



Cambois Connection – Onshore Scheme

Environmental Statement Volume 3

Technical Appendix 9.2: Great Crested Newt Survey Report



Cambois Connection Onshore Scheme

Appendix 9.2: Great Crested Newt Survey Report

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Basis of Report

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Appendices

- Appendix A Figures**
- Appendix B eDNA Results**



Acronyms and Abbreviations

BBWFL	Berwick Bank Wind Farm Limited
BBWF	Berwick Bank Wind Farm
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EPS	European Protected Species
GCN	Great Crested Newt
HSI	Habitat Suitability Index
MHWS	Mean High Water Springs
MLWS	Mean Low Water SPrings
NCC	Northumberland County Council
PEA	Preliminary Ecological Appraisal



1.0 Introduction

1.1 Overview

Berwick Bank Wind Farm Limited (BBWFL) is a wholly owned subsidiary of SSE Renewables (SSER) (hereafter referred to as 'the Applicant'). The Applicant is proposing the development of Offshore Export Cables, Onshore Export Cables, an Onshore Converter Station and associated grid connection at Blyth substation in Northumberland, known as the 'Cambois Connection' ('the 'Project'). The onshore components of the Project, landward of Mean Low Water Springs (MLWS) comprise the Onshore Scheme.

The purpose of this infrastructure is to facilitate the export of green energy from the generation assets associated with the Berwick Bank Wind Farm (BBWF), located in the outer Firth of Forth. A separate application for developing a grid connection to Branxton, East Lothian, has been included as part of the Applicant's application for consent for BBWF, currently being determined separately¹. The Project will enable the BBWF to reach full generating capacity (4.1 gigawatts (GW)) by the early 2030's.

The Project comprises two distinct proposals, or 'Schemes', which will require three separate consents. For the Onshore Scheme (all activities and infrastructure landward of MLWS) consent will be sought via a planning application to Northumberland County Council (NCC) as the local planning authority (LPA) under Section 57 of the Town and Country Planning Act 1990.

The offshore components of the Project seaward of Mean High Water Springs (MHWS) ('the Marine Scheme') are located within both Scottish and English waters. In Scotland, the Marine Scheme is entirely within offshore waters (i.e., between the 12 nautical miles (nm) limit and the Scottish Exclusive Economic Zone). In England, the Marine Scheme is within offshore waters and inshore waters.

SLR Consulting undertook a Preliminary Ecological Appraisal (PEA) with respect to the Onshore Scheme (see Appendix 9.8, Volume 3). The PEA was based on a UK Habitat Classification (UKHab) survey that included a Habitat Suitability Index (HSI) assessment that assesses the suitability of all water bodies within the Site and up to 250 m of the Site boundary for presence of great crested newts (GCN).

An eDNA survey was then conducted on seven water bodies within the Site that the HSI survey noted as having potential GCN habitat, to determine GCN presence.

GCN are a European Protected Species (EPS) and are fully protected by law.

1.2 Site Description

The Site is located approximately 1 km north of Blyth and 0.7 km south of Ashington, in south-east Northumberland and is approximately 188 ha in area, centred on grid reference NZ 29311 84281 and is adjacent to the A189, including land to the east and west of the A189. The Site contains numerous ponds distributed throughout the area. Some ponds are found adjacent to access tracks and main roads, and while many of them are semi-permanent, they serve as vital breeding grounds for early life-cycle amphibians and insects (larvae)².

¹ BBWF is subject to a separate consenting process. An application for consent under Section 36 of the Electricity Act 1989 (as amended) was submitted to MS-LOT and accepted in December 2022. The Branxton onshore infrastructure is subject to a separate planning application submitted to East Lothian Council and accepted in March 2023.

²Amphibian and Reptile Conservation (2011) Amphibian Habitat Management Handbook. Available online: <https://freshwaterhabitats.org.uk/wp-content/uploads/2018/06/amphibian-habitat-management-handbook-full.pdf>



Individual ditches are scattered within the Site, often associated with buildings, historical arable field runoff, and industrial developments, albeit with limited flow. These ditches contribute to the drainage and water management of the area while providing potential habitats for various aquatic species, especially in areas where water flow is slower.

1.3 Purpose of the Report

The Site was assessed for potential habitats that could be used by GCN, identified based on the HSI assessment. Ponds assessed as having suitability for GCN were further surveyed with eDNA testing.

The aim of the survey was to provide baseline data about presence / likely absence of GCN in waterbodies to inform the construction of the development.

This report sets out the results of the eDNA survey and identifies the need for any further surveys to inform any avoidance, mitigation, enhancement, and compensation measures (if required).

2.0 Legislation, Policy and Guidelines

2.1 Legislation

GCN are afforded a high level of protection under the Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations'). Under this legislation it is an offence to deliberately and/or recklessly:

- Capture, injure or kill great crested newts;
- Harass a great crested newt or group of newts;
- Damage or destroy a great crested newt breeding site or resting place;
- Disturb a great crested newt while it is occupying a place used for shelter or protection;
- Obstruct access to a breeding site or resting place, or otherwise deny use of such a place;
- Possess, sell, control or transport live or dead great crested newts, or part of a great crested newt; and
- Take great crested newt eggs.

