2021/1049 Land at Smithies Marsh

Water Vole Report

September 2022

Client:	Yorkshire Wildlife Trust	
Site Address:	Smithies Marsh, Smithies Lane Barnsley	
Central grid reference:	SE 3445 0815	
Revision:	2	
Prepared by:	Helen Norford BA (hons), MSc Natural England Bat Class 2 Licence: 2015-10170-CLS-CLS; Natural England Great Crested Newt Class 1 Licence: 2016-22838-CLS-CLS.	02/09/2022

1.0 Introduction

1.1 Introduction to scheme

Surveys were undertaken by Yorkshire Wildlife Trust (YWT) for European otter *Lutra lutra* and water vole *Arvicola amphibious* to determine the presence or likely absence of otter and water vole on the River Dearne, connecting field drains and an area of wetland, to inform any impacts of a river restoration scheme at Smithies Marsh here after referred to as the 'Site' (as shown in Figure 1) on these species.

1.2 Scheme proposals

Scheme proposals include:

- Re-profiling of 4 no. sections of the northern bank of the River Dearne totalling 250 m in length
- Creation of 3 no. shallow > 0.75 m deep ponds
- Creation of 5 no. shallow > 0.75 m deep scrapes

1.3 Site Description

The River Dearne runs along the southern boundary of the Site with small compartments of wet and broadleaved woodland and wetland areas which provide suitable habitats to support both otter and water vole.

1.4 Survey area

The survey area included a 0.83 km stretch of the River Dearne on the southern boundary of the Site together with an area of dense reed/sedge wetland within the centre of the Site.

1.5 Survey aims and objectives

The aim and objectives of the survey work and the subsequent report presented herein were to:

Aim

Determine the status (presence/likely absence) of otter and water vole on the Dearne located within the survey area and 250 m to the west and east of the scheme.

Objectives

- Undertake an otter and water vole survey on watercourses and wetland habitat that will be affected by the proposed works;
- Produce a report outlining the methods and results of the survey; and
- Use this information to evaluate and determine the results.

2.0 Legislation and policy

2.1 Otter legislation

Otter and their resting places receive protection under both British and European legislation. Under European legislation the otter is protected under EC Directive (92/43/EEC), being listed under Annexes IIa and IVa. This is implemented in Britain under the Conservation of Habitats and Species Regulations, 2010 (as amended).

Under this legislation it is an offence to:

- damage or destroy an otter's place of shelter, whether intentionally or accidentally and to deliberately disturb an otter.

  The otter is listed under Annexe II of the Bern Convention and is also protected under Schedule 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended).

  Under the Wildlife and Countryside Act, 1981 (as amended) it is a criminal offence to:

- 'intentionally' kill, injure, or take an otter without a licence. It is also illegal to damage, destroy, or obstruct access to a place used by an otter for shelter or protection.

Due to the otter's protection, it is necessary to identify if they are using the section of River Dearne affected by the scheme prior to any works commencing and to assess the likely effects of the works on otter. If otter is identified and will be affected by the proposed works, appropriate mitigation would be required, and it may be necessary to apply to Natural England for a European Protected Species (EPS) development licence.

2.2 Water vole legislation

Water vole receives full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended) due to a catastrophic decline (90%) in its population over the last 30 years.

Under the Wildlife and Countryside Act, 1981 (as amended) it is a criminal offence to:

- intentionally kill, injure, or take (capture) a water vole;
- possess or control live or dead water vole, or any part of a water vole or anything derived from a water vole;
  intentionally or recklessly damage, destroy, or obstruct access to any structure or place which a water vole uses for shelter or protection;
- intentionally or recklessly disturb a water vole while it is occupying a structure or place which it uses for shelter or protection;
- sell, offer or expose for sale, or have in one's possession or transport for the purpose of sale, any live or dead water voles, or any part of a water vole or anything derived from a water vole;
- publish any advertisement, or cause any advertisement to be published, which is likely to be understood as conveying that a person buys or sells, or intends to buy or sell, any of the above things

Due to the water vole's protection, it is necessary to identify if they are using the Dearne affected by the scheme prior to any works commencing and to assess the likely effects of the works on water vole. If water vole is identified and will be affected by the proposed works, appropriate mitigation would be required, and it may be necessary to apply to Natural England for a licence if effects cannot be avoided and translocation of water voles is required.

