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Appendix 9.8 Riparian Mammal Survey Report

Client

Hallam Land

Project

Hawkwell Village,

North-West Bicester

Date

October 2025

CONTENTS

TABLES

FIGURES

Rev	Issue Status	Prepared/Date	Approved/Date
-	Final	RAM / 12.09.2025	JDH / 07.10.2025
A	Final	JM / 23.10.2025	JDH / 24.10.2025

1.0 NON-TECHNICAL SUMMARY

Report Scope and Methodology
FPCR Environmental & Design Ltd. were commissioned by Hallam Land to undertake riparian mammal surveys at Land off Bicester Road, Bicester to provide an ecological baseline for the application Site. Proposals include an outline planning application 21/04275/OUT Surveys for otter and water vole were undertaken between April and September 2025 in accordance with good practice guidelines.
Survey Results
The Site is dominated by arable fields with associated field margins, a number of fields of semi-improved and improved grassland. A watercourse flows eastwards through the southern extent of the Site. Two watercourses are present in the north, and east of the site, and a single pond is present. The watercourse to the south provides good habitat for otter but is suitable but poor for water voles. The watercourses to the north and east, where sections are not scrubbed over or heavily shaded, provide good habitat for water vole but only limited suitability for otter. Evidence of otter was found in the watercourse to the south of the Site. Evidence of water vole was found largely found along R1 on Site, however, there is potential evidence of water vole along R2 and R3.
Assessment of Impacts
The proposals will retain the waterbodies on Site; however, vehicular access will be constructed in several places along the eastern and southern watercourses. It is also proposed that drainage inputs and pedestrian access will be developed into the northern watercourse. The proposals include extensive habitat creation measures including wider grassland buffers along the northern watercourse. In the absence of mitigation, the vegetation clearance operations and disturbance during the operational phase have the potential to breach legislation protecting otter and water vole.
Recommended Mitigation, Compensation and Enhancement
A pre-commencement survey prior to construction works along the watercourse is recommended. If water vole are recorded within 10m of the proposed works, and the location of the bridge cannot be altered, a licence from Natural England will be applied for. This will include precautionary methods of work and timings under ecological supervision, as well as compensatory habitat creation. In addition to generous green infrastructure proposals along the boundaries that will benefit otter/water vole in the long-term, additional habitat creation measures will be employed. During the creation of new sustainable drainage features, a range of food sources will be planted and the sides graded to provide opportunities for burrowing.

2.0 INTRODUCTION

2.1 The following has been prepared by FPCR Environment and Design Ltd on behalf of the Hallam Land as an appendix to the Ecological Impact Assessment to report the findings of riparian mammal surveys undertaken on land North West of Bicester (Central OS Grid Ref: SP 570 251) herein referred to as 'the Site'.

Site Context

2.2 The Site is dominated by arable cropland with species poor semi-improved and improved grassland for grazing livestock, scattered scrub, hedgerows, and a small woodland block. Three small watercourses bisect the Site, one close to the Site's northern boundary, a second towards the southern end of the Site and the third running north-south from the existing development to join the River Bure at Lords Lane. Along these watercourse corridors there is a mix of dense and scattered scrub and standard trees.

2.3 The Site is bound by existing residential development to the north-east, the railway approaching Bicester North station to the south. The remaining perimeter of the Site is bound by existing agricultural boundaries.

Site Proposals

2.4 The Site is proposed as a mixed-use development, with an extensive network of green infrastructure and public open space included which provides opportunities for habitat mitigation and enhancements.

Report Aims and Objectives

2.5 The report has been prepared to achieve the following objectives:

- Summarise the survey and assessment methodologies employed in order to assess the importance of the Site for otter *Lutra lutra* and water vole *Arvicola amphibius*
- Provide the desk study records of otter and water vole within a 1km radius of the Site
- Provide the results of riparian mammal surveys undertaken
- Assess the likelihood of otter and/or water vole being present onsite
- Provide recommendations for avoidance, mitigation, compensation and/or enhancement to mitigate impacts of the proposals on riparian mammals

3.0 LEGISLATION

Otter

3.1 The European otter *Lutra lutra* is fully protected under Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (as amended). This makes it an offence to:

