

**Riparian Mammal Survey  
North Bierley Phase 2**

**Keyland**

**Report Reference: ER-5528-02**

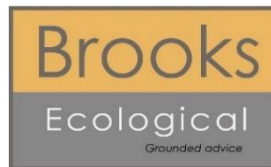
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Report Title:	Riparian Mammal Survey North Bierley Phase 2
Report Reference:	ER-5528-02
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## **Summary Statement**

Dedicated survey has demonstrated the likely absence of water vole and otter from the watercourse passing through the application site.

Standard precautions are recommended in avoiding indirect impacts upon the watercourse during construction works and post development.

## Introduction

1. Brooks Ecological was commissioned to undertake a detailed riparian mammal (water vole and otter) survey at the proposed development site known as North Bierley Phase 2, grid reference SE181271.
2. The survey encompassed the length of Hunsworth Beck that passes through the Site, as well as a c.200m length upstream and a c.20m length downstream as highlighted in Figure 1.

**Figure 1** The Site boundary and survey extent



## Legal Background

### Water vole

3. 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)).
4. 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.
  5. 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.

### Otter

6. Otters are afforded full protection under The Wildlife and Countryside Act (1981) plus amendments, and Conservation of Habitats and Species Regulations (2010). Under these Acts it is an offence, among others, to:
  - capture, kill, disturb, or injure otters (on purpose or by not taking enough care)
  - damage or destroy a breeding or resting place -an otter holt or couch- (deliberately or by not taking enough care)
  - obstruct access to their resting or sheltering places (deliberately or by not taking enough care)
  - possess, sell, control or transport live or dead otters, or parts of otters
7. Otters are territorial animals with ranges of up to 35km depending upon habitat quality. They frequent a wide range of sheltering places, mostly close to water, and occupy them at varying times of the year.

## Method

### Water vole

8. Survey followed the methodology for field survey outlined in Dean and Strachan (2016).
9. 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). However, based on the results of the first survey, a second survey was deemed unnecessary due to the suboptimal nature of the watercourse to support this species- detailed later in the report.
10. As such, one survey visit was completed, being undertaken on the 9<sup>th</sup> June 2021. A remote camera trap was also installed in a strategic location along the Beck- and left to run for 3 consecutive weeks (9<sup>th</sup> – 29<sup>th</sup> June 2021).
11. Survey was carried out from the channel itself; with the surveyor attempting to locate evidence of water vole, including 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
12. 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.

### Otter

13. Whilst undertaking the water vole survey, the surveyor was also vigilant to the field signs of otter activity, which can take the form of:
  - dung (spraints)
  - tracks (footprints)
  - feeding remains
  - otter slides (into water)
  - holts (underground dens)
  - couches (above ground sites where otters rest during the day)

### Limitations

14. Due to the dense scrub present across the steep banks, views were obscured in some sections, however, the Beck was shallow enough to walk the channel safely, and as such, a detailed inspection could still be made.
15. Also, to increase the detectability of riparian mammals, a remote camera trap was deployed in a strategic location at the approximate middle point of the surveyed area.

# Results

## Habitat Assessment

- 16. Hunsworth Beck flows to the east of the Site boundary, then enters the Site for c.210m before flowing into a culvert under the M62. This section of the Beck offers 3-4m steep banks, is c.2m in width with c.30cm of moderately fast flowing water. The bed comprises large cobbles, pebbles and silt with various debris. The watercourse is known to have suffered from significant pollution events in recent years.
- 17. Along the banks of the Beck, dense scrub has developed which includes invasive weeds. The top of the banks are dominated by dense scrub and mature trees including elder, hawthorn, bramble, alder and sycamore. Himalayan balsam is noted in abundance alongside a large stand of Japanese knotweed. Where there are small clearings, forbs such as wild garlic, dogs mercury and lesser celandine are present.

### Otter

- 18. The surveyed section of Hunsworth Beck offers suitable habitat for otter being secluded and quiet with the banks providing suitable holting and couching habitat. Small fish were noted in abundance, with the likely presence of crayfish and amphibians, additional potential food sources.

### Water vole

- 19. Whilst some parts of Hunsworth Beck further north of the survey area are assessed as being suitable for water vole, this section is seen as being sub-optimal, due to its fast-flowing nature, dense shading, limited suitable food resources and past pollution events.

**Figure 2a** Looking south towards M62



**Figure 2b** Culvert towards northern survey section



**Figure 2c** View from southern most survey point



**Figure 2d** Looking north- camera trap to right



## Results

### Field Signs

20. No evidence of either otter or water vole activity was found during the walkover survey.
21. This included no evidence of otter slides, holting, spraints or footprints. No evidence which could relate to water vole was identified, including mammal holes, footprints or latrines.
22. The only mammal evidence found was that of deer in the form of footprints.
23. During the three week monitoring period, no evidence of otter or water vole was recorded. The only mammals recorded were grey squirrel, roe deer and fox- all of which were recorded frequently.

## Evaluation & Conclusions

24. Despite thorough survey and a period of monitoring, no evidence of otter or water vole was found within the application Site or along the wider watercourse.
25. On this basis, the proposed development cannot currently be expected to impact on otters and water vole or contravene the legislation protecting them.

**Figure 3a** Deer footprints



**Figure 3b** Fox on camera



## Recommendations

26. Despite the likely absence of otter and water vole from the section of Hunsworth Beck that passes through and adjacent to the Site, the development should ensure that the watercourse does not become unsuitable for these species and other fauna in the future.
27. Most importantly, the development should ensure that light spill is avoided along Hunsworth Beck and the utilisation of a specialist lighting plan is recommended.
28. A Construction Environment Management Plan (CEMP) should also be provided by the project's main contractor. This should demonstrate how the proposed development will not release contaminants into the watercourse, along with details on how materials will be stored and used on the site.

## References

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