



ENVIRONMENTAL STATEMENT: 6.3 APPENDIX 7-9: WATER VOLE SURVEY REPORT

Cory Decarbonisation Project

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EXECUTIVE SUMMARY

WSP UK Ltd was commissioned by Cory Environmental Holdings Ltd (the 'Applicant') to complete a water vole survey for the Proposed Scheme.

A Preliminary Ecological Appraisal (**Appendix 7-2: Preliminary Ecological Appraisal (Volume 3)**) was completed in February 2023 and identified ecological records of water vole present on the Site. The Applicant has commissioned WSP UK Ltd to complete a water vole survey, following good practice guidance^{1,2}. The brief was to:

- undertake a habitat suitability assessment of ditches for water vole within and adjacent to the Site;
- establish what ditches within the Site are currently inhabited by water vole; and
- assess the water vole population size in each ditch (if possible).

In total 12 ditches and one pond were identified within the Survey Area, however, one ditch labelled as 'Ditch Thames C' (as presented on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**) has been recorded as dry from 2020 - 2022 and so was excluded from this water vole assessment. Therefore, 11 ditches and one pond within the Survey Area were included within the water vole habitat suitability appraisal. The locations of the ditches and pond surveyed are shown on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**. Ten ditches within the Survey Area were included within the water vole presence/absence survey.

Following the surveys undertaken in 2023, water vole populations were confirmed in 8 of the 11 ditches assessed within the Survey Area:

- MR3;
- MR4-east;
- MR4-west;
- OW3;
- OW7;
- OW11-Norman Road Field;
- OW12; and
- OW15.

Of these eight ditches, population size could be estimated for five ditches:

- MR4-west – High;
- MR4-east – Low;
- OW7 – Low;
- OW11-Norman Road Field – Medium; and
- OW15 – High.

The results of the water vole presence/absence survey during the first half of the breeding season are summarised below in **Table 3-2** and **Table 3-4** presented in **Figure 7-21: Water**

Vole Results 1st Half of Season - Northern Section of Site (Volume 2), Figure 7-22: Water Vole Results 1st Half of Season - Southern Section of Site (Volume 2), Figure 7-23: Water Vole Results 2nd Half of Season - Northern Section of Site (Volume 2) and Figure 7-24: Water Vole Results 2nd Half of Season - Southern Section of Site (Volume 2). The estimated population size for all ditches where water vole was confirmed present is presented below in **Table 3-3** and **Table 3-5**.

Water vole is fully protected under The Wildlife and Countryside Act³, meaning (among other offences) it is an offence to kill, injure or take this species; damage or destroy places of rest or shelter, or disturb this species whilst occupying a place of rest or shelter. Any works that could damage or destroy places of rest or shelter or disturb water vole must be carried out under a protected species mitigation licence for water vole obtained from Natural England, comprising specific mitigation and monitoring measures for this species, laid out in a method statement.

1. INTRODUCTION

1.1. ECOLOGICAL BACKGROUND

- 1.1.1. The Site comprises coastal and floodplain grazing marsh habitat and a drainage ditch network that is connected to the River Thames. The majority of ditches have open water and reedbed habitat dominated by common reed *Phragmites australis*, with some occurrences of teasel *Dipsacus pilosus* and bullrush *Typha latifolia*. Previous surveys carried out of the ditch network within the Site (as detailed in **Section 1.4** of this appendix) has confirmed the presence of water vole *Arvicola amphibius*.

1.2. SITE DESCRIPTION

- 1.2.1. The Site includes a ditch network that connects with the Crossness LNR. Surrounding this ditch network is coastal and floodplain marsh, grassland and hardstanding car parks, industrial buildings and the Riverside 1 and Riverside 2. A total of 12 ditches (one reported as dry, see **Paragraph 1.1.3.**) and one pond (Pond 6) are present within and adjacent to the Site, and collectively form the 'Survey Area'. Each ditch and the pond within the Site has been labelled and is presented on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**.

1.3. BRIEF AND OBJECTIVES

- 1.3.1. The Applicant has commissioned WSP UK Ltd to complete a water vole survey, following good practice^{1, 2} guidance. The brief was to:
- undertake a habitat suitability assessment of ditches for water vole within and adjacent to the Site;
 - establish what ditches within the Site are currently inhabited by water vole; and
 - assess the water vole population size in each ditch (if possible).

1.4. HISTORY OF WATER VOLE AT BELVEDERE

RECONSTRUCTION OF NORMAN ROAD – 2005

- 1.4.1. Information provided by the Applicant indicates that in 2005 a water vole translocation took place to allow the re-construction of Norman Road. Three water voles were caught and moved to Wildwood in Kent for captive breeding; 20-30 water voles were bred and then several were released into ditch MR4 – West (shown on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**). The remaining water voles were released within the surrounding ditch network.

CORY RIVERSIDE ENERGY PARK – 2018

- 1.4.2. For the Riverside Energy Park, Peter Brett Associates (PBA) carried out a water vole survey of the Site in 2018⁴. The following ditches (as labelled on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**) were included within the survey:

- MR1;
- MR4-west;
- OW3;
- OW4;
- OW11-Borax South;
- OW11-Norman Road Field;
- OW12; and
- OW15.

1.4.3. The remaining ditches within the Site could not be accessed due to marshy/unsafe conditions and fencing. The survey confirmed a low population of water vole to be present in ditches OW3, MR1, OW11-Borax South and OW11-Norman Road Field. No water vole signs were recorded in ditches OW4, MR4, OW12 and OW15.

1.4.4. This report also noted that a large pollution incident occurred in Spring 2018 from the adjacent Thames Water owned Crossness Sewage Treatment Works, contaminating Crossness LNR. As part of the cleanup, 62 water voles were trapped and removed with a view to rerelease them in Spring 2019.

RIVERSIDE RESOURCE RECOVERY FACILITY – 2021

1.4.5. A water vole mitigation method statement was produced by MHE Consulting in 2021 for the realignment of a ditch for the Riverside Campus⁵. The ditch that was realigned was the section of MR4-west (as presented on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**). Ditches MR4-west, OW4 and OW6 were surveyed by Stantec (2021)⁶ and Keystone Ecology (2021)^{10,11}. These surveys confirmed presence of water vole within ditches MR4-west and OW4, recording feeding remains, burrows and latrines in 2021. OW6 was found to be largely dry however a latrine was noted at the eastern end.

