



Immingham Green Energy Terminal

TR030008

Volume 6

6.4 Environmental Statement Appendices

Appendix 8.D: Otter and Water vole Survey Report

Planning Act 2008

Regulation 5(2)(a) and 5(2)(l)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

September 2023

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

Immingham Green Energy Terminal Development Consent Order 2023

6.4 Environmental Statement Appendices Appendix 8.D: Otter and Water Vole Survey Report

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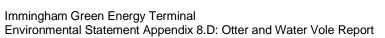






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1. Introduction

1.1. Background

- 1.1.1. This Otter and Water Vole Survey Report has been prepared by AECOM on behalf of Associated British Ports ("ABP") ("The Applicant"), to assess the ecological constraints, specifically pertaining to otter (*Lutra lutra*) and water vole (*Arvicola amphibius*), in connection with the proposed Immingham Green Energy Terminal ("IGET") (hereafter referred to as the Project). The Project is located adjacent to Kings Road, Queens Road and Laporte Road, Immingham, as shown by the Site Boundary on **Figure 1** in **Annex A**. All land situated within this Site Boundary is hereafter referred to as the Site.
- 1.1.2. The assessment of ecological constraints pertaining to otter and water vole has been undertaken with reference to current good practice and forms part of the technical information commissioned by the Applicant in connection with the Project.

1.2. Purpose of Report

- 1.2.1. This Otter and Water Vole Survey Report presents ecological information obtained or determined by the following:
 - a. Desk-study undertaken during March 2022 and updated in May 2023 to obtain records of otter and water vole within 2km of the Site (the area covered by the desk study is hereafter referred to as the Desk Study Area).
 - b. Survey of all waterbodies and watercourses identified during the Phase 1 Habitat surveys in 2022 as having the potential to support otter and/or water vole in May and October 2022.
 - c. Analysis of the survey and desk study data to evaluate the importance of the Site for otter and water vole to determination as important ecological features which should be considered within the ecological impact assessment ("EcIA").

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2. Relevant Legislation

2.1. Otter

- 2.1.1. Otter receives full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended) (Ref 1-1) and Schedule 2 of the Conservation of Habitats and Species Regulations 2019 (as amended) (Ref 1-2). This legislation, when taken together, results in a level of protection that prohibits the intentional, deliberate or reckless:
 - a. Killing, injuring, taking or disturbance of otters;
 - b. Damaging, destroying or obstructing any place used by otters for the purposes of breeding, sheltering or protection; and
 - c. Selling and/or advertising for sale an otter or any part thereof.
- 2.1.2. Otter is a species of principal importance for nature conservation in England listed pursuant to Section 41 of the Natural Environment and Rural Communities ("NERC") Act 2006 (Ref 1-3).

2.2. Water Vole

- 2.2.1. Water vole receives full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended); as such it is illegal to intentionally or recklessly:
 - a. Capture, kill or injure water voles;
 - b. Damage, destroy or block access to their places of shelter or protection;
 - c. Disturb them in a place of shelter or protection; and
 - d. Possess, sell, control or transport live or dead water voles or parts of them.
- 2.2.2. Water vole is a species of principal importance for nature conservation in England listed pursuant to Section 41 of the NERC Act 2006 (Ref 1-3). Section 40 of the same Act (as amended by the Environment Act, 2021 (Ref 1-4), Section 102) gives local and regional authorities the duty, consistent with their functions, to further the general biodiversity objective to conserve and enhance biodiversity in England.





3. Methods

3.1. Desk Study

- 3.1.1. The following sources of information were used to gain background information on the status and distribution of otter and water vole in the vicinity of the Project:
 - a. Lincolnshire Environmental Records Centre ("LERC") was contacted to request otter and water vole records from within 2km of the Project.
 - b. Planning applications published on the North East Lincolnshire Council online planning portal (Ref 1-5) in the vicinity of the Project which may have been supported by previous otter and water vole surveys. A review of ecological information pertaining to these species was conducted and extracted where available and potentially relevant to the Project.

