



Pennant Walters

GLANLLYNFI GARTH WIND FARM

Draft Environmental Statement

Appendix 8B - Great Crested Newt (GCN)
eDNA Survey





TECHNICAL NOTE UK0041134.7490 -WSP-74-XX-RP-L-0002

DATE:	July 2026	CONFIDENTIALITY:	Public
SUBJECT:	Great Crested Newt eDNA Survey		
PROJECT:	Glanllynfi Garth Wind Farm	AUTHOR:	Tara Okon
CHECKED:	Trevor Fletcher	APPROVED:	Nia Bowen

INTRODUCTION

WSP UK Ltd (WSP) was commissioned by Pennant Walters (the ‘Applicant’) to undertake a great crested newt (GCN) environmental DNA (eDNA) survey in support of the planning process for the construction and operation of a wind farm on land to the east of Maesteg, Bridgend County Borough. Glanllynfi Garth Wind Farm (hereafter referred to as the ‘Proposed Development’) comprises two land parcels which will be utilised for the construction and operation of the turbines: Mynydd Pwll y Lwrch (central grid reference: SS 87102 92887), hereafter referred to as the ‘Northern Array’; and Moel Cynhordy/ Mynydd Moelgella (central grid reference: SS 88988 89854), hereafter referred to as the ‘Southern Array’. Together, these are referred to as the ‘Development Site’.

PROPOSED DEVELOPMENT

The Proposed Development consists of the following elements:

- Up to eight wind turbines, with a maximum blade tip height of 180m, located across two land parcels referred to as the ‘Northern Array’ and ‘Southern Array’;
- Two substations including transformer housing;
- Two temporary construction compounds;
- Two temporary site offices;
- Crane pads and cabling;
- Access track construction;
- Overhead line connection (via wooden pole) to agreed Points of Connection (PoC) with National Grid Electricity Distribution (NGED); and
- A Forestry access track.

ECOLOGICAL BACKGROUND

The Preliminary Ecological Appraisal (PEA) for the Proposed Development included a Phase 1 habitat survey which was carried out in February and March 2025 (see **Appendix 8A** of the Environmental Statement (ES))¹. As part of the PEA, a great crested newt Habitat Suitability Index (HSI)² assessment identified five ponds (P1, P3, P4, P6 and P9) with some suitability to support GCN.

¹ WSP (2025) Maesteg Windfarms Preliminary Ecological Appraisal (May 2025).
² ARG UK. (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibian and Reptile Groups of the United Kingdom



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After the PEA report being issued, the Development Site boundary was revised, resulting in P4, P5 and P10 being located >500m from the Development Site. GCN eDNA surveys of P10 was not completed for this reason, however eDNA surveys of P4 and P5 were undertaken as a precautionary measure due to the presence of other ponds in close proximity, with some suitability for GCN (P4 and P6).

BRIEF AND OBJECTIVES

Pennant Walters commissioned WSP to undertake an environmental DNA (eDNA) survey on ponds identified in the PEA (see **Appendix 8A** of the ES) as offering some suitability to support GCN to determine whether GCN are present in the area.

LEGISLATION

GCN are protected from killing, injury and disturbance and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations)³. Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended)⁴ with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural Resources Wales (NRW) for certain purposes.

GCN is listed as a Priority Species in accordance with Section 7 of the Environment (Wales) Act 2016⁵. Public bodies have an obligation under Section 7 to have regard for these species when carrying out their functions.

METHODS

Environmental DNA (eDNA) surveys

eDNA surveys for GCN were to be undertaken on four suitable ponds within 500m of the Development Site (P1, P3, P6, P9) and two >500m from the Development Site as a precautionary measure (P4 and P5). The Northern Array and Southern Array plus an additional 500m survey buffer will hereafter be referred to as the 'Survey Area'. See **Figure 1** for Northern Array pond locations and Survey Area and **Figure 2** for Southern Array pond locations and Survey Area.

³ Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2017.

⁴ Wildlife and Countryside Act 1981 (as amended).

⁵ Environment (Wales) Act 2016



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The methodology used by WSP to collect the eDNA samples was in accordance with the Natural England technical advice note (Natural England, 2015)⁶ which is supported by NRW⁷. The survey was carried out between 15 April and 30 June (samples collected 22 April 2026) in line with the guidance. The surveys were carried out by an ecologist with a Natural Resources Wales (NRW) GCN survey licence.

Gloves were worn at all times during the sampling process and samples were collected without entering the water to prevent disturbance of the substrate and to limit cross-contamination. The field sampling protocol followed the steps outlined as follows.