- Intentionally or recklessly kill, injure or take otters
- Possess or control live or dead specimens or derivatives
- Intentionally or recklessly disturb this species whilst occupying a structure or place used for shelter or protection
- Intentionally or recklessly disturb this species whilst occupying a structure or place used for shelter or protection
- Sell this species or offer or expose for sale or transport for sale
- Publish or cause to be published any advertisement which conveys the buying or selling of this species

3.2 Otters are also protected by the Conservation of Species and Habitats Regulations (CSHR) 2017 as amended. This makes it an offence to:

- Deliberately kill, take or injure an otter
- Deliberately damage or destroy an otter's place of shelter
- Deliberately disturb an otter whilst using such a place

Water Vole

3.3 The water vole *Arvicola amphibius* is fully protected under the WCA 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take water voles
- Possess or control live or dead water voles or derivatives
- Intentionally or recklessly damage, destroy and obstruct access to any structure or place used by water voles for shelter or protection
- Intentionally or recklessly disturb water voles whilst they are using such a place
- Sell water voles or offer to expose for sale or transport for sale
- Publish or cause to publish any advertisement which conveys the buying or selling of water voles

3.4 Both otter and water vole are listed as a Species of Principal Importance under S41 of the NERC Act 2006.

3.5 Proposals that could lead to any of the above offences for either species would require a mitigation/conservation licence from Natural England, alongside appropriate avoidance, mitigation and compensation measures.

3.6 The impact that the above legislation has on the planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. This states:

"The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned."

4.0 METHODOLOGY

Desk Study

4.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Thames Valley Environmental Records Centre (TVERC)
- Multi Agency Geographic Information for the Countryside (MAGIC - https://magic.defra.gov.uk/MagicMap.html)

4.2 Inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was undertaken to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

Otter Surveys

4.3 The otter surveys were completed on 24th April 2025 and 9th September 2025 by suitably experienced FPCR ecologists in accordance with guidance[1,2]. Searches concentrated on the waterbodies within the Site and those with direct connectivity to the on-site waterbodies, where access was possible.

4.4 Due to the unlikely event of actual observation, surveys concentrated on locating field signs indicating otter presence or use:

- Spraints – characteristic sweet-smelling, black tar-like (where fresh/relatively recent i.e. within a few weeks) or grey crumbly (when old) faecal deposits usually containing fish scales, bones and occasionally invertebrate exoskeleton and bird feathers.
- Footprints – in good substrate typically asymmetrical and showing five toes arched around a large pad and depending on substrate, webbing and claw marks. Poorer, generally coarser substrates do not often enable the identification of otter footprints.

4.5 Additional signs which may indicate otter presence in combination with the above include:

- Feeding remains – Remains of fish and aquatic invertebrates.
- Slides/haul-outs – Routes into and out of the water, which are usually associated with terrestrial routes such as short cuts around meanders or along traditionally, used otter paths/routes.
- Couches/hovers – above ground resting place. Usually associated with cover such as dense scrub, rushes or reed, flood debris or fallen trees. Many couches are rarely used whilst others more so. Difficult to prove use without radio tracking.
- Holts – below ground resting site usually associated with spraints. Sometimes used with greater frequency than couches and can be important for breeding (natal holts) where other signs are usually absent. Notoriously difficult to find or prove without radio tracking.

[1] Chanin, P (2003) *Ecology of the European Otter*. Conserving Natura 2000 Rivers Ecology Series No. 10. English Nature, Peterborough

[2] Chanin, P (2003) *Monitoring the European Otter*. Conserving Natura 2000 Rivers. Ecology Series No.10. English Nature, Peterborough

Water Vole Surveys

4.6 A habitat assessment was made by an experienced FPCR surveyor on 24th April 2025 to determine the suitability of the Site to support water voles.

