



## **Water Vole Survey- Interim Report**

Report Ref. ER-3787-03-A

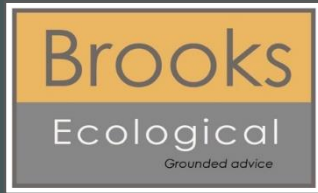
**D. Noble Ltd**

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<b>Author</b>	Christopher Shaw BSc (Hons) MCIEEM Principal Ecologist
<b>Technical Review</b>	Sam Kitching BSc (Hons) MCIEEM Principal Ecologist
<b>QA</b>	David Lovett MBiolSci (Hons) ACIEEM Ecologist
<b>Authorised</b>	Sam Kitching BSc (Hons) MCIEEM Principal Ecologist
<b>Date</b>	13/09/2023
<b>Duration</b>	In accordance with CIEEM (2019), unless otherwise stated the findings of this report remain valid for a period of 18 months. After this period advice should be sought on the scope of any updating work required.



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Unit A, 1 Station Road, Guiseley, Leeds, LS20 8BX  
Phone: 01943 884451  
01943 879129  
www.brooks-ecological.co.uk  
Registered in England Number 5351418



## **Summary Statement**

Based on the results of an early and late season survey in 2023, together with the findings of previous surveys, it is reasonable to conclude that water vole are no longer present on Site, or within immediately adjacent sections of the beck upstream.

As is the national trend for this species, it is postulated that the local population has either significantly contracted its range, drawing back into core habitat some distance off Site, or has faced localised extinction, due to predation (mink) or habitat degradation.

## Introduction

1. Brooks Ecological was commissioned to undertake an updated water vole survey at the proposed development site off Lady Anne Road in Soothill.
2. The survey encompassed the entire stretch of Howley Beck as it passes through the Site, along with an additional 20m up and down stream. The survey also took in the block of Tall Herb / Fen habitat within the centre-east, which also provides suitable habitat for this species. The survey extent is highlighted in Figure 1, opposite.

## Survey History

3. The Site has been surveyed on numerous occasions over the last 25 years.
4. West Yorkshire Ecology (WYE) hold records of water vole (field records, latrines and burrows) within the application Site (Howley Beck) from 2000 (4 records) and 2009 (4 records). Records are clustered towards the up-stream northern end of the Site but cover much of the length of Howley Beck within the Site. Howley Beck upstream (north) of the Site, flows from open countryside where it also provides suitable habitat for water vole. There are records in this stretch of watercourse from 1989 (1 record), 2000 (6 records) and 2009 (3 records).
5. A walkover survey was completed in 2015 by Whitcher Wildlife, to inform a Preliminary Ecological Appraisal (Reference 160518). Results of this survey are fairly confused but seem to identify the potential presence of water vole at this time - based on local records, presence of mammal burrows and there being suitable habitat for this species along parts of the watercourse.
6. A dedicated water vole survey was then undertaken by Brooks Ecological in August 2017, which identified two 'likely water vole burrows and a single latrine site with two old droppings'. Based on the evidence found on Site and its location, vegetation and current condition, it was concluded that the Site at this time represented the southern extent of the distribution of a population of water vole occupying the wider Howley Beck.
7. The Site was therefore considered likely to be a declining resource for this species, due to the spread of invasive species (Himalayan balsam), disturbance and littering of the watercourse.
8. An updating survey was then completed in November 2018, and May / June 2019; in addition to traditional survey techniques, these visits also made use of floating latrines and remote camera traps to increase efficiency of detecting field signs. These surveys recorded no evidence of water vole activity within the Site, and the likely absence of this species from site was concluded.

**Figure 1** Survey extent - Howley Beck and Tall herb community



## Legal Background

9. In England, water voles are protected under Schedule 5 of the Wildlife and Countryside Act (1981), receiving full protection since 2008. This Act, together with amending legislation, lists the following as offences:
  - intentionally killing, taking or injuring water voles (Section 9(1));
  - possessing or controlling any live or dead water voles, or any part or derivative (Section 9(2)).
  - intentionally or recklessly damaging or destroying a water vole's place of shelter or protection (Section 9(4)(a)).
  - intentionally or recklessly disturbing a water vole whilst it is occupying a structure or place which it uses for shelter or protection (Section 9(4)(b)).
  - intentionally or recklessly obstructing access to a water voles place of shelter or protection (Section 9(4)(c)).
  - selling, offering for sale, or possessing or transporting for the purposes of sale, any live or dead water vole, or any derivative, or advertising any of these for buying or selling (Section 9(5)).
10. It is generally agreed that a place of shelter or protection used by water vole includes a network of active burrows and/or any nests that have been constructed within the burrow system or above ground amongst dense vegetation.
11. Water voles occupy a variety of water's edge habitats but can also be found away from water in some regions of the UK. Their places of shelter are normally found within 2m of the water's edge and comprise a series of connected burrows with both above water and under water entrances.

