HELIOS RENEWABLE ENERGY PROJECT

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Environmental Statement Appendix 8.3: Otter and Water Vole Report

June 2024

Helios Renewable Energy Project

on behalf of Enso Green Holdings D Limited

Technical Appendix 8.3: Otter and Water Vole Survey

avian ecology

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V1	10/02/2023	Draft Issue.	Liam Quarton *MSc* **Assistant Ecologist**	D Foy *BA (Hons.) MCIEEM* **Principal Ecologist**
V2	16/04/2023	Draft Issue following Site boundary changes.	Liam Quarton *MSc* **Assistant Ecologist**	D Foy *BA (Hons.) MCIEEM* **Principal Ecologist**
V3	16/06/2023	Draft following 2023 survey completion.	D Foy *BA (Hons.) MCIEEM* **Principal Ecologist**	A Logan *MSc MCIEEM* **Principal Ecologist**
V4	26/02/2024	Minor Amendments Update report for submission with ES Chapter	C Scott *MRes ACIEEM* ***Senior Ecologist***	

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1 INTRODUCTION

1.1 Background

1.1.1 Avian Ecology Ltd. ('AEL') was commissioned by Enso Green Holdings D Limited (the Applicant) to undertake otter *Lutra lutra* and water vole *Arvicola amphibius* surveys, in relation to the proposed development of a renewable energy generating project; consisting of ground-mounted solar photovoltaic arrays, together with on-site energy storage, associated infrastructure and grid connection (the 'Proposed Development'), on land to the south-west of the village of Camblesforth and to the north of the village of Hirst Courtney in North Yorkshire (the 'Site'), as illustrated on **Figures 8.22** and **8.23.**

1.1.2 This report subsequently provides detailed survey methodology and results and should be read with reference to Chapter 8 Biodiversity of the Environmental Statement (ES) to be submitted in support of the application for development consent.

1.2 Site Overview

1.2.1 The Site as illustrated by the red-line boundary, shown on **Figures 8.22** and **8.23**, predominantly comprising arable fields marked by a series of wet and dry ditches, ponds, hedgerows, and woodlands. In the wider context, the Site is surrounded by further extensive areas of farmland and areas of woodland.

1.3 Legislation

Otter

1.3.1 Otters are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended)[1]; they receive further protection under the Conservation of Habitats and Species Regulations 2017 (as amended)[2] and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[3]. The Act and Regulations make it an offence to:

- Deliberately capture, injure, or kill an otter;
- Damage or destroy a breeding site or resting place;
- Deliberately disturb an otter, particularly in a way which is likely to:
  - a) to impair their ability to survive, breed or reproduce, rear or nurture young; or,
  - b) to significantly affect the local distribution or abundance of the species.

Water Vole

1.3.2 Water voles are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); It is an offence to intentionally or recklessly:

- kill, injure or take them;
- possess or control them (alive or dead);
- damage or destroy a structure or place used for shelter or protection;
- disturb them in a place used for shelter or protection; and,
- obstruct access to a place used for shelter or protection.

[1] Wildlife and Countryside Act 1981. Available at: https://www.legislation.gov.uk/ukpga/1981/69
[2] Conservation of Habitats and Species Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made
[3] Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at: https://www.legislation.gov.uk/ukdsi/2019/9780111176573

1.3.3 Both otter and water vole are also listed under Section 41 of the Natural Environment and Rural Communities Act (NERC) Act 2006[4] and are listed as a priority species within the Selby Biodiversity Action Plan[5] and are therefore a material consideration within the planning process.

[4] The Natural Environment and Rural Communities Act 2006. Available at: https://www.legislation.gov.uk/ukpga/2006/16/contents
[5] Available at: https://www.northyorks.gov.uk/sites/default/files/2023-05/Selby%20Biodiversity%20Action%20Plan%20Aug%202004.pdf (accessed 16th June 2023)

2 METHODOLOGY

2.1 Desktop Study

2.1.1 Biological record data regarding protected and notable species (including otter and water voles) was requested from the North and East Yorkshire Ecological Data Centre ('NEYEDC')[6]. A 2km search radius was used from the Site boundary.

2.1.2 Only recent records dated from 2005 onwards were used unless historic records (pre-2005) were received from within (or within close proximity to) the Site and/or historic records were considered otherwise pertinent to the Proposed Development.

2.1.3 The desktop study also included a data search for records of North American Mink *Neovison vison*; a Wildlife and Countryside Act 1981 (as amended) Schedule 9 non-native invasive species; which is known to be a major predator of water vole.

2.2 Field Surveys

2022 Survey Coverage

2.2.1 Surveys for both otter and water vole were undertaken on a precautionary basis and focused upon sections of wet (or seasonally wet) ditch networks identified by the Applicant which (however unlikely), at that stage of the project design process, minimal ditch/bankside impacts could not be precluded.

2.2.2 The survey of the Site was undertaken on 29th and 30th September 2022, 1st and 2nd October 2022, and 15th October 2022. Following from subsequent changes to the Site boundary, a number of ditch sections subject to surveys are now located beyond the Site boundary. However, for context, these have been referred to within the report and associated figures.

2.2.3 The 2022 survey areas are presented within **Figure 8.22**.

2023 Survey Coverage

2.2.4 Due to confirmation by the Applicant that some ditch networks surveyed in 2022 would not be impacted by the Proposed Development, the survey effort was reduced for both otter and water vole, survey coverage continued to adopt a precautionary approach and focused upon sections of wet (or seasonally wet) ditch networks identified which (however unlikely), at that stage of the project design process, minimal ditch/bankside impacts could not be precluded.

2.2.5 The surveys were undertaken between 16th and 19th May 2023.

2.2.6 The 2023 survey areas are presented within **Figure 8.23**.

Otter Survey

2.2.7 The survey involved systematically walking within the channel and along the top of the banks of all potentially suitable watercourses/ditches within the Site boundary. Terrestrial habitat was also surveyed, including 30m either side of the watercourses (where access allowed).

[6] Available at: https://www.neyedc.org.uk/ (accessed 22nd February 2023)

2.2.8 The surveyors searched for field signs, including spraints, footprints, resting places, pathways, slides, feeding remains, jelly and smears. Otters are mainly nocturnal and sparsely distributed. Any direct observations would also be recorded. A description of otter field signs searched for during the field surveys are provided below:

- **Spraints**: all raised places like rocks or tree stumps located along the watercourses were checked for spraints. Otter droppings, when fresh, are black and tarry with an oily smell, as they get older they become dry and grey/white/green in colour. Spraints often contain fish bones and scales/exoskeleton/crabs and amphibian bones. They have a distinctive smell often described as jasmine tea, fresh mown hey and are slightly sweet and fishy.

- **Footprints**: all otter prints are recorded if found, they are a characteristic field sign but can be difficult to find. The best places to look for tracks are muddy riverbanks. Otters have five toes, with their toe prints often tear dropped shape.

