

PEN MARCH WIND FARM

**Appendix 7.5 to Ecological Impact Assessment
Great Crested Newt Survey Report –
Prepared for: RWE Renewables Ltd**

SLR Ref: 406.02273.00066
Version No: 1
September 2022



Document Control	
Document Properties	
Organisation	SLR Consulting Ltd
Project Name	Pen March Wind Farm
Report Title	Great Crested Newt Survey Report
Author(s)	Amy Gill and Shannon Davies
Draft version/final	FINAL
Document reference	406.02273.00066

Date	Revision No	Prepared By	Reviewed By	Approved By	Status	Comments
25/09/2022	1	Amy Gill and Shannon Davies	Chris Mitchell	Duncan Watson	Final	

BASIS OF REPORT

This document has been prepared by SLR with reasonable skill, care and diligence, and taking account of the manpower, timescales and resources devoted to it by agreement with Innogy Renewables UK Ltd (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

CONTENTS

1.0 INTRODUCTION	1
1.1 Background	1
1.2 Legislative Context	1
1.3 Study Aims and Objectives	1
2.0 METHODOLOGY	2
2.1 Desk-based Study	2
2.2 Field Survey	2
2.2.1 Habitat Suitability Index Survey	2
2.2.2 Presence / likely absence survey	3
2.3 Survey personnel	3
2.4 Limitations	3
3.0 RESULTS	5
3.1 Desk-based Study	5
3.2 Field Survey	5
4.0 DISCUSSION AND CONCLUSION	9

DOCUMENT REFERENCES

TABLES

Table 2-1 Habitat Suitability Index scoring	2
Table 3-1 Pond Descriptions, eDNA and Habitat Suitability Index (HSI) score	5
Table 3-2 Summary of Survey Results 2021 – Pond 1	6
Table 3-3 Summary of Survey Results 2021 – Pond 2	7
Table 3-4 Summary of Survey Results 2021 – Pond 3	7

1.0 Introduction

1.1 Background

This report has been prepared by SLR Consulting Limited (SLR) on behalf of RWE Renewables Ltd and discusses the findings of great crested newt (*Triturus cristatus*) surveys undertaken at Pen March, a proposed wind farm, hereafter referred to as the Site, broadly centred on National Grid Reference (NGR) SO 08654 10182.

1.2 Legislative Context

The great crested newt is fully protected through inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (The Habitats Regulations) and Section 7 of the Environment (Wales) Act 2016. In brief, this legislation makes it offence to:

- deliberately kill, injure, or take a great crested newt;
- deliberately disturb a great crested newt in such a way as to be likely to impair their ability to survive, breed or reproduce, or rear or nurture their young; to hibernate or migrate; or to affect significantly the local distribution or abundance of that species;
- deliberately take or destroy the eggs of great crested newt;
- damage or destroy the breeding or resting place of a great crested newt;
- intentionally or recklessly obstruct access to a place that great crested newt use for shelter or protection; and
- intentionally or recklessly disturb a great crested newt whilst it is occupying a place which it uses for shelter or protection.

1.3 Study Aims and Objectives

The aims of the survey were to:

- Establish the presence/ likely absence of great crested newt and describe their distribution and abundance; and
- Evaluate, if present, the population in the local, regional, and national context.

The study area has been defined as a 500m buffer from the Site boundary.

2.0 Methodology

2.1 Desk-based Study

The South East Wales Biodiversity Records Centre (SEWBReC) was first contacted in July 2019 for pre-existing biological records of protected or otherwise notable species, including great crested newts, and for statutory and non-statutory ecologically designated sites within a 2km radius of centre of the approximate centre of the Site. This has been reviewed in September 2022 due to the time that had elapsed since the original search.

2.2 Field Survey

A summary of the methods employed is given below, methods followed published guidelines¹.

2.2.1 Habitat Suitability Index Survey

Habitat Suitability Index (HSI) assessments were undertaken to evaluate the broad habitat suitability and potential to support GCN. HSI surveys encompass the following ten criteria to calculate a suitability score:

- Geographic location;
- Pond area;
- Frequency of pond drying;
- Water quality;
- Shade;
- Presence of Waterfowl;
- Presence of Fish;
- Number of ponds within 1km;
- Terrestrial habitat quality; and
- Aquatic macrophyte cover

The following categorical scale is then applied in order to determine the overall suitability of the waterbody:

Table 2-1 Habitat Suitability Index scoring

HSI Score	Pond Suitability for GCN
<0.5	Poor
0.5-0.59	Below average
0.6-0.69	Average
0.7-0.79	Good

¹ English Nature (2001) Great Crested Newt Mitigation Guidelines. JNCC (1998) *Herpetofauna Workers' Manual*.

