



Wokingham Borough Council

SOUTH WOKINGHAM DISTRIBUTOR ROAD

Riparian Mammal Survey Report





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Riparian Mammal Survey Report

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EXECUTIVE SUMMARY

Wokingham Borough Council (WBC) has instructed WSP to conduct ecological surveys to support the detailed design and discharge of planning conditions for the South Wokingham Distributor Road (SWDR) Scheme. The Proposed SWDR is located between Easthampstead Road and Finchampstead Road, south of Wokingham. The main objective of the SWDR is to facilitate access for strategic housing allocations and reduce the impact of increased traffic on local roads.

The SWDR Scheme received planning permission (planning ref. 192928) in 2021. However, due to the time which has elapsed since, an ecological gap analysis was undertaken by WSP on behalf of WBC in order to identify the requirements for any updated ecological surveys required, in line with any relevant planning conditions or otherwise, to appropriately inform pre-construction mitigation measures.

Following the findings of the most recent ecological gap analysis, WSP was commissioned by WBC to complete an otter and water vole survey of the Emm Brook and network of ditches which is located within the SWDR Scheme. Otter is known to be present within the area, but no evidence of the species was found in previous surveys undertaken between 2013 and 2022. No signs of water vole were also recorded during previous surveys undertaken between 2013 and 2022.

Two survey visits were undertaken in May and July 2024, searching the Emm Brook for evidence of otter and water vole. One section of the watercourse was noted to be dry at the time of each survey. Two sections were also obstructed by dense vegetation and so provided sub-optimal habitat for otter and water vole but vegetation may have obscured evidence.

No evidence of water vole was found during either of the surveys. Part of the Emm Brook was determined to have low to moderate suitability for water vole. The rest of the Emm Brook surveyed was considered sub-optimal for water vole. No avoidance, mitigation or compensation measures are required for water vole.

Evidence of otter presence was found comprising spraint and foraging signs on the first survey, indicating otters likely utilise the area for foraging and commuting. No holts were recorded during either survey to indicate otter breeding. Where possible, effects from the Scheme on the Emm Brook where otters are present should be avoided. If this is not possible, mitigation measures must be undertaken to comply with legislation.

Enhancement measures for otter are required and recommended for water vole. These measures would include planting of wetland vegetation, management of scrub and restoration of the water channel.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1. Wokingham Borough Council (WBC) secured planning permission (planning ref. 192928) in 2021 to construct the South Wokingham Distributor Road (SWDR) between Easthampstead Road and Finchampstead Road (hereafter referred to as the 'Site'). The SWDR is to facilitate access for strategic housing allocations and to reduce the impact of increased traffic on local roads. The works associated with the Site are hereafter referred to as the 'Scheme'.
- 1.1.2. The Scheme forms part of the South Wokingham Strategic Development Location (SDL), which is defined as the following:

'....an urban extension of Wokingham town, Montague Park and south of the railway between the boundary with Bracknell Forest and Finchampstead Road. It will include new homes, new primary schools, local shopping and community facilities in two new neighbourhood centres, open spaces and roads including a South Wokingham Distributor Road.'
- 1.1.3. The Scheme is currently progressing through detailed design and discharge of planning conditions.

1.2 ECOLOGICAL BACKGROUND

- 1.2.1. The Site encompasses a range of habitats including arable fields, grassland and scrub and is approximately 0.7ha in size (Figure 1).
- 1.2.2. WSP completed ecological surveys of the Site between 2017 and 2021 to support the planning application. In addition, ecological survey work for areas targeting the SDL and associated major phased development, were carried out by Ecosa Ltd and The Ecology Partnership between 2013 and 2022. This survey data has not been obtained, but due to the time elapsed since these surveys were undertaken, updated surveys were required for target species.
- 1.2.3. An Ecology Gap Analysis (WSP, 2024) was undertaken for the Scheme in January 2024, consisting of a detailed, desk-based review of existing survey information, planning conditions and associated documents to determine detailed updated survey and pre-construction support requirements.
- 1.2.4. The Ecology Gap Analysis identified that further surveys for riparian mammals (otter *Lutra lutra* and water vole *Arvicola amphibus*) were required. This is due to the Scheme's potential impact to watercourses present within and in close proximity to the Site (including the Emm Brook) and the Environment Agency's expectation that otter will be found within the Loddon catchment where the Scheme falls (WSP, 2024).
- 1.2.5. Otter and water vole surveys were not previously undertaken for the Scheme and an assessment by Ecosa Ltd returned no results for these species in 2013 (Ecosa Ltd, 2014; 2016). No records of otter or water vole within 2km of the Site were returned by a desk study undertaken in 2018 but otter are known to be present on the wider Emm Brook catchment to the north of Wokingham (WSP, 2018a; WSP, 2018b). No evidence of otter or water vole was found during a survey undertaken by Ecosa Ltd of SDL land (including the Emm Brook) in 2019. Updated surveys were recommended in 2022 but it is unknown if these were completed.
- 1.2.6. While the Site itself offers limited suitable habitat for otter, the Emm Brook and surrounding vegetation offers foraging and cover opportunities. The network of wet ditches within and in

