FIVE ESTUARIES OFFSHORE WIND FARM

VOLUME 6, PART 6, ANNEX 4.15: OTTER AND WATER VOLE SURVEY REPORT: SOUTH OF A120

Application Reference	EN010115
Application Document Number	6.6.4.15
Revision	A
APFP Regulation	5(2)(a)
Date	March 2024

Project	Five Estuaries Offshore Wind Farm
Sub-Project or Package	Environmental Statement
Document Title	Volume 6, Part 6, Annex 4.15: Otter and Water Vole Survey Report: South of A120
Application Document Number	6.6.4.15
Revision	A
APFP Regulation	5(2)(a)
Document Reference	005024261-01

Revision	Date	Status/Reason for Issue	Originator	Checked	Approved
A	Mar-24	ES	Ecology Resources	GoBe	VE OWFL

ECOLOGY
RESOURCES

Water Vole & Otter Survey Report

Five Estuaries Offshore Wind Farm Ltd

November 2022

ECOLOGY | ARBORICULTURE

Status	Name	Date
Draft	Ben Payne BSc (Hons) MSc ACIEEM	01/11/2022
Rev 1	Gavin Mullan (BA) Hons MCIEEM	11/11/2022
Rev 2	Ben Payne BSc (Hons) MSc ACIEEM	17/11/2022
Rev 3	Ben Payne BSc (Hons) MSc ACIEEM	31/03/2023
Rev 4	Janine McMahon BSc (Hons) ACIEEM	11/04/2023
Rev 5	Janine McMahon BSc (Hons) ACIEEM	16/05/2023

EXECUTIVE SUMMARY

Ecology Resources Ltd was commissioned by Royal HaskoningDHV on behalf of Five Estuaries Offshore Wind Farm Limited, to undertake water vole and otter surveys of suitable water bodies within the scheme extents and buffers. Five water bodies were identified as being suitable to support water voles *Arvicola amphibius* and one as being suitable to support otters *Lutra lutra*. Two of the water bodies had field signs for water vole and one for American mink *Neovison vison*. No signs of otters were observed.

Contents

1. INTRODUCTION

Ecology Resources Ltd was commissioned by Royal HaskoningDHV on behalf of Five Estuaries Offshore Wind Farm Limited (VE OWF), to undertake water vole *Arvicola amphibius* and otter *Lutra lutra* surveys of suitable water bodies within the scheme extents and buffers.

In the Preliminary Ecological Appraisal (PEA)[1] conducted by SLR Consulting, recommendations were made to survey any suitable water bodies crossing the onshore infrastructure. Since its publication Royal HaskoningDHV have instructed Ecology Resources to survey a total of five water bodies for otter and water vole.

1.1 Project Background

The project involves a proposed extension to the operational Galloper Offshore Wind Farm (OWF) which consists of 56 wind turbine generators (WTGs). The 5E OWF will comprise up to 79 WTGs situated within two array areas to the east of the operational Galloper OWF. The array areas will be located approximately 30km off the coast of Suffolk, England.

Cables will connect the turbines to the offshore substation platforms and then export the power generated to shore. It is expected that there will be a number of inter-array cables, up to four export cables and up to two offshore substations platforms. A landfall area has been identified between Holland-on Sea and Frinton-on-Sea on the Essex coast. The landfall point is yet to be determined but will be located within this area of coastline.

A new 5E onshore substation will be needed and will be constructed in an area to the north of the A120. The 5E cables will be installed underground between the landfall and the grid connection point north of the A120. A preferred corridor has not yet been determined with several corridors still under consideration at the time of writing. Potential substation land parcels and associated corridor options north of the A120 also remain under review at the time of writing. A more detailed description of the project, several elements of which have yet to be finalised at this time, will be provided in the PEIR and ES in due course.

A Preliminary Ecological Appraisal was undertaken which recommends a suite of follow up Phase 2 surveys. This report details the scope, methodology and findings of water vole and otter surveys, which form part of these surveys.

1.2 Legislation

Water Voles are protected under UK law under Schedule 5 the Wildlife and Countryside Act (as amended) 1981. It is an offence to intentionally:

- Kill, injure or take them
- Possess or control them (alive or dead)

It is also an offence to intentionally or recklessly:

- Damage or destroy a structure or place used for shelter or protection

[1] GoBe Consultants (2022). Five Estuaries Offshore Wind Farm PEA Report (Onshore)

- Disturb them in a place used for shelter or protection
- Obstruct access to a place used for shelter or protection

Water voles are a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006) and local authorities and other public bodies have a legal duty to take their conservation into account. They are also a material consideration in the planning process.

