

RIPARIAN MAMMAL SURVEY REPORT

LAND EAST OF STOKE ROAD AND NORTH OF NORMANDY
WAY (A47), HINCKLEY, LEICESTERSHIRE, NR LE10 1YA

ON BEHALF OF

MR & MRS ADCOCK C/O RICHBOROUGH ESTATES

REFERENCE: ZEL_203
DATE: November 2022
V1

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Report Title	Riparian Mammal Survey Report
Report Reference	ZEL_203
Client	Mr & Mrs Adcock c/o Richborough Estates
Site	Land east of Stoke Road and north of Normandy Way (A47), Hinckley, Leicestershire, Nr LE10 1YA
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Where any appraisal is based upon information provided by third parties, it is assumed that this information is relevant, correct and complete; there has been no independent verification of information obtained from third parties unless otherwise stated. Where field investigations have been carried out these have been appropriate to the agreed scope of works and carried out to a level of detail required to achieve the stated objectives.



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EXECUTIVE SUMMARY

- Zebra Ecology Ltd were commissioned by Richborough Estates on behalf of Mr & Mrs Adcock to undertake a riparian mammal survey at the land east of Stoke Road and north of Normandy Way (A47), Hinckley, Leicestershire (centred on Ordnance Survey grid reference SP 420 956).
- The habitat is of sub-optimal quality for water voles (subject to intensive cattle-grazed up to banks, shaded, absence of aquatic vegetation). However, it was not possible to rule out the presence of riparian mammals based on an initial habitat assessment alone.
- The survey was completed on 9 September 2022. A metre-by-metre hand search of the banks of the brook and onsite ponds was undertaken to identify field signs from water vole and / or otter.
- No field signs from otter or water vole were recorded. On this basis there is no evidence to suggest otter or water vole are present at the site.
- No direct impacts are proposed to the brook as part of this application. Both on-site ponds (P1, P2) are also subject to retention. However, it is understood that a small area of developed land (road) is proposed within 10m of the brook. The remainder of the brook will be buffered with landscaping (species-rich grassland and mixed scrub) significantly improving the condition of the banks from their current condition (intensively cattle-grazed, modified grassland).
- As a precautionary approach, and taking into account the mobile nature of riparian mammals in line with seasonal habitat changes; a pre-commencement inspection should be undertaken at the site to ensure full compliance with the strict legislation (The Conservation of Habitat & Species Regulation, 2017) afforded to these protected species.
- A continuous, undisturbed and unlit vegetated buffer of not less than 10m should be strictly enforced between worked areas of development and the bank top of the brook (see *e.g.* Dean *et al.* 2016). This will ensure compliance with wildlife legislation and provide adequate protection of the watercourse.

2.0 INTRODUCTION

Site Location and Summary

- 2.1 Zebra Ecology Ltd were commissioned by Richborough Estates on behalf of Mr & Mrs Adcock to undertake a riparian mammal survey at the land east of Stoke Road and north of Normandy Way (A47), Hinckley, Leicestershire (centred on Ordnance Survey grid reference SP 420 956).
- 2.2 The site is 25.4ha in area and comprises five separate fields subject to cattle grazing with a further parcel of land (arable) located to the west of Stoke Road surrounded by mixture of native species-rich and species-poor hedgerows.
- 2.3 A slow-flowing brook (tributary of the River Tweed) runs along the eastern boundary of the site. It is shallow; approximately 200mm in depth with a silty / muddy substrate. No aquatic vegetation is present.
- 2.4 The application site boundary, brook and pond are shown in Figure 1:

