NERC S.42, EW S.7.	93m south
Purple moor grass and rush pastures	NERC S.42, EW S.7, LBAP.	260m north
Upland flush fens and swamps	NERC S.42, EW S.7, LBAP.	390m north east
Lowland heathland	NERC S.42, EW S.7.	570m north west
Open mosaic habitats on previously developed land	NERC S.42, EW S.7, LBAP.	850m east
Traditional orchards	NERC S.42, EW S.7	850m north west
Coastal grazing marsh and floodplain grassland	NERC S.42, EW S.7	1.26km north west
Lowland fens and reedbeds	NERC S.42, EW S.7, LBAP.	1.62km west

#### **Key**

**NERC S.42:** Natural Environment and Rural Communities (NERC) Act Section 42

**EW S.7:** Environment (Wales) Act Section 7

**LBAP:** Rhondda Cynon Taf Biodiversity Action Plan Priority Habitat

### **Extended Phase 1 Habitat Survey**

- 3.1.8 This section should be read in conjunction with the Phase 1 Habitat Plan presented as **Figure 9B.2**, Target Notes (TNs) presented in **Table 3.3** and photographs presented in **Appendix 2**
- 3.1.9 The Site is dominated by heavily grazed improved grassland dominated by perennial rye grass *Lolium perenne*, white clover *Trifolium repens*, crested dog's-tail *Cynosurus cristatus*, yarrow *Achillea millefolium*, common mouse-ear *Cerastium fontanum*, creeping buttercup *Ranunculus repens*, daisy *Bellis perennis* and spear thistle *Cirsium vulgare*.

- 3.1.10 A number of grazed and un-grazed poor semi improved grassland areas were present towards the north and east of the Site. Species consisted of perennial rye grass, annual meadow grass *Poa annua*, common bent *Agrostis capillaris*, crested dog's-tail, sweet vernal grass *Anthoxanthum odoratum*, Yorkshire fog *Holchus lanatus*, common nettle *Urtica dioica*, broad-leaved dock *Rumex obtusifolius*, common mouse-ear, marsh thistle *Cirsium palustre*, curled dock *Rumex crispus*, meadow fescue *Festuca pratensis*, Yorkshire fog, hawkweed species *Hieracium sp*, sheep sorrel *Rumex acetosella*, white clover, perforate St John's wort *Hypericum perforatum*, common sorrel *Rumex acetosa*, common cat's-ear *Hypochaeris radicata*, foxglove *Hypericum perforatum*, timothy *Phleum pratense*, selfheal *Prunella vulgaris*, dandelion *Taraxacum officinale agg.*, herb robert *Geranium robertianum*, knapweed *Centaurea nigra*, yarrow, creeping buttercup, daisy, soft rush *Juncus effesus*, marsh foxtail *Alopecurus geniculatus*, marsh thistle, curled dock and meadow fescue.
- 3.1.11 Areas of marshy grassland within the Site were dominated by purple moor grass *Molinia caerulea*, Yorkshire fog and soft rush. Other species comprised sweet vernal grass, common sorrel, marsh bedstraw *Galium palustre*, marsh thistle, tormentil *Potentilla erecta*, forget-me-not species *Myosotis sp*, violet species *Viola sp*, common cotton sedge *Eriophorum angustifolium*, perforate St John's wort, foxglove, cross-leaved heath *Erica tetralix* and marsh willowherb *Epilobium palustre*.
- 3.1.12 An area of valley mire along the north eastern boundary; species comprised bog asphodel *Narthecium ossifragum*, bog pondweed *Potamogeton polygonifolius*, bog pimpernel *Anagallis tenella*, water crowfoot *Ranunculus aquatilis*, marsh thistle, soft rush, tormentil, common cotton sedge, spike rush *Eleocharis palustris*, bilberry *Vaccinium myrtillus*, purple moor grass, forget-me-not species and patches of *Sphagnum* moss.
- 3.1.13 One small pond was present within the Site. The pond (P1) was approximately 4m by 5m in size bordered on two sides by a brick wall heavily used by sheep causing little marginal vegetation to be present and bank side erosion.
- 3.1.14 Habitats recorded within the Site are considered to be typical of dominant habitats within the wider landscape.
- 3.1.15 Adjacent to the Site, there were multiple pedunculate oak *Quercus robur*-dominated broadleaved woodland areas were present adjacent to the Site; other species comprised hawthorn *Crategeus monogyna*, alder *Alnus glutinosa*, silver birch *Betula pendulus*, hazel *Corylus avellana*, blackthorn *Prunus spinosa* and ash *Fraxinus excelsior*. The understory varied within the woodlands with species consisting of cock's-foot *Dactylis glomerata*, holly *Ilex aquifolium*, foxglove, creeping buttercup, ivy *Hedera helix*, smooth meadow grass *Poa pratensis*, chickweed *Stellaria media*, soft rush, yellow pimpernel *Lysimachia nemorum*, great willowherb *Epilobium hirsutum*, spear thistle, common nettle, dog's mercury *Mercurialis perennis*, sweet vernal grass and areas of scattered and dense bracken *Pteridium aquilinum*.