Otters are designated and protected as European protected species (EPS). EPS are protected under the Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- Deliberately kill, injure, disturb or capture them
- Damage or destroy their breeding sites and resting places – even if otters are not present
- Possess, control or transport them (alive or dead)

It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- Disturb otters while they occupy a structure or place used for shelter or protection
- Obstruct access to a place of shelter or protection

Otters are a species of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006) and local authorities and other public bodies have a legal duty to take their conservation into account. They are also a material consideration in the planning process.

2. METHODOLOGY

The Preliminary Ecological Appraisal conducted by SLR Consulting recommended surveying all suitable water bodies crossing the onshore infrastructure options[1]. This was refined via a habitat suitability exercise following best practice guidance[2] (results section, Table 2). Based on these survey results, Royal HaskoningDHV instructed Ecology Resources to survey a total of five water bodies for otter and water vole.

Weather conditions were recorded during the survey.

2.1 Surveying

2.1.1 Water Vole Survey

The water vole surveys were undertaken in accordance with the methodology set out in the Water Vole Conservation Handbook (Strachan et al., 2011) and as modified by The Water Vole Mitigation Handbook (Dean et al., 2016)

Surveys were conducted along one bank for the full length of each water body within the survey area, plus an additional 100m up and down stream for water vole and 250m for otter. Closer observation of potential signs took place at water level where accessible or using close focus binoculars to view when not accessible or on the opposite bank. Each water body was surveyed by

[2] Chanin, P. (2003). 'Ecology of the European Otter', in Conserving Natura 2000 Rivers, Ecology Series No. 10,(Peterborough: English Nature).

an ecologist, and all field signs of water vole recorded. This included sightings, burrows, latrines, feeding stations, lawns, nests, footprints, and runways.

Each field sign type and its location were recorded, and a photograph taken. In addition to all water vole field signs, field signs of other aquatic mammals (e.g., rats, otter and mink) were also recorded.

Weather conditions were recorded during the survey.

2.1.2 Otter Survey

During the water vole survey, the water bodies were also searched for field signs of otters. All evidence of otter activity – spraints, feeding remains, slides, couches, and holts – was recorded. Each field sign type and its location were recorded, and a photograph taken.

2.2 Surveyors

The surveys for both species were led by Johnnie Johnson (CIEEM Qualifying Member), a competent surveyor of water voles and otters with 7 years' experience. Assisting on the surveys were Patrick Davis and Kate Mann; both CIEEM Qualifying Members and both competent and experienced water vole and otter surveyors with 6 and 9 years' experience respectively.

2.3 Survey conditions

Table 1 shows weather conditions when surveys were undertaken.

Table 1: Survey Weather Conditions

Date	Survey conditions
12/05/2022	Sunny with slight breeze, 17°C
13/05/2022	Sunny with slight breeze, 18°C
19/05/2022	Sunny with slight breeze, 18°C
08/06/2022	Sunny with moderate breeze, 19°C
09/06/2022	Sunny with a breeze and overcast, 19°C
18/06/2022	Cloudy and humid, 20°C
08/09/2022	Light rain and cloudy at start of survey becoming sunny and warm as the survey continued, 18°C
09/09/2022	Cloudy, intervals of sun and breezy, 17°C
16/09/2022	Sunny spells after light rain, partial cloud, 13°C
19/09/2022	Sunny spells, dry, cloudy, light breeze, 14°C
22/09/2022	Sunny with slight breeze, 16°C
29/09/2022	Sunny with slight breeze, 18°C

2.4 Survey Limitations

Surveys were conducted in suitable weather conditions.

The following limitations were encountered across the surveyed water bodies.

- 99043 Approx. 20m at the southern end inaccessible due to dense bramble
- 99003 short section of water body to the northwest. Banks too steep to access.

Where sections of water bodies were not accessible every effort was made to view the section from the opposite bank. If both banks were too heavily vegetated or too steep, the section was omitted.

3. RESULTS

3.1 Habitat Suitability

In total five water bodies were scoped into the water vole and otter survey based on their suitability for water vole and or otter, all of which were subject to the required survey effort.