4.7 Habitat requirements were based on those detailed in current guidance[3,4] and include:

- dry areas above water level for nesting, either in burrows or above-ground woven nests
- steep bank profiles
- suitable bank substrate for burrowing
- daily water level fluctuations
- herbaceous marginal and bankside vegetation
- suitable water depth (as a means of escape from predators)

4.8 The habitats can then be categorised according to the following matrix:

Table 1: Water Vole Habitat Categories

Habitat Category	Bank Profile	Bank Substrate	Variation in Water Level	Herbaceous Vegetation	Water Permanence
Optimal (all criteria need to be met)	Steep (approaching 1:1) on at least one side of a watercourse. Steep or shallow banks on static waterbodies or fen-type habitat, where water levels do not fluctuate significantly.	Earth or peat	No noticeable variation during the summer months. Banks are not topped regularly (overtopping every 5-10 years likely to be too frequent).	Continuous swathe of bankside or in-channel (emergent) vegetation providing at least 60% ground cover. May be dominated by grasses and weeds, rather than luxurious riparian vegetation. The vegetation should generally be tall, except in urban or suburban areas, where shortened bankside vegetation may also qualify.	Permanent water or routinely wet for at least 2-3 months during the summer, and where other 'good' habitat is present in immediately adjacent areas with permanent water.
Good (all criteria need to be met)	Steep (approaching 1:1) on at least one side of a watercourse. Steep or shallow banks on static waterbodies or fen-type habitat, where water levels do not fluctuate significantly	Earth or peat bank, or stony/reinforced bank with gaps allowing access to the earth behind	No noticeable variation during the summer months; banks are not overtopped regularly	Continuous swathe of bankside or in-channel (emergent) vegetation providing at least 60% ground cover. May be dominated by grasses and weeds, rather than luxurious riparian vegetation. The vegetation should generally be tall, except in urban or suburban areas, where shorted bankside vegetation may also qualify	Permanent water. Or routinely wet for at least 2-3 months during the summer, and where other 'good' habitat is present in immediately adjacent areas with permanent water
Suitable but poor	Any habitat that falls short of the criteria to qualify as 'good' but does not meet the criteria of 'negligible' could reasonably be considered to be suitable but 'poor'				
Negligible (need to meet vegetation criteria and at least one other)	Shallow profile on both banks.	Rocky or gravel	Considerable variation in water level. The bank toe can move by more than 1m horizontally over the breeding season.	None or limited bankside and marginal vegetation due to shading or other 'permanent' factors. (Management can change and is often a 'temporary' factor)	N/A

[3] Dean, M., Strachan, R., Gow, D & Andrews, (2016) The Water Vole Mitigation Handbook. The Mammal Society Guidance Series. The Mammal Society, London.

[4] Dean, M, (2021) Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water vole Surveys, Pelagic Publishing.

	Vertical bank face with no burrowing opportunities behind it.	Reinforced banks with no gaps	N/A		N/A

4.9 The water vole surveys were completed on 24th April 2025 and 9th September in accordance with guidance[5].

4.10 The surveys involved searching for evidence of water vole activity within 5m of the banks of waterbodies and any suitable habitat, including watercourses. Examples of evidence include:

- Water voles – live sightings
- Latrines - distinct piles of water vole droppings found near nest sites, at the ranges of territorial boundaries and where the animals enter and leave the water. The presence of droppings is the only field sign which can be used reliably on its own.
- Burrows - burrow entrances are typically wider than high with a diameter between 4 and 8cm. Generally, these burrow entrances are located at the water's edge.
- Feeding stations - areas with distinct neat piles of chewed lengths of vegetation along pathways or haul out platforms along the water's edge.
- Footprints - identifiable prints in soft margins of the watercourse.
- Runways - low tunnels that are pushed through the vegetation and often leading to burrows or feeding stations.
- Nest balls – woven vegetation of approximately the size and shape of a rugby ball, usually found within a tuft of vegetation above the water line.

4.11 To supplement the surveys, twenty-eight water vole latrine rafts were deployed along S1, S2 and S3. Rafts were deployed between the 24th April 2025 and the 9th September and assessed at intervals, four times across this period.

Other Species

4.12 During surveys, any field signs of other pertinent species were recorded particularly brown rat *Rattus norvegicus* or American mink *Neovison vison.* Notable field signs included:

- the presence of live or dead animals
- footprints
- scats
- feeding remains
- burrows

Limitations

[5] Dean, M., Strachan, R., Gow, D & Andrews, (2016) The Water Vole Mitigation Handbook. The Mammal Society Guidance Series. The Mammal Society, London.