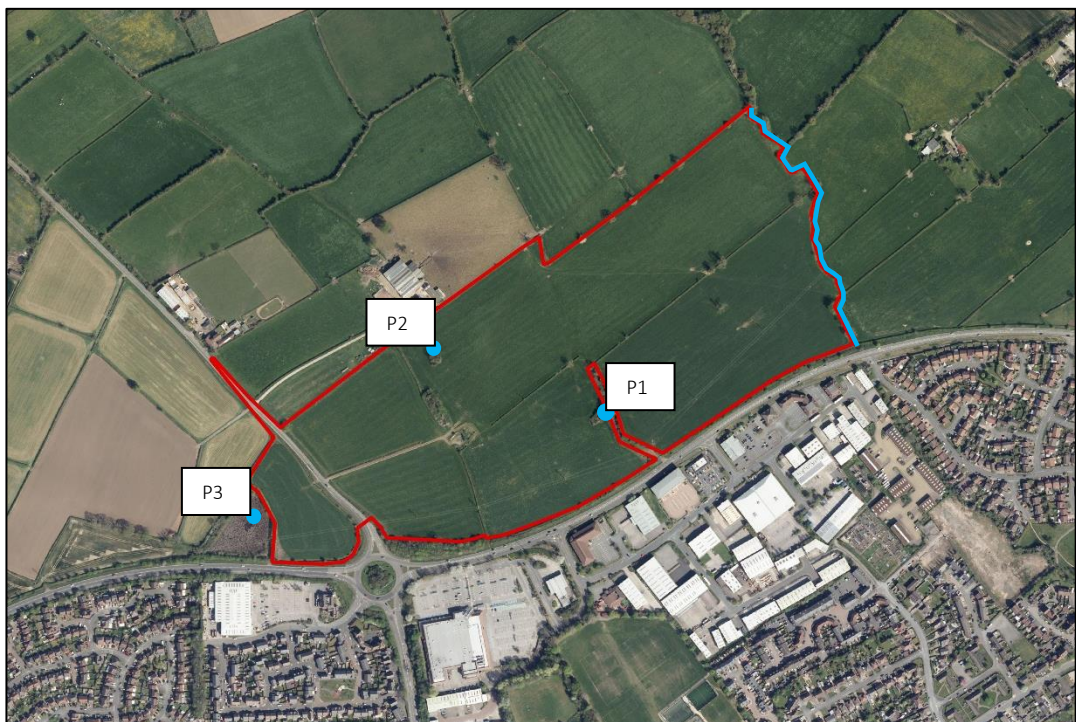


Figure 1: application site boundary, ponds and brook.

Survey Objectives

2.5 The objectives of the survey were:

- to undertake a specialised survey for otters and water voles along the brook following recognised best practice survey guidelines;
- to provide specialist advice on the possible presence of otters and/or water voles in relation to the planning process; and
- to report survey results and make appropriate recommendations for further surveys and/or works as necessary to ensure compliance with wildlife legislation and standard best practice.

3.0 METHODOLOGY

Desk Study

- 3.1 Existing ecological and nature conservation data relevant to the site was collated from various sources including the Multi Agency Geographic Information for the Countryside (MAGIC) online database (<http://magic.defra.gov.uk>) and Leicestershire and Rutland Environment Records Centre (LRERC).
- 3.2 A third-party data search was undertaken to attain biological records from Leicestershire and Rutland Environment Records Centre (LRERC) during November 2021 to identify any riparian mammals within a 2km radius of SP 420 956.

Field Study

Water Vole Survey

- 3.3 A metre-by-metre hand search of the banks of the brook and onsite ponds was undertaken as far as access permitted. Signs of water (as per Strachan *et al.*, 2011) were recorded and mapped; these include:
- Water vole droppings. Soft when fresh and measure approximately 8-12mm in length and 4-5mm in diameter. Colour ranges from brown to green due to herbivorous diet. Droppings are cylindrical, torpedo-shaped with blunted ends.
 - Latrines. Water voles mark their home ranges with latrines between February and November. Latrines form scent markets at locations within their home range such as burrow entrances, range termini and water emergence points.
 - Feeding stations. Distinctive piles of cut vegetation acting as ladders that may be dragged into burrows. There is usually a distinct 45° angle cut just above the stem of the plant. Vegetation cut by water is typically 100mm in length or more. Water voles will also gnaw through branches such as willow (up to 1inch in diameter) leaving the same distinct 45° angle. It should be noted that recent studies of captive voles have demonstrated overlap between feeding stations belonging to field voles and water voles so does not provide a reliable indication of water vole presence alone.
 - Burrows. Water vole burrows can be located below on, or above the water line and are slightly broader than high. Burrows are typically 40-80mm in diameter (rats are slightly larger in size at 80mm – 100mm) and normally occur within 2m of the water's edge.
 - Lawns. Water voles may graze the area of vegetation immediately around their burrows creating a 'lawn' area. Female water voles with young are particularly

likely to demonstrate this behaviour to discourage young from straying from the safety of the burrow entrance.