Table 2 below shows the water bodies selected for survey. Appendix C contains all the habitat assessment descriptions of the remaining watercourses that were scoped out of further survey.

Table 2: Water bodies selected for further survey

Water body ID	Eastings	Northings	Habitat Description	Otter Potential	Water Vole Potential	Figure (Appendix A)
99403	620149	219628	1m wide channel with steep earth banks. Not holding water at time of assessment. 100% vegetation cover consisting of tall and tussocky grasses, bramble, and trees. Approx length surveyed 560m	Negligible	Suitable	Figure 1
99001	615768	224575	1m wide channel with steep earth banks. Not holding water at time of assessment. 90% vegetation cover consisting of tall and tussocky grasses. Approx length surveyed 480m	Negligible	Suitable	Figure 2
99003	615517	225113	2m wide channel with earth banks and water depth of 0.25m. 100% Vegetation cover consisting of tall and tussocky grasses. Approx length surveyed 1100m	Suitable	Suitable	Figure 2
99004	614979	224984	2m wide channel with steep earth banks and water depth of 0.25m. 100% vegetation cover 100% consisting of tall and tussocky grasses. Approx length surveyed 700m	Negligible	Suitable	Figure 2

99012	611669	227754	2m wide channel with steep earth banks and water depth of 1m. 80% Vegetation cover consisting of trees, shrubs, tall grasses and reeds. Approx length surveyed 615m	Negligible	Suitable	Figure 3

3.2 Survey Results Summary

Two of the five water bodies surveyed displayed signs of water vole and one displayed signs of American mink.

Table 3 provides a summary of the findings on each water body surveyed. Detailed results, with photographs can be found in Appendix B.

Table 3: Water Vole and Otter Survey Results Summary

Waterbody ID	Field sign(s)	Figure (Appendix A)
99403	No field signs observed	Figure 1
99001	No field signs observed	Figure 2
99003	Water vole - Feeding remains (x 2) Mink - Spraint (x 1)	Figure 2
99004	Water vole - Burrow (x 3) - Latrine (x 1) - Footprint (x 1)	Figure 2
99012	No field signs observed	Figure 3

The Water Vole Mitigation handbook (Dean et al., 2016) stipulates feeding remains are not confirmatory evidence on their own, and that experience is required to distinguish them from other small mammals. All evidence was subject to Tech QA by Johnnie Johnson, a senior ecologist, who was the deputy otter and water vole ecologist for the Strategic Pipeline Alliance (SPA) and is experienced in writing water vole displacement licenses. Therefore, the data has been reliably confirmed as water vole feeding remains on watercourse 99003.

3.3 Population Assessment

No signs of otter were observed; therefore, no population assessment was possible. Table 4 shows a population assessment of water bodies where water vole signs were observed, based on the methodology outlined in the Water Vole Mitigation Handbook.

Table 4: Water Vole Population Assessment

Waterbody ID	Approx. length of bank surveyed	Average No. of latrines per 100m of bankside habitat	Relative population density
99003	1100m	None, but with other confirmatory signs	Low
99004	700m	0.14	Low

4. CONCLUSION

A total of five water bodies were surveyed across the onshore project area. Evidence of water vole activity confirming presence was found along two water bodies, this was confirmed by lead surveyor Johnnie Johnson a competent and experienced ecologist of delivering otter and water vole surveys:

- 99003,
- 99004.

Evidence of American mink was also found on water body 99003.

No evidence of otters was found during the surveys.

5. REFERENCES

Chanin, P. (2003). 'Ecology of the European Otter', in Conserving Natura 2000 Rivers, Ecology Series No. 10, (Peterborough: English Nature).

