



WATER VOLE *Arvicola terrestris*

Introduction

This action plan covers all known, and potential, water vole populations within the administrative boundaries of Bristol.

The water vole *Arvicola terrestris* is largely confined to lowland areas associated with water. It is of considerable nature conservation concern, having experienced a 94% decline since the mid 1980s. The main cause of this decline has been predation by the American mink, together with loss and degradation of habitat. The water vole is a priority species in the UK BAP.

Bristol holds one of the south-west's most important water vole populations but this population is fragile and susceptible to many external influences such as predation, habitat loss and disturbance (particularly from development), fluctuations in water level and pollution.

Avon Wildlife Trust ran a very successful Avonmouth Water Vole Project from 1997 until 2001 which saw a great deal of survey work; liaison with statutory bodies, landowners and managers; and awareness raising. Annual surveys have been carried out when resources have allowed in subsequent years.

This document has strong links with, and a number of cross-over points and actions with regard to, the Rivers and Rhines Habitat Action Plan.

Current Status

Within Bristol there is currently only one area where water voles are found – the rhines, ditches and pools of the Avonmouth area. This area has the best water vole habitat in Bristol, with a number of core locations where strong water vole populations have been present for at least the past ten years, as well as many other adjacent locations, which are occupied during periods when population numbers are high. In effect the water voles of Avonmouth act as one, or several, metapopulations.

Over the past decade extensive surveys have been carried out over Bristol's other watercourses, standing waters and wetland areas to establish the presence or absence of this species. None have been found.

A similar pattern is repeated across the rest of the former Avon area with only small and scattered native populations in discrete locations and with no population matching the size or status of that at Avonmouth.

Across the UK the status of the water vole is equally fragmented and threatened. The water vole receives legislative protection under: Wildlife & Countryside Act 1981 (as amended) and the Countryside & Rights of Way Act 2000.

A number of the main Avonmouth rhines (namely Lawrence Weston Road, Salt, and Kingsweston Road rhines), which support the core water vole populations, are Sites of Nature Conservation Interest (SNCIs) for this interest. However, whilst this has provided some level of protection, a number of these rhines have suffered from loss of, or damage to, sections as a result of development.

Current Threats

- | Loss of habitat from development

- | Inappropriate management of rhines and ditches

- | Unfavourable hydrological regimes

- | Lack of resources for co-ordinated monitoring

- | Potential mink invasion into water vole locations

- | Pollution events

- | Lack of full awareness amongst key players

Objective 1: Establish and maintain co-ordinated and regular monitoring of water vole and mink

Target:

- | Establish a new Avonmouth Water Vole Project
- | Monitor all main rhines and ponds within the Avonmouth area once a year at an appropriate time
- | Monitor all other ditches and ponds within the Avonmouth area at least once every three years at an appropriate time

Objective 2: Protect the existing water vole population

Target:

- | No net loss of the rhine and ditch network at Avonmouth
- | Maintained integrity and interconnectivity of rhine and ditch network
- | All development works must avoid destruction or damage to existing watercourses wherever possible
- | A minimum five metre buffer area of native vegetation to be retained between the edge of all development working areas and the edge of adjacent rhine, ditch or pond banks
- | Adequate compensation/mitigation for losses to the rhine and ditch network
- | New ditches and rhines to replicate the structure of existing/recently lost watercourses especially with regard to depth, freeboard and bank profile

Objective 3: Ensure appropriate management of all water vole habitat

Target:

- l All Avonmouth rhines and at least 50% of smaller ditches to be under agreed sympathetic management regimes by 2013
 - l All managers and operatives to be fully educated in the ecology and requirements of water voles
 - l All water courses subject to completed development works, or within the boundaries of a completed development work, to be under binding management agreements
 - l Ensure Internal Drainage Board works are sympathetic to nature conservation objectives
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Objective 4: Restore appropriate hydrological regimes across the Avonmouth area

Target:

- l Agreement between all main landowners, managers, and other involved parties to create an appropriate hydrological regime across the Avonmouth area
 - l Restoration, or provision, of sluice equipment on the main rhines
 - l Agreement by all parties to ensure management of watercourse does not involve excessive excavation of rhine and ditch beds
 - l Ensure new development proposals demonstrate a thorough understanding of drainage issues with particular regard to avoiding spate flows from on-site drainage
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Objective 5: Establish and maintain an effective mink control programme

Target:

- l Establish mink control procedure for Avonmouth
 - l Evidence of mink activity to be acted upon immediately
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Objective 6: Raise awareness amongst key players

Target:

- l All key players to understand and appreciate the importance of the Avonmouth water vole population
 - l Inform and educate all landowners, managers and user bodies
 - l Disseminate current best practice guidance to all landowners, managers and user bodies
 - l Encourage local communities to appreciate and care for local watercourses
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CHAPTER 5

WATER VOLE

WATER VOLE SPECIES ACTIONS	OBJECTIVE	DATE	IMPLEMENTORS
Establish monitoring programme and maintain co-ordinated and regular monitoring of water vole populations, mink and condition of habitat	1	2008 – 2013	AWT, EA, BCC, Landowners
Assess planning applications to ensure protection of rhine habitat and integrity of the rhine and ditch network at Avonmouth	2	2008 – 2013	BCC, AWT, EA
Develop and implement programme of habitat management and restoration on Avonmouth rhines and ditches following ecological best practice	3	2008 – 2013	BCC, IDB, AWT, Landowners
Establish Avonmouth water vole management group – to include key landowners, IDB, EA	3	2009	AWT, BCC, EA, Landowners
Implement scheme for mink control	5	2008 – 2013	Appointed mink controller/landowners
Investigate restoration of appropriate hydrological regime across the Avonmouth area	4	2012 – 2013	IDB, EA, BCC, Landowners
Run annual training/seminar for key players to promote good practice and feedback annual survey results	3, 6	2008 – 2013	AWT
Develop awareness raising programme targeted at landowners, businesses and local people and co-ordinate implementation	6	2008 – 2013	AWT, BZG

