

M3 Junction 9 Improvement

Scheme Number: TR010055

6.3 Environmental Statement Appendix 8.1t - Water Vole Survey Report 2020

APFP Regulation 5(2)(a)

Planning Act 2008

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6.3 ENVIRONMENTAL STATEMENT- APPENDIX 8.1t: WATER VOLE SURVEY REPORT 2020
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VolkerFitzpatrick

M3 Junction 9 Improvement

Water Vole Survey Report

HE551511-VFK-EBD-X_XXXX_XX-RP-LE-0004

On behalf of **Highways England**



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For and on behalf of Stantec UK Limited				

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Appendix A Survey Results

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1 Introduction

1.1 Background

- 1.1.1 Stantec UK has been commissioned by Volker Fitzpatrick to undertake a water vole survey of a stretch of the River Itchen, which flows beneath two road bridges, which fall within the footprint of the M3 Junction 9 Improvement Scheme. The two road bridges, the Itchen Bridge and Kingsworthy Bridge, carry the A34 over the River Itchen. The bridges and the stretch of the River Itchen may be affected by the proposals.
- 1.1.2 The footprint of the proposed scheme will be referred to 'the Site' and the area subject to survey will be referred to as 'the Survey Area' throughout this report.
- 1.1.3 The Site is located to the north-east of Winchester and includes proposed improvements to Junction 9 of the M3 and the A34 around an approximate central grid reference of SU496308.
- 1.1.4 The Survey Area is the stretch of the River Itchen from grid reference SU493311 to the west of the bridges to grid reference SU493316 to the east and is shown on **Figure 1 Water vole survey locations**.

1.2 Project Description

- 1.2.1 M3 Junction 9 is a key transport interchange which connects South Hampshire and the wider sub-region, with London via the M3 and the Midlands/North via the A34. A significant volume of traffic currently uses the grade separated, partially signalised gyratory (approximately 6,000 vehicles per hour during the peak periods) which acts as a bottleneck on the local highway network and causes significant delay throughout the day.
- 1.2.2 Highways England is looking to reconfigure the junction to improve the situation for vehicle traffic and non-motorised users.

1.3 Context

- 1.3.1 An Environmental Impact Assessment Scoping Report was produced by Highways England in January 2019 (Highways England, 2019), accompanied by a number of baseline ecological surveys, including a water vole survey carried out in 2017 by WSP (Highways England, 2017).
- 1.3.2 In order to inform the scheme design, the need for additional ecological surveys was identified following a review of the reports and design information available. This report provides the findings of an update of the water vole survey for part of the area covered by the 2017 survey, with a brief evaluation and recommended next steps to inform the detailed design and mitigation strategy for the proposed works.
- 1.3.3 The 2017 Water Vole Survey Report (Highways England, 2017) included the results of a desk study, which identified 357 water vole records within a 2km search area and a Phase 1 habitat survey, which identified habitats suitable for water vole, including the channels of the River Itchen and associated ditches and reedbeds and presence/likely absence surveys found water voles to be present within the survey area.

1.4 Purpose and Scope of the 2020 Surveys

- 1.4.1 The purpose of the 2020 surveys was to provide an update of the 2017 surveys for the area upstream and downstream of Itchen Bridge and Kingsworthy Bridge and to update recommendations made in 2017, as appropriate, depending on the findings of the surveys.

1.4.2 The scope of the survey comprised:

- A review of the 2017 water vole survey report
- Surveys to establish whether the habitats present within the survey area were still suitable for water voles
- Surveys for water vole presence/likely absence within the Survey Area

2 Methods

2.1 Desk Study

2.1.1 The 2017 Water Vole Report was reviewed.

2.2 Field Survey

2.2.1 To determine whether water voles were present or likely absent from the survey area, a survey was completed in line with current good practice guidance (Strachan *et al*, 2011).

2.2.2 The survey comprised one visit, within the recommended season for water vole survey (late April to early October). The Survey Area is shown on **Figure 1**. The survey included the following:

- The river bank on both sides was walked in order to carry out a visual inspection of the banks up to 5m from the water for water voles and their field signs (droppings, latrines, feeding remains, burrows, lawns, nests, footprints or runways through vegetation). In places this was aided by the use of binoculars to see the opposite bank
- The recording of habitat type and features which help to establish suitability for water voles (habitat type, shore substrate, bank substrate, surrounding land use, vegetation type, level of disturbance, bank profile, water depth)
- The recording of any incidental observations of other wildlife, such as otter, mink, brown rat, or wetland birds

2.2.3 The survey was carried out on 30th September 2020. The weather was 11°C, cloudy with a light wind at the time of the survey.