**Table 3.3: Target notes (TNs).**

Target Note	Comment
TN1	Marshy grassland – dominated by Yorkshire fog <i>Holchus lanatus</i> , purple moor grass <i>Molinia caerulea</i> , crested dog's-tail <i>Cynosurus cristatus</i> and soft rush <i>Juncus effesus</i> . Species also occurring include sweet vernal grass <i>Anthoxanthum odoratum</i> , common sorrel <i>Rumex acetosa</i> , marsh bedstraw <i>Galium palustre</i> , marsh thistle <i>Cirsium palustre</i> , tormentil <i>Potentilla erecta</i> , forget-me-not species <i>Myosotis sp</i> , violet sp <i>Viola sp</i> , common cotton sedge <i>Eriophorum angustifolium</i> , perforate St John's wort <i>Hypericum perforatum</i> , foxglove <i>Digitalis purpurea</i> , cross-leaved heath <i>Erica tetralix</i> and marsh willowherb <i>Epilobium palustre</i> .

Target Note	Comment
TN2	Grazed improved grassland – sheep grazed. Perennial rye grass <i>Lolium perenne</i> , annual meadow grass <i>Poa annua</i> , common bent <i>Agrostis capillaris</i> , crested dog’s-tail, sweet vernal grass, Yorkshire fog, common nettle <i>Urtica dioica</i> , broad-leaved dock <i>Rumex acetosa</i> , common mouse-ear <i>Cerastium fontanum</i> and white clover <i>Trifolium repens</i> .
TN3	Valley mire – Wet area with bog asphodel <i>Narthecium ossifragum</i> , bog pondweed <i>Potamogeton polygonifolius</i> , bog pimpernel <i>Anagallis tenella</i> , water crowfoot <i>Ranunculus aquatilis</i> , marsh thistle, soft rush, tormentil, common cotton sedge, spike rush <i>Eleocharis palustris</i> , bilberry <i>Vaccinium sp</i> , purple moor grass, forget-me-not species and patches of <i>Sphagnum</i> .
TN4	Ungrazed poor semi-improved grassland with Yorkshire fog, creeping buttercup <i>Ranunculus repens</i> , white clover, crested dog’s-tail, common bent, sweet vernal grass, soft rush, common mouse-ear, perennial rye grass, marsh foxtail <i>Alopecurus geniculatus</i> , marsh thistle and curled dock <i>Rumex crispus</i> .
TN5	Small flowing stream with water crowfoot in channel. c3cm deep and ranging from 10-40cm wide. Shallow and sloping banks. Rocky floor.
TN6	Planted species-poor hedge with internal dry ditch. Goat willow <i>Salix caprea</i> , hawthorn <i>Crataegus monogyna</i> and hazel <i>Corylus avellana</i> .
TN7	Improved grassland (heavily grazed) dominated by perennial rye grass, white clover, crested dog’s-tail, yarrow, common mouse-ear, creeping buttercup, daisy <i>Bellis perennis</i> and spear thistle <i>Cirsium vulgare</i> .
TN8	Planted hedge with hawthorn, blackthorn <i>Prunus spinosa</i> , hazel and field maple <i>Acer campestre</i> .
TN9	Broad-leaved woodland with alder, ash, hazel, pedunculate oak and blackthorn. Understorey of cock’s-foot <i>Dactylis glomerata</i> , holly <i>Ilex aquifolium</i> , foxglove, creeping buttercup, ivy <i>Hedera helix</i> , smooth meadow grass <i>Poa pratensis</i> , chickweed <i>Stellaria media</i> , soft rush, yellow pimpernel <i>Lysimachia nemorum</i> , remote sedge <i>Carex remota</i> , great willowherb <i>Epilobium hirsutum</i> , spear thistle, common nettle, dog’s mercury <i>Mercurialis perennis</i> and bracken <i>Pteridium aquilinum</i> .
TN10	Semi-improved grassland with white clover, perennial rye grass, Yorkshire fog, hawkweed species, sheep sorrel <i>Rumex acetosella</i> , white clover, perforate St John’s wort, common sorrel, common cat’s-ear <i>Hypochaeris radicata</i> , foxglove, timothy <i>Phleum pratense</i> , selfheal <i>Prunella vulgaris</i> , dandelion <i>Taraxacum officinale agg.</i> , herb robert <i>Geranium robertianum</i> and knapweed <i>Centaurea nigra</i> .
TN11	Himalayan balsam <i>Impatiens glandulifera</i> present along watercourse banks
TN12	Oak-dominated woodland with pedunculate oak and silver birch with understorey of dog’s mercury, hazel, holly, sweet vernal grass, foxglove and smooth meadow grass.
TN13	Scrub-lined ditch with willow species, ash, hemlock water dropwort <i>Oenanthe crocata</i> , common nettle, bramble and field maple.