3.2. Field Survey

- 3.2.1. The scope of the otter and water vole survey was defined following the completion of the extended Phase 1 Habitat surveys of the Site which were undertaken in 2022 (see **Appendix 8.B [TR030008/APP/6.4]**). Habitats; predominantly a series of drainage ditches located within the Site, were identified as being potentially suitable to support otter and water vole and therefore were subject to further survey for these species. The extent of the areas subject to survey is defined as the Survey Area and is shown on **Figure 2** in **Annex A**.
- 3.2.2. The surveys were completed by suitably experienced AECOM ecologists on 25 May 2022 and 4 October 2022 in accordance with best practice guidance (Ref 1-6; Ref 1-7; Ref 1-8). This guidance indicates that an 'early' season survey and a 'late' season survey should be completed which these dates sought to achieve.
- 3.2.3. All survey visits were completed during periods of dry weather (both in the days preceding and during the survey) to increase the likelihood that field signs, such as droppings, would persist in the environment.
- 3.2.4. The surveys involved searching the banks and margins of the relevant waterbodies/watercourses, where safely accessible, for field signs as detailed below.
- 3.2.5. Otter field signs include the following:
 - Spraints (faeces)

 – these are usually black in colour and have a sweet smell likened to jasmine or fresh cut hay. The otter uses spraints to define its home range, and these are deposited at prominent points such as on boulders and ledges;
 - Footprints the otter has five toes that are webbed. The footprints are very characteristic and easy to recognise. Each print is around 50mm – 60mm wide;
 - c. Paths found along river banks;
 - d. Couches flattened vegetation amongst scrub or dense vegetation, which may indicate an above ground resting area for an otter during the day;





- e. Holts holes in the riverbank, hollow trees, cavities amongst tree roots, piles of rocks, wood or debris may all be used as holts; and
- f. Feeding remains including fish remains.
- 3.2.6. Water vole field signs include the following:
 - Faeces these are 8mm 12mm long and 4mm 5mm wide, with a smooth cylindrical shape rounded at both ends, varying in colour from green to black, and odourless, with a putty-like texture;
 - b. Latrines found throughout the territory, often comprising a pile of flattened droppings, with fresh droppings on top;
 - Feeding stations comprise a neat pile of chewed feeding remains, often comprising lengths of vegetation up to 10cm long, showing the marks of the two large incisors;
 - d. Burrows these are typically wider than they are high, with a diameter of 4cm 8cm, and are usually located along the water's edge;
 - e. Lawns around burrows there is often an area of grazed vegetation, surrounded by taller vegetation, these are most often produced when the female is nursing young;
 - f. Footprints as with other rodents, the footprints of the fore foot show four toes in a star arrangement, with the hind foot showing five toes. The size of footprints for the hind foot is 26mm 34mm; and
 - g. Runways these are low tunnels within the vegetation, often adjacent to the water's edge.
- 3.2.7. The presence and distribution of these signs can be used to assess the likely importance of the Survey Area for local otter and water vole populations.

3.3. Limitations

- 3.3.1. The survey guidance indicates that two surveys are usually necessary for determining the presence/absence of water voles (Ref 1-9), with one visit between April and June and a second visit between July and September. However, only one survey was undertaken of Ditches 1, 2, 3, 5, 6 and 7 in early October 2022. Ditches 1, 2, and 3 were found to be unsuitable for otter and water vole during the initial survey and therefore were discounted from further survey. Water vole field signs were found on Ditches 6 and 7 during the first survey, and therefore as presence was confirmed, a second 'late season' survey was not warranted. Sufficient evidence was collected from the single survey to inform an evaluation of the importance of the ditches to water vole for the ecological impact assessment.
- 3.3.2. Ditch 4 (North Beck Drain) was only surveyed from the top of the banks using binoculars, due to it being a wide, deep tidal drain with no safe access to the riparian habitat zone for field sign inspections. However, given there are numerous desk study records of the species on North Beck Drain, despite the lack of field signs observed during the survey visit in October 2022 it was assumed for the purposes of the ecological impact assessment that the species was present at this location, and thus a second survey was not undertaken.





3.3.3. The early October survey was undertaken slightly outside of the optimum survey window of July to September. There were mild late summer conditions through until early October 2022, vegetation had not died back and water vole would still be active, therefore it is not considered to represent a limitation to the collection of data. Furthermore, the presence of water vole field signs on suitable ditches indicates that the species was sufficiently active at the time to be detected through field survey methods.