- **Resting Sites**: these can be below and/or above ground. Below ground resting sites include burrows/ tunnels, cavities in undercut banks, under tree roots, enclosed drainage structures, cavities behind bank protection and other man-made structures such as drains/pipes and jetties. Resting places above ground include dense scrub, flood debris and reed beds. Resting places are generally categorised within the three categories below:

  - Holt: An underground or other fully enclosed shelter, of which the full extent cannot be seen, can range from enlarged rabbit holes and cavities amongst tree roots to rock piles and man-made structures.
  - Hover: An above ground, semi-enclosed resting place, often found under overhanging riverbanks or tree root plates.
  - Couch: A nest-like structure (0.3m-1m in diameter) constructed from nearby vegetation or a depression in a stick pile.

  Resting sites also include natal holts, which are inconspicuous with few field signs present. They can be several hundred meters from watercourses and are believed to be located away from areas of other otter activity (off main rivers). Rearing holts are more conspicuous, tending to be located close to food sources with significant number of spraints and field signs nearby, when they are in use. Both natal holts and rearing holts are below ground resting sites.

- Other field signs: other field signs include feeding remains such as fish remains, but they can be difficult to confirm as being otter. They can also create pathways and slides on the riverbanks/ditches, often going in and out of the water or to favoured feeding sites/resting areas, although these are not characteristic and can be used/created by other mammals such as badger and dogs etc. Otters can also deposit anal jelly and smears, but these are rarely found.

Water Vole Survey

Habitat Suitability Assessment

2.2.9 Habitat suitability assessments were undertaken to determine whether or not habitat likely to be suitable for and preferred by water voles was present and to distinguish any variation of habitat suitability for the species within the survey area.

2.2.10 The habitat assessment was undertaken with reference to '*Habitat survey assessment guidelines*' for water vole prepared by Cheshire Wildlife Trust and adapted from '*A Method for Assessing Water Vole*

Habitat Suitability' (Harris *et al*., 2009)[7]. **Table 2.1** (below) provides the water vole habitat suitability assessment scoring methodology.

Table 2.1: Water Vole Habitat Assessment Scoring Criteria

Habitat score	Habitat Suitability for water Voles	Notes
≤2	Unsuitable	Water voles usually absent.
3-6	Sub-optimal	Occasional field signs for water vole, particularly in late summer when numbers are higher.
7-10	Optimal	Water voles usually present.

2.2.11 Detailed habitat assessment results are presented in **Annex 1**.

Water Vole Detection Dog Survey

2.2.12 Water vole surveys were undertaken on the 29th and 30th September 2022, the 1st and 2nd October 2022, and 15th October 2022 by highly trained detection dogs and suitably qualified and Natural England licenced and Land Management and Production, Animal Health and Welfare and Environmental Industries ('LANTRA') registered wildlife detection dog handlers from Conservation K9 Consultancy[8]. A total of two wildlife detection dog handlers and three detection dogs undertook water vole surveys on-Site between 29th September and 2nd October 2022, and a single handler and 4 dogs on the 15th October 2022. The ditch network surveyed Is shown in **Figure 8.22**.

2.2.13 The use of water vole detection dogs for survey purposes is relatively new, this methodology can detect the presence of species in the hardest to reach parts of habitats with minimal disturbance. They are able to search meticulously in a habitat covering large areas quickly, with minimal disturbance to the surrounding wildlife and habitat. The dogs are trained to give a passive indication on their target. They will freeze whilst using their nose to point at the target.

2.2.14 Grimm-Seyfarth *et al*. (2001)[9] systematic review examined 611 cases comparing efficacy of conservation dogs to other monitoring methods. The authors found that in 88.71% of cases, conservation detection dogs outperformed other methods such as camera traps, experienced human surveyors, hairs snares and scent stations.

Visual Searches

2.2.15 In addition to the use of detection dogs, a suitably experienced supervising ecologist from AEL, also accompanied the detection dog team and undertook water vole visual surveys based on methods detailed within Dean *et al* (2016)[10]. In addition, the second survey undertaken between 16th and 19th May 2023, involved a team of up to six surveyors systematically undertaking visual searches based on methods detailed within Dean *et al* (2016).

2.2.16 Searches for the following field signs of water vole presence as per Strachan *et al*. (2011)[11] were undertaken along each survey section:

- Sightings;

[7] Harris, J., Markwell, H. & Raybould, B. (2009) A method for assessing water vole habitat suitability. *Ecology and Environmental Management - In Practice*, **65**, pp. 28 -
[8] Available at: https://conservationk9consultancy.com/use-of-dogs-in-conservation/ (accessed 23rd February 2023)
[9] Available at: https://besjournals.onlinelibrary.wiley.com/doi/10.1111/2041-210X.13560 (accessed 23rd February 2023)
[10] Dean, M., Strachan, R., Gow, D. & Andrews, R. (2016) *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.
[11] Strachan, R., Moorhouse, T. & Gelling, M. (2011). *The water vole conservation handbook (3rd edition)*. Wildcru, Oxford.

- Latrines;
- Burrows;
- Footprints;
- Pathways;
- Nests;
- Feeding stations; and,
- Lawns.

Population Density Estimates

2.2.17 The presence of water vole droppings and latrines are the only field signs that can be reliably used to confirm the species presence. Other signs are used as corroborative evidence of small mammal activity such as burrows and paths.

2.2.18 The number of latrines recorded during a survey helps provide an indication of relative population densities and identify the most important parts of a survey area for water vole for the purposes of assessing impacts and approach to mitigation.

2.2.19 **Table 2.2** outlines an approach to estimating the relative population densities on the basis of latrine counts in accordance with current guidance (Dean *et al*., 2016).

Table 2.2: Relative Water Vole Population Densities on the Basis of Latrine Counts.

Relative Population Density	**Approximate number of latrines per 100m of bankside habitat**	
	First half of survey season (mid-April to end of June)	**Second half of survey season (July to September)**
High	10 or more	20 or more
Medium	3-9	6-19
Low	≤2 (or non, but with other confirmatory field signs)	≤5 (or non, but with other confirmatory field signs)

3 BASELINE INFORMATION

3.1 Desk Study Results

Designated Sites

3.1.1 A review of MAGIC identified a total of three statutory designated sites within a 10km radius of Site (i.e., River Derwent SAC and SSSI, and Lower Derwent Valley SAC) which include the presence of otter as qualifying features, the closest being the River Derwent SSSI located approximately 2.2km north-east of the Site boundary.

3.1.2 Additionally, a single statutory designated site (i.e., Barlow Common LNR) notable for the presence of water vole was also identified via MAGIC, located approximately 500m north of the Site boundary.

3.1.3 Data returned by NEYEDC identified no non-statutory designated sites located within 2km of the Site which feature qualifying features for either otter or water vole.

Species Records

Otter

3.1.4 NEYEDC returned a single recent record in relation to otter from within 2km of the Site; specifically relating to two juveniles observed in association with the Selby Canal approximately 1.7km northwest of the Site boundary.

3.1.5 Additionally, a further three historical records for otter were also returned, although none were recorded directly on-Site, with the closest in relation to the Site having been recorded approximately 1.7km northwest of the Site boundary also in association with the Selby Canal.

