Appendix 8D
CSA Environmental (2024c). Water Vole Survey Report - Foel Trawsnant Wind Farm

Water Vole Survey Report

November 2024

Foel Trawsnant Wind Farm

Prepared by
CSA Environmental

On behalf of
Fisher German

Report No: CSA/7086/04

CSA environmental

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Report Reference	Date	Revision	Prepared by	Approved by	Comments
CSA/7086/04	26/11/2024	-	TR	CSm	

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1.0 INTRODUCTION

1.1 This report has been prepared CSA Environmental on behalf of Fisher German. It sets out the findings of water vole *Arvicola arvensis* survey work undertaken at Foel Trawsnant Wind Farm, Maesteg (hereafter referred to as 'the Site'). Overhead and underground power lines for a new 66kv electricity line are proposed at the Site for which outline planning permission for a Development of National Significance will be sought.

1.2 The proposed route occupies a length of c. 9km and is located around central grid reference SS 8474 8970, to the west of Maesteg. The underground section of the route is expected to be restricted to the existing highways network, whilst the remaining overhead route passes through areas of modified grassland, upland acidic grassland, purple moor-grass and rush pasture and ancient and broadleaved woodland, with several boundary hedgerows, tree lines and watercourses present.

1.3 A Preliminary Ecological Appraisal (PEA) (CSA/7086/01) identified the presence of watercourses within proximity of the proposed power line route and survey work was recommended to determine water vole presence / likely absence in order to inform the route location and design and to identify any impacts and associated mitigation measures that may be required. Two sections of the route where overhead cables are proposed contain watercourses that have been surveyed. The areas surveyed are shown on the Water Vole Survey Areas drawing (CSA/7086/107) in Appendix A.

1.4 Firstly, at the northern end of the scheme a stream (Watercourse A) flows along a woodland edge from west (SS 84257 93359) to east (SS 84656 93243) towards Maesteg. Two watercourses feed into the stream from the north-west (Watercourse A.1, SS 84290 93669 to SS 84503 93355) and north-east (Watercourse A.2, SS 84667 93459 to SS 84623 93303). At the southern end of the scheme, a second stream (Watercourse B) flows through predominantly modified grassland fields from south (SS 84103 87838) to north (SS 84707 88817). Photographs from the survey visits are provided in Appendix B and referred to in this report, where appropriate.

Legislation

1.5 Water voles have full legal protection under the Wildlife & Countryside Act 1981 (as amended). These regulations make it an offence to:

- Intentionally kill, injure or take water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose

1.6 Water voles are also a species of principal importance under the Natural Environment and Rural Communities (NERC) Act 2006, and local authorities and other public bodies therefore have a legal duty to take their conservation into account.

2.0 METHODS

2.1 Watercourse A, associated Watercourses A.1 and A.2 and Watercourse B were surveyed on 25 June 2024 by Katie Critchley CEcol MCIEEM and Tom Richards MCIEEM. A second survey of Watercourses A, A.1 and A.2 was undertaken on 24 September 2024 by Tom Richards MCIEEM and Cerian Smith MCIEEM.

2.2 Each survey involved a detailed search for field signs of water vole, which include droppings and latrines, feeding stations, footprints, runways, lawns, burrows and nests. Details on the characteristics of each watercourse were noted, including substrate and bank profiles, to allow a habitat assessment to be undertaken and to consider the likelihood of burrows being present. The specific locations of any confirmed water vole field signs were mapped and are illustrated on the Water Vole Survey Results Plan (CSA/7086/108) in Appendix C.

2.3 The survey work associated with Watercourses A, A.1 and A.2 included searches within adjacent terrestrial habitat areas, specifically two adjacent fields which support purple moor-grass and rush pasture and upland acid grassland habitats respectively.

2.4 The optimal period for water vole survey is late April to early October, with peaks of activity typically in May and August. In-line with guidance in the Water Vole Mitigation Handbook[1], two survey visits for water vole were undertaken to account for variability in habitat suitability. Following the first survey visit to Watercourse B it was clear that the due to poor habitat suitability and a lack of field signs that water vole absence could be reliably inferred. A second survey was not considered to be necessary for this watercourse. Weather conditions during each survey were dry and bright.

Limitations

2.5 Access was available to survey all watercourses in their entirety from both banks and from within the channel. However, small areas of dense scrub along Watercourse A.1 limited the extent to which the bank side habitats could be surveyed. This is not considered to have significantly impacted the findings of the survey.