4. Results

4.1. Desk Study

Otter

- 4.1.1. There is one recent record of otter within the Study Area (specific location is withheld from LERC data).
- 4.1.2. Otter surveys of the West Site undertaken in 2011 and 2013 (excluding the newer ditches around the new road infrastructure, which had not been created at that time) for planning application DM/1027/13/OUT, did not record any evidence of this species within the West Site.
- 4.1.3. Surveys of the waterbodies and ditches in the landfill site to the south of West Site for planning application DM/0968/19/FUL in 2017, 2018 and 2019 did not record any evidence of otter.

Water Vole

- 4.1.4. The desk study data returned by LERC included two recent records of water vole within the Study Area. The closest/most relevant of these records is associated with a ditch on the north side of Kings Road, which is located approximately 55m from the West Site (on the opposite side of Kings Road from the West Site). There were also old (pre-2013) records in the LERC desk study data of this species on watercourses on the south side of Queens Road, which are outside the Site but close to the landfill site.
- 4.1.5. Water vole surveys of the ditches on the West Site in 2011 and 2013 (excluding the newer ditches around the new road infrastructure, which had not been created at that time) conducted to support planning application DM/1027/13/OUT did not record any evidence of this species within the West Site.
- 4.1.6. Water vole surveys of the ditches and the waterbodies within the landfill site south of West Site for planning application DM/0968/19/FUL in 2017, 2018 and 2019 recorded abundant water vole field signs, including burrows, droppings and feeding remains, indicating that the species was widespread in suitable habitat within the landfill site.
- 4.1.7. The citation for Laporte Road Brownfield Site Local Wildlife Site ("LWS") indicates the presence of a water vole population in the ditch to the south of the Project (North Beck Drain), which runs adjacent to the south-eastern boundary of the Temporary Construction Area within the Site. There were also several old (pre-2013) records of water vole from North Beck Drain in the desk study data returned by LERC.

4.2. Field Survey

- 4.2.1. A table summarising the findings of the survey is provided as **Table 1**. Surveys for otter and water vole were undertaken by a team of two AECOM ecologists on the following dates:
 - a. Ditches 8 and 9 25 May and 10 October 2022; and





- b. Ditches 1, 2, 3, 4, 5, 6 and 7 10 October 2022.
- 4.2.2. No otter field signs were identified during the surveys. However, the drainage ditch at the landward toe of the flood embankment (which includes Ditches 5, 6 and 7) is considered suitable due to its connectivity with and proximity to the Humber estuary. This ditch is crossed by the Pipe Rack and Jetty Access Road, and is adjacent to the Temporary Compound Area. North Beck Drain (Ditch 4), which is adjacent to the western boundary of the Temporary Compound Area is also considered to hold some suitability to support transient otter due to its connectivity to the estuary and the wider drainage ditch network. Evidence of predated shore crabs was found at the northern end of the ditch, which could have been due to otter predation, although this does not provide conclusive evidence to confirm presence of the species. Despite the lack of conclusive field signs of otter on these watercourses, it is not possible to rule out the occasional transient presence of otter.
- 4.2.3. Water vole field signs were recorded on both Ditch 6 and Ditch 7, which are both connected sections of the drainage ditch at the landward toe of the flood embankment. This ditch is crossed by the Pipe Rack and Jetty Access Road, and runs along the northern boundary of the Temporary Construction Area. Water vole are also assumed present on North Beck Drain (Ditch 4), which was not accessible for survey, but on which there have been several historical records of the species, and which is connected to Ditch 6 and Ditch 7.
- 4.2.4. No water vole evidence was found on any of the ditches within West Site (Ditch 8 and Ditch 9), despite their proximity to known water vole populations in the landfill site to the south. This is due to the lack of permanent water in the ditches, which is sub-optimal for the species. Furthermore, none of the ditches within West Site have any connectivity to ditches/watercourses or waterbodies within the adjacent landfill site that support water vole. The water vole population within the landfill site may also use the high-quality habitat associated with North Beck Drain, which is immediately south of the landfill site.
- 4.2.5. No water vole evidence was identified on the ditch that runs along the northern boundary of Long Strip Woodland (within the Pipe Rack and Jetty Access Road site). This ditch is predominantly dry along the majority of its length, and is culverted beneath Laporte Road (separated into Ditch 3 and Ditch 4 for the purposes of the survey). Only the northernmost few metres of the ditch regularly hold water, and this section is stagnant and largely anoxic, and lacks sufficient aquatic or marginal vegetation to support water vole. Despite its connectivity with Ditch 7 on which water vole field signs were recorded, it is concluded to be unsuitable for the species.