3.1.6 A review of MAGIC identified no European Protected Species mitigation licenses ('EPSML') relating to otter awarded by Natural England within 2km of the Site boundary.

Water Vole

3.1.7 The data search returned two recent water vole records within 2km of the Site. Records were made during 2009 and 2011, respectively located 1.7km and 1.1km north of the Site. Both records were located north of the neighbouring Drax Power Station in a network of ditches and ponds.

3.1.8 Five historical water vole records were also returned in the data search dating between 1977 and 2002. Of these, four were recorded between 2000 and 2002. Records were made in freshwater habitats in the wider environment, such as Selby Canal, various drainage ditches and the River Derwent.

North American Mink

3.1.9 NEYEDC returned two recent records relating to American mink; whilst no records were recorded directly on-Site, the closest in proximity was recorded approximately 1.8km north-west, in association with the Selby Canal.

3.2 Field Survey Results: Otter

3.2.1 No otter field signs were recorded throughout the surveys, in addition, no otter field signs were recorded during habitat surveys and other ecological surveys undertaken within and surrounding the Site in 2021, 2022 and 2023.

3.3 Field Survey Results: Water Vole

Habitat Assessment

3.3.1 Aquatic habitats present within the Site have varying suitability for water vole, ranging from unsuitable to optimal habitats. Aquatic habitat connectivity to further watercourses/ditch networks located outside of the Site boundary also provide the species with potential habitat corridors to move between sites and potentially colonise watercourses within the Site.

3.3.2 It should be noted that the large majority of ditches located within the Site are currently being intensively managed; with bankside vegetation flailed on at least an annual basis (see photographs within **Annex 2**); this significantly reduces the potential for the habitat to sustain water vole populations during the winter months.

3.3.3 **Table 3.1** provides a summary of the assessment for each ditch section surveyed. Detailed results and photographs are presented in **Annex 1.**

Table 3.1: Water Vole Habitat Assessment Results

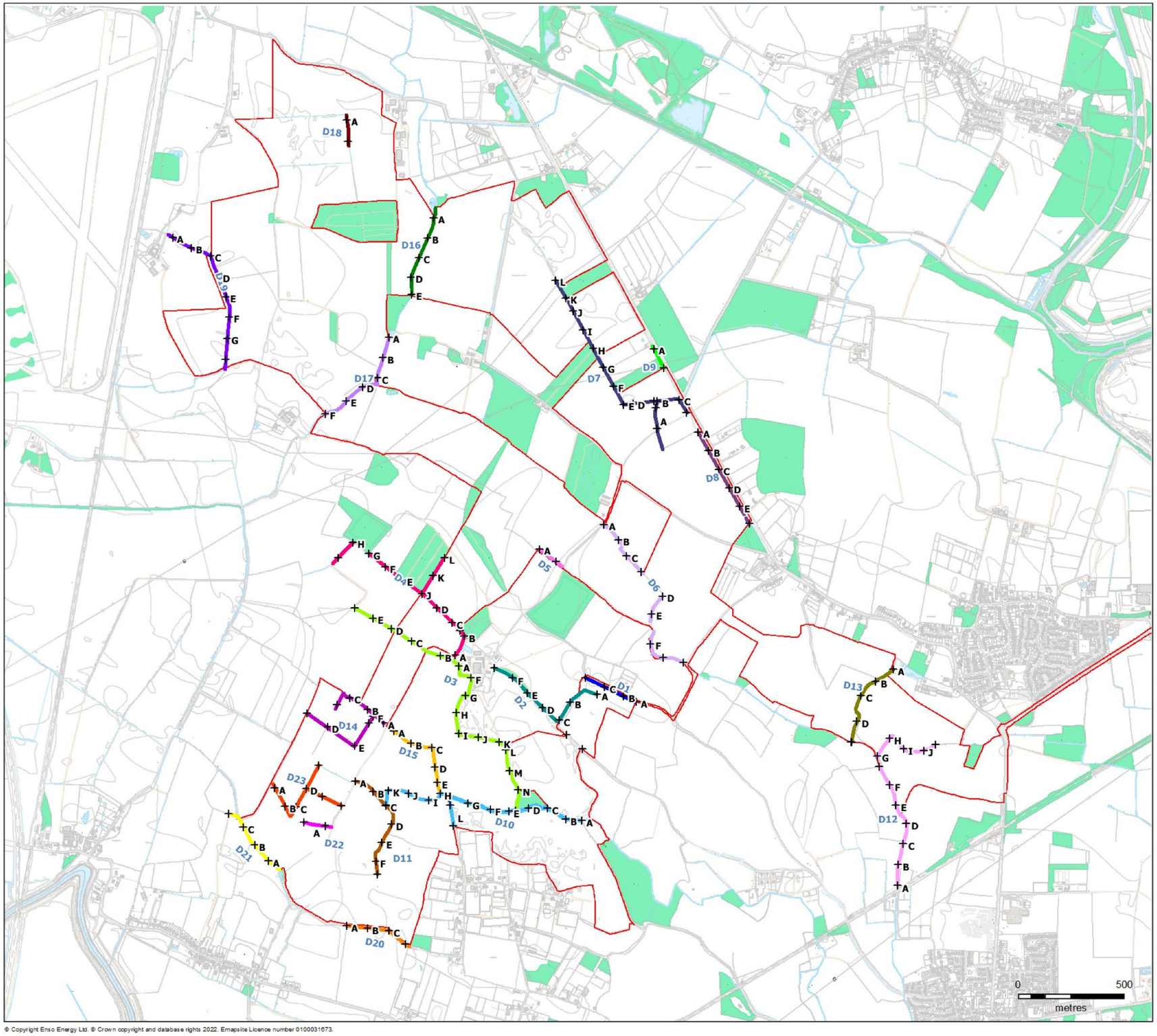
Ditch Section Habitat Suitability		
Unsuitable	**Sub-optimal**	**Optimal**
D3: M, N **D4:** J, K, L **D5:** A **D14:** B, D, E, F **D23**: A	**D1:** A, B, C **D2:** A. B. C, D, E, F **D3**: A, B, C, D, E, H, I, J, K **D4:** A, B, C, D, E, F, G, H, I **D6:** A, B, C, D, E, F **D7:** A, B, C, D, E, F, G, H, I, J, K, L **D8:** A, B, C, D, E **D9:** A **D10:** A, B, C, D, E, F, G, H, I, J, K, L **D11:** A, B, C, D, E, F **D12:** A, B, C, D, E, F, G, H, I, J **D13:** A, B, C, D **D14**: A, C **D15:** B **D16:** A **D17:** A, B, C, D, E, F **D18:** A **D19:** A, B, C, D, E, F, G **D20:** A, B, C **D21:** A, B, C **D22:** A **D23:** B, C, D **D24:** D	**D3:** F, G, L **D15:** A, A, C, D, E **D16:** B, C, D, E **D24**: A, B, C
Total: 11	**Total: 112**	**Total: 15**

Field Survey Results

3.3.4 No evidence of water voles (i.e., latrines, feeding remains etc) was found within the Site boundary. A number of rat burrows (with droppings) and field vole/bank vole burrows were noted during the survey, single rat droppings were recorded sporadically throughout the survey area during the surveys.