KEYSTONE ECOLOGY – 2020-2022

1.4.6. Keystone Ecology carried out water vole surveys in September 2020⁷, January 2021⁸, July 2021⁹, and September 2021¹⁰ on the MR4-east and 'Ditch Thames C' (as labelled on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**). All of these surveys confirmed water vole to be present in MR4-east, recording latrines and feeding remains. They also confirmed 'Ditch Thames C' to be dry and so unsuitable for water vole. Keystone Ecology also carried out a water vole survey in March 2022 on ditch OW3 and confirmed water vole to be present, recording latrines, burrows and feeding remains.

VATTENFALL HEAT UK – WSP, 2022

1.4.7. In 2022 WSP carried out a water vole survey for Vattenfall Heat UK¹¹ on MR3 and the section of ditch adjacent to Norman Road labelled as MR4-east. The survey confirmed a medium population of water vole to be present in both ditches.

SUMMARY OF WATER VOLE SURVEYS

1.4.8. **Table 1-1** summarises the ditches surveyed and the results of the previous studies.

Table 1-1: Summary of Water Vole Population within the Site According to Previous Studies

Ditch Surveyed	Water Vole Confirmed Present – Yes/No	Water Vole Population Size (Year)	Ecology Consultancy (Year)
MR1	Yes	Low (2018)	PBA (2018)
OW3	Yes	Low (2018)	PBA (2018), Keystone Ecology (2022)
OW4	Yes	N/A	MHE Consulting (2021)
OW6	Yes	N/A	MHE Consulting (2021)
MR3	Yes	Medium (2022)	WSP (2022)
MR4 (Section left of Norman Road)	Yes	Medium (2022)	MHE Consulting (2021), Keystone Ecology (2021) and WSP (2022)
OW11	Yes	Low (2018)	PBA (2018)
OW12	No	N/A	PBA (2018)
OW15	No	N/A	PBA (2018)

2. METHODS

2.1. DESK STUDY

- 2.1.1. A data search was obtained from Greenspace Information for Greater London (GiGL) in January 2023, which detailed records of protected and/or notable species within a 2km radius of the Proposed Scheme and from within the last ten years of the request date.

2.2. FIELD STUDY

- 2.2.1. The water vole surveys were led by an Associate member of the Chartered Institute of Ecology and Environment Management (CIEEM) with over five years' experience of ecological survey, including extensive water vole survey experience enabling them to develop a strong understanding of the ecology of water vole and ability to identify their field signs.

WATER VOLE HABITAT SUITABILITY APPRAISAL

- 2.2.2. 11 ditches and one pond within the Survey Area were included within the water vole habitat suitability appraisal. 'Ditch Thames C' has been recorded as dry from 2020 - 2022 and the ditch within the Riverside Campus, to the east of Riverside 1 was also dry, therefore both were excluded from this water vole assessment. The habitat suitability appraisal was undertaken in line with good practice^{1,2}. These ditches and pond include:

- MR3;
- MR4-east;
- MR4-west;
- OW4;
- OW3;
- OW6;
- OW7;
- OW11-Borax South;
- OW11-Norman Road Field;
- OW12;
- OW15; and
- Pond 6.

- 2.2.3. The locations of the ditches and pond surveyed are shown on **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**.

- 2.2.4. Water vole habitat suitability was assessed using the methodology developed by Harris et al (2009)¹⁵. The Water Vole Habitat Suitability (WVHS) assessment assigns

scores of 1 to 8 to ditches and watercourses based on the presence of features beneficial to water voles (each feature scores 1 point), which are as follows:

- WDBV Well developed bankside (>50%) vegetation;
- YRFA Year round food availability of food sources;
- SRA Suitable refuge areas above extreme water levels;
- SBB Steep banks for burrowing;
- POW Presence of open water;
- POB Presence of berm (flat area, raised bank, or terrace bordering a waterbody);
- LOD Lack of disturbance e.g., poaching and grazing; and
- NBO Nest building opportunities.

2.2.5. There is a demonstrable positive relationship between the WVHS score and the probability of use by water vole. Experience of this methodology has demonstrated the following points:

- ditches scoring 5 or more routinely support water voles;
- ditches scoring 6 or more are considered to provide 'optimal' habitat¹⁵;
- ditches scoring 3 and 4, when associated with higher scoring habitats, will generally provide 'sink' habitats later in the breeding season, most likely for juvenile animals. Ditches scoring 3 and 4 would not be able to support a year round viable population of water vole in isolation, and are considered unlikely to support water voles during the late winter period at any location;
- ditches scoring 1 and 2 are considered to be unsuitable for water vole as they lack the food, cover and habitat features necessary for the species; and
- ditches which lack permanent open water are generally also considered unsuitable for water vole. The exception may be later in the breeding season when and if food and cover are present. Such an environment may be considered as offering a 'sink habitat' for dispersing juvenile water voles if other better quality habitats nearby are at full occupancy.

2.3. PRESENCE/ABSENCE WATER VOLE SURVEY

2.3.1. Ten ditches within the Survey Area were included within the water vole presence/absence survey which are as follows:

- MR3;
- MR4-east;
- MR4-west;
- OW3;
- OW6;
- OW7;
- OW11-Borax South;
- OW11-Norman Road Field;

- OW12; and
 - OW15.
- 2.3.2. OW4 and Pond 6 could not be accessed (see **Section 2.5** of this appendix for more details).
- 2.3.3. The majority of ditches had dense vegetation and steep banks, making it difficult to walk the entire length of the ditch. Therefore, to be able to record signs along the entire length of the ditches (where access permitted), rafts (squares of thick insulation board approximately 40cm x 40cm in size) were deployed instead (see Photograph 1; **Annex A**). The purpose of the rafts is to provide an artificial structure suitable for use by water voles as a feeding and latrine station. This increases the visibility of field signs and aids confirmation of the presence or absence of water voles. These rafts were checked for field signs of water vole on each survey visit.
- 2.3.4. In addition, visible field signs in the vicinity of the rafts were also recorded. Field signs for water vole include droppings, latrines, feeding stations, burrows, 'lawns', nests, footprints and runways in vegetation.
- 2.3.5. The survey comprised six total visits:
- two visits to deploy the rafts and carry out a WVHS assessment. Field signs (if present) were recorded during deployment;
 - two visits to each ditch during the first half of the water vole breeding season (late April to end of June); and
 - a further two visits to each ditch during the second half of the water vole breeding season (July to September inclusive).
- 2.3.6. Two survey visits were made instead of the recommended one visit per survey season to allow the water vole to become habituated to the rafts. The rafts were collected during the final visit to each ditch.
- 2.3.7. Rafts were deployed approximately every 5 meters along each ditch (if access permitted), to allow assessment of the population size within each ditch.
- 2.3.8. **Table 2-1** sets out the dates and weather conditions of the survey. **Annex B** details the dates, habitat suitability assessment, raft deployment, survey visits and raft collection carried out for each ditch and pond.