Table 1: Survey Results

Ditch ref	Description	Location relative to site boundary	Water vole field signs	Otter field signs	Photograph
1	A shallow dry ditch approximately 1m wide running on the northern edge of Long Strip woodland. There was leaf litter in the ditch and no evidence of any marginal or aquatic plant species to indicate it regularly holds water. The ditch channel is heavily shaded by mature trees and scrub present on both banks. Connected to Ditch 3 via culvert beneath Laporte Road. Adjacent land: mature woodland and scrub.	Outside Site Boundary. Adjacent to East Site – Hydrogen Production Unit Site	×	x	

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Ditch ref	Description	Location relative to site boundary	Water vole field signs	Otter field signs	Photograph
2	A steep sided dry ditch approximately 0.4m wide running along the northern side of Laporte Road. No aquatic or marginal vegetation. May hold water in winter months. Adjacent land: mature woodland, arable farmland, road.	Outside Site Boundary. Adjacent to Temporary Construction Area	*	×	
3	A shallow, seasonally dry ditch approximately 1m wide running on the northern edge of Long Strip woodland. The ditch is heavily shaded by overhanging scrub and trees from the adjacent woodland, and supports no marginal/ aquatic vegetation. Standing water present in October 2022 appears to have no flow and is generally stagnant and anoxic. Connected to Ditch 1 via culvert beneath Laporte Road.	Within Pipe Rack and Jetty Access Road site	×	x	





Ditch ref	Description	Location relative to site boundary	Water vole field signs	Otter field signs	Photograph
	Connected to Ditch 7. Adjacent land: mature woodland and scrub, industrial land (Associated Petroleum Terminal site)				
4	North Beck Drain. Substantial main drain with tidal influence and tidal flap outfall to the estuary at its northernmost extent. Watercourse is approximately 4m wide with steep sided banks, and supports no aquatic/marginal vegetation. Adjacent land: arable farmland	Outside Site Boundary. Adjacent to Temporary Construction Area.	×	x	





Ditch ref	Description	Location relative to site boundary	Water vole field signs	Otter field signs	Photograph
6	Drainage ditch running along landward toe of flood embankment. The ditch was dry at the time of the survey, although likely to hold water in the winter months. The channel is entirely choked with common reed and there is some shading from scattered bankside scrub. The grassed banks of the flood embankment are regularly mown short. Connected to Ditch 7 and North Beck Drain (Ditch 4). Adjacent land: arable farmland, mown flood embankment.	Crossed by Pipe Rack and Jetty Access Road. Adjacent to Temporary Construction Area		×	





Ditch ref	Description	Location relative to site boundary	Water vole field signs	Otter field signs	Photograph
7	Wide drainage ditch running along landward toe of flood embankment. Abundant common reed and some shading from scattered bankside scrub. The grassed banks of the flood embankment are regularly mown short. Connected to Ditch 6 and North Beck Drain (Ditch 4). Adjacent land: industrial land (Associated Petroleum Terminal site), mown flood embankment, mature woodland.	Crossed by Pipe Rack and Jetty Access Road		×	
8	Man-made ditch created as part of site access to West Site for previous planning application. Ditch is approximately 1.5m wide and was dry along the majority of its length at the time of the survey. The ditch is choked with common reed, and has no connectivity with any other ditches. Adjacent land: neutral grassland	Within West Site	×	x	INUIT IN THE PROPERTY OF THE P





Ditch ref	Description	Location relative to site boundary	Water vole field signs	Otter field signs	Photograph
9	Ditch approximately 1.2m wide; dry along most of its length and choked with common reed. Small amount of shallow water at outlets near road. The southernmost section is entirely overgrown with bramble (<i>Rubus fruticosus</i> agg.) scrub. Adjacent land: neutral grassland.	Within West Site	x	x	