4.13 Short lengths of the watercourses could not be surveyed due to impenetrable scrub. These inaccessible sections of watercourse were in the minority, and it is considered that this had negligible impact on the outcomes of the survey.

5.0 RESULTS

Desktop Study

5.1 There were no records for otter or water vole received within 1km from the local records centre.

Habitat Suitability Assessment

5.2 The habitats on Site consist of arable fields, modified grassland woodland and three watercourses.

5.3 Watercourse R2, a tributary of the River Bure supported running water, flows east through the Site, although levels fluctuated, becoming drier in the summer periods. The watercourse flows east out of the Site near Lord's Farm, below the road and into Bure Park LNR. It comprised a steep sided channel, approximately 1.5m wide and 1m deep, with vegetated earth banksides and a largely mud base. Goat willow *Salix caprea* and blackthorn *Prunus spinosa* scrub and semi-mature and mature trees including crack willow *S. fragilis* and ash *Fraxinus excelsior* were scattered along the bank tops, with ruderal species similar to field margins also present. Species recorded included Fool's watercress *Apium nodiflorum*, a bur reed Sparganium, water figwort *Scrophularia aquatica* and marsh dock *Rumex palustre* and in places the stream was largely choked with vegetation. Poaching was evident in some places as a result of cattle activity.

5.4 Watercourse R1, also a tributary of the River Bure, was located to the north of the Site, bisecting it east-west. Around 1m width at the base, its bank profile, also about 1m in height, varied between shallow and steep along its length. It appeared to support limited standing water at the time of survey the first survey but was completely dry during the second survey. Bank tops and the main channel were largely overgrown with ruderal and tall herbs, including frequent common nettle and great willowherb, with occasional meadow sweet *Filpendula ulmaria*, and brooklime *Veronica beccabunga*. Canary reed grass *Phalaris canadensis* was locally abundant. Scattered scrub was present along its length, except for its eastern extent.

5.5 R3 extended south from the north of Site to meet R2 at the eastern boundary. Another seasonal steep profile earth watercourse, it contained shallow water during the initial survey, however, was largely dry during the second survey and was heavily overshaded by the adjoining hedgerow on its eastern bank. To its west was a wide margin (1 – 2m) of ruderal and tall herbs, similar to that seen elsewhere and dominated by nettle in places.

5.6 Where possible the watercourses were surveyed 100m offsite. R2 branches and continues south through a culvert underneath the A4095 and west through a culvert underneath railway track. It was not possible to access the full 100m along these offsite stretches due to inaccessibility, however, from aerial imagery the watercourse appears to be heavily shaded and of low suitability.

5.7 R1 extended west offsite and was characterised by steep earth and stone substrate banks approximately 1-2m in width. During the initial survey, water depth was recorded as between 0.5-1m, however, the watercourse had become dry by the second survey. Vegetation comprised

dense in channel nettle, shaded by bankside scrub and trees. A large pond (P12) with a vegetated island in the centre of it was located adjacent to the offsite watercourse. The banks to the north of P12 were steep in gradient but became shallow and flat along the southern banks. Bank substrate comprised a mix of silt/mud and stones and water was present but appeared to have receded from its average water table. Vegetation along the banks was dominated by reeds, sedge and tall herbs with frequent patches of bramble scrub also recorded.

5.8 R1 extends across the eastern boundary into a newly built residential area where the watercourse continues before diverting southwards and joining R3. The offsite section of the watercourse was generally shallow or flat in profile with a mixture of earth and stone banks. Vegetation ranged from areas dense with tall herbs, tall grass, bramble and occasional patches of reed grass to the west which then transitioned into lengths of watercourse that were heavily shaded by bankside trees with sedge, tall grass and herbs recorded in a lower abundance. These watercourses were recorded as being dry during both survey occasions.

5.9 Otters are known to utilise all types of waterbodies in the UK, including small streams and watercourses, even when dry. As such, it is considered that the watercourses on Site have the potential to be used by otters for commuting, resting and foraging.