Table 2-1: Dates and Weather Conditions for the Water Vole Survey

Date	Weather Conditions
17/05/2023	Approximately 16°C, gentle breeze, 6 okta ^a . Dry.
24/05/2023	Approximately 18°C, gentle breeze, 7 okta. No rainfall on the day of the survey or preceding days.
15/06/2023	Approximately 24°C, gentle breeze, 2 okta. No rainfall on the day of the survey or preceding days.
22/06/2023	Approximately 25°C, gentle breeze 2 okta. No rainfall on the day of the survey or preceding days.
10/08/2023	Approximately 22°C, gentle breeze 2 okta. No rainfall on the day of the survey or preceding days.
06/09/2023	Approximately 23°C, gentle breeze 2 okta. No rainfall on the day of the survey or preceding days.
14/09/2023	Approximately 20°C, gentle breeze 2 okta. No rainfall on the day of the survey or preceding days.

2.4. ESTIMATED POPULATION SIZE

- 2.4.1. Following current good practice guidance², an estimate of the water vole population size can be determined from the number of latrines per 100m of watercourse (as detailed below in **Table 2-2**).

Table 2-2: Relative Population Density According to Number of Latrines Recorded²

Relative Population Density	Approximate number of latrines per 100m of bankside habitat	
	First half of survey season	Second half of survey season
High	10 or more	20 or more
Medium	3-9	6-19
Low	≤ 2 (or none, but with other confirmatory field signs)	≤ 5 (or none, but with other confirmatory field signs)

^a In meteorology, an okta is a unit of measurement used to describe the amount of cloud cover at any given location.

2.5. NOTES AND LIMITATIONS

- 2.5.1. Pond 6 (location presented in **Figure 7-20: Water Vole Watercourse Locations (Volume 2)**) was fenced off due to soft and slippery ground and deep water, therefore this pond was not accessed to carry out a water vole presence/absence survey. This is not considered to be a significant limitation as the connecting OW11-Norman Road Field ditch could be accessed and therefore water vole presence or absence could be assumed from the results of the survey on OW11-Norman Road Field. A WVHS could be carried out on Pond 6, by assessing the pond from the fence with the use of binoculars.
- 2.5.2. OW4 had dense vegetation and steep banks and as a result was deemed not safe to access. This is not considered to be a significant limitation as there is extensive past water vole data for this ditch and a section of OW6, which connects to OW4, could be surveyed. Therefore, water vole presence can be assumed from the results of the survey on OW6 and past data. A WVHS could be carried out on OW4, by assessing the ditch from visible areas from Norman Road and the West Paddock, with the use of binoculars.
- 2.5.3. The majority of the ditch OW6 had steep banks and dense vegetation, deeming it not safe to access. However, the southern section of OW6 (located within the Site Boundary) was flatter with less vegetation and so rafts were deployed within this section instead.
- 2.5.4. Dense bramble and steep banks blocked access to the majority of MR3 and as a result only two rafts could be deployed in this river. Consequently, a suitable length of MR3 (>50m) could not be surveyed and thus population size could not be assessed. However, this is not considered to be a significant limitation as MR3 was surveyed in 2022 by WSP (see **Section 1.4** of this appendix) which confirmed a medium water vole population to be present.
- 2.5.5. The average mean temperature for June 2023 in the UK was the highest on record since 1884¹². As a result, the following ditches were recorded as dry on the second survey visit (15th June 2023) during the first half of the water vole breeding season: MR4-west, OW3, OW6 and OW11-Borax South (as presented in **Annex B**). This is not considered to be a significant limitation as a 3rd survey visit was carried out on the 22nd June where water was present. This dry spell may have had a negative impact on the water vole population as a dead water vole was recorded in OW15 on the 15th June (see Photograph 2; **Annex A** and **Figure 7-21: Water Vole Results 1st Half of Season - Northern Section of Site (Volume 2)**). Therefore, as fewer ditches had water, this may have impeded dispersal throughout the ditch network and so it is likely a smaller population size was recorded within these ditches than is usually present during the first half of the water vole breeding season. Furthermore, these ditches were not assumed to regularly dry out and so were still assessed to be suitable for water vole during the WVHS.

- 2.5.6. Ditches OW15, OW12, OW7 and MR4-east were not accessible on the first raft deployment visit (17th May) therefore rafts were deployed on the first survey visit (24th May). This is not considered to be a significant limitation as a third survey visit was arranged for the 22nd of June, which allowed for all ditches to receive at least one survey visit during the first half of the breeding season, as detailed in the guidance.
- 2.5.7. Horses, with young, were moved to the West Paddock in August 2023 and on occasion showed aggressive behaviour. Therefore, access was prohibited to OW6 for the second half of the water vole survey season. This is not considered to be a significant limitation to assess presence or absence of water voles, as sufficient data was collected in the first half of the water vole survey season, and previous studies confirmed water vole to be present in OW6 in 2021. However, population size could not be assessed.
- 2.5.8. During the second half of the water vole breeding season, some ditches had become very dense with vegetation, making it difficult to survey and extract the rafts on the second survey visit (6th September), resulting in surveyors spending longer surveying each ditch. Therefore, a third survey visit was arranged for the 14th of September, which allowed for all ditches to receive at least one survey visit during the second half of the breeding season, as detailed in the guidance. Furthermore, as a result of the thick vegetation, not all of the rafts were visible within ditches MR4-west, MR4-east and OW7. Therefore, fewer latrines may have been recorded for these ditches which may have resulted in a smaller estimated population size than what is present.
- 2.5.9. Dense vegetation and steep banks within OW3 and OW12 prohibited deploying rafts along a suitable length of watercourse (>50m) to estimate population size. This is not considered to be a significant limitation as population size was assessed for OW3 in 2018 by PBA (see **Table 1-1**) and as OW7 connects to OW12, it can be assumed OW12 has the same population size as OW7.