2.3 National policy

Current legislation and the National Planning Policy Framework (NPPF), contains overarching policy on conserving and enhancing the natural environment, and states that in determining applications the local planning authority should aim to conserve and enhance biodiversity. The NPPF was introduced by the UK Government in March 2012 to simplify and replace a variety of separate planning policy documents (including Planning Policy Statement 9: Biodiversity and Geological Conservation). Section 11 is concerned with conserving and enhancing the natural environment and
states that the planning system should achieve this by "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity". It addresses the issue of development with respect to protected species. When determining planning applications, it states that local planning authorities should aim to conserve and enhance biodiversity and to refuse planning permission "if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for".

2.4 Local policy

The 'UK Post-2010 Biodiversity Framework' was published in July 2012 and succeeds the UK Biodiversity Action Plan (BAP). Species in England which were identified as requiring action under the UK BAP continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework; this includes otter and water vole.

Barnsley BAP lists otter and water vole as priority species for the local care and have Species Action Plans for both species, with these species also being listed within Barnsley Local 2012 – 2029.

3.0 Survey methods

3.1 Desk top survey

Barnsley Biological Records Centre were consulted for records of otter and water vole within 1 km of the survey area. These records are considered to provide a good representation of the local area as the surrounding land outside of the Site.

Information returned from this source is incorporated within this report in relevant sections. A full list of species is available on request.

3.2 Field survey

Surveys were undertaken in May and September 2022. This is within the optimal survey time for identifying water vole breeding territories and a suitable time for surveying otter. The optimal period for water vole surveys is April to October inclusive (Strachan and Moorhouse, 2011). Surveys for otter can be undertaken all year round, dependent on vegetation cover and suitable weather conditions.

Surveys were primarily undertaken in weather conditions considered suitable for conducting otter and water vole surveys i.e., dry, sunny. Surveys were not undertaken during, or immediately after, heavy rain.

The surveys involved walking along both banks, where possible, of the River Dearne within the survey area and two connecting field drains and wetland areas within the Site searching

for signs of otter and water vole presence.
Watercourses were searched up to 2 m from the water's edge; where wet woodland areas were present the area was extended to check for otter signs. As water levels were low at the time of survey it was possible to check for field signs along the water's edge when required.

Otter survey field signs

Otter surveys were undertaken following guidance provided in the Environment Agency's Fifth Otter Survey of England 2009-2010 (Crawford, 2010) and Monitoring the Otter (Chanin, 2003).

Otter field signs that were searched for during the survey include:

- Spraints – usually black in colour and smell of fresh cut hay/jasmine tea with fish scales/bones in evidence. Usually located on boulders and ledges to define home ranges;
- Anal jelly;
- Footprints –50-60 mm wide with five toes, usually the webbing between toes is apparent;
- Paths and slides found along river banks;
- Flattened vegetation;
- Holts and 'couches' – located in riverbank holes, hollow trees, amongst tree roots, piles of rocks, wood or debris may all be used as holts or couches; and
- Feeding remains.

  The presence and distribution of these signs can be used to assess the likely importance of the watercourse for the local otter population.

Water vole field signs

Water vole surveys were undertaken following guidance provided in the Water Vole Conservation Handbook (Strachan and Moorhouse, 2011).