proximity to the Site, including the Emm Brook, contains many which are suitable for water vole in that they have sloping vegetated banks and hold water, offering forage and cover for this species.

1.3 BRIEF AND OBJECTIVES

- 1.3.1. WBC commissioned WSP to complete a riparian mammal survey of the Emm Brook plus a suitable buffer, where necessary, (indicatively 100m upstream and downstream for otter and 50m upstream and downstream for water vole). The brief was to:
- complete a field survey to search for signs of otter activity to include recording the presence of otter holts and field signs such as spraint, pathways or tracks and prints where present; and
 - complete a field survey to search for signs of water vole activity to include recording the presence of water vole burrows and field signs such as latrines, feeding stations and prints where present.
- 1.3.2. The results of this survey, and subsequent recommendations, are included within this report.

2 METHODS

2.1 FIELD SURVEY

- 2.1.1. The Emm Brook and associated surrounding areas for the riparian mammal survey are hereafter referred to as the 'Survey Area' which is shown on Figure 1.
- 2.1.2. The Survey Area was searched for evidence of otter and water vole following the standard methodology as outlined by Chanin (2003) and Dean *et al.* (2016), respectively.
- 2.1.3. The survey comprised two visits to each surveyed water course within the appropriate season for otter and water vole survey (late April to early October), each incorporating three elements:
 - A walked survey of the entire length of the water courses within the Survey Area to conduct a thorough visual inspection of the banks and immediate vicinity for otter and water voles or their field signs. Field signs for otter include spraint, fish feeding remains, holts, footprints and paths or slides. For water vole field signs include faeces, latrines, feeding stations, burrows, 'lawns', nests, footprints and runways in vegetation.
 - The recording of habitat variables and features relevant to otter and water voles (for example general habitat type, shore/bank substrate, bordering land use, vegetation, disturbance level, bank profile, water depth).
 - The recording of any field signs or evidence relating to other relevant wildlife (for example mink *Neovision vison* or brown rat *Rattus novegicus*).

2.2 DATES OF SURVEY AND PERSONNEL

- 2.2.1. The riparian mammal survey was completed by an experienced surveyor with several years' experience of ecological survey, including extensive riparian mammal survey experience.
- 2.2.2. Weather conditions during the riparian mammal survey were mild and dry. Two visits of the Survey Area were undertaken on the following dates:
 - 28 May 2024; and
 - 23 July 2024.

2.3 NOTES AND LIMITATIONS

- 2.3.1. Ecological survey data is typically valid for up to 18 months unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management (CIEEM, 2019).
- 2.3.2. Light rain was noted throughout most of Survey 1 which may have potentially affected the chance of observing riparian mammal evidence which may have been washed away. This is not considered a significant limitation as other signs such as burrows would still be present.

- 2.3.3. Vegetation was dense in some parts surrounding the Emm Brook which may have obscured evidence (Figure 1). This included large amounts of the invasive species Himalayan balsam *Impatiens glandulifera* present on banks.
- 2.3.4. Section A of the Emm Brook was mostly dry on both surveys (Figure 1).

3 RESULTS

3.1 OVERVIEW

- 3.1.1. The majority of the Survey Area was suitable for otter and had low/moderate suitability for water vole (Section B on Figure 1). Some suboptimal areas which were dry or had dense vegetation were also present (Sections A, C and D). Sections of the Emm Brook surveyed are described below in Table 3-1.
- 3.1.2. No evidence of other mammals (i.e. mink and rats) was found during either survey.