3. RESULTS

3.1. DESK STUDY

- 3.1.1. A total of 278 records of water vole were returned by the GiGL data search. The most recent of which was returned within the Site in September 2021.
- 3.1.2. The Site has been extensively surveyed for water vole, with presence of water vole confirmed from 2005 – 2022 (as detailed in **Section 1.4** of this appendix).

3.2. WATER VOLE HABITAT SUITABILITY APPRAISAL

- 3.2.1. An overview of the habitat suitability appraisal data is summarised in **Table 3-1**.
- 3.2.2. The ditches form a ditch network which is connected to the River Thames, thus each ditch has high connectivity. The majority of ditches scored highly for water vole habitat suitability (score of 7 or 8). OW11-Borax South had polluted water with minimal bankside vegetation and available food source for water vole, scoring a 3.
- 3.2.3. The WVHS score¹⁵ for each ditch has been summarised in **Table 3-1** below, however full details of the WVHS scores are presented in **Annex C**.

3.3. PRESENCE/ABSENCE SURVEY

- 3.3.1. The raw survey results for the water vole presence/absence survey are detailed in **Annex D**.
- 3.3.2. The results of the water vole presence/ absence survey during the first half of the breeding season are summarised below in **Table 3-2** and presented in **Figure 7-21: Water Vole Results 1st Half of Season - Northern Section of Site (Volume 2)** and **Figure 7-22: Water Vole Results 1st Half of Season - Southern Section of Site (Volume 2)**. The estimated population size for all ditches where water vole was confirmed present is presented below in **Table 3-3**. The approximate length of OW3 and OW12 surveyed was too small to estimate population size.
- 3.3.3. The results of the water vole presence/absence survey during the second half of the breeding season are summarised below in **Table 3-4** and presented on **Figure 7-23 Water Vole Results 2nd Half of Season - Northern Section of Site (Volume 2)** and **Figure 7-24 Water Vole Results 2nd Half of Season - Southern Section of Site (Volume 2)**. The estimated population size for all ditches where water vole was confirmed present is presented below in **Table 3-5**. The approximate length of MR3, OW3 and OW12 surveyed was too small to estimate population size.

Table 3-1: Water Vole Habitat Suitability Appraisal Results

Watercourse/ Photograph Reference	Grid Reference	Habitat Suitability Assessment Summary
Pond 6 Photograph 3 and 4, Annex A	TQ 49505 80020	A pond with well developed bankside vegetation comprising of reeds and scrub with year round food availability for water vole. This pond is not shaded and it is unclear if there are steep banks for burrowing but plenty of marginal vegetation for nest building. The pond is fenced off and so there is a lack of disturbance. This ditch scored 5/8 according to the WVHS assessment ¹⁵ .
MR3 Photograph 4 and 5, Annex A	TQ 49519 79944	A silt ditch within the southern section of the Site, approximately 2.5m wide with steep banks and open water with no perceivable flow. The ditch has well developed bankside vegetation comprising of reeds and scrub with year round food availability for water vole. The ditch is lightly shaded and has steep banks for burrowing and plenty of nest building opportunities. Dense bramble separates the ditch from the neighbouring grassland and so there is a lack of disturbance. This ditch scored 7/8 according to the WVHS assessment ¹⁵ .
MR4 - West Photograph 6 and 7, Annex A	TQ 49644 80493	A ditch adjacent to and west of Norman Road, approximately 1.5m wide with steep banks for burrowing. This ditch has open water that is very turbid and has grey colouration, suggesting high levels of pollution from the construction site. The ditch has well developed bankside vegetation comprising of reeds and scrub that is not shaded, with year round food availability for water vole. The vegetation adjacent to the ditch is managed by Cory and occasionally mown, however there is no public access to the ditch and therefore has low levels of disturbance. This ditch scored 8/8 according to the WVHS assessment ¹⁵ .

Watercourse/ Photograph Reference	Grid Reference	Habitat Suitability Assessment Summary
MR4 - East Photograph 8 and 9, Annex A	TQ 49654 80306	<p>A ditch adjacent to and east of Norman Road, with steep banks and patches of open water with no perceivable flow. The ditch has well developed bankside vegetation comprising of reeds and scrub with year round food availability for water vole. The ditch is moderately shaded and has steep banks for burrowing. The vegetation adjacent to the ditch is managed by Aviva and occasionally mown, however there is no public access to the ditch and therefore has low levels of disturbance.</p> <p>This ditch scored 8/8 according to the WVHS assessment¹⁵.</p>
OW3 No Photographs	TQ 49386 80635	<p>A ditch adjacent to Riverside 2 within the northern section of the Site. The ditch has well developed bankside vegetation comprising of reeds with year round food availability for water vole. The ditch is has limited shading and has steep banks for burrowing. The vegetation adjacent to the ditch is grazed by horses and there are signs of poaching by these horses on the bank, suggesting low disturbance to this ditch.</p> <p>This ditch scored 5/8 according to the WVHS assessment¹⁵.</p>
OW4 Photograph 10, Annex A	TQ 49568 80551	<p>A ditch adjacent to Riverside Campus running along the northern boundary of the East Paddock. This ditch has steep banks for burrowing with dense vegetation, making it difficult to access. The ditch has no shade and well developed bankside vegetation comprising of reeds and scrub, with year round food availability for water vole. The ditch lacks disturbance as is fenced off from the public and horses.</p> <p>This ditch scored 8/8 according to the WVHS assessment¹⁵.</p>