## 3.2 Protected and Notable Species

### *Birds*

#### Existing Records – SEWBReC

- 3.2.1 Existing ornithological records within 2km of the Site provided by the South East Wales Biological Records Centre (SEWBReC) comprised a suite of species typical of the habitats and locale. from within the Site including skylark *Alauda arvensis*. Records returned included species protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), species listed as a priority species under Section 7 of the Environment (Wales) Act, 2016 and/or red or amber listed 'Birds of Conservation Concern 5' (BoCCs) (Stanbury *et al.*, 2021)<sup>13</sup> and Rhondda Cynon Taf Biodiversity Action Plan<sup>14</sup> species.

#### *Breeding Birds*

- 3.2.2 A total of 19 species were recorded showing breeding behaviour during the survey period of May to July 2021, including 14 notable species. These included eight Amber List species (whitethroat *Cucucca communis*, willow warbler *Phylloscopus trochilus*, wren *Troglodytes troglodytes*, song thrush *Turdus philomelos*, redstart *Phoenicurus phoenicurus*, dunnock *Prunella modularis*, meadow pipit *Anthus pratensis* and reed bunting *Emberiza schoeniclus*), and four Red List species (skylark, mistle thrush *Turdus viscivorus*, tree pipit *Anthus trivialis* and linnet *Linnaria cannabina*). Of these, six species are listed as rare and most threatened species under Section 7 of the Environment (Wales) Act, 2016 (skylark, song thrush, dunnock, tree pipit, linnet and reed bunting) as well as the Rhondda Cynon Taf Biodiversity Action Plan plus buzzard *Buteo buteo* and stonechat *Saxicola rubicola* which are listed as LBAP only.
- 3.2.3 Skylark and meadow pipit were the only notable ground-nesting species recorded showing breeding behaviour.
- 3.2.4 No species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded showing breeding behaviour during surveys.
- 3.2.5 Full details of breeding bird territories recorded during 2021 is presented in **Appendix 2**.

### *Bats*

- 3.2.6 A data search requested from SEWBReC returned 31 records of five species of bat: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, brown long-eared bat *Plecotus auritus*, and noctule *Nyctalus noctula* and an unidentified bat species within 2km of the Site.

#### *Roosting Bats*

- 3.2.7 No buildings were present within the Site. Several mature trees present along field boundaries had bat roost potential.