Table 3-1: Watercourse descriptions

Watercourse section reference	Description of evidence present
A	Largely dried up during both surveys with some sparse standing water in some sections. A public footpath runs along the right-hand bank and a supermarket and car park is close by to the left-hand bank. Evidence of lots of littering present and so high levels of disturbance. The banks for Section A were not well established and relatively flat and eroded, potentially from frequent drying. In addition to poor bank profiles, the surrounding vegetation did not provide adequate vegetation cover in terms of density and was fairly sparse on both survey visits. Consequently, there was not suitable alternative space for other burrow creation along this stretch. Given the frequent drying of the waterbody, there are less options for predator escape and connectivity. Fish stocks are likely not abundant if frequently drying.
B	Some lengths of this are surrounded by fairly dense nettle <i>Urtica dioica</i>, bramble <i>Rubus fruticosus</i> and Himalayan balsam at present. The water was very turbid and lots of the bank was undercut. Surrounded by tussocky grassland parcels on either side. Water level reduces significantly towards wooded section (in middle of the Site boundary). Moderate amounts of fallen deadwood from surrounding tree fall present overhanging this brook throughout. A potentially flooded mammal entrance was observed from the opposite bank along section B. The entrance was tall and narrow and considered unsuitable for water vole and otter. There were no obvious mammal paths leading to the entrance and likely disused.
C	Very dense bramble vegetation covering the majority of watercourse section and so was heavily shaded. Banks not well established for burrow creation. Public access and working fruit farm surround this section so high levels of disturbance. No emergent macrophytic vegetation present.
D	Small section of watercourse surrounded by active horse paddocks which has potentially affected water quality as some manure was present in and close to the water. Water level is generally shallow. Dense vegetation (largely bramble) was covering majority of waterbody. Shallow and eroded banks, likely not enough embankment on either side present to support burrow making.

3.2 RESULTS OF OTTER SURVEY

- 3.2.1. The surveys confirmed otter presence within the north-west of the Emm Brook (Section B) and the species likely use the area for foraging and commuting. Details of otter evidence recorded are summarised in Table 3-2 below and shown in Figure 2, with photographs included in Appendix A.

Table 3-2: Otter evidence recorded

Water course	Date	Description of evidence present
Emm Brook	28 May 2024	Feeding remains (likely signal crayfish <i>Pacifastacus leniusculus</i>) found on log across watercourse. Otter spraint with bones present located on a log on the bank.
	23 July 2024	No signs of otter present.

3.3 RESULTS OF WATER VOLE SURVEY

- 3.3.1. The surveys recorded no signs of water vole presence within the Survey Area on both visits.

4 IMPLICATIONS FOR DEVELOPMENT

4.1 OVERVIEW

Otter

- 4.1.1. Otters are protected from killing, injury and disturbance under UK and European legislation. In addition, planning policy affords further protection within the planning system, as described below. As otter has been confirmed to be present in the Survey Area, it will be necessary to adopt appropriate avoidance and/or mitigation measures as part of the Scheme, see Section 5.

Water vole

- 4.1.2. The survey results indicate that water voles are likely absent from the Survey Area, therefore there are no known legal or planning constraints in relation to water vole. The legislation and national planning policy listed below is included for information only.

4.2 LEGAL COMPLIANCE

OTTER

- 4.2.1. Otter are protected from killing, injury and disturbance and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Conservation of Habitats and Species Regulations 2017 (as amended). The species is also protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.
- 4.2.2. Otter are also a Species of Principle Importance (SPI) for the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of the NERC Act 2006, public bodies, including local planning authorities, have a duty to have regard for SPI when carrying out their functions, including determining planning applications.

WATER VOLE

- 4.2.3. Water vole are fully protected under Schedule 5 of the WCA against intentional killing, capture or injury and intentional or reckless disturbance, obstruction, damage or destruction of their burrows.
- 4.2.4. Water Vole are also a SPI under Section 41 of the NERC Act 2006. Under Section 40 of the NERC Act 2006, public bodies, including local planning authorities, have a duty to have regard for SPI when carrying out their functions, including determining planning applications.

4.3 PLANNING POLICY COMPLIANCE

- 4.3.1. At the national level, the National Planning Policy Framework (NPPF) (2023) forms the basis for planning system decisions with respect to conserving and enhancing the natural environment, including otter and water vole. The ODPM circular 06/2005 also provides supplementary guidance, including confirmation that *'the presence of a protected species is a material consideration when a planning authority is considering a development proposal'*.
- 4.3.2. The updated NPPF (2023) made clear the expectations for development to protect and enhance biodiversity and achieve biodiversity net gain, including references in the following sections:

- *'Planning policies and decisions should contribute to and enhance the natural and local environment by...(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'* (paragraph 180);
- *'To protect and enhance biodiversity and geodiversity, plans should:...(b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity'* (paragraph 185); and
- *'when determining planning applications, local planning authorities should apply the following principles: (a) if significant harm to biodiversity 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, then planning permission should be refused.'* (paragraph 186).