3.3.5 At no point during the surveys did water vole detection dogs indicate that water vole scent and/or field signs had been found.

FIGURE 8.22: 2022 WATER VOLE AND OTTER SURVEY LAYOUT



Key

Site Boundary

Ditch Survey Area

- D1
- D2
- D3
- D4
- D5
- D6
- D7
- D8
- D9
- D10
- D11
- D12
- D13
- D14
- D15
- D16
- D17
- D18
- D19
- D20
- D21
- D22
- D23

\+ 100m Ditch Section (x)

N
W
E
S

HELIOS RENEWABLE ENERGY PROJECT

Project Title

Helios Renewable Energy Project

Drawing Title

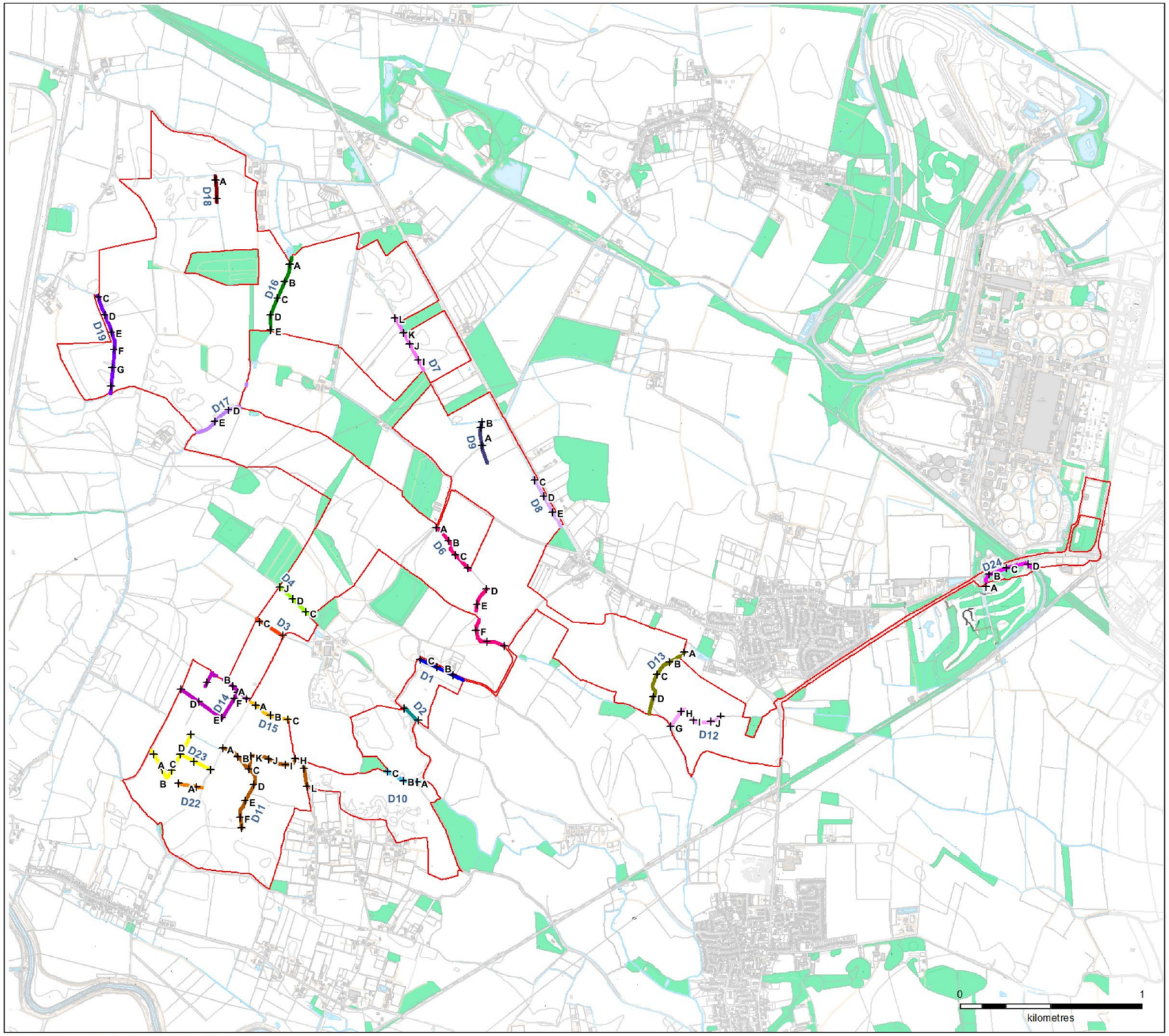
Water Vole and Otter Survey Plan (2022)

DRWG No	Rev	Sht no

Drawn by	Checked by
HD	HF

Scale	Date
1:17,000 @A3	12/03/2024

FIGURE 8.23: 2023 WATER VOLE AND OTTER SURVEY LAYOUT



Key

- Site Boundary

Ditch Survey Area

- D1
- D2
- D3
- D4
- D6
- D7
- D8
- D9
- D10
- D11
- D12
- D13
- D14
- D15
- D16
- D17
- D18
- D19
- D22
- D23
- D24

\+ 100m Ditch Section (x)

N
W
E
S

HELIOS RENEWABLE ENERGY PROJECT

Project Title: Helios Renewable Energy Project		
Drawing Title: Water Vole and Otter Survey Plan (2023)		
DRWG No	Rev	Sht no
Drawn by: HD	Checked by: HF	
Scale: 1:20,000 @A3	Date: 12/03/2024	

Annex 1

Water Vole Habitat Suitability Assessment

Ditch Section	D1 A, B, C	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Lake Upland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	- A A N N A -
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m		Rapid Fast Slow Sluggish Static	

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels		**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**3**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 1 & Photo 2.

Ditch Section	D2 A, B, C, D, E, F	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	O F F N N F F
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m		Rapid Fast Slow Sluggish Static	x

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)		**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**4**	

Comment(s):	Depth/Current - Dry

Photograph(s): Appendix 2; Photo 3 & Photo 4.

Ditch Section	D3 A, B, C, D, E	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	N
Dyke		Sand		Permanent/temporary grass		Bushes	N
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop		Tall grass	D
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x	<0.5m		Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°	x	2-5m		1-2m		Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**4**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 5.

Ditch Section	D3 F, G	Date	1st October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	F
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt	x	Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth		Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop		Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	-
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m		Rapid	
Shallow <45°		1-2m	x	0.5-1m		Fast	
Steep >45°	X	2-5m		1-2m		Slow	
Vertical/undercut		5-10m		>2m		Sluggish	
		10-20m				Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**7**	

Comment(s):	Himalayan balsam present.

Photograph(s): Appendix 2; Photo 6.

Ditch Section	D3 H	Date	1st October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	F
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop		Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	-
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m	x	Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**4**	

Comment(s):	Himalayan balsam present.

Photograph(s): Appendix 2; Photo 7.