2.3 Personnel

2.3.1 The survey was undertaken by Alison Johnson BSc MSc MCIEEM CEnv, with assistance from Richard Law. Alison has over eighteen years of commercial ecological experience and Richard has over ten years of commercial ecological survey experience. Both have experience of conducting many protected species surveys, including water vole habitat assessment and presence/likely absence surveys.

2.4 Limitations

2.4.1 The survey was conducted during the season recommended in the current good practice guidance. Access was possible to both sides of the watercourse to search for field signs of water voles. In places, silty ground or dense vegetation limited access to the banks, but in these areas, the habitat was generally of lower suitability for water voles (due to high levels of shading limiting growth of bankside vegetation) and in these areas the banks could be viewed with binoculars from the opposite side of the river.

2.4.2 Current good practice guidance recommends that two surveys be carried out within the appropriate season for survey (late April to early October) in order to confirm presence/likely absence. In this case, one survey has been carried out so far, in order to update the findings of the 2017 surveys and to identify any changes in habitat since the 2017 surveys. As the habitat remains suitable, a precautionary approach has been taken in assuming that water voles remain present in the areas identified as being suitable. As the detailed design is still under consideration, it is recommended that a further survey is carried out once it is known where the areas of potential impact may be.

3 Results

3.1 Desk Study

- 3.1.1 The 2017 survey covered suitable habitats within 250m of the proposed works area. Survey visits were undertaken in June 2017 and August 2017, which included a visual search of all wetland habitats along the lengths of ditch and river and within 5m of the bank tops.
- 3.1.2 Water voles were confirmed to be present within the River Itchen and its associated channels west of the A34. Evidence of water voles included sightings, burrows, latrines, feeding remains and pathways. The river channels west of the A34 form part of Winnall Moors Nature Reserve, an area of wetland habitat managed by the Hampshire and Isle of Wight Wildlife Trust. The majority of channels within this area of springs, flushes and wetland meadows exhibited some water vole activity, although the abundance of activity greatly varied. Limited activity signs were also found along the River Itchen east of the A34 and A33, though the suitability of these habitats was described as limited due to the presence of broadleaved woodland and management relating to angling.

3.1.3

3.2 Field Survey

Habitat Suitability

- 3.2.1 **Figure 1** shows a map of the 2020 Survey Area divided into sections. Table A.1 in Appendix A provides descriptions of the habitats within each of these section, photographs of each section and each section is classified as Low, Moderate or High Suitability for Water Voles.
- 3.2.2 The habitats to the west of the A34 bridges (Section 1) provide banks suitable for burrowing and excellent food sources for water vole on the west side of the river. Along the east side there is a reedbed with woodland and overhanging trees lining a silty bank in the southern part of this section with lower suitability for burrowing. Overall this section was classified as having high suitability for water voles.
- 3.2.3 The section flowing under the A34 bridges (Section 2) comprised shallow banks (in places flat) and canalised sections, unsuitable for water vole burrowing. Woodland and overhanging trees limit the growth of bankside and emergent vegetation, so opportunities for feeding are generally poor, with the exception of the reeds/sedges present immediately to the west of the bridges. Overall this section was classified as having moderate suitability for water voles.
- 3.2.4 To the north-east of the bridges (Section 3) mature overhanging trees are present on the shallow east bank. Fewer trees are present on the west bank, which is canalised. The central gravel island is vegetated with scrub, reeds and sedges, providing some potential for feeding. Burrowing potential in banks in this section is low. Overall this section was classified as having moderate suitability for water voles.

Evidence of Water Vole

- 3.2.5 No evidence of water vole was found during the survey.