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<sup>13</sup> <https://www.bto.org/sites/default/files/publications/bocc-5-a5-4pp-single-pages.pdf>

<sup>14</sup>

<https://www.rctcbc.gov.uk/EN/Resident/PlanningandBuildingControl/LocalDevelopmentPlans/LDPEvidenceBaseLibraryandAnnualMonitoringRe/RelateddocumentsEvidenceBase/EB47a.pdf>



### *Foraging and Commuting Bats*

- 3.2.8 Habitats within the Site are considered to most closely fit the description for land of 'low' interest for foraging bats in accordance with BCT guidance<sup>15</sup>, with foraging habitat limited to linear features such as dry stone walls and ditches.

### **Badger**

- 3.2.9 One record of badger *Meles meles* was returned by SEWBRc within 2km of the Site.
- 3.2.10 No signs of badger, including setts, prints, latrines or pathways were found during the extended Phase 1 habitat survey. However, the Site and surrounding habitats including woodland and hedgerows, provide suitable habitat for commuting, foraging badgers and sett creation. Although no evidence of badger activity was noted, it is possible that badgers may still be present and active in the area.

### **Otter**

- 3.2.11 SEWBRc returned one record of otter *Lutra lutra* within 2km of the Site.
- 3.2.12 There are no suitable habitats within the Site for foraging otter or habitats suitable for the creation of otter holts. The watercourses found within the Site were shallow approximately 2cm to 5cm in depth. No signs of otter were found during the extended Phase 1 habitat survey.
- 3.2.13 It is considered that otter are absent from the Site and therefore not discussed further.

### **Hazel dormouse**

- 3.2.14 No records of hazel dormouse *Muscardinus avellanarius* were returned by SEWBRc within 2km of the Site.
- 3.2.15 The habitats within the Site are not considered suitable to support this species with grazed grassland fields being unsuitable for this species and linear habitats within the Site being mostly isolated from potentially suitable habitat away from the Site.

### **Water Vole**

- 3.2.16 SEWBRc returned no records within 2km of the Site.
- 3.2.17 No signs of water voles *Arvicola amphibius* were observed during the extended Phase 1 habitat survey. A number of wet ditches were present within the Site with the potential to support water vole populations.

### **Amphibians**

- 3.2.18 SEWBRc returned one record of common frog *Rana temporaria*, two records of Common toad (*Bufo bufo*) two records of palmate newt *Lissotriton helveticus* and one record of Smooth newt (*Lissotriton vulgaris*) within 2km of the Application Site. No records of GCN were found.
- 3.2.19 Results from a search of MAGIC showed no European Protected Species (EPS) licence had been granted within 2km of the Site.
- 3.2.20 There is one pond (P1) located within the Site with no wet ponds within 250m of the Site. The habitat suitability index (HSI) for P1 was determined to be poor suitability for GCN results summarised in **Table**

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<sup>15</sup> Bat Conservation Trust (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).

**3.5.** The ponds HSI score of Poor remained the same in 2024, however the Macrophyte cover had increased which increased the overall HSI score to 0.48.

**Table 3.5: HSI survey results.**

Suitability Indices	P1	
SI1 – Location	0.5	Marginal
SI2 – Pond area	0.05	95m <sup>2</sup>
SI3 – Pond drying	0.5	Sometimes
SI4 – Water quality	0.33	Poor
SI5 –Shade	1	0%
SI6 – Fowl	1	Absent
SI7 – Fish	1	Absent
SI8 – Ponds	0.82	6 within 1km
SI9 – Terrestrial habitat	0.33	Poor
SI10 – Macrophytes	0.3-0.6	0-30%
HSI	<b>0.45-0.48</b>	
Suitability	<b>Poor</b>	

3.2.21 The terrestrial habitat within the Site is dominated by heavily grazed grassland which offers limited potential for both commuting and foraging areas. Areas of woodland, hedgerows, field margins and ditches provide better value foraging and commuting habitat for amphibians although are isolated from the onsite pond.

#### *eDNA*

3.2.22 Pond 1 returned negative results for the presence of GCN as summarised in **Table 3.6**. In addition, the laboratory reports are reproduced in **Appendix 2**.