4.3.3. The Core Strategy Development Plan for Wokingham (WBC, 2010) states that a development which:

- *'...may harm habitats or species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly, or*
- *...that compromises the implementation of the national, regional, county and local biodiversity action plans;*
will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and:
 - i) *mitigation measures can be put in place to prevent damaging impacts; or*
 - ii) *appropriate compensation measures to offset the scale and kind of losses are provided.'*

4.3.4. Through the Wokingham Borough Biodiversity Action Plan (BAP) process, *'...county targets were set to maintain, restore and create BAP Priority habitats in Berkshire'* (WBC, 2014). There has also been movement towards a landscape-scale conservation and an ecosystem approach rather than target based for priority habitats and species. The BAP contains several Habitat Action Plans (HAP) such as wetlands which includes rivers and streams. Water vole was listed as a species associated with these habitats in the HAP. The Emm Brook has been subject to a number of pollution incidents in the past which is considered a threat to these habitats. Residential and commercial development is also considered a risk to wetlands in Wokingham borough. Aspirations for wetland habitats to be achieved by 2100 include:

- *'the river floodplains are maintained as fully functioning wetland corridors;*
- *there is no decline in area or wildlife value of wetlands within the Borough;*
- *targeting of habitat restoration and creation is prioritised within the Boroughs Biodiversity Opportunity Areas (BOAs) to create networks of resilient wildlife habitat; and*
- *Wetlands are a valued and appreciated part of our natural heritage.'*

4.4 OTHER GUIDANCE

4.4.1. Otter and water vole are also priority species in the UK Biodiversity Framework.

5 RECOMMENDATIONS

5.1 AVOIDANCE AND MITIGATION MEASURES

WATER VOLE

- 5.1.1. As water voles are considered likely absent from the Survey Area, no avoidance, mitigation or compensation measures focussed specifically on this species are required.

OTTER

- 5.1.2. Due to the transient nature of otter, targeted pre-construction surveys should be undertaken within within three months of construction works on the watercourse crossing commencing or if construction of the crossing has not commenced within three months of this report. These surveys should be undertaken on the full length of the watercourse plus 200m upstream and downstream of the Site boundary.
- 5.1.3. Effects upon water courses in which otter populations are present should be avoided, wherever possible. Habitat occupied by otter should be retained and protected wherever possible within the Scheme designs and areas of retained habitat should remain connected to other habitat areas, within or beyond the Survey Area to ensure commuting routes are not obstructed/fragmented. It is recommended that a minimum 10m buffer should be maintained around the watercourses where possible, with fencing to prevent otter accessing the construction site without disrupting commuting routes. Compounds and material storage areas should be sited well away from any watercourse and lighting should be directed away from the watercourse.
- 5.1.4. If this is not possible, it will be necessary to design and implement a Precautionary Method of Works (PMoW) to avoid an offence under the Conservation of Habitats and Species Regulations 2017 (as amended) and the WCA. The purpose of this detailed mitigation strategy will be to avoid the disturbance of individuals as they utilise the Survey Area for foraging or commuting.
- 5.1.5. It is recommended that the following measures are incorporated during the construction phase, where crossing the watercourse is required:
- Any water course crossing points (i.e. bridges or culverts) associated with the Scheme should be designed to limit otter vulnerability to road traffic by creating dry otter underpasses or bolt-on ledges, and otter-proof fencing to allow otters a safe passage through the works area and direct them to a safe crossing point.
 - Industry standard pollution prevention measures should be followed and incorporated into the Environmental Management Plan (EMP).
 - One side of the watercourse being bridged should remain intact for as long as possible to provide safe access, and the area around the watercourse to be disturbed should be minimised by the provision of temporary barriers and safe working areas.
 - No night work should take place to avoid disturbance to otter when they are most active;
 - Open excavations should be kept to a minimum across the whole Site and covered overnight or fitted with a means of escape to prevent otters or other animals becoming trapped by means of ramped access / egress. These should be inspected every morning to ensure no animals have fallen in. Pipes stored on site should also be inspected.
 - Following the construction of any crossing points, the banks should be reinstated to the same height and profile and allowed to re-vegetate.

- 5.1.6. It is recommended that the following measures are incorporated during the operation phase:
- Mammal passages maintained through Emm Brook bridge embankments;
 - Otter-proof fencing of Emm Brook at bridge crossing to keep otters away from the road and direct them to a safe crossing point (i.e. mammal passages).
 - Landscaping plans should include tree and shrub planting to screen the watercourse from the Scheme to minimise disturbance during the operation phase.
 - A lighting strategy should be designed and implemented to ensure a dark corridor along the watercourse is maintained to enable otter to continue to use this habitat.
- 5.1.7. For sections within the Scheme where crossing the watercourse is not required (i.e. the west of the Scheme), otter proof fencing should be installed to limit access to the watercourse and a 10m buffer should be placed around the Emm Brook to minimise pollution risk and avoid disturbance of any otter that might be passing through.