Ditch Section	D3 -I, J, K,	Date	1st October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	-
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	-
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop		Tall grass	A
Marsh/bog		Earth Cliffs	x	Salt marsh		Short grass	A
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m	x	Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)		**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**3**	

Comment(s):	Small mammal burrows observed, attributed to field vole.

Photograph(s): Appendix 2; Photo 8.

Ditch Section	D3 L			Date	1st October 2022	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**	
Ditch	x	Boulders		Upland grass		Bankside trees	-
Dyke		Sand		Permanent/temporary grass		Bushes	**F**
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	-
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	**A**
Running Water		Rock cliffs		Arable crop		Tall grass	**A**
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	**A**
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m				Fast	
Steep >45°	x	2-5m		<0.5m		Slow	
Vertical/undercut		5-10m		0.5-1m		Sluggish	
		10-20m		1-2m	x	Static	x
		20-40m		>2m			
		>40m	x				
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)							
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover					x		
(b) A good variety of food plants including favoured plants and winter food sources					x		
(c) Suitable refuge areas above extremes in water levels					x		
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	***DAFORN**	
(e) Water permanently present (does not dry up)						**D**ominant 81-100%	
(f) Open water for swimming					x	**A**bundant 61-80%	
(g) Ledge or berm present at or close to water level						**F**requent 41-60%	
(h) Lack of damage or erosion to the banks						**O**ccasional 21-40%	
(i) Slow flowing current or static water					x	**R**are 1-20%	
(j) Non-native invasive plant species absent (HB, JK, GH etc)					x	**N**one 0%	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					**7**		
Comment(s):							
Photograph(s): Appendix 2; Photo 9.							

Ditch Section	D3 M, N			Date	1st October 2022	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**	
Ditch	x	Boulders		Upland grass		Bankside trees	
Dyke		Sand		Permanent/temporary grass		Bushes	
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	
Lowland Lake		Silt		Conifer wood		Submerged weed	
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	x
Running Water		Rock cliffs		Arable crop		Tall grass	
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**	
Flat <10°	x	1m				Rapid	
Shallow <45°		1-2m				Fast	
Steep >45°		2-5m		<0.5m		Slow	
Vertical/undercut		5-10m	x	0.5-1m		Sluggish	
		10-20m		1-2m		Static	
		20-40m		>2m			
		>40m					
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)							
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover							
(b) A good variety of food plants including favoured plants and winter food sources							
(c) Suitable refuge areas above extremes in water levels					x		
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	***DAFORN**	
(e) Water permanently present (does not dry up)						**D**ominant 81-100%	
(f) Open water for swimming						**A**bundant 61-80%	
(g) Ledge or berm present at or close to water level						**F**requent 41-60%	
(h) Lack of damage or erosion to the banks						**O**ccasional 21-40%	
(i) Slow flowing current or static water						**R**are 1-20%	
(j) Non-native invasive plant species absent (HB, JK, GH etc)						**N**one 0%	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					**2**		
Comment(s):	Himalayam balssam present.						
Photograph(s): Appendix 2; Photo 10.							

Ditch Section	D4 A, B, C, D, E, F, G, H, II	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Lake Upland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	 A O A A
						Disturbance: TBC	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m		Rapid Fast Slow Sluggish Static	

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)		**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**3**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 11.

Ditch Section	D4 J, K, L	Date	29TH September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	- - A - O A A
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m		Rapid Fast Slow Sluggish Static	

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)		**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**2**	

Comment(s):	Depth/Current – Dry . Himalayan balsam present. .

Photograph(s): Appendix 2; Photo 12.

Ditch Section	D5 A	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch		Boulders		Upland grass		Bankside trees	**O**
Dyke	**x**	Sand	**x**	Permanent/temporary grass		Bushes	**D**
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	**O**
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	**x**	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop		Tall grass	**O**
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	-
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	**x**		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	**x**			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	**x**	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		
(c) Suitable refuge areas above extremes in water levels		
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	**x**	
(e) Water permanently present (does not dry up)		
(f) Open water for swimming		
(g) Ledge or berm present at or close to water level		
(h) Lack of damage or erosion to the banks		
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	**x**	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**2**	

***DAFORN**
Dominant 81-100%
Abundant 61-80%
Frequent 41-60%
Occasional 21-40%
Rare 1-20%
None 0%

Comment(s):	Depth/Current – Dry

Photograph(s): Appendix 2; Photo 13.

Ditch Section	D6 A, B, C	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch		Boulders		Upland grass		Bankside trees	**O**
Dyke	**x**	Sand	**x**	Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	-
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	**x**	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop		Tall grass	-
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	**D**
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	**x**		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	**x**			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	**x**	5-10m		1-2m		Sluggish	**x**
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		
(c) Suitable refuge areas above extremes in water levels	**x**	
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	**x**	
(e) Water permanently present (does not dry up)		
(f) Open water for swimming		
(g) Ledge or berm present at or close to water level		
(h) Lack of damage or erosion to the banks		
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	**x**	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**3**	

***DAFORN**
Dominant 81-100%
Abundant 61-80%
Frequent 41-60%
Occasional 21-40%
Rare 1-20%
None 0%

Comment(s):	Depth/Current – Dry

Photograph(s): Appendix 2; Photo 14.

Ditch Section	D6 D, E, F	Date	30th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	F
Dyke		Sand		Permanent/temporary grass		Bushes	O
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	-
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m				Fast	
Steep >45°		2-5m		<0.5m		Slow	
Vertical/undercut	x	5-10m	x	0.5-1m		Sluggish	
		10-20m		1-2m		Static	
		20-40m		>2m			
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources	x	*DAFORN
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	4	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 15.

Ditch Section	D7 A	Date	29TH September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop	x	Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m				Fast	
Steep >45°		2-5m		<0.5m		Slow	
Vertical/undercut	x	5-10m	x	0.5-1m		Sluggish	
		10-20m		1-2m		Static	
		20-40m		>2m			
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		*DAFORN
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	3	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 16.

Ditch Section	D7 B, C	Date	29th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop		Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)		**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**4**	

Comment(s):	Reedmace and duckweed present.

Photograph(s): Appendix 2; Photo 17.

Ditch Section	D7 D, E	Date	30th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	F
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop		Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m	x	<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**6**	

Comment(s):	Japanese knotweed present in field adajacent.

Photograph(s): Appendix 2; Photo 18.

Ditch Section	D7 F, G, H, I, J, K	Date	30th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	F
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	O
Running Water		Rock cliffs		Arable crop	x	Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m	x	<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**3**	

Comment(s):

Photograph(s): Appendix 2; Photo 19.

Ditch Section	D7 L	Date	30th September 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	A
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland	x	Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	-
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m	x	<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**5**	

Comment(s):

Photograph(s): Appendix 20; Photo 20.