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

GoBe Consultants (2022). Five Estuaries Offshore Wind Farm PEA Report (Onshore)

Strachan, R. , Moorhouse, T. , Gelling, M. (2011). Water Vole Conservation Handbook, Third Edition, WildCRU, University of Oxford

APPENDIX A: Figures

LEGEND

- VE Onshore Cable Route
- Waterbody Survey Extent

WATER VOLE AND OTTER SURVEYS
FIGURE 1

PROJECT TITLE:
Five Estuaries Offshore Wind Farm

CLIENT:
Royal HaskoningDHV

DATE:
14.02.2023

PRODUCED BY:
J. McMahon

REF: 22043

ECOLOGY RESOURCES

LEGEND

- VE Onshore Cable Route
- Waterbody Survey Extent

Mink Evidence
- Spraint

Water Vole Evidence
- Burrow
- Feeding remains
- Latrine
- Print

WATER VOLE AND OTTER SURVEYS
FIGURE 2

PROJECT TITLE:
Five Estuaries Offshore Wind Farm

CLIENT:
Royal HaskoningDHV

DATE:
14.02.2023

PRODUCED BY:
J. McMahon

REF: 22043

ECOLOGY RESOURCES

LEGEND

VE Onshore Cable Route

Waterbody Survey Extent

Water Vole Evidence

Latrine

WATER VOLE AND OTTER SURVEYS
FIGURE 3

PROJECT TITLE:
Five Estuaries Offshore Wind Farm

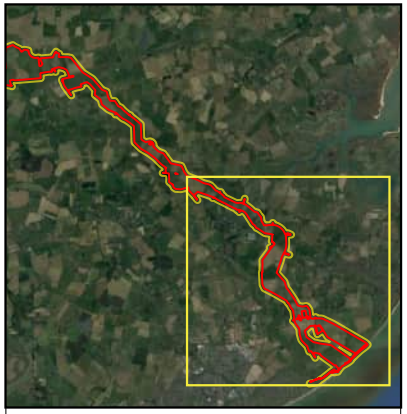
CLIENT:
Royal HaskoningDHV

DATE:
14.02.2023

PRODUCED BY:
J. McMahon

REF: 22043

ECOLOGY RESOURCES



LEGEND

- VE Onshore Cable Route
- 100m Buffer
- Watercourses

WATERCOURSE LOCATIONS FIGURE 4.1

PROJECT TITLE:
Five Estuaries Offshore Wind Farm

CLIENT:
Royal HaskoningDHV

DATE:
16.05.2023

PRODUCED BY:
J. McMahon

REF: 22043

ECOLOGY RESOURCES

LEGEND

- VE Onshore Cable Route
- 100m Buffer
- Watercourses

WATERCOURSE LOCATIONS FIGURE 4.2

PROJECT TITLE:
Five Estuaries Offshore Wind Farm

CLIENT:
Royal HaskoningDHV

DATE:
16.05.2023

PRODUCED BY:
J. McMahon

REF: 22043

ECOLOGY RESOURCES

APPENDIX B: Detailed Results

Table 5: Water Vole and Otter Survey Results

Waterbody ID	Species	Sign	Notes	Eastings, Northings	Survey Date	Photograph(s)
99003	Water vole	Feeding remains		615560, 225160	13/05/2022	No photograph
99003	Mink	Spraint (old)	Mink spraint	615655, 225252	13/05/2022	

Waterbody ID	Species	Sign	Notes	Eastings, Northings	Survey Date	Photograph(s)
99003	Water vole	Feeding remains		615389, 225038	13/05/2022	
99004	Water vole	Burrow	2 burrows present	614910, 225071	18/06/2022	No photograph
99004	Water vole	Burrow		614920, 225059	18/06/2022	No photograph
99004	Water vole	Burrow		614799, 225217	18/06/2022	No photograph
99004	Water vole	Latrine		614807, 225212	18/06/2022	No photograph
99004	Water vole	Print		614961, 227548	18/06/2022	No photograph

APPENDIX C: Habitat Assessments of Scoped Out Watercourses

Water body ID	Eastings	Northings	Date	Surveyor	Channel Width (m)	Channel Depth (m)	Water Depth (m)	Bank Profile	Bank Substrate	Water Level Variation	Water Permanence	Channel Bankside Vegetation Cover	Bankside Vegetation Type	Otter Potential	Water Vole Potential	Further Survey
2	622178	218704	13/06/22	Patrick Davis	1	1	0.2	Steep	Earth	Considerable	Permanent in sections	100	Reeds, tall and tussocky grass, brambles	Negligible	Suitable but poor	No - further survey not required
3	621275	217888	13/06/22	Patrick Davis	1	2	0	Steep	Earth	Considerable	N/A	100	Ruderals, trees	Negligible	Negligible	No - further survey not required
4	621102	218181	13/06/22	Patrick Davis	0	0	0	Shallow	Earth	Not noticeable	N/A	100	Ruderals, scrub	Negligible	Negligible	No - channel no longer exists
5	621117	218276	13/06/22	Patrick Davis	0	0	0	Shallow	Earth	Not noticeable	N/A	100	Ruderal, scrub	Negligible	Negligible	No - channel no longer exists
8	622262	218415	13/06/22	Patrick Davis	0	0	0	Shallow	Earth	Considerable	N/A	100	Scrub	Negligible	Negligible	No - no further required. Watercourse doesn't exist and has been absorbed by hedgerow.
9	622470	218130	20/06/22	Chloe Marzuoli	4	1	2	Brambles	Unknown	Unknown	Unknown	80	Sedges, rushes, brambles	Suitable but poor	Suitable but poor	No - further survey not required