Watercourse/ Photograph Reference	Grid Reference	Habitat Suitability Assessment Summary
OW6 Photograph 11 and 12, Annex A	TQ 49453 80441	A ditch running along the western boundary of the Stable Paddock and East Paddock with steep banks for burrowing and open water with no perceivable flow. The ditch has no shade and well developed bankside vegetation comprising of reeds and scrub, with year round food availability for water vole. The ditch lacks disturbance as it is fenced off from the public and horses. This ditch scored 8/8 according to the WVHS assessment ¹⁵ .
OW7 Photograph 13 and 14, Annex A	TQ 49662 80428	A ditch adjacent to and east of Norman Road, with steep banks and patches of open water with no perceivable flow. The ditch has well developed bankside vegetation comprising of reeds and scrub with year round food availability for water vole. The ditch has low shading and steep banks for burrowing. The vegetation adjacent to the ditch is managed by Aviva and occasionally mown, however there is no public access to the ditch and therefore has low levels of disturbance. This ditch scored 8/8 according to the WVHS assessment ¹⁵ .
OW11 – Borax South Photograph 15 and 16, Annex A	TQ 49491 80265	A ditch adjacent to the Borax South with shallow banks (<45) and dense with vegetation comprising of grass and tall ruderal species. This ditch is undisturbed as it is fenced off to the public and horses. The ditch has a lack of reed and food sources for water vole and has light shading. The ditch had turbid water that dried completely during June, however as this was a record warm June, this ditch was not assumed to lack permanent open water. This ditch scored 3/8 according to the WVHS assessment ¹⁵ .

Watercourse/ Photograph Reference	Grid Reference	Habitat Suitability Assessment Summary
OW11 – Norman Road Field Photograph 17, and 18, Annex A	TQ 49534 80128	<p>A ditch adjacent to the boundary fence between Creekside, Munster Joinery, Gannon and Norman Road Field. This ditch has well developed bankside (>50%) vegetation comprising of reeds and scrub with year round food availability for water vole. The banks are shallow in areas but could be steeper where there is dense vegetation. The ditch has open water with no perceivable flow and has moderate shading. There is lack of disturbance as the ditch is fenced off to the public and horses.</p> <p>This ditch scored 5/8 according to the WVHS assessment¹⁵.</p>
OW12 Photograph 19, and 20, Annex A	TQ 49756 80581	<p>A ditch adjacent to the access track to Iron Mountain Record Storage, east of the public right of way and Riverside Campus boundary fence. This ditch has steep banks for burrowing and open polluted water with no perceivable flow. The ditch has well developed bankside vegetation comprising of reeds and scrub with year round food availability for water vole. There is moderate shading along this ditch with trees present along the ditch and a lack of disturbance as the ditch is fenced off to the public.</p> <p>This ditch scored 7/8 according to the WVHS assessment¹⁵.</p>
OW15 Photograph 21, Annex A	TQ 49552 80433	<p>A ditch on the southern border of the East Paddock, adjacent to the HZI construction site. This ditch has steep banks for burrowing and open water with no perceivable flow. This ditch has some shading and well developed bankside (>50%) vegetation comprising of reeds and scrub with year round food availability for water vole. There is lack of disturbance as the ditch is fenced off to the public and horses.</p> <p>This ditch scored 8/8 according to the WVHS assessment¹⁵.</p>

Table 3-2: Water Vole Presence/Absence Survey Results during First Half of Breeding Season

Watercourse	Confirmed Present	Number of Rafts with Latrines	Additional Evidence
MR3	No	0	None
MR4-west	Yes	1	Latrines, burrows and feeding remains
MR4-east	Yes	8	None
OW3	Yes	1	None
OW6	No	0	None
OW7	No	0	None
OW11-Borax South	No	0	None
OW11-Norman Road Field	Yes	5	Latrine and mammal run
OW12	Yes	0	Latrines and feeding remains
OW15	Yes	14	Dead water vole and latrines

Table 3-3: Estimated Population Size during First Half of the Water Vole Breeding Season

Watercourse	Approximate length of watercourse with rafts deployed (m)	Total number of Rafts with latrines	Total number of Additional Latrines	Approximate number of latrines per 100m (Dean et al. 2016)	Estimated Population Size (Dean et al. 2016)
MR4-west	70	8	3	10+	High
MR4-east	80	1	0	<2	Low
OW3	25	1	0	N/A	N/A
OW11-Norman Road Field	170	5	2	3-9	Medium
OW12	35	0	1	N/A	N/A
OW15	200	14	3	3-9	Medium

Table 3-4: Water Vole Presence/Absence Survey Results during Second Half of Breeding Season

Watercourse	Confirmed present	Number of rafts with latrines	Additional evidence
MR3	Yes	2	None
MR4-west	Yes	6	None
MR4-east	Yes	2	None
OW3	Yes	3	None
OW6*	N/A	N/A	N/A
OW7	Yes	3	None
OW11-Borax South	No	0	None
OW11-Norman Road Field	Yes	9	None
OW12	Yes	5	Feeding remains
OW15	Yes	20	Latrine
* No longer accessible during second half of water vole survey season due to construction works (as detailed in Section 2.5 of this appendix).			

Table 3-5: Estimated Population Size during Second Half of the Water Vole Breeding Season

Watercourse	Approximate length of watercourse with rafts deployed (m)	Total number of Rafts with latrines	Total number of Additional Latrines	Approximate number of latrines per 100m (Dean et al. 2016)	Estimated Population Size (Dean et al. 2016)
MR3	10	2	0	N/A	N/A
MR-west	70	6	0	6-19	Medium*
MR4-east	80	2	0	<5	Low*
OW3	25	3	0	N/A	N/A
OW7	150	3	0	<5	Low*
OW11-Norman Road Field	170	9	1	6-19	Medium
OW12	35	5	0	N/A	N/A
OW15	200	20	1	20 or more	High

* Not all rafts were visible due to thick vegetation, therefore the estimated population size may be higher than what was recorded during the survey.

4. IMPLICATIONS FOR DEVELOPMENT

4.1. LEGAL COMPLIANCE

WATER VOLE

- 4.1.1. Water vole is fully protected under The Wildlife and Countryside Act³, meaning (among other offences) it is an offence to kill, injure or take this species; damage or destroy places of rest or shelter, or disturb this species whilst occupying a place of rest or shelter.
- 4.1.2. Any works that could damage or destroy places of rest or shelter or disturb water vole must be carried out under a protected species mitigation licence for water vole obtained from Natural England, comprising specific mitigation and monitoring measures for this species, laid out in a method statement.

NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006

- 4.1.3. Water vole is listed as a Species of Principal Importance under the NERC Act 2006¹³. The NERC Act 2006 reinforces the duty upon all public authorities, including planning authorities, to have regard for the conservation and enhancement of biodiversity when discharging their duties. The Act refines the definition of biodiversity conservation, stating that it includes restoring or enhancing a population or habitat. Section 41 of the NERC Act requires the Secretary of State to list habitats and species of principal importance (HPI and SPI) for the conservation of biodiversity in England.

4.2. PLANNING POLICY COMPLIANCE

- 4.2.1. All relevant planning policies are detailed within **Section 7.2 of Chapter 7: Terrestrial Biodiversity (Volume 1)**.

5. CONCLUSION

5.1.1. Overall, the survey confirmed water vole present in the following ditches:

- MR3;
- MR4-east;
- MR4-west;
- OW3;
- OW7;
- OW11 – Norman Road Field;
- OW12; and
- OW15.

5.1.2. Of these eight ditches, population size could be estimated for five ditches:

- MR4-west - High;
- MR4-east – Low;
- OW7 – Low;
- OW11-Norman Road Field – Medium; and
- OW15 – High.

5.1.3. It is important to note that by the second half of the survey season, thick vegetation within ditches MR4-east, MR4-west and OW7 resulted in some rafts being hidden from view. Therefore, the estimated population size may be higher than what was recorded during the survey. Furthermore, some rafts within MR4-east, MR4-west, OW7, OW11, OW12 and OW15, had large latrines, with fresh droppings on a thick matted latrine layer (see Photograph 21; **Annex A**), which would suggest a medium to high population size.

5.1.4. Population size could not be estimated for MR3, OW3 or OW12 due to thick vegetation and steep banks limiting the number of rafts that were able to be deployed (see **Section 2.5** of this appendix). However, in 2022, WSP assessed MR3 to have a medium population (WSP, 2022; see **Table 1-1**), and Keystone Ecology assessed OW3 to have a low population (Keystone, 2022; see **Table 1-1**), thus it is likely this is still the case. Additionally, OW7 is connected to OW12, which was estimated to have a low population (see **Section 5.1.2** of this appendix) and so it is likely OW12 also has a low population.

5.1.5. A survey visit in the second half of the water vole breeding season could not be carried out for OW6 (see **Section 2.5** of this appendix), therefore absence cannot be confirmed within this ditch, or within OW4 which is connected to OW6. However, it is likely that water vole are present as MHE Consulting confirmed water vole to be present in OW4 and OW6 in 2021 (see **Table 1-1**).

- 5.1.6. Pond 6 could not be accessed (see **Section 2.5** of this appendix), however the pond is connected to OW11-Norman Road Field, therefore it is likely to have a medium water vole population size.

Annex A

PHOTOGRAPHS



Photograph 1 (Rafts deployed)



Photograph 2 (Dead water vole)



Photograph 3 (Pond 6)



Photograph 4 (Pond 6)



Photograph 5 (MR3)



Photograph 6 (MR3)



Photograph 7 (MR4-west)



Photograph 8 (MR4-west)



Photograph 9 (MR4-east)



Photograph 10 (MR4-east)



Photograph 11 (OW4)



Photograph 12 (OW6)



Photograph 13 (OW6)



Photograph 14 (OW7)



Photograph 15 (OW7)



Photograph 16 (OW11–Borax South)



Photograph 17 (OW11–Borax South)



Photograph 18 (OW11–Norman Road Field)



Photograph 19 (OW11–Norman Road Field)



Photograph 20 (OW12)



Photograph 21 (OW12)



Photograph 22 (OW15)



Photograph 23 (Example of large latrine on rafts)

Annex B

HABITAT SUITABILITY APPRAISAL, RAFT DEPLOYMENT, SURVEY VISITS AND RAFT COLLECTION FOR EACH DITCH AND POND

Table 0-1: Dates Each Survey Activity was Carried out on Each Ditch and Pond During the Water Vole Survey

Watercourse	First Half of Survey Season		Second Half of Survey Season	
	Survey Activity	Date	Survey Activity	Date
Pond 6	Habitat Suitability Appraisal	17/05/2023	N/A	N/A
MR3	Habitat Suitability Appraisal and Raft deployment	17/05/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	24/05/2023	Survey Visit 2 and Collection	06/09/2023
	Survey Visit 2	15/06/2023		
	Survey Visit 3	22/06/2023		
MR4-east	Habitat Suitability Appraisal and Raft deployment	15/06/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	22/06/2023	Survey Visit 2 and Collection	14/09/2023
MR4-west	Habitat Suitability Appraisal and Raft deployment	17/05/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	24/05/2023	Survey Visit 2 and Collection	06/09/2023
	Survey Visit 2	15/06/2023 – Dry		
	Survey Visit 3	22/06/2023		
OW3	Habitat Suitability Appraisal and Raft deployment	17/05/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	24/05/2023	Survey Visit 2 and Collection	

Watercourse	First Half of Survey Season		Second Half of Survey Season	
	Survey Activity	Date	Survey Activity	Date
	Survey Visit 2	15/06/2023 - Dry		Not possible as area now a construction site.
	Survey Visit 3	22/06/2023		
OW6	Habitat Suitability Appraisal and Raft deployment	17/05/2023	Not possible due to horses with young present.	
	Survey Visit 1	24/05/2023		
	Survey Visit 2	15/06/2023 - Dry		
	Survey Visit 3	22/06/2023		
OW7	Habitat Suitability Appraisal and Raft deployment	15/06/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	22/06/2023	Survey Visit 2 and Collection	14/09/2023
OW11-Borax South	Habitat Suitability Appraisal and Raft deployment	17/05/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	24/05/2023	Survey Visit 2 and Collection	06/09/2023
	Survey Visit 2	15/06/2023 – Dry		
	Survey Visit 3	22/06/2023 - Dry		
OW11-Norman Road Field	Habitat Suitability Appraisal and Raft deployment	17/05/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	24/05/2023	Survey Visit 2 and Collection	06/09/2023

