

# Technical Guidance Series



Chartered  
Institute of  
Ecology and  
Environmental  
Management

In association with



## Competencies for Species Survey: Water Vole



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## 1. Introduction

The purpose of this document is to set out the knowledge, skills and experience required to survey, disturb, handle or to carry out research works (hereinafter referred to generically as ‘survey’) for the water vole *Arvicola amphibius*, in a professional capacity. To be undertaking such work, CIEEM would consider attainment of the criteria outlined in this guidance to be a minimum for an individual to competently survey for water voles. The Institute aims to drive up standards in the ecological profession for the benefit not only of ecologists but also of the public.

This document does not provide guidance on the techniques to be employed in carrying out survey activities: references to published sources of guidance on survey methods are listed in Section 5.

## 2. Status

Water vole populations in England, Scotland and Wales are at the western edge of their natural range and have declined dramatically over the last century, in particular over the last 30 years. The species has been lost from almost 90% of the sites where it occurred in the last century, as a result of habitat loss and fragmentation, and predation by the introduced mink as this spreads across the UK. The remaining populations are often fragmented, which threatens their long term survival. Water voles are not found in Ireland.

Water voles are listed as a species of least concern on the IUCN Red List of Threatened Species as they are still common in many parts of Europe, however, the water vole is a UK BAP Priority Species and is protected by Wildlife legislation in England, Scotland and Wales.

## 3. Legislation and Licensing

### Legislation

Water voles are protected under the following legislation. This outline of legislation is not comprehensive and the appropriate legislation should always be consulted for a definitive list of offences.

COUNTRY	LEGISLATION GIVING PROTECTION	SCHEDULE OR ANNEX LISTING
<i>England</i>	Wildlife and Countryside Act 1981 (as amended)	Schedule 5
<i>Wales</i>	Wildlife and Countryside Act 1981 (as amended)	Schedule 5
<i>Scotland</i>	Wildlife and Countryside Act 1981 (as amended)	Schedule 5

### Licensing

The following Statutory Nature Conservation Organisations (SNCOs) are responsible for issuing licences to capture water voles or damage their habitat.

A licence is required: if disturbance of water voles or their burrows is likely (e.g. detailed and prolonged examination of a known water vole burrow which would cause disturbance to any water voles present or interference with burrow entrances by digging or blocking) and to trap them for marking or study.

A licence is not required for:

- walking river banks or wading along the river to look for signs of water voles (droppings, feeding stations, burrows). This could include walking past known burrows and carrying out a brief exterior examination;
- stopping to examine potential burrows (as there is no intention of disturbing a water vole). However, if a water vole is seen to be present an unlicensed surveyor should withdraw immediately unless in the presence of a licensed surveyor;
- watching a known water vole site from a distance or from concealment to see if it is occupied, providing there is no intention of disturbing the water vole; or
- collecting material from water vole feeding stations or latrine sites.

COUNTRY	SNCO
<i>England</i>	Natural England
<i>Wales</i>	Natural Resources Wales
<i>Scotland</i>	Scottish Natural Heritage

It is the role of the appropriate licensing authority to define the criteria for issuing such licences as may be required for survey work, therefore, attainment of the skills set out is no guarantee that a licence will be obtained; other criteria will need to be considered.

## 4. Knowledge, Skills and Experience

To plan, undertake and interpret surveys for water voles independently and competently, an individual would be expected to possess all of the following knowledge, skills and experience.

A surveyor needs to recognise their level of attainment along a continuum. Those without the breadth and depth of the knowledge, skills and experience that CIEEM consider a minimum, should always work with, or seek advice from, an adequately experienced individual.