Water body ID	Eastings	Northings	Date	Surveyor	Channel Width (m)	Channel Depth (m)	Water Depth (m)	Bank Profile	Bank Substrate	Water Level Variation	Water Permanence	Channel Bankside Vegetation Cover	Bankside Vegetation Type	Otter Potential	Water Vole Potential	Further Survey
11	619978	220384	13/06/22	Patrick Davis	1.5	1.5	0	Steep	Earth	Considerable	N/A	100	Tall and tussocky grass, scrub and trees.	Negligible	Suitable but poor	No - further survey not required
13	620196	222095	13/06/22	Patrick Davis	1	1.5	0.1	Steep	Earth	Considerable	N/A	100	Tall and tussocky grass, ruderals and trees.	Negligible	Negligible	No - further survey not required, channel only occurs north of road, south mainly filled in.
14	619363	222922	13/06/22	Patrick Davis	1	1.5	0	Moderate	Earth	Considerable	N/A	100	Tall and tussocky grass	Negligible	Negligible	No - further survey not required
29	614310	225990	13/06/22	Patrick Davis	2	2	0	Steep	Earth	Considerable	N/A	100	Tall and tussocky grass	Negligible	Negligible	No - further survey not required
32	614096	226516	13/06/22	Patrick Davis	5	1	0.25	Moderate	Earth	Considerable	Permanent	90	Ruderals, trees	Negligible	Negligible	No - further survey not required
36	620185	219134	13/06/22	Patrick Davis	1	1	0.1	Shallow	Earth	Considerable	N/A	90	Scrub, ruderals and trees	Negligible	Negligible	No - no further survey required, small section has water, area in scrub appears dry.

Water body ID	Eastings	Northings	Date	Surveyor	Channel Width (m)	Channel Depth (m)	Water Depth (m)	Bank Profile	Bank Substrate	Water Level Variation	Water Permanence	Channel Bankside Vegetation Cover	Bankside Vegetation Type	Otter Potential	Water Vole Potential	Further Survey
40	619422	221415	13/06/22	Patrick Davis	1	1.5	0	Steep	Earth	Considerable	N/A	100	Tall and tussocky grass, ruderals, trees and hedgerow	Negligible	Negligible	No - further survey not required
44	612314	227074	20/06/22	Ross Lane	1	1	0	Steep	Earth	Not noticeable	N/A	95	Ruderal. Scrub. Tall grass.	Negligible	Negligible	No - further survey not required
45	612405	227250	20/06/22	Ross Lane	1	1	0	Steep	Earth	Not noticeable	N/A	80	Tall grass. Ruderals. Scrubs	Negligible	Negligible	No - further survey not required
67	615891	224060	20/06/22	Ross Lane	4	1	5	Shallow	Earth	Not noticeable	Permanent. Ditch dry at East end. Pond and channel to Brook at West end approx 0.3m depth	70	Trees. Tall grass. Scrub. Ruderal. Reeds.	Suitable but poor	Suitable but poor	No - further survey not required
131	612087	228432	20/06/22	Ross Lane	2	2	0.03	Steep	Earth	Not noticeable	N/A	95	Tall grass. Ruderal. Water depth 3cm	Negligible	Negligible	No - further survey not required

FIVE ESTUARIES
OFFSHORE WIND FARM

PHONE 0333 880 5306
EMAIL fiveestuaries@rwe.com
WEBSITE www.fiveestuaries.co.uk
ADDRESS Five Estuaries Offshore Wind Farm Ltd
Windmill Hill Business Park
Whitehill Way, Swindon, SN5 6PB
COMPANY NO Registered in England and Wales
company number 12292474