5. Conclusions and Evaluation

5.1. Otter

- 5.1.1. It is possible that otters transiently utilise habitats within the Site Boundary as a place for rest or shelter, given that they are likely present in the nearby Humber Estuary. However there is no evidence of their presence or suitable habitat features to support a permanent holt site within terrestrial habitats closest to the estuary (e.g. Long Strip woodland). The large ditch at the base of the flood embankment (Ditches 5, 6 and 7) has the potential to provide sub optimal foraging habitat for otter (particularly given its proximity and connectivity to the estuary) although no signs of otter were recorded during a survey undertaken in October 2022. North Beck Drain (Ditch 4), which runs along the eastern boundary of the temporary compound off Laporte Road, also provides suitable foraging and resting habitat for otter.
- 5.1.2. All the other ditches within the Site Boundary are considered unsuitable for otter. The ditches within the West Site (both the ditches associated with the original hedgerow boundaries, and those created in recent years as part of the consented development enabling works) are shallow and likely to be predominantly dry most of the time (due to being heavily overgrown with common reed) and therefore would not be expected to support sufficient fish to provide prey for foraging otter. The West Site is surrounded by roads and otters are vulnerable to road traffic injury or fatality, therefore reducing the likelihood of otter being present. No evidence of otter was recorded on these ditches during surveys undertaken in May and October 2022, and it is concluded that the species is likely absent from these parts of the Site.
- 5.1.3. Despite the lack of otter field signs recorded during an otter survey of ditches within the Site boundary undertaken in October 2022, given the recorded presence of otter in the desk study area, it is reasonable to conclude that this species will likely use suitable habitats within and adjacent to the Site boundary for foraging and passage on an occasional basis. The areas of occasional usage are likely to include North Beck Drain (Ditch 4) and the large ditch at the base of the flood embankment (Ditches 5, 6 and 7), as well as the estuary frontage/intertidal mudflats. This is a wide-ranging species that is likely to be found in suitable habitats throughout the Humber catchment, and it is therefore evaluated that these habitats within the Site boundary are of no more than **Local** value to populations of otter.

5.2. Water Vole

5.2.1. Surveys undertaken in 2022 recorded water vole field signs on the large ditch at the base of the flood embankment (Ditches 5 and 7). No water vole field signs were identified on Ditch 6, which is the linking section between Ditches 5 and 7; however, the ditch was dry at the time of the survey and holds very little water, indicating that it may not be suitable for a resident population of water vole. However, given that this stretch of ditch connects to areas of ditch that do hold water, and on which water vole field signs were recorded, it is reasonable to





- assume that individuals may be using this habitat to move between patches of higher suitability ditch habitat.
- 5.2.2. Although no evidence of water vole was observed on North Beck Drain (Ditch 4), given that there are numerous desk study records of water vole on Ditch 4 and it is connected to the ditches referred to above, it is reasonable to conclude for the purposes of the ecological impact assessment that it also supports this species.
- 5.2.3. All the other ditches within the Site Boundary are concluded to be unsuitable for water vole. The ditches within the West Site (both the ditches associated with the original hedgerow boundaries, and those created in recent years as part of the consented development enabling works) are shallow and likely to be predominantly dry most of the time (due to being heavily overgrown with common reed) and therefore would not be expected to support water vole, despite their proximity to the known water vole population within the landfill site to the south of West Site. The ditches were surveyed for water vole in May and October 2022 and no evidence of water vole was found. It is therefore concluded that the species is likely absent from these ditches.
- 5.2.4. The desk study has identified that there are water vole populations on habitats adjacent to the Project boundary; within the landfill site (south of West Site) and North Beck Drain (Ditch 4) (west of the Temporary Compound Area). Water vole is listed on the Local Biodiversity Action Plan ("BAP") as 'widespread' within the county, which is noted to be a population stronghold within the UK despite the national trend for a significant decline in this species. It is therefore evaluated that the water vole population recorded within the Study Area is of **County** nature conservation value. Although most of the ditches in the Site are considered to have low suitability, the Site has habitat which is likely to have at least a minor or intermittent role in supporting this local metapopulation (Ditches 4, 5 and 7). As such, maintaining connectivity to more suitable areas is important and management to maintain habitat.





6. References

- Ref 1-1 The Stationery Office Limited (1981). Wildlife and Countryside Act. (as amended).
- Ref 1-2 The Stationery Office Limited (2019). *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations.*
- Ref 1-3 The Stationery Office Limited (2006). *Natural Environment and Rural Communities Act*.
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- Ref 1-9 Strachan, R., Moorhouse, T., Gelling, M. (2011) *Water Vole Conservation Handbook*. 3rd Edition. Wild Cru, Bristol.





Annex A: Figures

Figure 1: Survey Area

Figure 2: Location of Field Signs and Desk Study Records