2.2.2 Presence / likely absence survey

eDNA sampling

In 2020, Environmental DNA sampling protocol was carried out for each water body surveyed and samples analysed by ADAS in accordance with published protocols. The results of these are provided as Appendix A however, as two samples were indeterminate (most likely as a result of water chemistry), further ‘traditional’ presence / likely absence surveys were undertaken following relevant guidelines² in 2021 as set out below.

Torchlight Survey

Following sunset, waterbodies were systemically searched using a 1,000,000 candle power torch, to detect the presence of amphibians. Amphibians, notably newt species, are easier to detect under these conditions.

The banks of each waterbody were scanned with the torch beam and any amphibians encountered were identified and counted. Surveys of each section of the bank was considered complete when all visible water area had been scanned with the torch beam and no further amphibians were encountered.

Egg searching

Suitable egg laying material in all ponds was inspected (where possible) for evidence of GCN eggs during torching surveys. Other evidence of breeding activity, e.g., courtship and egg-laying were also recorded where observed.

Bottle trapping

Where accessible, bottle traps were set around the waterbody margin at 2m intervals. The traps were left overnight and checked and collected the following morning.

Netting

In line with published guidelines, where accessibly, dip-nets were used to sample the open areas of water along the pond margins.

2.3 Survey personnel

The surveys were led by experienced and appropriately licenced ecologist Robert Williams (Natural England Licence number 77894:OTH:SA:2017), Associate Ecologist with SLR and assisted by Amy Gill, a Project Ecologist with SLR and Helen Calver, Senior Field Ecologist with SLR.

Reporting has been completed by Amy Gill, a Project Ecologist, qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM), with 2 years professional ecology consultancy experience.

2.4 Limitations

Desk study data are unlikely to be exhaustive, especially in respect of species, and are intended mainly to set a context for the study. It is therefore possible that GCN occur in locations not identified during the data search.

Bottle trapping was only undertaken when deemed safe and appropriate to do so. Pond PM2 (Jepson’s Pond) has a solid substrate base and freely accessible to grazing animals. At Pond PM2 it was therefore not considered appropriate or safe (from animal welfare perspective) to set bottle traps during any of the surveys. This was considered appropriate as there were welfare considerations relating to ensuring the stable siting of each bottle trap for maintenance of air pockets to be utilised by the trapped GCN.

The weather in April 2021 was uncharacteristically warm with cold nights which continued into early May. In accordance with the guidelines due to cold overnight temperatures, it was not possible to set bottle traps (within

² English Nature (2000) Great Crested Newt Mitigation Guidelines.

Ponds PM1 & PM 3) on the 8th April or 4th March as there were welfare considerations relating to trapped GCN when temperatures were predicted to fall below 5°C.

All ponds however comprised clear water with low vegetation cover, and therefore a combination of other survey methods was considered sufficient to meet the survey objectives.

3.0 Results

3.1 Desk-based Study

SEWBRc returned one record of great crested newt. This record pertains Twyn y Rodyn reclamation pond approximately 1km south of the Site, to the south of the A465, dating from 1986.

SEWBRc returned records of amphibian within the 2km desk search. This included records of common toad (*Bufo bufo*), common frog (*Rana temporaria*) and palmate newt (*Lissotriton helveticus*) pertaining to Jepson's Pond (Pond PM2), dating from 2017.

The search did not identify any designated areas for great crested newts within the 2km search area.

3.2 Field Survey

Table 3-1 provides a general description of the three ponds within 500m of the Site boundary that have been subject to surveys, this also included the eDNA result from 2020 and the HSI scores.

Table 3-1
Pond Descriptions, eDNA and Habitat Suitability Index (HSI) score

Pond	Description	eDNA result	HSI Score
Pond PM1 	Small pond which appeared to have formed part of a pump system, approximately 20m x 10m and estimated to be 1.5m deep. Pond is divided by a causeway with one half with no open water and densely vegetated by soft rush, common cotton-grass, lesser spearwort and marsh thistle. The other half of the pond comprises open water fringed with soft rush and horsetail <i>Equisetum</i> sp. Aquatic vegetation within the open water is limited to water crowfoot <i>Ranunculus aquatilis</i> , pondweed <i>Potamogeton</i> sp. and floating sweet-grass <i>Glyceria fluitans</i> .	Indeterminate	0.70 – good

Pond	Description	eDNA result	HSI Score
Pond PM2 (Jepson's Pond) 	Large reservoir (Jepson's Pond) lined with stone blocks. Water largely devoid of vegetation but some small areas of horsetail <i>Equisetum</i> sp. are growing in the shallow margins.	Indeterminate	0.63 - average
Pond PM3 	A relatively large pond located approximately 220m from the Site Boundary (National Grid Reference (NGR) SO 07529 08820). No evidence of fish, minor impacts of waterfowl noted, and low levels of aquatic plant life. Evidence of littering is also apparent.	Negative	0.68 - average

Tables 3-2 to 3-4 provide details of the 2021 presence / absence results.