Water vole field signs that were searched for during the survey include:

- Faeces – 8 -12 mm long and 4-5 mm wide, ranging in colour from green to black, and odourless;
- Latrines – piles of flattened droppings, often with fresh droppings on top;
- Feeding stations – piles of chewed feeding remains;
- Burrows – these are typically wider than they are high, with a diameter of 4 – 8cm, and are usually located along the water's edge;
- Lawns –grazed vegetation around burrows;
- Nests – large ball of shredded material, often woven into the bases of rushes and reeds, and are usually found in wetland areas;
- Footprints – these field signs in isolation are not verification of presence due to the similarity with rat footprints and the substrate usually being dam and muddy, therefore likely to be distorted;
- Runways – low tunnels within the vegetation; and

- Characteristic 'plops' the sound made by water vole entering the water, which acts as a warning to other voles

3.3 Survey limitations

All stretches of the River Dearne survey area and wetland area within the Site were undertaken without limitation, the connecting drain to the east of the Site was dry and overshaded by trees and not surveyed.

3.4 Survey assurance

Otter and water vole surveys were undertaken by Helen Norford, with over ten years of riparian survey experience and are competent in identifying otter and water vole field signs and is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

4.0 Results

4.1 Desk top study

Three records for this otter were returned within the search area, two pertaining to 2007 (prints) and one for spraint recorded, Pete Wall, YWT, 2014 on the southern bank of the River Dearne within the Site boundary.

No records were returned for water vole.

4.2 Field survey

Surveys along the River Dearne and 250 m to the east and west of the Site was undertaken 19 May and 1 September 2022 for field signs of otter and water vole. See Appendix 2, Figure 1 for survey area.

Otter

Surveys for the presence/likely absence of otter was undertaken in May and September 2022, suitable holes for otter within recorded in the bridge structure within 100 m from the Site boundary, with root systems of semi-mature trees along banksides, however, no field signs (slides, holts, spraint, prints, etc.) for otter were observed.

Water vole

Surveys for the presence/likely absence of water vole were undertaken in May and September 2022, along both banks of the River Dearne, a field drain to the west and within an area of dense reed/rush/sedge swamp within the centre of the Site. No field signs (latrines, runs, burrows, droppings etc.) for this species were recorded.

5.0 Evaluation

5.1 Otter

No field signs for this species were recorded during surveys in 2022, therefore no impact on this species is predicted prior, during and post works.

However, this is a transient species with large territories of several kilometres, and though unlikely it is feasible that they may occasionally utilise the river on the boundary of this Site, therefore it is appropriate to work within a Precautionary Method Statement.

See Precautionary Method Statement Appendix 1 within the PEA for this application.

5.2 Water vole

No field signs for this species were recorded during surveys in 2022, this species is considered likely absent from this Site, therefore no impact on this species is predicted prior, during and post works.

Anecdotal evidence (Pers. Comms, fishermen at the fishing pond within 20 m of the Site) suggest recent presence of mink in the local area, though no field signs were present for this species at the time of survey; data (RSPB mink dispatch figures) from wetland habitat reserves along the Dearne suggest a high burden of mink within the area, which may offer insight into the lack of water vole field signs recorded during surveys undertaken in 2021 and 2022 by Yorkshire Wildlife Trust at historical locations for this species recorded in 2015.

This Site, in the presence of mink is sub-optimal habitat for water vole.

See Precautionary Method Statement Appendix 1 within the PEA for this application