**Table 3.6: eDNA survey results.**

Pond	Sample Ref.	Inhibition Check	Degradation Check	Sample Integrity Score	Result
P1	6918	Pass	Pass	Pass	Negative

#### **Reptiles**

3.2.23 SEWBreC returned 15 records for slow worm *Anguis fragilis* and two records of common lizard *Zootoca vivipara* within 2km of the Application Site.

3.2.24 The habitat within the Site is dominated by heavily grazed grassland which offers limited potential for reptile commuting foraging and hibernating areas. Areas of woodland, hedgerows and field margins and provide better value foraging, commuting and hibernating habitat for amphibians.

#### ***Other Notable Species***

3.2.25 The data search by SEWBRc returned ten records of Western hedgehog *Erinaceus europaeus*, one record of Harvest mouse (*Micromys minutus*) and several notable invertebrate species.

3.2.26 No other notable species were recorded during the extended Phase 1 survey.

### **3.3 Invasive Non-native Species**

3.3.1 SEWBRc returned records for two species of invasive non-native species within 2km of the Site: American skunk cabbage (*Lysichiton americanus*), Himalyan Balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*), American mink *Neovision vision* and grey squirrel *Sciurus carolinensis*.

No invasive non-native species were recorded within the Site during the extended Phase 1 habitat survey, however Himalayan balsam *Impatiens glandulifera* was present within adjacent watercourses in nearby Ancient woodland streams to the south of Bryn Tail Farm buildings.