- Footprints. Water voles have star-shaped prints. They are similar to rats, but rat toes tend to be forward facing. Water voles also have a shorter heel than rats.

Otter Survey

A survey was undertaken within 150m of all suitable habitats. This included along the brook, on-site ponds (P1-P2) and adjoining off-site pond (P3) where access permitted. Whilst otters are rarely recorded during the day; presence can be detected by physical field signs such as faeces (spraint), anal jelly, tracks (five-toed), holts, couches and feeding remains such as fish and crayfish remains (Woodroffe, 2007; Chanin, 2003).

- 3.4 The survey was completed during September 2022. Details of surveyors, survey area, watercourse condition and weather conditions are details within Table 1:

Table 1: survey details

Date	Surveyor	Survey Area	Watercourse Condition	Weather Conditions
9 September 2022	E. Seaton	Brook (SP 42504 95720 to SP 42359 96053), ponds (P1-P3) and within 150m of these habitats (access permitting).	Shallow (c.200m in depth), slow-flowing, silty / muddy substrate, absence of aquatic vegetation, cattle-grazed up to banks.	Temperature: 16°C, cloud cover: 80%, wind: still, rain: none.

Limitations

- 3.5 The results of the survey and assessment undertaken by Zebra Ecology are representative at the time of surveying.
- 3.6 No significant limitations were encountered to negatively influence results.

4.0 RESULTS AND CONCLUSION

Desk Study

- 4.1 Records of water vole have been returned from a Hinckley ditch / stream west of Normandy way located c.1780m south-west. Water voles are also known to be present within Brodick Road Flood Retention Area (LWS) located c.2025m south-west of the application site.
- 4.2 No records have been returned from the brook subject to survey or on-site habitats.

Field Survey - Habitat Assessment Results

- 4.3 The brook presents uniform habitat along the stretch. The watercourse is shallow (c.200m in depth), slow-flowing, supporting a silty / muddy substrate and an absence of aquatic. It is subject to intensive cattle grazing up to the banks.
- 4.4 The substrate of the banks is earth and suitable for burrowing. The banks of the brook are steep and suitable for burrow excavation that would be adaptable to changing water levels. Herbaceous vegetation is largely limited to species such as common nettle, cleavers and bramble. This vegetation provides some limited herbaceous cover; however, this does not extend further than the bank top due to intensive grazing pressures limiting associated food and cover. Furthermore, no aquatic vegetation is present.
- 4.5 A hedgerow runs along the bank with species recorded such as blackthorn hawthorn, ash, field maple and elder. Water voles are capable climbers with this hedgerow providing some additional limited foraging habitat (fruits, shoots etc.); however, would likely only be able to sustain low densities of this European Protected Species.
- 4.6 Although the habitat is of sub-optimal quality for water vole, it is not possible to rule out the presence of riparian mammals based on an initial habitat assessment alone. Therefore, a metre-by-metre hand search of the banks of the brook (and on-site ponds) was carried out.

Field Survey - Survey Results

- 4.7 No field signs from otter or water vole were recorded. On this basis, there is no evidence to suggest otters or water voles are present at the site.

Impacts

- 4.8 No direct impacts are proposed to the brook as part of this application. Both on-site ponds (P1, P2) are also subject to retention. The on-site habitat within proximity to the off-site pond (P3) is to be retained and enhanced from arable to grassland meadow.
- 4.9 It is understood that a small area of developed land (road) is proposed within 10m of the brook. The remainder of the brook will be buffered with landscaping (species-rich grassland and mixed scrub) significantly improving the condition of the banks from their current condition (intensively cattle-grazed, modified grassland).