4 Evaluation and Recommendations

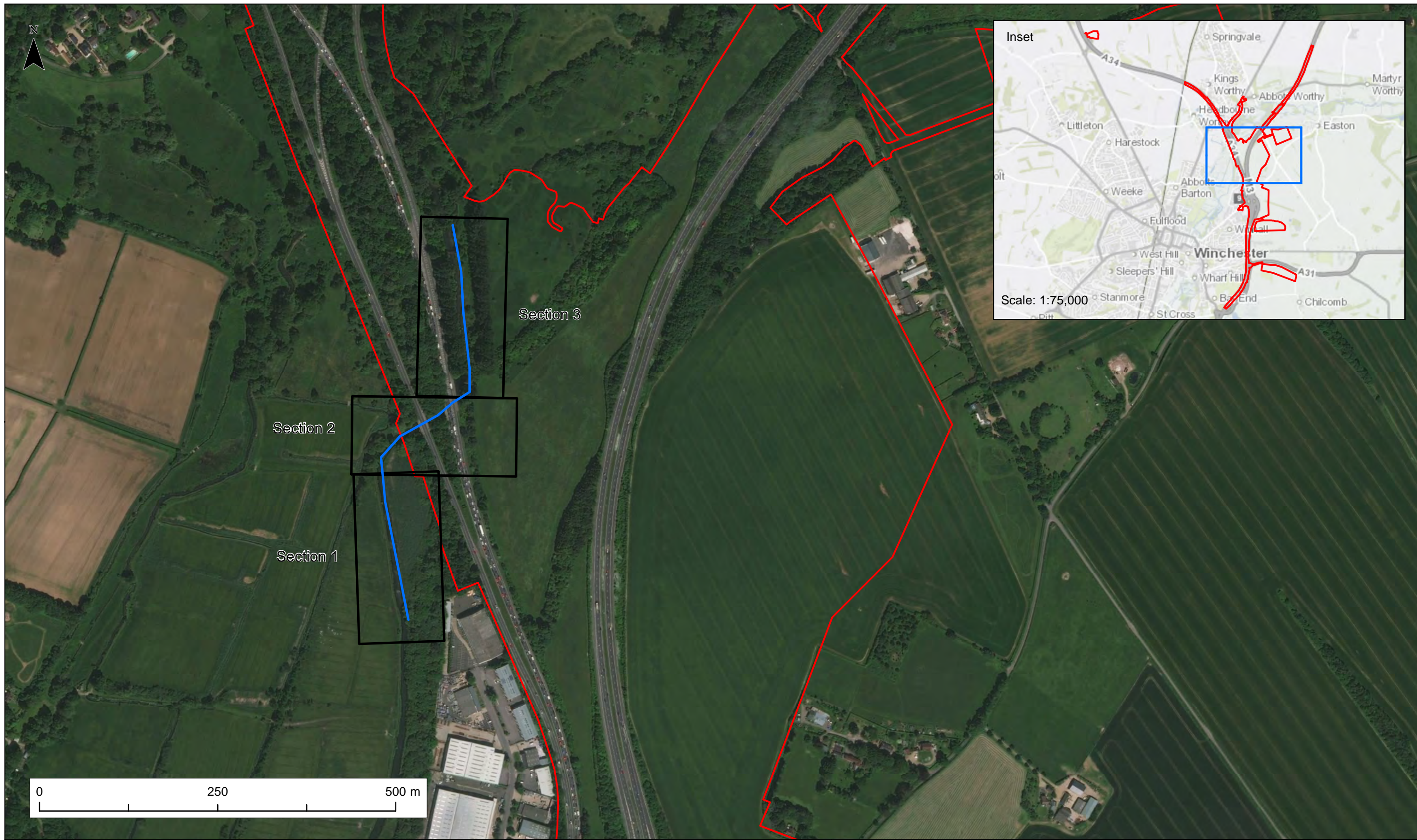
- 4.1.1 The habitats recorded during the 2020 survey were similar in type and composition to those recorded during the 2017 survey with no material change identified.
- 4.1.2 Although no water vole signs were found during the survey, as the habitats remain suitable for water voles and evidence of presence was confirmed during the 2017 surveys, a precautionary approach should be taken in assuming that water voles remain present, unless a second survey carried out within the suitable survey season for water voles (late April to early October) indicates likely absence.
- 4.1.3 If the proposed works will impact on any suitable habitats within 10m of the watercourse and bankside habitats, there would be the potential for impacts to water voles and their habitat. It is therefore recommended that the proposed works avoid the watercourse and river banks and habitats up to 10m from the watercourse if possible.
- 4.1.4 If this is not possible, it is recommended that a further survey be carried out once it is known where any potential impacts to the watercourse, river banks or bridges will be. If potential for impacts to water voles are identified, a detailed mitigation plan will be required prior to commencement of works.

5 References

- Dean M, Strachan R, Gow D and Andrews R (2016) The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds Fiona Matthews and Paul Chanin. The Mammal Society London.
- Hampshire Biodiversity Partnership (undated) Biodiversity Action Plan for Hampshire.
- Highways England (2017) M3 Junction 9 Improvement Scheme PCF Stage 3 – Water Vole Survey Report.
- Highways England (2019) M3 Junction 9 Improvements Environmental Impact Assessment Scoping Report.
- Strachan R, Moorhouse T and Gelling M (2011) Water Vole Conservation Handbook, third edition. The Wildlife Conservation Research Unit, University of Oxford.