Watercourse	First Half of Survey Season		Second Half of Survey Season	
	Survey Activity	Date	Survey Activity	Date
	Survey Visit 2	15/06/2023		
OW12	Habitat Suitability Appraisal and Raft deployment	15/06/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	22/06/2023	Survey Visit 2 and Collection	14/09/2023
OW15	Habitat Suitability Appraisal and Raft deployment	24/05/2023	Survey Visit 1	10/08/2023
	Survey Visit 1	15/06/2023	Survey Visit 2 and Collection	14/09/2023
	Survey Visit 2	22/06/2023		

Annex C

WATER VOLE HABITAT SUITABILITY (HARRIS ET AL. 2009)

Table 0-1: Water Vole Habitat Suitability Assessment (Harris et al. 2009)

Watercourse Ref*	WDBV	YRFA	SRA	SBB	POW	POB	LOD	NBO	Score	Comments
Pond 6	Y	Y	N	N	Y	N	Y	Y	5	N/A
MR3	Y	Y	Y	Y	Y	N	Y	Y	7	N/A
MR4-west	Y	Y	Y	Y	Y	Y	Y	Y	8	N/A
MR4-east	Y	Y	Y	Y	Y	Y	Y	Y	8	N/A
OW3	Y	Y	N	Y	Y	N	N	Y	5	N/A
OW11-Borax South	Y	N	N	N	N	Y	Y	N	3	N/A
OW11-Norman Road Field	Y	Y	Y	N	Y	N	Y	N	5	N/A
OW12	Y	Y	N	Y	Y	Y	Y	Y	7	N/A
OW15	Y	Y	Y	Y	Y	Y	Y	Y	8	N/A
OW4	Y	Y	Y	Y	Y	Y	Y	Y	8	N/A
OW6	Y	Y	Y	Y	Y	Y	Y	Y	8	N/A
OW7	Y	Y	Y	Y	Y	Y	Y	Y	8	N/A
Key: <ul style="list-style-type: none"> WDBV Well developed bankside (>50%) vegetation YRFA Year round food availability of food sources SRA Suitable refuge areas above extreme water levels 										

Watercourse Ref*	WDBV	YRFA	SRA	SBB	POW	POB	LOD	NBO	Score	Comments
<ul style="list-style-type: none"> SBB Steep banks for burrowing POW Presence of open water POB Presence of berm LOD Lack of disturbance e.g poaching and grazing NBO Nest building opportunities <p>* Watercourse Ref are presented on Figure 7-20: Water Vole Watercourse Locations (Volume 2)</p>										

Annex D

WATER VOLE PRESENCE/ABSENCE SURVEY RESULTS – RAW DATA

Table 0-1: Water Vole Presence/Absence Survey Raw Data – 1st Half of the Survey Season

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
MR3	24/05/2023	1	No water vole evidence recorded		
MR3	15/06/2023	2	No water vole evidence recorded		
MR3	22/06/2023	3	No water vole evidence recorded		
MR4-east	22/06/2023	1	J4	40 droppings	
MR4-west	24/05/2023	1	B1	4 droppings	Feeding remains adjacent
MR4-west	24/05/2023	1	B3	12 droppings	Feeding remains and burrows adjacent
MR4-west	24/05/2023	1	B5	2 droppings	
MR4-west	24/05/2023	1	B6	-	Latrine and feeding remains opposite
MR4-west	24/05/2023	1	B8	-	Feeding remains and latrine adjacent
MR4-west	24/05/2023	1	B10	-	Latrine and feeding remains opposite
MR4-west	15/06/2023	2	Ditch dry		
MR4-west	22/06/2023	3	B1	6 droppings	2 rat droppings on raft and smaller rodent droppings
MR4-west	22/06/2023	3	B2	4 droppings	
MR4-west	22/06/2023	3	B5	20 droppings	

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
MR4-west	22/06/2023	3	B7	30 fresh droppings on mat of droppings	
MR4-west	22/06/2023	3	B10	40+ fresh droppings on mat of droppings	
OW11-Borax South	24/05/2023	1	No water vole evidence recorded		
OW11-Borax South	15/06/2023	2	Ditch dry		
OW11-Borax South	22/06/2023	3	Ditch dry		
OW11-Norman Road Field	24/05/2023	1	F5	1 dropping	
OW11-Norman Road Field	24/05/2023	1	F9	2 droppings	
OW11-Norman Road Field	24/05/2023	1	F11	6 droppings	
OW11-Norman Road Field	24/05/2023	1	F12	5 droppings	1 latrine adjacent

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
OW11-Norman Road Field	15/06/2023	2	F10	11 droppings	Mammal run on bank
OW11-Norman Road Field	15/06/2023	2	F11	40 droppings	1 latrine adjacent
OW12	15/06/2023	Deploy	H1	-	Latrine and feeding remains adjacent
OW12	15/06/2023	Deploy	H2	-	Feeding remains in gabions
OW12	15/06/2023	Deploy	H3	-	Feeding remains in gabions
OW12	22/06/2023	1	No water vole evidence recorded		
OW15	15/06/2023	1	C2	25 droppings	
OW15	15/06/2023	1	C3	16 droppings	
OW15	15/06/2023	1	C4	20 droppings	Dead water vole in water
OW15	15/06/2023	1	C5	25 droppings	
OW15	15/06/2023	1	C6	4 droppings	
OW15	15/06/2023	1	C7	43 droppings	
OW15	15/06/2023	1	C8	13 droppings	
OW15	15/06/2023	1	C14	4 droppings	
OW15	22/06/2023	2	C2	18 droppings	
OW15	22/06/2023	2	C3	24 droppings	1 latrine adjacent

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
OW15	22/06/2023	2	C4	10 droppings	1 latrine adjacent
OW15	22/06/2023	2	C5	5 droppings	
OW15	22/06/2023	2	C6	6 droppings	
OW15	22/06/2023	2	C7	11 droppings	
OW15	22/06/2023	2	C8	14 droppings	
OW15	22/06/2023	2	C12	12 droppings	
OW15	22/06/2023	2	C13	35 droppings	
OW15	22/06/2023	2	C14	41 droppings	
OW15	22/06/2023	2	C15	38 droppings	
OW15	22/06/2023	2	C16	40 droppings	1 latrine adjacent
OW15	22/06/2023	2	C17	49 droppings	
OW15	22/06/2023	2	C18	34 droppings	
OW3	24/05/2023	1	No water vole evidence recorded		
OW3	22/06/2023	2	A5	2 droppings	
OW6	24/05/2023	1	No water vole evidence recorded		
OW6	15/06/2023	2	No water vole evidence recorded		
OW6	22/06/2023	3	No water vole evidence recorded		
OW7	22/06/2023	1	No water vole evidence recorded		