5.10 It is considered that onsite watercourses provide suitable but poor suitability for water voles. The southern watercourse (R2) had steep banks but was heavily shaded by bank trees. Water was present but in very low levels and marginal vegetation suitable for foraging and cover was almost absent. These sections of R2 were assessed as being 'suitable but poor' for water voles. The northern watercourse (R1) had a mixture of shallow and steep sloping earth banks along the majority of the length with the areas of steep banks providing suitable habitat for burrowing. Vegetation present within the watercourses also provided some suitable cover and foraging opportunities, however, the channel bed had limited, or no water and some areas of the watercourse were shaded by scrub. Overall R1 is therefore considered to be of 'suitable but poor' habitat quality. The eastern watercourse (R3) was dry during the surveys but had steep sided earth banks suitable for burrowing. Vegetation varied from areas dense with tall herbs and reed grass to the south and bank trees and scrub causing shading along the northern portion of the watercourse. This watercourse was assessed as having 'suitable but poor' suitability for water voles.

Otter Surveys

5.11 Surveys undertaken at the Site have confirmed the presence of otter. Results are summarised in Table 2 and the location of evidence found is shown in Figure 1. Evidence was focussed along the southern watercourse (R2).

Table 2: Summary of Otter Survey Results

Survey	Date	Survey Results
1	24 April 2025	1 otter spraint on prominent stone outside the entrance to the culvert along R2.
2	9 September 2025	3 otter spraints underneath culvert, next to right abutment along R2. An old otter spraint was present on a small log along the western end of R2. Another old spraint was old found just to the east of this on a log at the top of a bank along western end of R2.

Water Vole Surveys

5.12 Surveys undertaken have confirmed the presence of water vole on Site. Results are summarised in Table 3 and the location of evidence found is shown in Figure 1. Evidence was focussed along the north watercourse (R1).

Table 3: Summary of Water Vole Survey Results

Waterbody Reference	Survey Date	Survey Results
R2	24 April 2025	No definitive water vole evidence identified.
	9 September 2025	No definitive water vole evidence identified.
R1	24 April 2025	No evidence was found during the survey.
	9 September 2025	3 scattered water vole droppings were recorded along the centre of R1, surrounded by field vole droppings. 1 water vole burrow was recorded in the centre of R1.
R3	24 April 2025	No definitive water vole evidence identified.
	9 September 2025	No evidence was found during the survey.

Other Species

5.13 No evidence of mink was recorded during the surveys.

5.14 Evidence of brown rat was recorded across all onsite watercourses. During the April survey, 3 sets of rat droppings were recorded along R1, as well as a set of footprints. During the September survey, 5 sets of rat droppings were recorded along R1, as well as a set of footprints. One of the sets of droppings was found on one of the float rafts in close proximity to where rat prints were recorded during the April survey. A rat dropping was also recorded during the September survey at the southern end of R3.

5.15 Evidence of field vole or bank vole was recorded along all of the onsite watercourses but was most prominent along R1. Evidence included droppings and feeding activity.

5.16 A number of small mammal signs including burrows, footprints, and feeding activity was recorded along the lengths of all of the onsite watercourses. These were not considered definitive water vole signs and were more likely to be result of field voles, bank voles, rabbits and rats.

6.0 IMPACT ASSESSMENT AND DISCUSSION

6.1 The Site is proposed for redevelopment as a new residential area with associated infrastructure including school, hospital, burial ground and solar arrays.

6.2 The proposals will therefore result in the total loss of arable habitat from the Site; however, the watercourses and pond will be retained. Access roads will be constructed across R2 and R3 where they will be culverted. Additional active transport watercourse crossing are expected to be included in final designs.

6.3 The Site will include a range of habitat creation measures as part of the proposed green infrastructure. Areas of neutral grassland will be created to buffer existing watercourses, and

woodland along R2 is to be retained under current proposals. The drainage proposals for the Site will include the creation of a series of swale and SuDs features across the Site.

Impact Assessment

6.4 Surveys have confirmed water vole presence along R1. Due to habitat connectivity, it must be assumed that water voles may be present in low numbers at / occasionally utilise all suitable habitats on Site.

6.5 Surveys have also confirmed that otter have been using the Site, likely for commuting and foraging purposes, with spraints recorded along R2. No holts were identified during the surveys.