2.6 Prior to the second survey visit on 24 September 2024 there had been a period of three days of rain showers. While the day of survey was dry, the preceding rain showers may have washed away some water vole field signs such as latrines positioned in unsheltered locations or floating within the channel. The survey was undertaken in the knowledge that this may

[1] Dean, M., Strachan, R. Gow, D and Andrews, R. (2016) *The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews and Paul Chanin. Mammal Society, London.

have been the case and thorough searches were undertaken. Other field signs such as burrows and feeding remains were unlikely to have been affected by the rain, and water vole evidence was still identified during the survey. The preceding weather conditions are not considered to have significantly impacted the findings of the survey.

3.0 RESULTS

Watercourses A, A.1 and A.2

Habitat Suitability

3.1 Watercourse A is situated within a valley with dense woodland edge to the south and purple moor-grass and rush pasture to the north (Photo 1). The immediate bank sides are sharply steep in profile to c. 1m high but then steeply rise again up the valley sides to the north and south. The bank face and channel substrate are cobble and gravel with a narrow channel of c. 0.5m wide (Photo 2) which contains a fast-flowing but shallow watercourse of c. 10-20cm deep with deeper pools in places to c. 50cm deep. The watercourse flows quite steeply down to the south-east. The bank faces are densely vegetated with tall grasses and rush, while the channel itself is devoid of vegetation.

3.2 Watercourse A.1 flows steeply down from the north-west from higher ground within upland acid grassland vegetation. The gradient then plateaus halfway down into a flat area of ground approximately where the upland acid grassland vegetation becomes purple moor-grass and rush pasture. Prior to this point the watercourse is fast flowing with a very narrow channel densely covered in grasses and occasional bramble scrub. In the flat middle section, the channel is not apparent and instead there is an area of pooled surface water for approximately 30m by 15m. To the south of this area the channel is again present (Photo 4) which is similar in character to the northern section of the watercourse. This channel then flows south-east through the purple moor-grass and rush pasture vegetation, eventually connecting with Watercourse A. The substrate of Watercourse A.1 is also made up of cobble and gravel with a water depth of less than 10cm.

3.3 Watercourse A.2 is situated along the eastern edge of the survey area and is considered to be a ditch feature, holding less water than Watercourse A.1 and being shallower (Photo 5). It is situated within dense purple moor-grass and rush pasture vegetation and runs parallel to an existing farm access track on its eastern side. It exhibits steep bank faces of c. 0.5 to 1m high. The substrate is stony but to a lesser extent than Watercourses A and A.1. The watercourse flows south, connecting with Watercourse A.

3.4 The purple moor-grass and rush pasture vegetation that lies to the north of Watercourse A and surrounds Watercourse A.2 and the southern half of Watercourse A.1 contains standing surface water in places, particularly along the southern edge of the area closer to Watercourse A and within the area of standing water associated with Watercourse A.1. This vegetation contains dense, tussocky mounds of purple moor-grass and other tall grasses and rushes that are suitable for burrowing and foraging water voles. Given the connectivity between the

watercourses and this waterlogged terrestrial habitat, the purple moor-grass and rush pasture habitat was also considered to hold suitability for water voles.

3.5 Further north the purple moor-grass and rush pasture vegetation becomes upland acid grassland (see dashed line divide in Appendix C) which is characterised by shorter and finer grass species and limited rushes and broadleaved herbs (Photo 6). This habitat is situated at higher elevations in this part of the Site and the ground conditions are markedly drier. Limited opportunities for burrowing are present alongside less suitable foraging opportunities and no shelter. As a result, this habitat area is not considered to be a suitable terrestrial habitat resource for water voles.

Survey Results

3.6 The Water Vole Survey Results drawing in Appendix C illustrates the locations of water vole field signs identified during survey work. An initial site visit in May 2024 as part of a Preliminary Ecological Appraisal incidentally recorded a single water vole latrine within the purple moor-grass and rush pasture vegetation centrally between Watercourses A, A.1 and A.2.

3.7 The first detailed water vole survey in June 2024 identified a second water vole latrine in a similar location to the latrine found in May. Further latrines were identified, one on the southern bank of Watercourse A, with feeding remains also found nearby on the northern bank of the watercourse. A third latrine was identified associated with Watercourse A.1 within the flat area of pooled water alongside two clear pile of feeding remains. No burrows were identified along these watercourses, likely due to the bank face substrate. Numerous runs and potential burrows were found within the purple moor-grass tussocks, which provide a dense thatch of vegetation cover for shelter.

3.8 No evidence of water vole presence was identified associated with Watercourse A.2.

3.9 The second water vole survey in September 2024 found water vole field signs/evidence of activity to be lower than the initial survey, with only one water vole latrine and nearby feeding remains identified centrally within the field of purple moor-grass and rush pasture. The conditions of the three watercourses surveyed were similar in terms of suitability compared to the June survey, but no evidence of water vole activity was noted in association with any of the watercourses.