- 4.10 Taking into account that evidence of riparian mammals has not been recorded, the sub-optimal condition of habitat and absence of direct impacts on the brook and ponds, no detrimental impacts are predicted upon these species as a result of the proposals. However, as both water voles and otters are mobile species responding to habitat changes over the course of a season, a further pre-commencement inspection should be carried out to ensure full compliance with the strict legislation afforded to these species. This will be detailed and secured as part of a future Construction & Ecological Management Plan (CEMP) for the site.

5.0 RECOMMENDATIONS

- 5.1 As a precautionary approach, and taking into account the mobile nature of riparian mammals in line with seasonal habitat changes; a pre-commencement inspection should be undertaken at the site to ensure full compliance with the strict legislation (The Conservation of Habitat & Species Regulation, 2017) afforded to these protected species. Ideally, this should be completed during the first half of the season (mid-April to the end of June).
- 5.2 A continuous, undisturbed and unlit vegetated buffer of not less than 10m should be strictly enforced between worked areas of development and the bank top of the brook (see *e.g.* Dean *et al.* 2016). This will ensure compliance with wildlife legislation and provide adequate protection of the watercourse.

6.0 REFERENCES

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APPENDIX A

Photographs



Photograph 1: view along the brook.



Photograph 2: view along the brook with cattle-grazed grassland at banks.



Photograph 3: view along the brook.



Photograph 4: view along the brook.



Photograph 5: pond 1 (on-site)



Photograph 6: pond 2 (on-site)

APPENDIX B

Legislation

Otters

The European otter is the only native UK otter species. It IS a European protected species (EPS) and is also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to:

- Capture, kill, disturb or injure otters (on purpose or by not taking enough care); -
- Damage or destroy a breeding or resting place (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.

Water voles

Water voles are protected in the UK under the Conservation of Habitats and Species Regulations, 2017 and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to:

- Intentionally kill, take or injure a water vole;
- Possess or control any live or dead water vole, or any part or derivative (not including water voles bred in captivity under licence);
- Intentionally or recklessly damage, destroy or block access to a water voles place of shelter or protection (on purpose or by not taking enough care);
- Intentionally or recklessly disturb a water vole whilst it is occupying a structure or place which it uses for shelter or protection (on purpose or by not taking enough care).

APPENDIX C

Qualifications and Experience

Zebra Ecology Ltd is Registered Practice of the Chartered Institute of Ecology and Environmental Management (CIEEM). A comprehensive range of ecological services are offered including Preliminary Ecological Appraisal (PEA), Ecological Impact Assessment (EclA), Habitat Regulations Assessment (HRA), Biodiversity Impact Assessment (BIA) and European Protected Species (EPS) Surveys / Licensing.

The practice works closely with clients to achieve their aspirations alongside securing the best outcomes for the environment. With wildlife legislation and policy as its basis; commercial awareness, pragmatism and defensible advice is combined to form Zebra Ecology's approach.

As well as offering a wide range of ecological services, Zebra Ecology forms part of Zebra Group offering an in-house collaborative approach in conjunction with Zebra Architects, Zebra Landscape Architects, Zebra Trees and Zebra Land and Development.

Emma Seaton BSc (Hons) MCIEEM

Emma holds a BSc (Hons) degree in Biology from the University of Sheffield and has since gained a postgraduate certificate in Ecological Consultancy. Her ecological experience includes Preliminary Ecological Appraisals, Ecological Impact Assessments (EclA), surveying for notable / European Protected Species, mitigation / licensing advice and providing Continued Professional Development (CPD) sessions for developers on Biodiversity Net Gain. She has held Natural England survey licences for bats (Class 2), great crested newts and white-clawed crayfish since 2015. She is also a Registered Consultant under the Bat Mitigation Class Licence (BMCL) licence and Earned Recognition 'ER' consultant under the Natural England bat pilot project. Emma is a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).