For each waterbody surveyed, twenty samples of 30ml of water were collected using individual ladles, ensuring that sub-samples were taken as evenly spaced as possible around the waterbodies. The water samples were stirred gently with a ladle following collection.

Each sample was emptied into a Whirl-Pak bag. Once 20 samples had been taken, the Whirl-Pak bag was closed and shaken for 10 seconds to mix any DNA across the whole water sample. Using the clear plastic pipette provided, c15ml of water was taken from the Whirl-Pak bag and pipetted into a sterile tube containing 35ml of ethanol to preserve any eDNA present (i.e. each tube was filled up to 50ml). The tube was then shaken vigorously for 10 seconds to mix the sample and preservative.

This process was repeated for each of the six conical tubes in the kit. Before taking each sample, the water in the bag was stirred well to homogenize the sample because eDNA will constantly sink to the bottom if not agitated.

The box of preserved sub-samples was then immediately returned at ambient temperature to the eDNA test laboratory for analysis. An appropriate labelling system was used to ensure that the kits were supplied with a unique reference number (Biggs *et al.*, 2014)⁸.

NOTES AND LIMITATIONS

Every effort has been made to provide a comprehensive description of the sampling locations and surrounding habitats; however, the following specific limitations apply to this assessment:

⁶ Natural England (2015). Great crested newts: surveys and mitigation for development projects. [online] Available at: <https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects#history> [Accessed June 2026].

⁷ Natural Resources Wales (2026) The use of environmental DNA test for Great crested newt licensing purposes Available at: <https://naturalresourceswales.gov.uk/permits-and-permissions/species-licensing/list-of-protected-species/the-use-of-environmental-dna-test-for-great-crested-newt-licensing-purposes/?lang=en> [Accessed June 2026]

⁸ 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.

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- Although efforts were made to sample all areas of P5, steep banks, difficult terrain, including tussocky *Molinia* grassland that made the pond edge difficult to identify, and vegetation extending into the waterbody, including rush *Juncus* sp. and an immature willow *Salix* sp., prevented surveyors from sampling the water closest to the northern bank of P5. As samples were taken from all other pond edges of P5, this limitation is not considered to have adversely affected the overall results of this report.
- No more than a small pool of water was visible in Pond 6 (P6) with willow scrub present and soft banks vegetated with soft-rush *Juncus effusus* and approximately 1m width of *Sphagnum* moss around bank sides making the pond edges inaccessible. This limitation is not considered to have adversely impacted the overall results of this report as water, where visible, appeared <10cm deep making it unsuitable for eDNA sampling and unsuitable for GCN to breed as they require open water habitats in which to do so.
- Ecological survey data is typically valid for 18-24 months unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management (CIEEM, 2019)⁹.

RESULTS

Three ponds in the Northern Array (P1, P3, P6) were unsuitable for eDNA testing due to being in the process of drying out, and / or supporting water <10cm deep and/ or being overgrown with willow *Salix* scrub. Three other ponds (P4, P5 south of the Northern Array and P9 in the Southern Array) held enough water (>10cm) for eDNA sampling. See **Table 1** for a summary of pond habitat conditions at the time of the eDNA survey.

⁹ CIEEM (2019) Advice note on the lifespan of ecological reports and surveys. Chartered Institute of Ecology and Environmental Management, Winchester.

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Table 1 – Pond habitat conditions at time of eDNA survey

Pond number	Summary of pond condition	Photograph
P1	Pond drying out and overgrown with willow <i>Salix</i> scrub and bulrush <i>Typha latifolia</i> which covered most of the pond, water <10cm deep.	
P3	Drying out, heavily shaded and overgrown with willow scrub, surrounded by purple moor-grass <i>Molinia caerulea</i> and soft-rush <i>Juncus effusus</i> , water <10cm deep.	
P4	Large, open pond (approximately 5m x 15m), gently sloping banks, >10cm deep at edges with depth in middle unknown. Densely vegetated with aquatic plants. Shading minimal and localised to banksides.	

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Pond number	Summary of pond condition	Photograph
P5	Large (approximately 5m x 10m), deep (at least 1m depth), open pond with encroaching vegetation including willow scrub, yellow iris <i>Iris pseudacorus</i> and soft-rush. Submerged vegetation included broad-leaved pondweed <i>Potamogeton natans</i> .	
P6	A small pool of water present (approximately 2m x 1m). Waterbody overgrown with willow scrub and encroachment of soft-rush from soft banks sides. Approximately 1m width of <i>Sphagnum</i> spp. mosses around whole margin of the waterbody. Waterbody drying out around margins at time of survey. Where water was visible it appeared <10cm deep.	
P9	Steep banks on all sides of the waterbody with the exception of the west bank where it gently sloped from a farm track. No shading, no vegetation, heavily silted and likely entered by livestock where accessible from farm track.	