Table 3-2 Summary of Survey Results 2021 – Pond 1

Survey Visit	GCN				Other Amphibians	Comments
	Male	Female	Juvenile	Undetermined		
30/03/2021	0	0	0	0	20x palmate newt (<i>Lissotriton helveticus</i>), 15x common toad (<i>Bufo bufo</i>), 2x common frog (<i>Rana temporaria</i>)	None.
08/04/2021	0	0	0	0	8x palmate newt, 2x common toad	Temperature too low to bottle trap.
04/05/2021	0	0	0	0	13x palmate newt, adult common toads present	Temperature too low to bottle trap.

Survey Visit	GCN				Other Amphibians	Comments
	Male	Female	Juvenile	Undetermined		
21/05/2021	0	0	0	0	14x palmate newt, 37x common toad	Number of traps limited due to only trapping areas inaccessible to grazing animals.

Table 3-3 Summary of Survey Results 2021 – Pond 2

Survey Visit	GCN				Other Amphibians	Comments
	Male	Female	Juvenile	Undetermined		
30/03/2021	0	0	0	0	30x palmate newt, 100+ common toad, 15x common frog	Stone-lined -cannot bottle trap. Open access to grazing animals.
08/04/2021	0	0	0	0	17x palmate newt, 30+ common toad	Stone-lined -cannot bottle trap. Open access to grazing animals.
04/05/2021	0	0	0	0	22x palmate newt, adult common toads present	Stone-lined -cannot bottle trap. Open access to grazing animals.
21/05/2021	0	0	0	0	11x palmate newt, 15x common toad	Stone-lined -cannot bottle trap. Open access to grazing animals.

Table 3-4 Summary of Survey Results 2021 – Pond 3

Survey Visit	GCN				Other Amphibians	Comments
	Male	Female	Juvenile	Undetermined		
30/03/2021	0	0	0	0	20x palmate newt, 10x common toads, 5x common frog	None.
08/04/2021	0	0	0	0	6x palmate newt, 1x common toad	Temperature too low to bottle trap.
04/05/2021	0	0	0	0	None	Temperature too low to bottle trap.
21/05/2021	0	0	0	0	7x palmate newt, 2x common toad	Number of traps limited due to

Survey Visit	GCN				Other Amphibians	Comments
	Male	Female	Juvenile	Undetermined		
						only trapping areas inaccessible to grazing animals.