## Method

12. The latest survey effort followed the methodology for field survey outlined in Dean and Strachan (2016).
13. Given that the suitability of any given habitat for water vole can change markedly over the course of the breeding season, affecting the distribution and apparent population size, two survey visits should be undertaken in most cases: one in the first half of the season (mid-April to the end of June) and one in the second half of the season (July to September inclusive). These visits should be undertaken at least two months apart.
14. In this case, an early season visit was completed on the 26<sup>th</sup> June 2023, whilst a late season visit was carried out on the 13<sup>th</sup> September 2023.
15. Survey was carried out from the banks and within the channel. Evidence of water vole was searched for throughout consisting of the following field signs:
  - Water vole latrines
  - Sightings of water vole
  - Water vole tunnel entrances
  - Water vole "lawns"
  - Water vole feeding stations
  - Water vole footprints
16. The presence of water vole droppings is the only field sign that can be used reliably on its own. Experience is required to distinguish between feeding remains, burrows and footprints of water vole and other species. However, a combination of these field signs in close proximity to each other is highly suggestive of water vole presence.
17. To supplement traditional survey techniques, floating latrines were installed along the beck on the 26<sup>th</sup> June, and checked on 10<sup>th</sup> July and the 13<sup>th</sup> September 2023

## Results

### Habitat Assessment

18. Since the last water vole survey was completed in June 2019, the beck's suitability for supporting water vole has deteriorated. Most of the beck would now be considered to represent sub-optimal water vole habitat, due in large to the lack of management over the last decade.
19. Large sections of the beck are now covered in dense scrub (mostly bramble), which has led to a decline in floral diversity (and food resource) for water vole along the banks. In places, this represents a major constraint to survey effort. To overcome this constraint, five floating latrines were installed along the beck, using hand-held brush cutters to clear small (c.1m) sections of scrub within the channel. These were left in situ across the summer period, and were periodically re-inspected on the 10<sup>th</sup> July and 13<sup>th</sup> September 2023.

### Field Signs

20. Much of the southern and central sections of the beck were inaccessible for traditional survey, due to the presence of dense impenetrable scrub. Survey here therefore relied on the use of floating latrines.
21. Inspection of the Tall herb community and northern section of beck was still possible. The northern section of beck contained many features, such as silt bars, that would have been expected to retain field signs of water vole, should they be active in this location. Despite this, no evidence of water vole activity was identified anywhere on Site, or within areas immediately off-Site, during the early season visit.
22. Similarly, no evidence of water vole activity was present on any of the floating latrines deployed in June and inspected in July and September.

**Figure 2** Survey extent - Howley Beck and Tall herb community



**Figure 3** View of Howley Beck towards the centre of the Site.



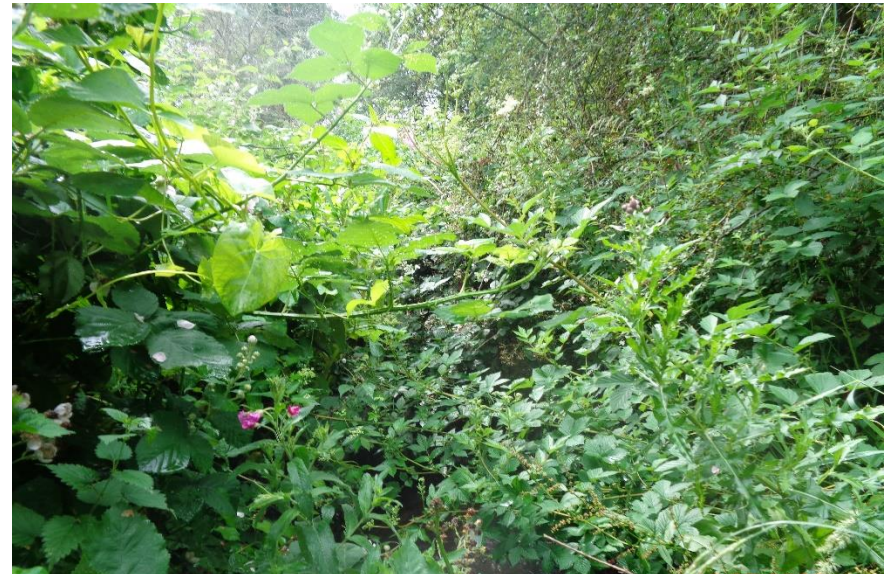
**Figure 4** Typical view of the beck towards the northern end of the Site.



**Figure 5** Example features within the banks of the beck that could be expected to retain water vole activity.



**Figure 6** Typical view of the beck towards the southern end of the Site.



## Conclusions

23. Based on the results of an early and late season survey in 2023, together with the findings of the last updating survey in 2019, it is reasonable to conclude that water vole are no longer present on this stretch of Howley Beck, or within immediately adjacent sections of the beck upstream.
24. As is the national trend for this species, it is postulated that the local population has either significantly contracted its range, drawing back into core habitat some distance off Site, or has faced localised extinction, due to predation (mink) or habitat degradation.

### Ecological Enhancement

25. As part of the proposed development, it is recommended that the ditch be brought back into a suitable management regime of periodic dredging to remove silt build-up and bankside cutting (once every 1-2 years) so as to promote a diverse community of aquatic vegetation and high-water quality.

## References

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