Watercourse B

Habitat Suitability

3.10 The southernmost part of this watercourse lies within upland rush pasture vegetation, however it is situated between two field areas, within a

narrow fenced-off section that contains the watercourse only. It then flows north where it runs between short-grazed modified grassland fields (Photo 9). This southern half of the watercourse exhibited steep bank sides of c. 1.5m in height, vegetated predominantly with grasses and rushes, with scrub and tree vegetation absent (Photo 10). The bank sides and channel substrates consist of stony cobble and gravel sediments. The channel is approximately 0.5m wide with very shallow water of less than 10cm in depth, however deeper silty sediment is present in places. The water and overlying silt were distinctly reddish-orange in colour suggesting mineral deposition/contamination.

3.11 The northern half of the watercourse is tree-lined and heavily shaded. The channel here is wider, to c. 1m in width and slightly deeper in places at 10-30cm. The substrate is coarser, containing much larger sized stones with minimal silt (Photo 11). The bankside habitats are dominated by trees and some scattered bramble scrub, with limited vegetation otherwise due to the heavy shading, consisting of some short grasses but mostly bare ground. The bank sides are gentle in profile immediately adjacent to the channel and to the west but rise steeply to the south-east up to sheep-grazed modified grassland fields (Photo 12).

Survey Results

3.12 No evidence of water vole presence was identified during the survey of this watercourse in June 2024. Water vole are considered to be likely absent from this watercourse due to poor habitat suitability and a lack of survey evidence.

4.0 DISCUSSION AND RECOMENDATIONS

4.1 Water vole survey work within areas of suitable habitat along the Foel Trawsnant scheme route has identified the presence of water vole associated with two watercourses in land to the west of Maesteg where an overhead cable route is proposed.

4.2 Watercourses A and A.1 support water voles, and it has been confirmed that the population also utilises terrestrial habitats in the form of purple moor-grass and rush pasture vegetation near to the watercourse, which was found to be waterlogged in many places and offers suitable opportunities for shelter and foraging. The dense tussocky vegetation was extensive and difficult to survey thoroughly, and it is expected that the number of field signs identified during the survey work was an underestimate of activity within this habitat. However, given the limited number of latrines identified directly associated with the watercourses, a Low relative population density is predicted based on the survey information available.

4.3 Water vole presence is therefore confirmed in Watercourse A and A.1 and is assumed within the associated field area of purple moor-grass and rush pasture vegetation. Water vole are considered to be likely absent from Watercourse A.2.

Potential Impacts

4.4 In the absence of impact avoidance and mitigation measures, the proposed works could result in the killing/injury of water voles and/or damage or destruction of their burrows which would constitute a legal offence under the Wildlife and Countryside Act 1981 (as amended). Initial proposals showed the cable route passing through the central purple moor-grass and rush pasture area from south-east to north-west, crossing Watercourse A.1. This would necessitate the installation of poles within this habitat alongside associated vehicle movement routes and working areas. These works could result in impacts to water voles that have been confirmed to be present in this habitat area.