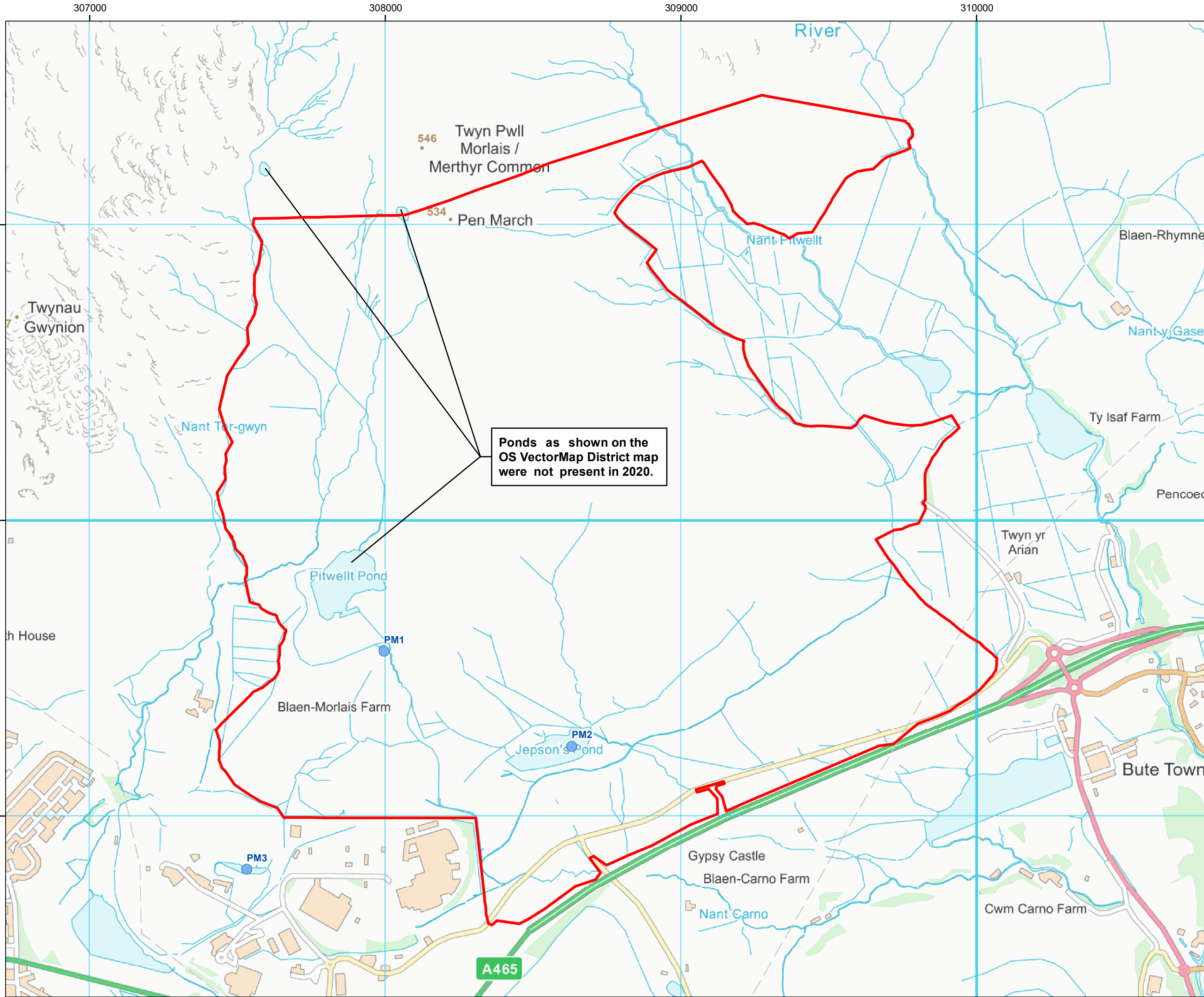
4.0 Discussion and Conclusion

The eDNA survey carried out in 2020 returned indeterminate results for Ponds PM1 and PM2, and a negative result for Pond PM3. The indeterminate results were thought to be due to the water chemistry, as the ponds are located in an upland, acid grassland setting. Consequently, the indeterminate results then prompted the need for conventional great crested newt survey methods to be implemented. Although a negative eDNA result was returned from Pond PM3, this was also subject to additional survey in 2021 on a precautionary basis.

During the field surveys, no evidence of great crested newt was recorded from Ponds PM1, PM2, or PM3. Whilst it was not possible to bottle-trap Pond PM2, no great crested newts were observed within them using other survey methods and so great crested newt is concluded likely absent from these ponds.

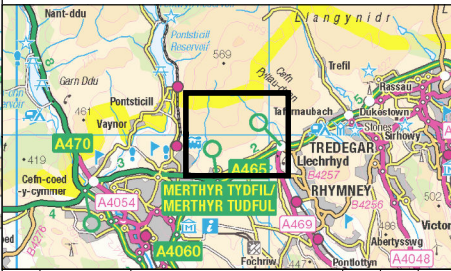
The field surveys undertaken in 2021 confirmed a likely absence of great crested newts, and confirmed presence of palmate newts, common toads and common frogs in Ponds PM1, PM2, and PM3.

The survey effort is considered sufficient to determine a likely absence of GCN, this result may need to be reviewed should a period of two years or more pass before implementation of works.



- Legend:**
- Pen March Site Boundary
 - Pond Location

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter



Rev	Date	Description	Drm	Chk	App
1	09/16/2022	First Revision	JK	Chk	CM

Pen March Wind Farm



TITLE: Figure 7-5:
Pond Location Plan

0250500

Meters

SCALE: 1:12,000 @ A3

N
W
E
S

REV 01

EUROPEAN OFFICES

United Kingdom

AYLESBURY

T: +44 (0)1844 337380

BELFAST

belfast@slrconsulting.com

BRADFORD-ON-AVON

T: +44 (0)1225 309400

BRISTOL

T: +44 (0)117 906 4280

CARDIFF

T: +44 (0)29 2049 1010

CHELMSFORD

T: +44 (0)1245 392170

EDINBURGH

T: +44 (0)131 335 6830

EXETER

T: + 44 (0)1392 490152

GLASGOW

glasgow@slrconsulting.com

GUILDFORD

guildford@slrconsulting.com

LONDON

T: +44 (0)203 805 6418

MAIDSTONE

T: +44 (0)1622 609242

MANCHESTER (Denton)

T: +44 (0)161 549 8410

MANCHESTER (Media City)

T: +44 (0)161 872 7564

NEWCASTLE UPON TYNE

T: +44 (0)191 261 1966

NOTTINGHAM

T: +44 (0)115 964 7280

SHEFFIELD

T: +44 (0)114 245 5153

SHREWSBURY

T: +44 (0)1743 23 9250

STIRLING

T: +44 (0)1786 239900

WORCESTER

T: +44 (0)1905 751310

Ireland

DUBLIN

T: + 353 (0)1 296 4667

France

GRENOBLE

T: +33 (0)6 23 37 14 14