Ditch Section	D8 A, B, C, D, E			Date	30th September 2022	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**
Ditch	x	Boulders		Upland grass		Bankside trees **O**
Dyke		Sand		Permanent/temporary grass		Bushes **-**
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs **F**
Lowland Lake		Silt		Conifer wood		Submerged weed **-**
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges **O**
Running Water		Rock cliffs		Arable crop	x	Tall grass **A**
Marsh/bog		Earth Cliffs		Salt marsh		Short grass **F**
Canal		Canalized		Urban/industrial		**Disturbance:**
		Poached		Park/garden		
		Reinforced		Heath		
				Fen		
				Cattle/grazing SHEEP		
				Bank fenced		
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**
Flat <10°		1m		<0.5m		Rapid
Shallow <45°		1-2m	x	0.5-1m		Fast
Steep >45°		2-5m		1-2m		Slow
Vertical/undercut	x	5-10m		>2m		Sluggish
		10-20m				Static
		20-40m				
		>40m				
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)						
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover						
(b) A good variety of food plants including favoured plants and winter food sources						***DAFORN**
(c) Suitable refuge areas above extremes in water levels					x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)						**F**requent 41-60%
(f) Open water for swimming						**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level						**R**are 1-20%
(h) Lack of damage or erosion to the banks						**N**one 0%
(i) Slow flowing current or static water						
(j) Non-native invasive plant species absent (HB, JK, GH etc)					x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					**3**	
Comment(s):	Depth/Current – damp, but no standing water. Small mammal burrows present.					
Photograph(s): Appendix 2; Photo 21.						

Ditch Section	D9 A			Date	30th September 2022	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**
Ditch	x	Boulders		Upland grass		Bankside trees **F**
Dyke		Sand		Permanent/temporary grass		Bushes **F**
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs **F**
Lowland Lake		Silt		Conifer wood		Submerged weed **-**
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges **-**
Running Water		Rock cliffs		Arable crop	x	Tall grass **F**
Marsh/bog		Earth Cliffs		Salt marsh		Short grass **F**
Canal		Canalized		Urban/industrial	x	**Disturbance:**
		Poached		Park/garden		Located adjacent to road
		Reinforced		Heath		
				Fen		.
				Cattle/grazing SHEEP		
				Bank fenced		
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**
Flat <10°		1m		<0.5m		Rapid
Shallow <45°		1-2m	x	0.5-1m		Fast
Steep >45°		2-5m		1-2m		Slow
Vertical/undercut	x	5-10m		>2m		Sluggish
		10-20m				Static
		20-40m				
		>40m				
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)						
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover					x	
(b) A good variety of food plants including favoured plants and winter food sources					x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels					x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)						**F**requent 41-60%
(f) Open water for swimming						**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level						**R**are 1-20%
(h) Lack of damage or erosion to the banks						**N**one 0%
(i) Slow flowing current or static water						
(j) Non-native invasive plant species absent (HB, JK, GH etc)					X	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					**5**	
Comment(s):	Depth/Current – Dry.					
Photograph(s): Appendix 2; Photo 22.						

Ditch Section	D10 A, B, E, F, H, I	Date	1st October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	O
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	A
Running Water		Rock cliffs		Arable crop	x	Tall grass	-
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	A
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m		Rapid	
Shallow <45°		1-2m	x	0.5-1m		Fast	
Steep >45°		2-5m		1-2m	x	Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	6	

Comment(s):

Photograph(s): Appendix 2; Photo 23.

Ditch Section	D10 C, D	Date	1st October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	A
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	O
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	A
Running Water		Rock cliffs		Arable crop	x	Tall grass	O
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	A
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m		Rapid	
Shallow <45°		1-2m	x	0.5-1m		Fast	
Steep >45°		2-5m		1-2m	x	Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	6	

Comment(s):

Photograph(s): Appendix 2; Photo 24.

Ditch Section	D10 G			Date	1st October 2022	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**	
Ditch	x	Boulders		Upland grass		Bankside trees	**O**
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	**O**
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	**A**
Running Water		Rock cliffs		Arable crop		Tall grass	-
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	**A**
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**	
Flat <10°		1m		<0.5m		Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°		2-5m		1-2m		Slow	
Vertical/undercut	x	5-10m		>2m	x	Sluggish	
		10-20m	x			Static	x
		20-40m					
		>40m					
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)							
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover							
(b) A good variety of food plants including favoured plants and winter food sources						***DAFORN**	
(c) Suitable refuge areas above extremes in water levels					x	**D**ominant 81-100%	
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	**A**bundant 61-80%	
(e) Water permanently present (does not dry up)					x	**F**requent 41-60%	
(f) Open water for swimming					x	**O**ccasional 21-40%	
(g) Ledge or berm present at or close to water level						**R**are 1-20%	
(h) Lack of damage or erosion to the banks						**N**one 0%	
(i) Slow flowing current or static water					x		
(j) Non-native invasive plant species absent (HB, JK, GH etc)							
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					5		
Comment(s):	Himalayan balsam present.						
Photograph(s): Appendix 2; Photo 25.							

Ditch Section	D10 J, K, L			Date	1st October 2022	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**	
Ditch	x	Boulders		Upland grass		Bankside trees	**O**
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	**F**
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	**F**
Running Water		Rock cliffs		Arable crop		Tall grass	**F**
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	**F**
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath		Evidence of human disturbance (i.e., tyre tracks).	
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced	x		
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)							
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover							
(b) A good variety of food plants including favoured plants and winter food sources						***DAFORN**	
(c) Suitable refuge areas above extremes in water levels					x	**D**ominant 81-100%	
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	**A**bundant 61-80%	
(e) Water permanently present (does not dry up)						**F**requent 41-60%	
(f) Open water for swimming						**O**ccasional 21-40%	
(g) Ledge or berm present at or close to water level						**R**are 1-20%	
(h) Lack of damage or erosion to the banks						**N**one 0%	
(i) Slow flowing current or static water							
(j) Non-native invasive plant species absent (HB, JK, GH etc)					x		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					3		
Comment(s):	Depth/Current – Damp.						
Photograph(s): Appendix 2; Photo 26.							

Ditch Section	D11 A, B, C, D, E, F	Date	1st October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	F
Running Water		Rock cliffs		Arable crop	x	Tall grass	O
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	A
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	X	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	3	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 27.

Ditch Section	D12 A, B	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	-
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	A
Running Water		Rock cliffs		Arable crop	x	Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m	x	0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
	x	10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	5	

Comment(s):	D12.A featured rat droppings.

Photograph(s): Appendix 2; Photo 28.

Ditch Section	D12 C, D, E, F	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	A
Running Water		Rock cliffs		Arable crop		Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m	x	Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°	x	2-5m	x	1-2m		Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources	x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	6	

Comment(s):

Photograph(s): Appendix 2; Photo 29.

Ditch Section	D12 G, H	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	F
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop		Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial			
		Poached		Park/garden		**Disturbance:**	
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP	x		
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m	x	Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°	x	2-5m	x	1-2m		Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	5	

Comment(s):

Photograph(s): Appendix 2; Photo 30.

Ditch Section	D12 I, J	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	R
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	A
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	A
Running Water		Rock cliffs		Arable crop	x	Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m	x	<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**4**	

Comment(s):

Photograph(s): Appendix 2; Photo 31.

Ditch Section	D13 A, B, C	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	O
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m	x	<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**6**	

Comment(s):

Photograph(s): Appendix 2; Photo 32.