Protection is also afforded under the Wildlife and Countryside Act 1981 (as amended) with respect to disturbance of animals when using places of shelter, and obstruction of access to places of shelter.

Due to the high level of protection afforded to GCN and their habitat, mitigation for this species is governed by a strict licensing procedure administered by Natural England (normally, planning permission must be obtained before a licence can be sought. However, works which do not require planning permission must still adhere to licensing requirements).

Licensing is subject to three tests, as defined under the Habitats Regulations, these must also be applied by a planning authority before granting permission for activities affecting GCN. For permission to be granted the following criteria must be satisfied;

- The proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment';
- 'there is no satisfactory alternative'; and



- The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.

Great Crested Newts are also listed as a Species of Principal Importance (SPI) for the Conservation of Biodiversity in England in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of the NERC Act (2006) public bodies (including local planning authorities) have a duty to have regard for the conservation of SPI when carrying out their functions, including determining planning applications.

2.2 Best Practice Ecological Guidance

The guidance and best practice documents used in the preparation of this report:

- Great Crested Newt Habitat Suitability Index³ (2010);
- Competencies for Species Survey: Great Crested Newt⁴ (2013); and
- Great Crested Newt Mitigation Guidelines⁵.

3.0 Methods

3.1 Study Area

The Study Area was considered to include all ponds within the Site boundary and a 250 m buffer as indicated by Figure 9.2.1.

3.2 Desk Study

A desk study was undertaken as part of the PEA. The full results of which are contained within the PEA report (Appendix 9.8, Volume 3).

In accordance with the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017), an ecological desk study was carried out using a range of publicly available information sources to provide an understanding of the ecological context of the Site and wider area. Additional records were obtained from the local biological records centre Environmental Records Information Centre (ERIC) North East.

Historical records for protected or otherwise notable species were identified within 2 km of the Site boundary. Only records from within the last 15 years were considered relevant to the study.

In addition to ERIC, data sources included the following online databases and nearby developments:

- National Biodiversity Network Atlas (NBN, 2022);
- Multi-agency Geographic Information Centre (MAGIC) website and Natural England's Designated Sites Viewer.

³ Amphibian and Reptile Groups of the UK (2010) Great Crested Newt Habitat Suitability Index. ARG UK Advice Note 5. Available online: <https://www.arguk.org/info-advice/advice-notes/9-great-crested-newt-habitat-suitability-index-arg-advice-note-5/file>

⁴ CIEEM (2013) Competencies for Species Survey: Great Crested Newt. Technical Guidance Series. Available online: <https://cieem.net/wp-content/uploads/2019/02/CSS-GREAT-CRESTED-NEWT-April-2013.pdf>

⁵ English Nature (2001) Great Crested Newt Mitigation Guidelines. Available online: https://mokrady.wbs.cz/literatura_ke_stazeni/great_crested_newt_mitigation_guidelines.pdf



- Former British Volt battery plant site⁶; and
- North Sea Link⁷.

3.3 Habitat Suitability Index (HSI)

Habitat Suitability Index (HSI) assessments were undertaken where possible on the ponds within the Study Area to evaluate their potential to support GCN using the standard HSI assessment method (ARG UK, 2010⁸) and (Oldham, Keeble, Swan, & Jeffcote, 2000⁹). 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 1 km;
- Terrestrial habitat quality; and
- Aquatic macrophyte cover.

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

Table 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

3.4 eDNA Sample Collection

An eDNA survey of seven water bodies considered suitable to support newts, within the Study Area, was carried out in line with the recommended guidelines⁸ on the 19th and 20th June 2023. Prior to the surveys there was a long period of higher temperatures and very little rainfall locally. On the 19th June, the surveys were carried out under dry conditions and in full sunlight, while on the 20th June there were heavy showers.

⁶ Britishvolt Project Phoenix, Environmental Statement, Ridge 2021)

⁷ National Grid, NSN Link Environmental Statement, TEP (2014)

⁸ ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index (2010).

⁹ Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.



Seven waterbodies were surveyed within the Study Area. The water samples were collected by an experienced ecologist Helen Allinson, a senior field ecologist with SLR as a named agent under GCN licence no. 2019-42037-CLS-CLS-1.

Samples were taken following the instructions provided with the ADAS sample kits (a company specialising in environmental sampling analysis). From each waterbody, 20 water samples were taken at equidistant intervals around the circumference of the outer edge. The 20 samples were then mixed, and six individual samples were taken and sent to ADAS laboratory for eDNA analysis.

3.5 Survey Limitations

An additional two ponds were not able to be surveyed. Ponds 27 and 28, located on British Volt land, were not accessible for HSI and eDNA survey due to barrier fencing surrounding the ponds and adjacent habitats. eDNA Surveys of these ponds were completed in 2020 and found no positive result for great crested newt, as well as other ponds within 500 m of the BritishVolt site. The last positive result of great crested newt was found to be in 2006 in Maw Burn and survey efforts since have all concluded that great crested newt are likely absent.