5.2 ECOLOGICAL ENHANCEMENT MEASURES

- 5.2.1. As water voles are considered likely absent from the Site no enhancement measures specifically targeted at this species are considered necessary.
- 5.2.2. Due to otter being present, there is scope to enhance the existing habitat. For example, retained riparian habitat should be enhanced where possible in association with the Scheme and consideration should be given to the creation of new riparian habitat such as vegetated wet ditches, ponds or swales.
- 5.2.3. Biodiversity gain in association with development is encouraged by the NPPF (2023). In accordance with this policy, it is recommended the following opportunities for enhancing the Site for otter should be considered:
- The planting of native wetland plants, reeds, grasses, rushes and sedges along new channels in Sections A to D;
 - The planting and management of scrub habitat along the banks of watercourses to provide cover for riparian mammals in Sections A-D; and
 - The restoration of water channels; with deepening or alteration of bank profile where appropriate to maximise their suitability for otter in Sections A and D. This could be through ensuring a sufficient depth of water remains present throughout the year or providing a suitable bank profile and substrate for holt creation.

6 CONCLUSIONS

- 6.1.1. Two survey visits were undertaken in May and July 2024, searching the Emm Brook for evidence of otter and water vole.
- 6.1.2. Part of the Emm Brook was determined to have low to moderate suitability for water vole. However, no evidence of water vole was found during either of the surveys. As such, they are considered to be likely absent from the Survey Area and no avoidance, mitigation or compensation measures are required for water vole.
- 6.1.3. Evidence of otter presence was found comprising spraint and foraging signs on the first survey visit, indicating otters likely utilise the area for foraging and commuting. This evidence was found in Section B of the Emm Brook to the north-west of the Survey Area. No holts were recorded during the surveys. Where possible, effects on the Emm Brook where otters are present should be avoided. If this is not possible, mitigation measures must be undertaken to comply with legislation.
- 6.1.4. Enhancement measures for otter are required and recommended for water vole. These measures would include planting of wetland vegetation and restoration of the water channel.

7 REFERENCES

7.1 PROJECT REFERENCES

- Ecosa Ltd (2014) Land at South Wokingham Ecological Assessment Summary Report.
- Ecosa Ltd (2016) Land at South Wokingham, Berkshire, Updating Phase 2 Ecological Assessment
- WSP (2018a) South West Distributor Road – Spine Road and Western Gateway: Preliminary Ecological Appraisal.
- WSP (2018b) West of Old Forrest Road, Preliminary Ecological Appraisal Report.
- WSP (2024) South Wokingham Distributor Road – Ecological Gap Analysis.

7.2 TECHNICAL REFERENCES

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- National Planning Policy Framework (NPPF) (2023) (Department for Levelling Up, Housing and Communities, December 2023).
- WBC (2010) Wokingham Borough Core Strategy Development Plan Document (Adopted – 29 January 2010).
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FIGURES

Figure 1 – Site Location and Survey Area

Figure 2 – Riparian mammal Survey Results



Key

Indicative Emm Brook Survey Area

Low/moderate suitability for water vole, suitable for otter

Dense vegetation (sub-optimal), mostly dry

Riparian Mammal Results

Potential flooded mammal entrance

otter foraging sign

otter spraint

0

50

100

Meters

WSP

Client:

Wokingham Borough Council (WBC)

Project:

South Wokingham Distributor Road (SWDR)

Title:

Riparian mammal survey results

Drawing No:

Figure 2

Date:

July 2024

Scale:

1,500 @ A3

Drawn:

ES

Checked:

KT

Approved:

CH

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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Appendix A

PHOTOGRAPHS

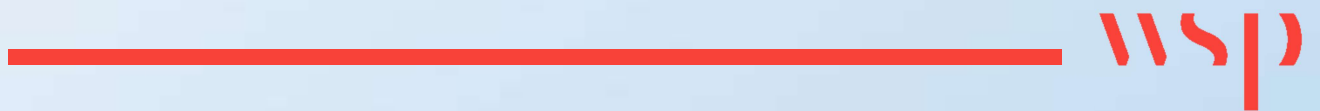


Table A-1 - Photographs from the riparian mammal survey

Photograph	Description
	Otter feeding remains on log, likely signal crayfish (Survey 1) on Section B
	Otter spraint on log (Survey 1) on Section B.

Photograph	Description
	Potential flooded mammal entrance along Section B.



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