Ditch Section	D13 D	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	O
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	O
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	A
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	6	

Comment(s):

Photograph(s): Appendix 2; Photo 33.

Ditch Section	D14 A, C	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:** D14.A featured oil in ditch water – pollution evident.	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m	x	Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	6	

Comment(s):

Photograph(s): Appendix 2; Photo 34.

Ditch Section	D14 B, D, E, F	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	R
Dyke		Sand		Permanent/temporary grass		Bushes	F
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	O
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	-
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°	x	2-5m		0.5-1m		Slow	
Vertical/undercut		5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover		***DAFORN**
(b) A good variety of food plants including favoured plants and winter food sources		**D**ominant 81-100%
(c) Suitable refuge areas above extremes in water levels		**A**bundant 61-80%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**F**requent 41-60%
(e) Water permanently present (does not dry up)		**O**ccasional 21-40%
(f) Open water for swimming		**R**are 1-20%
(g) Ledge or berm present at or close to water level		**N**one 0%
(h) Lack of damage or erosion to the banks		
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**2**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 35.

Ditch Section	D15 A, C, D, E	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	R
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	F
Running Water		Rock cliffs		Arable crop	x	Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced	x	Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°	x	2-5m		0.5-1m		Slow	
Vertical/undercut		5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	***DAFORN**
(b) A good variety of food plants including favoured plants and winter food sources	x	**D**ominant 81-100%
(c) Suitable refuge areas above extremes in water levels	x	**A**bundant 61-80%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**F**requent 41-60%
(e) Water permanently present (does not dry up)	x	**O**ccasional 21-40%
(f) Open water for swimming		**R**are 1-20%
(g) Ledge or berm present at or close to water level		**N**one 0%
(h) Lack of damage or erosion to the banks		
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**7**	

Comment(s):	

Photograph(s): Appendix 2; Photo 36.

Ditch Section	D15 B	Date	2nd October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	R
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	F
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	F
Running Water		Rock cliffs		Arable crop	x	Tall grass	A
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	x			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources	x	*DAFORN
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	5	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 37.

Ditch Section	D16 A	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	F
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland	x	Herbs	A
Lowland Lake		Silt		Conifer wood		Submerged weed	--
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	F
Running Water		Rock cliffs		Arable crop	x	Tall grass	F
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m	x	0.5-1m		Slow	
Vertical/undercut	x	5-10m		1-2m		Sluggish	
		10-20m		>2m	x	Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources	x	*DAFORN
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	5	

Comment(s):	Depth/Current – wet mud. Himalayan balsam.

Photograph(s): Appendix 2; Photo 38.

Ditch Section	D16 B, C, D, E	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	-
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	-
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	F
Running Water		Rock cliffs		Arable crop	x	Tall grass	D
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	F
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m	X	Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°		2-5m	X	1-2m		Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	X
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks	x	**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	7	

Comment(s):	

Photograph(s): Appendix 2; Photo 39.

Ditch Section	D17 A, B, C, D, E, F	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	R
Lowland Lake		Silt		Conifer wood		Submerged weed	--
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	R
Running Water		Rock cliffs		Arable crop	x	Tall grass	D
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	O
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden		D17 C-F sections used for horse jumping.	
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m	x	Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°		2-5m	x	1-2m		Slow	
Vertical/undercut	x	5-10m		>2m		Sluggish	
		10-20m				Static	x
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks	x	**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	5	

Comment(s):	Himalayan balsam present.

Photograph(s): Appendix 2; Photo 40.

Ditch Section	D18 A	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Lake Upland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	- - A - - A -
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m	x	Rapid Fast Slow Sluggish Static	

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN** **D**ominant 81-100% **A**bundant 61-80% **F**requent 41-60% **O**ccasional 21-40% **R**are 1-20% **N**one 0%
(c) Suitable refuge areas above extremes in water levels		
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	
(e) Water permanently present (does not dry up)		
(f) Open water for swimming		
(g) Ledge or berm present at or close to water level		
(h) Lack of damage or erosion to the banks	x	
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**4**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 41.

Ditch Section	D19 A, B, C, D, E, F, G	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	R A - - - - -
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m	x	Rapid Fast Slow Sluggish Static	x

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN** **D**ominant 81-100% **A**bundant 61-80% **F**requent 41-60% **O**ccasional 21-40% **R**are 1-20% **N**one 0%
(c) Suitable refuge areas above extremes in water levels	x	
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	
(e) Water permanently present (does not dry up)		
(f) Open water for swimming	x	
(g) Ledge or berm present at or close to water level		
(h) Lack of damage or erosion to the banks	x	
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**6**	

Comment(s):	Himalayan balsam present.

Photograph(s): Appendix 2; Photo 42.

Ditch Section	D20 A, B, C	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	O
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	R
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop	x	Tall grass	O
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	A
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m				Fast	
Steep >45°	x	2-5m		<0.5m		Slow	
Vertical/undercut	x	5-10m	x	0.5-1m		Sluggish	
		10-20m		1-2m		Static	
		20-40m		>2m			
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks	x	**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	5	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 43.

Ditch Section	D21 A, B, C	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	A
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	-
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop		Tall grass	O
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	D
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m				Rapid	
Shallow <45°		1-2m				Fast	
Steep >45°	x	2-5m		<0.5m		Slow	
Vertical/undercut	x	5-10m	x	0.5-1m		Sluggish	
		10-20m		1-2m		Static	
		20-40m		>2m			
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level	x	**R**are 1-20%
(h) Lack of damage or erosion to the banks	x	**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	6	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 44.

Ditch Section	D22 A	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	R
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	-
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	D
Running Water		Rock cliffs		Arable crop	x	Tall grass	-
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	-
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m		<0.5m		Rapid	
Shallow <45°		1-2m		0.5-1m		Fast	
Steep >45°		2-5m		1-2m		Slow	
Vertical/undercut	x	5-10m	x	>2m		Sluggish	
		10-20m				Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks	x	**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**5**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 45.

Ditch Section	D23 A	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch	x	Boulders		Upland grass		Bankside trees	F
Dyke		Sand		Permanent/temporary grass		Bushes	-
Gravel Pit		Gravel		Mixed broadleaf woodland		Herbs	O
Lowland Lake		Silt		Conifer wood		Submerged weed	-
Upland Loch Reservoir		Earth	x	Peat bog		Reeds/sedges	-
Running Water		Rock cliffs		Arable crop		Tall grass	R
Marsh/bog		Earth Cliffs		Salt marsh		Short grass	D
Canal		Canalized		Urban/industrial		**Disturbance:**	
		Poached		Park/garden			
		Reinforced		Heath			
				Fen			
				Cattle/grazing SHEEP			
				Bank fenced			

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10°		1m	X			Rapid	
Shallow <45°		1-2m		<0.5m		Fast	
Steep >45°		2-5m		0.5-1m		Slow	
Vertical/undercut	X	5-10m		1-2m		Sluggish	
		10-20m		>2m		Static	
		20-40m					
		>40m					

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels		**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)		**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**2**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 46.