6.6 Site proposals entail the creation of several vehicular access bridges which will intersect watercourses R2 and R3. In addition to this, several smaller scale pedestrian access bridges are anticipate din final designs. In the absence of appropriate mitigation, this could result in the disturbance, damage or destruction of a water vole burrow or death or injury to a water vole. These works may also result in the loss of small lengths of suitable water vole habitat.

6.7 To ensure the development is completed in accordance with the requirements of the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended), a pre-commencement survey prior to works is recommended to confirm the absence of water vole burrows 10m either side of proposed bridge locations and associated working area. If evidence of water vole is recorded within that area, appropriate mitigation measures will be adopted as outlined in the following section.

Mitigation

6.8 If during the pre-commencement survey, a water vole burrow is found within 10m of proposed works, it is recommended that the bridge is relocated so that it is at least 10m from a water vole burrow.

6.9 If this is not possible, and where the conditions of a Class Licence allow, a passive displacement exercise will be completed under the supervision of an ecologist who holds a CL31 Class Licence. Once planning permission is granted, the initial vegetation removal will be supervised by the licensed ecologist. This can only take place between 15th February-15th April and/or 15th September-15th October. A 50m (maximum) continuous strip of vegetation adjoining unaffected habitat must be maintained at a height of 10cm above ground level. Once cut, it should be left for a minimum of five consecutive days and a maximum of 10 consecutive days.

6.10 A survey will be completed to check for evidence of water voles following vegetation clearance. Where no evidence is found, each burrow within the 50m strip will be carefully excavated by hand. Construction work will then commence within five days.

6.11 If the this is not possible due to the restrictions of a Class Licence, a Mitigation Licence will be applied for.

6.12 The potential for contamination of watercourses (with sediment, chemicals or hydrocarbons), is a risk associated with all development sites. This would pose a direct risk to water voles within the area, as well as to all other wildlife. As such, best practice guidelines will be adhered to at all times to ensure no adverse impact through contamination upon the watercourses, waterbodies and their associated fauna. Appropriate precautions have been incorporated into

the Construction Environmental Management Plan (CEMP) which will be implemented to control the works.

6.13 Prior to works commencing, 5m buffer zones will be clearly demarcated around all retained aquatic habitat within or adjacent to the working footprint. This will help protect the habitat and any water voles that might be present.

Enhancements

6.14 The proposals include significant areas of habitat creation and enhancement that will enhance the Site for this species group where they seek to colonise the Site. The watercourses will be buffered by a large buffer of other neutral grassland and areas of existing woodland along the watercourses are to be retained.

6.15 Watercourses will need to be enhanced, by ensuring that scrub encroachment on the watercourses is <5% over the next 30 years. To provide additional enhancements, aquatic vegetation including lesser pond sedge, Cyperus sedge, sweet reed grass, yellow iris, purple loosestrife, water mint, reed canary grass and common club rush will be planted in ditches R1, R2 and R3 to provide a foraging resource and provide cover for water vole. It is considered that these enhancements would increase the suitability of the ditches from 'Suitable but poor' to 'good'.