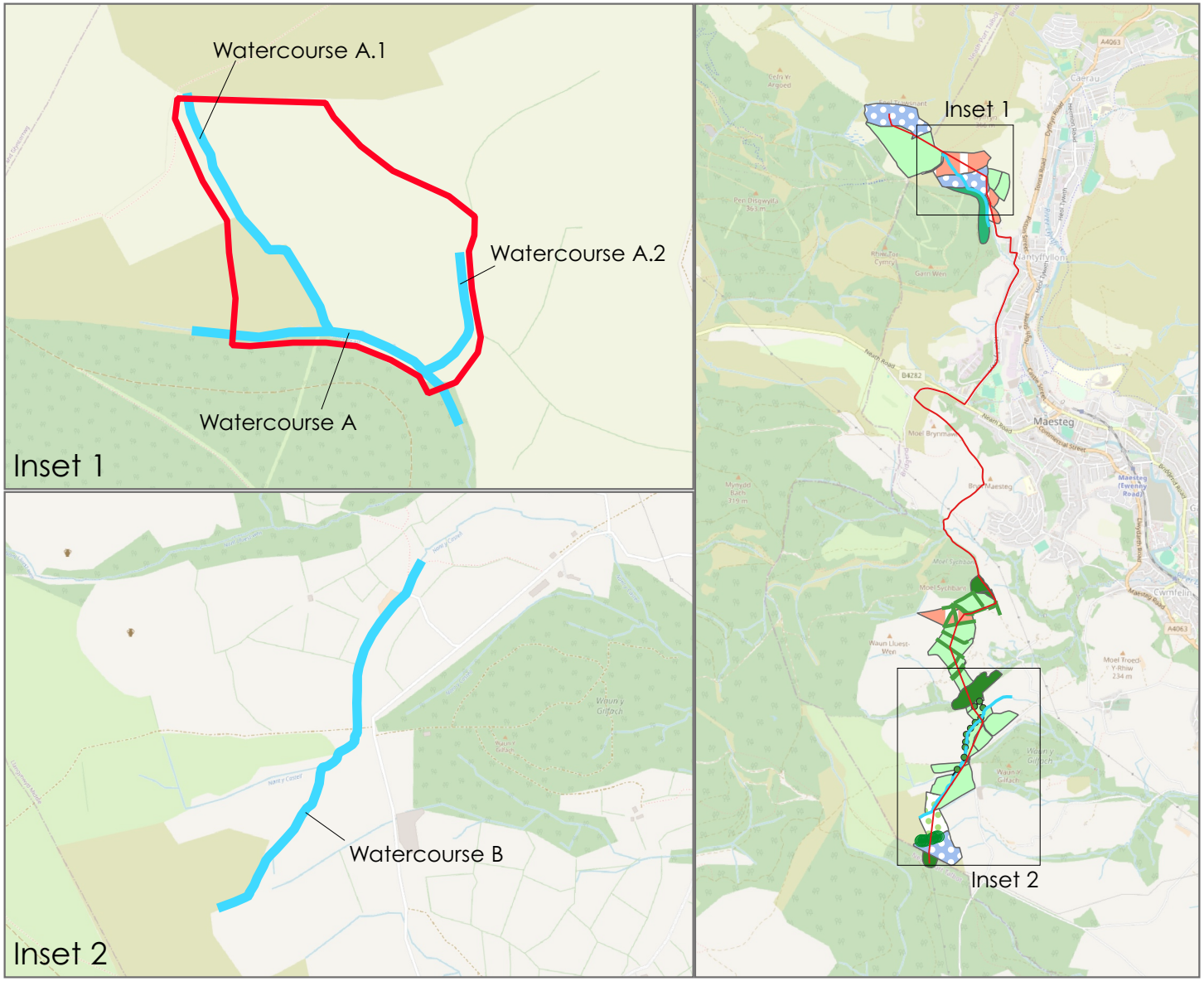
4.5 Following discussions with the project team, areas of particularly wet ground were identified in this location, in addition to the likely water vole constraints. The cable route was then revised to run north along the eastern edge of the field, along the existing hardstanding track that runs parallel to Watercourse A.2. The route then heads north-west through the upland acid grassland habitat, still crossing Watercourse A.1 at its northern extent but with pole locations chosen well away from the watercourse to avoid impacts.

4.6 As the proposals currently stand, it is considered that the cable route works could be undertaken to avoid impacts to water voles altogether, retaining areas of suitable habitat where they have been found to be

present. In the event that impacts are predicted due to changes to the cable route or working methods, a licence would be required from Natural Resources Wales to allow works to proceed. This licence would need to be supported by a detailed method statement, to include protocols to avoid impacts to this species, such as through a displacement operation, specifically related to the proposed works and likely impacts.

Appendix A

Water Vole Survey Areas Plan
(CSA/7086/107)



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Project	Foel Trawsnant Wind Farm	Date Nov. 2024	Drawing No. CSA/7086/107
Drawing Title	Water Vole Survey Areas	Scale Not to scale	Rev -
Client	Fisher German	Drawn TR	Checked CSm

Appendix B

Photographs

Photo 1. Watercourse A, view east (June 2024).

Photo 2. Watercourse A (June 2024).

Photo 3. View south-east across purple moor-grass and rush pasture towards Watercourse A (June 2024).

Photo 4. Watercourse A.1, view south-east (June 2024).

Photo 5. Watercourse A.2, view south-east (September 2024).

Photo 6. View south showing shorter upland acid grassland habitat (immediate foreground) leading south-east to purple moor-grass and rush pasture (September 2024).

Photo 7. Water vole latrine (May 2024).

Photo 8. Water vole feeding remains (June 2024).

Photo 9. Watercourse B, southern section view north (June 2024).

Photo 10. Watercourse B, southern section view north (June 2024).

Photo 11. Watercourse B, northern section view north (June 2024).

Photo 12. Watercourse B, northern section view north along eastern bank top (June 2024).

Appendix C

Water Vole Survey Results
(CSA/7086/108)

N

- Survey Area
- Watercourses
- Water vole latrines (07/05/24)
- Water vole latrines (25/06/24)
- Water vole latrines (24/09/24)
- Water vole feeding remains (25/06/24)
- Water vole feeding remains (24/09/24)
- Approximate field division. Upland acid grassland to the north and purple moor-grass and rush pasture to the south.

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