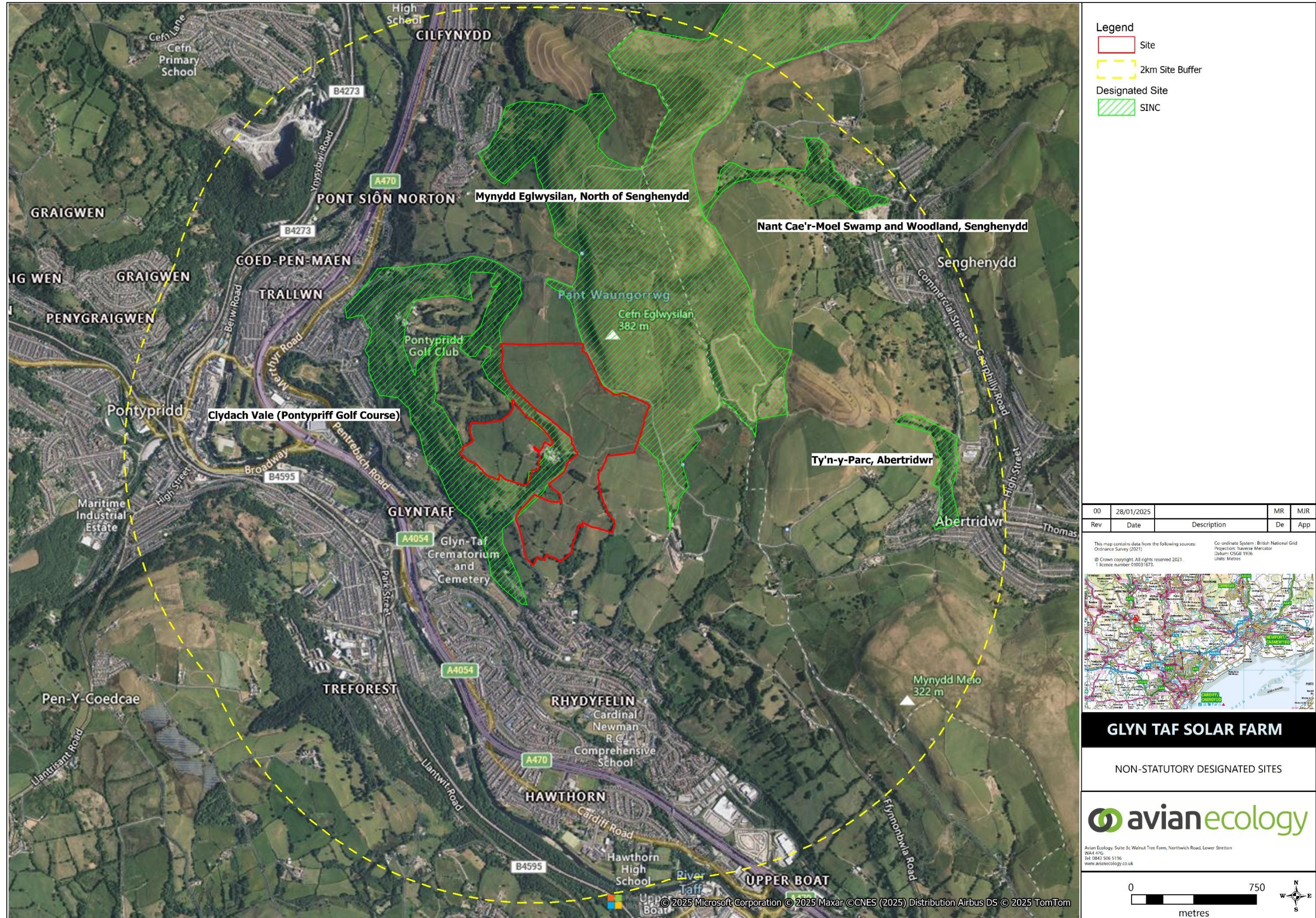
# FIGURES

**Figure 9B.1: Non-statutory Designated Sites Plan**

**Figure 9B.2: Phase 1 Habitat Plan**



Figure 9B.1: Non-statutory Designated Sites within 2km of the Site



**Legend**

- Site
- 2km Site Buffer
- Designated Site**
- SINC

Rev	Date	Description	MR	MJR
00	28/01/2025			

This map contains data from the following sources:  
 Ordnance Survey (2021)  
 © Crown copyright. All rights reserved 2021.  
 T license number 01003/073.