7.0 CONCLUSION

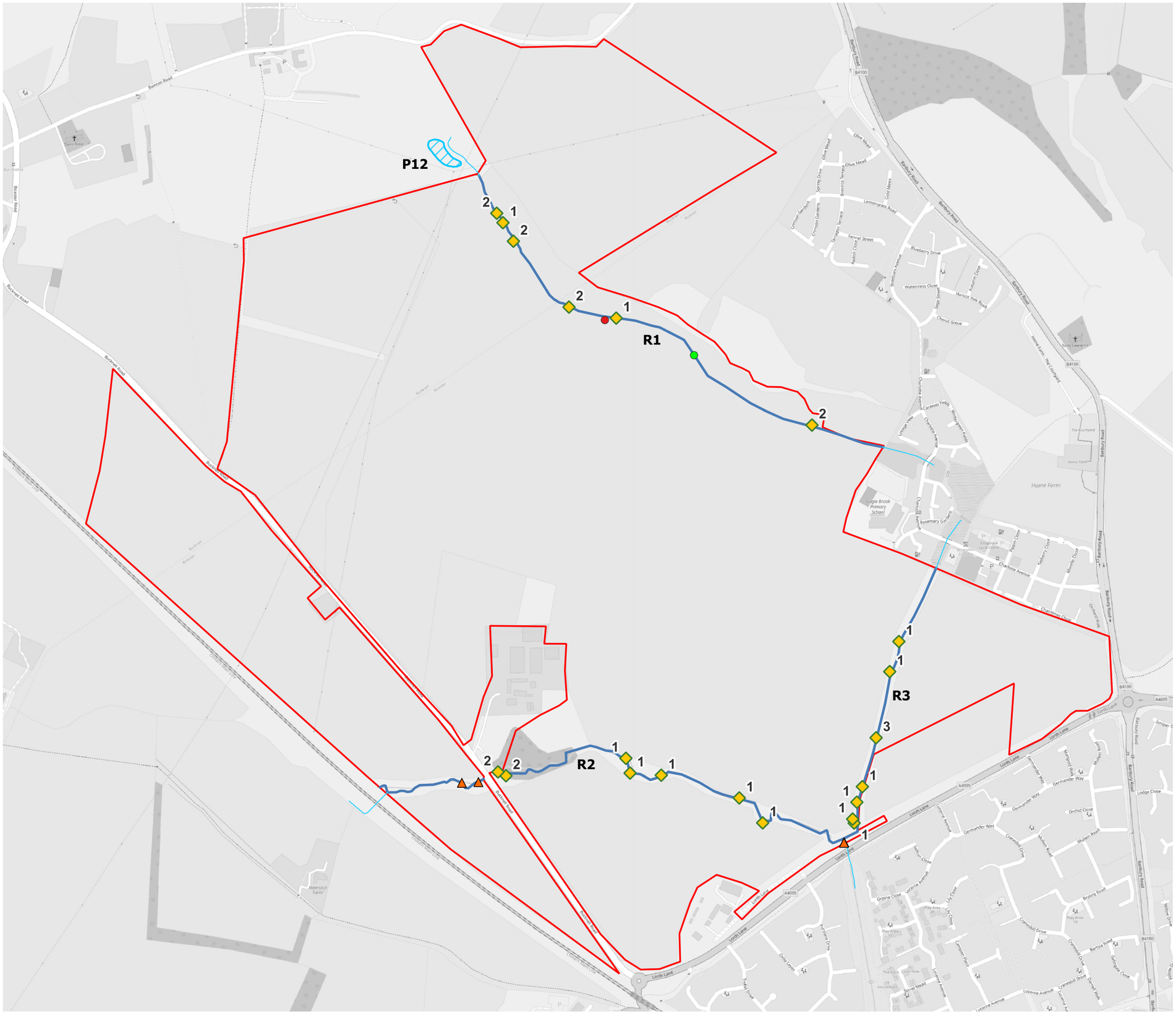
7.1 Survey has demonstrated that the habitats on Site support otter and water vole.

7.2 The proposals will create a number of crossing points over the watercourse, which have the potential to negatively impact the water vole population and to breach legislation protecting this species.

7.3 If water voles are recorded within 10m either side of the proposed bridge construction works, a Natural England licence will be required to carry out development works on Site, if the location of the bridge cannot be altered. This will include precautionary methods of works and timings under ecological supervision.

7.4 Mitigation regardless of the licence will include compensatory habitat creation, along with a sympathetic management scheme.

7.5 The proposals will therefore result in a positive impact on the local water vole population and otter.



🟥 Site Boundary
━ Watercourse
─ Watercourse within 100m Buffer
▨ Suitable Pond within 100m Buffer
◆ Raft Location*

2025 Survey Results

▲ Otter Spraint
● Water Vole Scattered Droppings
● Water Vole Burrow

*Number next to raft location is the number of rafts deployed in that location

date	drwn/chkd
24/10/25	RAM / JH

client
Hallam Land

project
Hawkwell Village,
North-West Bicester

title	scale
RIPARIAN MAMMAL SURVEY RESULTS PLAN	1:7,500 @ A3

number	rev
FIGURE 1	**-**

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