6 Figures

Figure 1 Water Vole Survey Area



KEY

- Indicative Application
- Survey Extent
- Survey Sections

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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Figure Status <p style="text-align: center; font-weight: bold;">FOR INFORMATION</p>	Project Title <p style="text-align: center; font-weight: bold;">M3 JUNCTION 9 IMPROVEMENT</p>										
	Figure Title <p style="text-align: center; font-weight: bold;">WATER VOLE SURVEY AREA 2020</p>										
Client 	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td>Scale: 1:5,000</td> <td>Designed: TL</td> <td>Drawn: TL</td> <td>Checked: DM</td> <td>Approved: DM</td> </tr> <tr> <td>Original Size: A3</td> <td>Date: 01/12/2020</td> <td>Date: 01/12/2020</td> <td>Date: 01/12/2020</td> <td>Date: 01/12/2020</td> </tr> </table> <p style="text-align: center; font-weight: bold; font-size: large;">FIGURE 1</p>	Scale: 1:5,000	Designed: TL	Drawn: TL	Checked: DM	Approved: DM	Original Size: A3	Date: 01/12/2020	Date: 01/12/2020	Date: 01/12/2020	Date: 01/12/2020
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Original Size: A3	Date: 01/12/2020	Date: 01/12/2020	Date: 01/12/2020	Date: 01/12/2020							
Project Ref No. 48176 Revision: A											

Appendix A Survey Results

Table A.1 Water Vole Survey Results

1.1.1 Section ¹	2.1.1 1	3.1.1 2	4.1.1 3
Habitat	Running Water	Running Water	Running Water
Shore Bank	Earth/Gravel	Earth/Canalised/Reinforced	Earth/Canalised/Reinforced
Bordering Land Use	Permanent/Temporary Grass, Broadleaf Woodland	Broadleaf Woodland/Hard surfaces and footpath under road bridges	Broadleaf Woodland, Permanent/Temporary Grass
Bank Profile	Shallow on north side, flat on south side	Shallow (flat in places)	Vertical canalised bank on north side, flat banks on south side (shallow in places)
Depth	1-2m	1-2m	1-2m
Width	5-10m	5-10m	10-20m
Current	Fast	Fast	Fast
Vegetation Type (DAFOR) ²	Reeds/Sedges: Frequent Tall Grass: Dominant Short Grass: Occasional Submerged Weed: Occasional	Bankside Trees: Dominant Bushes: Frequent Reeds/Sedges: Frequent Submerged Weed: Occasional	Bankside Trees: Abundant Reeds/Sedges: Frequent Bushes: Frequent Submerged Weed: Occasional Herbs: Occasional
Description	Main channel of the River Itchen to the west of the A34 bridges. This section has a wide, deep channel with banks suitable for burrowing and excellent food sources for water vole on the west side. Along the east side there is a reedbed with woodland and overhanging trees lining a silty bank in the southern part of this section.	Main channel of the River Itchen flowing under the bridges carrying the A34 over the river. This section has a wide, deep channel with shallow banks (in places flat) and canalised sections under the bridges, unsuitable for water vole burrowing. Woodland and overhanging trees in this section limit the growth of bankside and emergent vegetation so opportunities for feeding	Main channel of the River Itchen to the north-east of the A34 bridges. This section has a wide, deep channel with a small vegetated gravel island in the centre. Mature overhanging trees are present on the shallow east bank. Fewer trees are present on the west bank, which is canalised. The central gravel island is

1.1.1 Section ¹	2.1.1 1	3.1.1 2	4.1.1 3
		are generally poor, with the exception of the reeds/sedges present immediately to the west of the bridges.	vegetated with scrub, reeds and sedges, providing some potential for feeding. Burrowing potential in banks in this section is low.
Water Vole Suitability	High	Moderate	Moderate
Evidence of Water Vole	None	None	None
Other Wildlife	Evidence of feeding on tall vegetation by wildfowl. High potential for otters.	None. High potential for otters.	None. High potential for otters.
Photograph			

¹ Refer to Figure 1 Water Vole Survey Area

² DAFOR: Cover - Dominant (D) >75%, Abundant (A) 51-75%, Frequent (F) 26-50%, Occasional (O) 11-25%, Rare (R) 1-10%

Appendix B Relevant Legislation

- B.1.1 Water vole are fully protected under The Wildlife and Countryside Act (1981) (as amended), meaning: it is an offence to kill, injure or take this species; damage or destroy places of rest or shelter; or disturb this species whilst occupying a place of rest or shelter.
- B.1.2 The water vole is also listed as a Species of Principal Importance (SPI) for the Conservation of Biodiversity in England, in accordance with 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 the conservation of SPI when carrying out their functions, including determining planning applications.
- B.1.3 Water vole is a priority species within the Hampshire Biodiversity Action Plan (BAP) (Hampshire Biodiversity Partnership, undated).