Co-ordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Metres



**GLYN TAF SOLAR FARM**

NON-STATUTORY DESIGNATED SITES

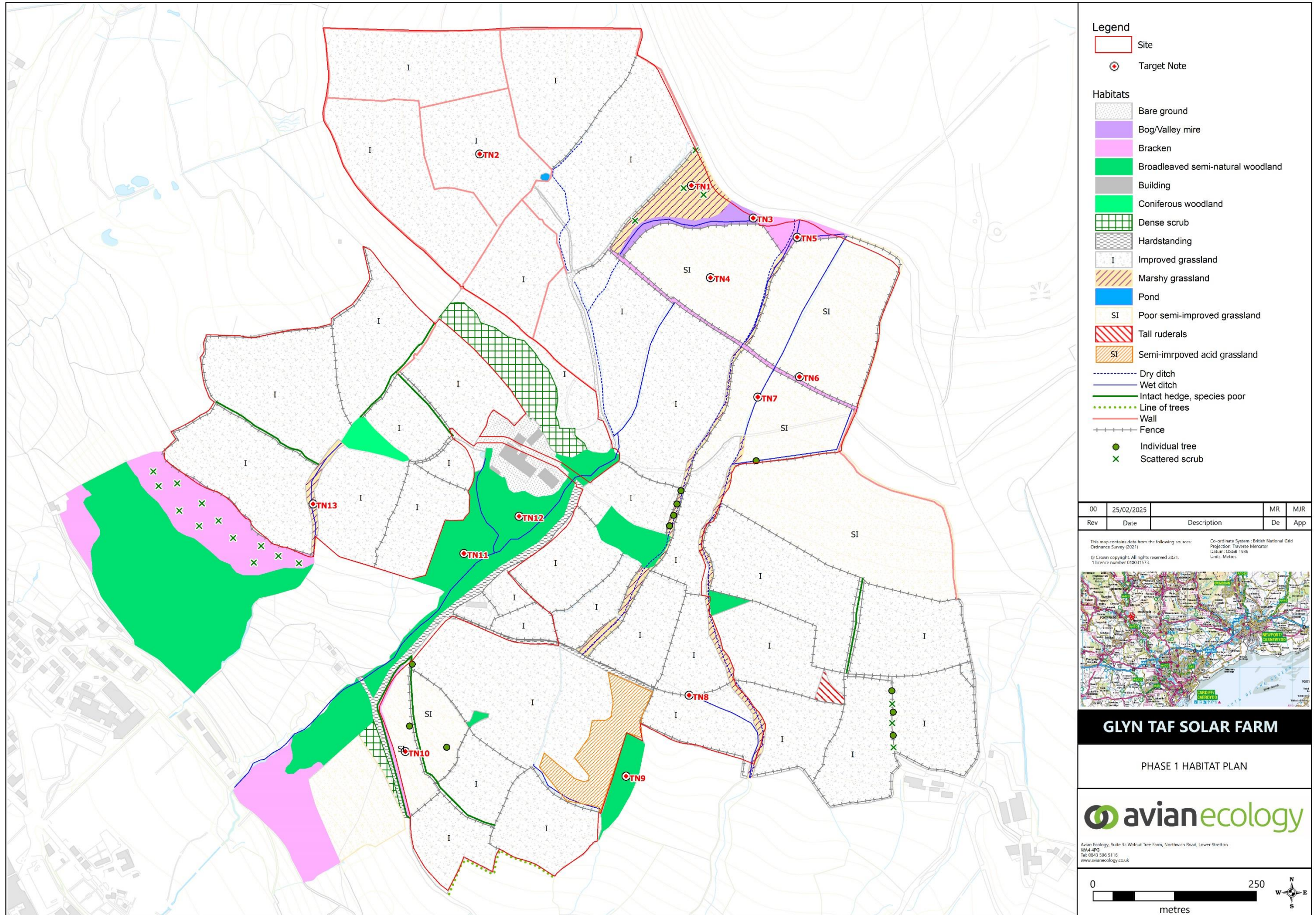


Avian Ecology, Suite 3c, Walnut Tree Farm, Northwich Road, Lower Stretton  
 Walsley, Walsley, Walsley, Walsley  
 Tel: 0843 506 5116  
 www.avianecology.co.uk

0 750 metres






Figure 9B.2 : Phase 1 Habitat Plan





**APPENDIX 1**  
**Site Photographs**

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Plate	Description
	<p><b>Photo 1:</b> Sheep-grazed pasture</p>
	<p><b>Photo 2:</b> Bog/Valley Mire with common cotton grass <i>Eriophorum angustifolium</i> pictured</p>
	<p><b>Photo 3:</b> Ungrazed pasture.</p>





**Photo 4:** Planted hedgerow with hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, hazel *Corylus avellana* and field maple *Acer campestre*.



**Photo 5:** Grazed pasture with poor-quality acid grassland.



**Photo 6:** Adjacent ancient woodland south of Bryn Tail Farm.

**APPENDIX 2**  
**eDNA Survey Results**

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Folio No: E11685  
Report No: 1  
Purchase Order: AE-21-156  
Client: AVIAN ECOLOGY  
Contact: Rachel Hughes

## TECHNICAL REPORT

### ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (TRITURUS CRISTATUS)

#### 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 analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

#### RESULTS

**Date sample received at Laboratory:** 06/07/2021  
**Date Reported:** 19/07/2021  
**Matters Affecting Results:** None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
6918	Bryn Tail PV P1		Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: [ForensicEcology@surescreen.com](mailto:ForensicEcology@surescreen.com)

**Reported by:** Chris Troth

**Approved by:** Chris Troth





## **METHODOLOGY**

The samples detailed above have been analysed 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 which then undergoes DNA extraction. The extracted sample is then analysed 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 scrupulous attention to detail to prevent 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 security.

SureScreen Scientifics Ltd is ISO9001 accredited and participate in Natural England's proficiency testing scheme for GCN eDNA testing. We also carry out regular inter-laboratory checks on accuracy of results as part of our quality control procedures.

## **INTERPRETATION OF RESULTS**

- SIC:**            **Sample Integrity Check** [Pass/Fail]  
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.
- DC:**            **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.
- IC:**            **Inhibition Check** [Pass/Fail]  
The presence of inhibitors within a sample are assessed using a DNA marker. If inhibition is detected, samples are purified and re-analysed. 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 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.