Ditch Section	D23 B, C, D	Date	15th October 2022

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
Ditch Dyke Gravel Pit Lowland Lake Upland Loch Reservoir Running Water Marsh/bog Canal	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	**R** **O** **A** - **F** **A** -
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	 x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m		Rapid Fast Slow Sluggish Static	

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)		**F**requent 41-60%
(f) Open water for swimming		**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level		**R**are 1-20%
(h) Lack of damage or erosion to the banks	x	**N**one 0%
(i) Slow flowing current or static water		
(j) Non-native invasive plant species absent (HB, JK, GH etc)	x	
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**5**	

Comment(s):	Depth/Current – Dry.

Photograph(s): Appendix 2; Photo 47.

Ditch Section	D24 A, B, C,	Date	17th May 2023

Habitat		Shore/bank		Bordering land use		Vegetation (DAFORN*)	
F	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	X x	Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass	**F** **O** **O** - - - -
						Disturbance:	

Bank Profile (tick)		Width (tick)		Depth (tick)		Current (tick)	
Flat <10° Shallow <45° Steep >45° Vertical/undercut	 x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m	x	Rapid Fast Slow Sluggish Static	 x

Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)		
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover	x	
(b) A good variety of food plants including favoured plants and winter food sources		***DAFORN**
(c) Suitable refuge areas above extremes in water levels	x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)	x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)	x	**F**requent 41-60%
(f) Open water for swimming	x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level	x	**R**are 1-20%
(h) Lack of damage or erosion to the banks		**N**one 0%
(i) Slow flowing current or static water	x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)		
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:	**7**	

Comment(s):	Bankvoles/field vole signs present

Photograph(s): Appendix 2; Photo 47.

Ditch Section		D24 D		Date	17th May 2023	
Habitat		**Shore/bank**		**Bordering land use**		**Vegetation (DAFORN*)**
F	x	Boulders Sand Gravel Silt Earth Rock cliffs Earth Cliffs Canalized Poached Reinforced	x	Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing SHEEP Bank fenced	x	Bankside trees D Bushes O Herbs O Submerged weed - Reeds/sedges - Tall grass - Short grass - **Disturbance:**
Bank Profile (tick)		**Width (tick)**		**Depth (tick)**		**Current (tick)**
Flat <10° Shallow <45° Steep >45° Vertical/undercut	x	1m 1-2m 2-5m 5-10m 10-20m 20-40m >40m	x	<0.5m 0.5-1m 1-2m >2m	x	Rapid Fast Slow Sluggish Static x
Water Vole Habitat Suitability Assessment (Score 1 if feature present and 0 if absent)						
(a) Well developed (>60%) bankside **and** emergent vegetation providing food & cover						
(b) A good variety of food plants including favoured plants and winter food sources					x	***DAFORN**
(c) Suitable refuge areas above extremes in water levels					x	**D**ominant 81-100%
(d) Soft, earth banks suitable for burrowing (30 to 60 degree slope)					x	**A**bundant 61-80%
(e) Water permanently present (does not dry up)					x	**F**requent 41-60%
(f) Open water for swimming					x	**O**ccasional 21-40%
(g) Ledge or berm present at or close to water level					x	**R**are 1-20%
(h) Lack of damage or erosion to the banks						**N**one 0%
(i) Slow flowing current or static water					x	
(j) Non-native invasive plant species absent (HB, JK, GH etc)						
HABITAT ASSESSMENT SCORE AND SUITABILITY CATEGORY:					**6**	
Comment(s):	Bankvoles/field vole signs present					
Photograph(s): Appendix 2; Photo 47.						

Annex 2

Annex 2: Habitat Assessment Photograph Panel

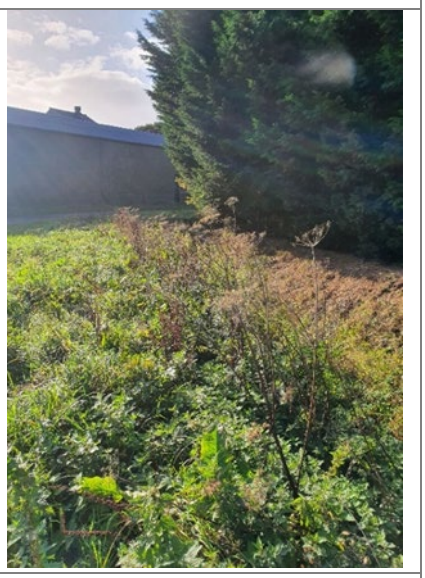
		
Photo 1: D1.A-C	**Photo 2**: D1.A-C	**Photo 3: D2.A-F**
		
Photo 4: D2.A-F	**Photo 5: D3.A-E**	**Photo 6: D3.F**
		
Photo 7: D3.H	**Photo 8: D3.J-K**	**Photo 9: D3.L**

		
Photo 10. D3.M-N	**Photo 11: D4.A-I**	**Photo 12: D4.J-L**
		
Photo 13: D5.A	**Photo 14: D6.A-C**	**Photo 15: D6.D-F**
		
Photo 16: D7.A	**Photo 17: D7.B-C**	**Photo 18: D7.D-E**

		
Photo 19: D7.F-K	**Photo 20: D7.L**	**Photo 21: D8.A-E**
		
Photo 22: D9.A	**Photo 23: D10.A-I**	**Photo 24: D10.C-D**
		
Photo 25: D10.G	**Photo 26: D10.J-K**	**Photo 27: D11.A-F**

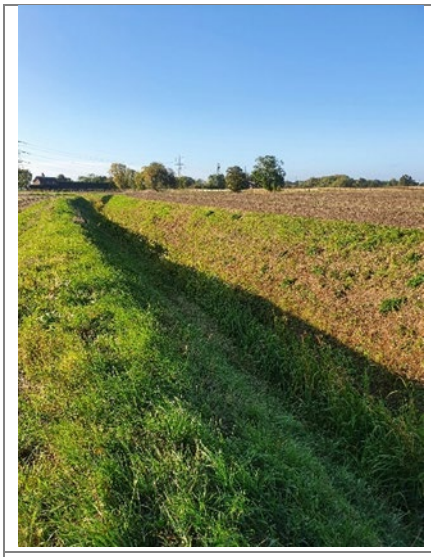


Photo 28: D12.A-B	**Photo 29: D12.C-F**	**Photo 30: D12.G-H**
		
Photo 31: D12.I-J	**Photo 32: D13.A-C**	**Photo 33: D13.D**
		
Photo 34: D14.A-C	**Photo 35: D14.B-F**	**Photo 36: D15.A-E**

		
Photo 37: D15.B	**Photo 38: D16.A**	**Photo 39: D16.B-E**
		
Photo 40: D17.A-F	**Photo 41: D18.A**	**Photo 42: D19.A-G**
		
Photo 43: D20.A-C	**Photo 44: D21.A-C**	**Photo 45: D22.A**

		
Photo 46: D23.A	**Photo 47: D23.B-C**	**Photo 48: D24 A-C**
		
Photo 49: D24 B		