Each sample taken for P4, P5, and P9 had a unique sample number. Results from laboratory testing for all waterbodies were negative for evidence of GCN eDNA. A summary of the results is provided in **Table 3**.

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Table 3 – Summary of results of eDNA survey

Waterbody ID	British National Grid reference	Sample ID number	Date of sampling collection	GCN status
Pond 4	SS 86224 92173	ADAS-12232	22 April 2026	Negative
Pond 5	SS 86609 92053	ADAS-12234	22 April 2026	Negative
Pond 9	SS 88619 89673	ADAS-12236	22 April 2026	Negative

INCIDENTAL OBSERVATION

While conducting the GCN eDNA survey a green hairstreak *Callophrys rubi* butterfly was noted on slopes south of P1. Green hairstreak butterfly is a Local Biodiversity Action Plan (LBAP) species in Bridgend (Butterfly Conservation)¹⁰.

DISCUSSION AND CONCLUSION

No evidence of GCN was found during the Phase 1 habitat survey (part of the PEA) (see **Appendix 8A** of the ES). No records of GCN were returned from the South East Wales Biological Records Centre (SEWBRc) within 2km of the Development Site in the last 10 years, as part of the PEA (see **Appendix 8A** of the ES).

GCN eDNA testing of all ponds surveyed (P4, P5 and P9) returned negative results.

Three ponds in the Northern Array (P1, P3 and P6) supported no open water suitable for breeding GCN and it was considered that these do not routinely hold water and are often dry, making them unsuitable to support breeding GCN. This has been verified incidentally during other surveys carried out on the Development Site.

P4, close to the southern edge of the Northern Array Survey Area, although supporting open water, was assessed as having 'below average' habitat suitability for GCN (see **Appendix 8A** of the ES). P5 just outside and south of the Northern Array Survey Area showed signs of encroachment from willow scrub and surrounding vegetation. Signs of drying out were evident at its margins. P9 within the Southern Array was an exposed waterbody lacking vegetation suitable for GCN egg-laying. At the time of the survey, it was heavily silted and considered likely affected by livestock intrusion from the adjacent farm track.

GCN is considered likely absent from the Northern and Southern Arrays of the Proposed Development,

¹⁰ Butterfly Conservation (2026) Available at: <http://www.southwalesbutterflies.org.uk/species/butterflies/> [Accessed June 2026]



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and no further action is required for this species.

FIGURES

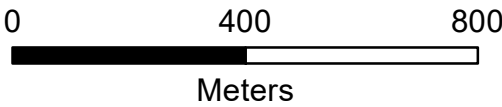
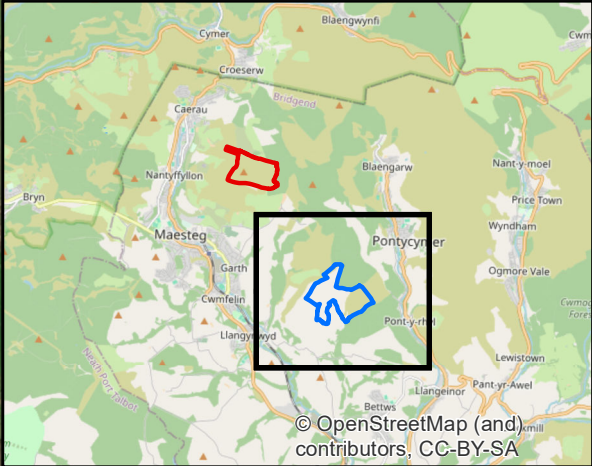
Figure 1 – Northern Array Great Crested Newt eDNA survey ponds

Figure 2 – Southern Array Great Crested Newt eDNA survey ponds



Key

- Moel Cynhordy/Mynydd Moelgella
- 500m Buffer
- Ponds



Client:	Pennant Walters		
Project:	Maesteg Windfarms Great Crested Newt eDNA Survey		
Title	Ponds within 500m of Moel Cynhordy/ Mynydd Moelgella and ponds identified during Preliminary Ecological Appraisal (2025)		
Drawing No:	Figure 2	Drawn:	LT
Date:	6/23/2026	Checked:	TO
Scale:	13,000 @ A3	Approved:	JB