Table 0-2: Water Vole Presence/Absence Survey Raw Data – 2nd Half of the Survey Season

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
MR3	10/08/2023	1	G2	6 fresh droppings	
MR3	06/09/2023	2	G1	11 fresh droppings	
MR4-east	10/08/2023	1	J1	200+fresh droppings on large trampled down latrine	
MR4-east	10/08/2023	1	J6	30+ fresh droppings on large trampled down latrine	
MR4-east	14/09/2023	2	J1	100+ fresh droppings on matted latrine	
MR4-east	14/09/2023	2	J6	10 fresh droppings on matted latrine	
MR4-west	10/08/2023	1	B1	30 fresh droppings on mat of droppings + feeding remains	
MR4-west	10/08/2023	1	B2	30 fresh droppings on mat of droppings + feeding remains	
MR4-west	10/08/2023	1	B3	20+ fresh droppings on mat of droppings	
MR4-west	06/09/2023	2	B1	100+ fresh on mat of droppings	
MR4-west	06/09/2023	2	B2	100+ fresh on mat of droppings	
MR4-west	06/09/2023	2	B3	100+ fresh on mat of droppings	

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
MR4-west	06/09/2023	2	B4	100+ fresh on mat of droppings	
MR4-west	06/09/2023	2	B5	50+ fresh on mat of droppings	
MR4-west	06/09/2023	2	B6	50+ fresh on mat of droppings	
OW11-Borax South	10/08/2023	1	No water vole evidence recorded		
OW11-Borax South	06/09/2023	2	No water vole evidence recorded		
OW11-Norman Road Field	10/08/2023	1	F3	40 fresh droppings on top of matted down.	
OW11-Norman Road Field	10/08/2023	1	F4	22 fresh droppings.	3 piles of feeding remains close by and another latrine on bank
OW11-Norman Road Field	10/08/2023	1	F6	50+ matted down, 15 fresh on top	
OW11-Norman Road Field	10/08/2023	1	F7	20+ droppings, feeding remains	
OW11-Norman Road Field	10/08/2023	1	F8	2nd half 1st visit 100+ all matted down, fresh latrines present	
OW11-Norman Road Field	10/08/2023	1	F9	150+ all matted down. feeding remains	

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
OW11-Norman Road Field	10/08/2023	1	F10	150+ droppings all matted down + Feeding remains	
OW11-Norman Road Field	10/08/2023	1	F11	200 + droppings trampled down latrine	
OW11-Norman Road Field	06/09/2023	2	F6	10+ droppings on mat of droppings	
OW11-Norman Road Field	06/09/2023	2	F7	4 fresh droppings	
OW11-Norman Road Field	06/09/2023	2	F8	50+ droppings on mat of droppings	
OW11-Norman Road Field	06/09/2023	2	F9	8+ droppings on mat of droppings	
OW11-Norman Road Field	06/09/2023	2	F10	80+ droppings on mat of droppings	
OW11-Norman Road Field	06/09/2023	2	F11	50+ fresh droppings on mat of droppings	
OW11-Norman Road Field	06/09/2023	2	F12	12 fresh droppings	
OW15	10/08/2023	1	C2	40 droppings, 11 fresh	
OW15	10/08/2023	1	C3	30 old droppings 20 fresh	

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
OW15	10/08/2023	1	C4	35 fresh droppings 20 old	
OW15	10/08/2023	1	C5	17 fresh droppings	
OW15	10/08/2023	1	C6	piled debris with 20+ droppings within and on top the debris	
OW15	10/08/2023	1	C7	2 mats of droppings and 13 droppings on top	
OW15	10/08/2023	1	C11	30 + new on one large mats of droppings	
OW15	10/08/2023	1	C15	20+ fresh droppings on mats of droppings. in overgrowth	
OW15	14/09/2023	2	C1	10 dry droppings	
OW15	14/09/2023	2	C2	20 fresh droppings	
OW15	14/09/2023	2	C3	20+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C4	30+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C5	20+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C6	15 fresh droppings	
OW15	14/09/2023	2	C7	8 fresh droppings	
OW15	14/09/2023	2	C8	20 dry droppings	
OW15	14/09/2023	2	C9	10 dry droppings	

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
OW15	14/09/2023	2	C10	30+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C11	30+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C12	30+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C13	8 fresh droppings	
OW15	14/09/2023	2	C14	100+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C15	50+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C16	30+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C17	100+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C18	50+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C19	50+ fresh droppings on matted latrine	
OW15	14/09/2023	2	C20	50+ fresh droppings on matted latrine	
OW12	10/08/2023	1	No water vole evidence recorded		
OW12	14/09/2023	2	H1	20+ fresh droppings on matted latrine	Feeding remains on raft
OW12	14/09/2023	2	H2	100+ fresh droppings on matted latrine	
OW12	14/09/2023	2	H3	30+ fresh droppings on matted latrine	

Ditch	Date	Survey Visit	Raft with Latrines Present	Evidence on Raft	Additional Evidence
OW12	14/09/2023	2	H4	5 old droppings	
OW12	14/09/2023	2	H5	5 fresh droppings on matted latrine	
OW7	10/08/2023	1	I1	30+ fresh droppings on trampled down latrine	
OW7	14/09/2023	2	I1	30+ fresh droppings on matted latrine	
OW7	14/09/2023	2	I2	2 dry droppings	
OW7	14/09/2023	2	I6	15+ fresh droppings on matted latrine	
MR4-east	14/09/2023	2	J1	100+ fresh droppings on matted latrine	
MR4-east	14/09/2023	2	J6	10 fresh droppings on matted latrine	
OW3	10/08/2023	1	A5	27 droppings	
OW3	10/08/2023	1	A4	35 droppings	
OW3	10/08/2023	1	A2	42 fresh droppings on mat of droppings	

6. REFERENCES

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