### **Knowledge**

Individuals should have a knowledge and understanding of:

- a. conservation status;
- b. distribution;
- c. threats to water vole populations, species range and species survival;
- d. water vole ecology, breeding biology and behaviour;
- e. mink ecology, breeding biology, behaviour and distribution;
- f. basic freshwater ecology;
- g. known ecological requirements (including landscape requirements of water vole meta-populations);
- h. legal protection;
- i. licensing and permissions;
- j. appropriate survey season and conditions;
- k. current relevant guidance on survey methods and standards;
- l. main survey methods used to survey for water voles (including visual surveys (from bank, wading or using a boat) for latrines, feeding stations, burrows and footprints and including trapping and marking/tagging) and the strengths, weaknesses and limitations of these methods;
- m. safety and welfare issues involved in live trapping and handling and marking of wild animals (including Home Office Licensing if required);
- n. range of factors that might lead to bias in the survey results, and false negatives (e.g. lack of field signs after rain);
- o. identification issues with water voles and other small rodents (e.g. field voles, bank voles and brown rats);
- p. sources of information on known occurrence and distribution of water voles (including NBN Gateway, national surveys, local biological/environmental records and local contacts/species groups);
- q. metadata standards / data sharing; and
- r. health and safety issues commonly associated with surveying for water voles (including Weil's disease and risks of handling biological material by water).

### **Skills**

Individuals should have skills and experience enabling them to confidently:

- a. identify water voles and differentiate between these and brown rats and other rodents (e.g. bank voles and field voles);
- b. identify field signs of water voles and differentiate these signs from those of other rodents (e.g. brown rats, field voles and bank voles);
- c. accurately identify mink and their field signs (e.g. footprints, scats and den sites) and differentiate mink from mammals such as otters, stoats, weasels, pine martens and polecats;
- d. assess habitat in terms of suitability for water voles;
- e. appropriately scope field work (especially in relation to water vole meta-populations and their ability to colonise adjacent habitats);
- f. plan and implement sound scientific surveys;
- g. interpret and analyse survey data;
- h. take appropriate biosecurity precautions; and
- i. take appropriate health and safety precautions.

If monitoring mink presence, individuals should also be able to:

- a. use mink rafts.

If trapping is used, individuals should also be able to:

- a. deploy and monitor live traps effectively (e.g. at correct spacing);
- b. legally and humanely handle live water voles;
- c. effectively record biometric data from live water voles;
- d. legally and humanely mark/tag water voles (if using this technique); and
- e. correctly handle and identify a range of potential by-catch (e.g. other rodents or shrews) from live-traps, with due regard to relevant legislation (it is an offence to release grey squirrel or mink into the wild).

### **Practical Experience**

Whilst some of the knowledge and skills set out in this guidance can effectively be gained from personal study, involvement with local Mammal Group field work and/or training courses would be advisable. Water vole

surveyors should ideally have gained some practical experience, under the direct supervision of an experienced surveyor; ideally this should comprise of:

- a. at least 8 hours of search time for latrines, feeding signs, tracks and burrows in an area where the species is known to exist, including river and canal bank habitats, reed fringes, fens and upland moorland streams;
- b. attendance at an appropriate training course on water vole ecology and survey techniques or an equivalent level of training from an existing experienced person/licensee (such as through employer's in house training programme);
- c. at least 3 supervised trapping sessions if trapping for water voles;
- d. handling of at least 6 water voles under supervision (if intending to handle water voles); and
- e. marking/tagging/radio-collaring at least 2 water voles under supervision and appropriate licence (if intending to use this technique).

## 5. Reading

The following references are essential reading for those wishing to gain the necessary knowledge, skills and experience to survey for water voles.

Natural England (2008) *Water voles – the law in practice: Guidance for planners and developers*. Natural England, Peterborough.

Natural England (2010) *Water voles and development: licensing policy*. Technical Information Note TIN042. Natural England, Peterborough.

Strachan R and Moorhouse T (2006) *Water vole conservation handbook 2nd Edition*. Wildlife Conservation Research Unit, Oxford<sup>1</sup>.

## 6. Acknowledgements

This guidance has been produced by Rob Strachan of The Mammal Society with input from Mike Dean on behalf of the Chartered Institute of Ecology and Environmental Management with the support of the Professional Standards Committee.

Cover photographs taken by Derek Middleton.

<sup>1</sup> Note that this handbook pre-dates the increased legal protection for water voles in England and Wales and is due to be updated during 2011

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