The eDNA surveys can confirm presence but cannot reliably be deemed to prove absence without interpretation by a qualified ecologist using emerging research to guard against false negative results (CIEEM, 2020). Recent research has shown that eDNA surveys can be effective in detecting GCN during March, July, and August, outside of the optimal survey period (Buxton et al., 2017; Rees et al., 2017). As the survey was conducted at the beginning of June, it is considered likely that larval and/or adult newts would still have been present in the water bodies at this time and a false negative is considered highly unlikely.

4.0 Results

4.1 Desk study results

4.1.1 ERIC

ERIC North East returned historical records of GCN within the Study Area, the most recent from 2006.

4.1.2 Magic Maps

The magic.gov.uk search found no GCN EPS licences issued within 2 km of the Study Area.

4.1.3 Other Developments

Surveys and the desk study carried out for the British Volt Ecological Appraisal¹⁰ report that ponds east of the A189 between 2013 and 2020¹¹ returned no records of GCN. Surveys conducted in 2013 to inform the NSL project returned no records of GCN⁷.

The magic.gov.uk search found no GCN EPS licences issued within 2 km of the Study Area.

4.2 HSI and eDNA results

During the assessment of waterbodies within the Study Area using the HSI, a total of 36 waterbodies were identified and evaluated, including ditches and ephemeral waterbodies. Twelve of which were deemed to be suitable for further survey. At the time of conducting

¹⁰ BritishVolt Project Phoenix-Environmental Statement Volume 3: Appendices (2021).

¹¹ BritishVolt Project Phoenix-Advanced Works, Construction Environmental Management Plan (2021).



subsequent eDNA surveys, water samples were collected from seven waterbodies that still contained water and had not yet dried out.

The eDNA laboratory analysis results are presented in Appendix A, focusing on seven ponds that were assessed during the PEA and were still present at the time of eDNA testing. The summarized results for ponds sampled as described in Section 3.2 are provided in Table 2 below, while Figure 9.2.1 displays the locations of the water bodies.

All seven water bodies surveyed returned negative eDNA test results, suggesting that GCN are likely absent.

Table 2. Summary of HSI and eDNA results

Pond Number	Grid Ref	HSI Score	Suitability	Pond Area (m ²)	eDNA Result
3	NZ 30083 84431	0.75	Good	2393	Negative
4	NZ 29768 83699	0.63	Average	4726	Negative
10	NZ 29647 84195	0.72	Good	2026	Negative
15	NZ 29488 84200	0.65	Average	146	Negative
31	NZ 29193 84269	0.72	Good	357	Negative
32	NZ 29160 84193	0.78	Good	977	Negative
34	NZ 29879 84575	0.68	Average	4159	Negative

5.0 Conclusion

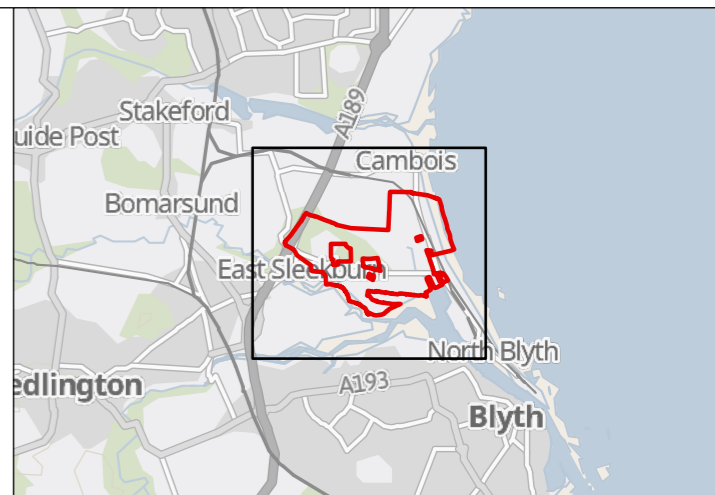
The following concludes the findings of this report:

- The results of the desk study results indicated that GCN have not been identified to be present across the Study Area since 2006.
- Two ponds were not possible to survey due to access restrictions, including HSI and eDNA.
- The eDNA surveys of 7 waterbodies containing water returned no positive results.
- No further population studies are required.



Appendix A Figures





Legend

- Site Boundary
- Study Area (Site Boundary + 250 m Buffer)
- Ponds subject to eDNA
- Waterbody

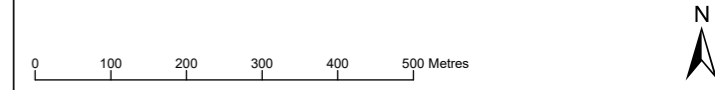
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Project
CAMBOIS CONNECTION ONSHORE SCHEME

Title
FIGURE 9.2.1: GCN SURVEY



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Scale	Plot Size	Datum	Projection
1:10,000	A3	OSGB36	BNG
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Appendix B eDNA Results



Table A-1 eDNA Ponds Sample References

Pond Number	Sample ID
3	ADAS-2009
4	ADAS-2010
10	ADAS-2015 (pg.6)
15	ADAS-2015 (pg.7)
31	ADAS-2011
32	ADAS-2012
34	ADAS-2013