Appendix 1: Smithies Marsh site proposals

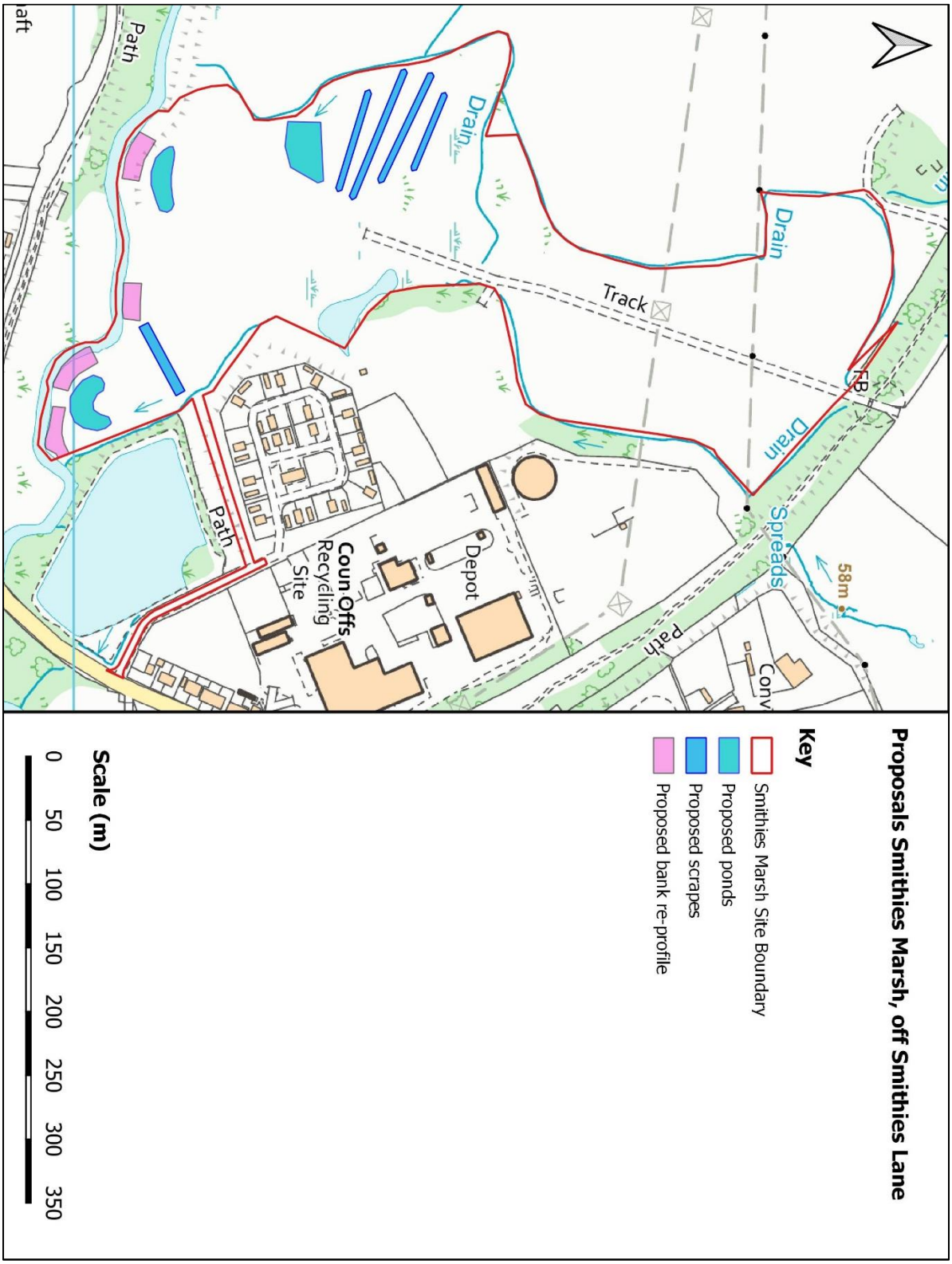


Figure 1: Smithies Marsh proposals

Appendix 2: Otter and water vole survey area map and photographs

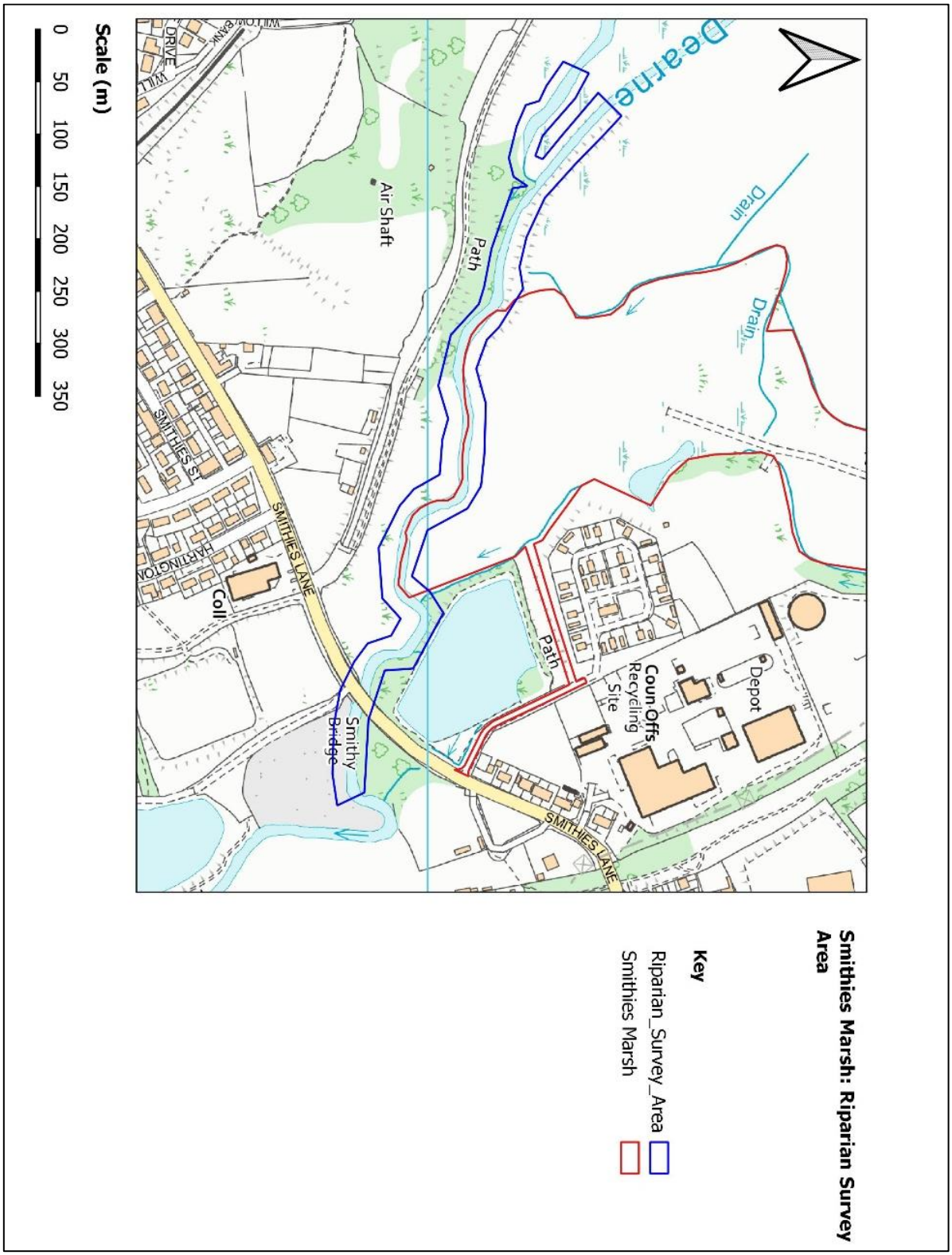


Figure 2: Survey area



Figure 3: Southern river bank looking west



Figure 4: Southern river bank looking east



Figure 5: Southern river bank looking west



Figure 6: Southern river bank looking east (root area suitable for holt marked with red keyline)



Figure 7: Bridge Smithies Lane (area suitable for holt marked with red keyline)



Figure 8: Debris pile Dearn northern extent of Site



Figure 9: Northern bank of Dearne looking east



Figure 10: Northern bank of Dearne looking south



Figure 11: Northern bank of Dearne looking south