

Richmond upon Thames

Species Action Plan

Water Vole



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“A brown little face with whiskers. A grave round face, with the same twinkle in its eye that had first attracted his notice. Small neat ears and thick silky hair. It was the water rat !”
(Kenneth Grahame, The Wind in the Willows, 1908)

1. Aim

- To conserve London Borough of Richmond upon Thames’s (LB Richmond) Water Vole population and increase their range and numbers for the benefit of current and future generations.

2. Introduction

The former widespread distribution and abundance of the Water Vole (*Arvicola terrestris*) has meant that it has attracted little or no previous conservation interest. However, its accelerating decline in numbers and the resulting fragmentation of its population across the UK is of great concern.

As one of the main characters in the Children’s classic *The Wind in the Willows*, the water rat or Water Vole as it is properly called, is a well-liked and familiar animal amongst the general public – with their short, blunt muzzle, small hairy ears and plump, rounded body. Water Voles are not overly sensitive to the presence of people and may be easily seen during the day where they still survive. This high profile presents opportunities to bring the species’ plight to the attention of people living in LB Richmond, publicise progress of the Action Plan and involve the borough in its conservation.

The Water Vole is potentially an excellent flagship species, whose presence reflects healthy waterside habitats and their associated plant communities.

3. Current Status

The changing fortunes of the British Water Vole population through the 20th century has only recently come to light, following the pioneering national surveys conducted by the Vincent Wildlife Trust in 1989-90 and 1996-98. These surveys confirmed that the species has become progressively scarcer along our waterways since the 1930s, due to habitat loss and land-use changes associated with the intensification of agriculture in the wider countryside. Since the 1980s, this decline has accelerated due to predation by feral American Mink (established as escapes from fur farms). The decline has now developed into a serious population crash with a further 88% loss to the remaining populations in only seven years (1991-1998). This makes the Water Vole the most rapidly declining mammal in Britain.

In Greater London, the Water Vole has disappeared from over 72% of the sites it occupied previous to 1997 (LMG Greater London Water Vole Survey 1997). Although the species still retains a widespread distribution around much of London's periphery (especially in outer boroughs including LB Richmond, neighbouring LB Hounslow and to a lesser extent LB Kingston upon Thames), populations are highly localised and fragmented.

In LB Richmond, the Water Vole is currently confined to a few extant sites including the Longford River (BII 2) where it runs through Bushy Park (M84) and London Wildlife Trust's (LWT) Crane Park Island reserve on the Crane Corridor (M 76). Outlying sites on the edge of the borough include a population south-west of Feltham Marshalling Yards (M7) in LB Hounslow further west along the Crane Corridor. Recently, a population was introduced at the Wildfowl & Wetlands Trust's (WWT) London Wetland Centre at Barn Elms (M 87). Populations reported at Lonsdale Road Reservoir (BI 2) in the late 1980s are believed to be extinct. However, opportunities exist for further introduction programmes at certain sites in the borough e.g. the Beverley Brook in Richmond Park (M 82).

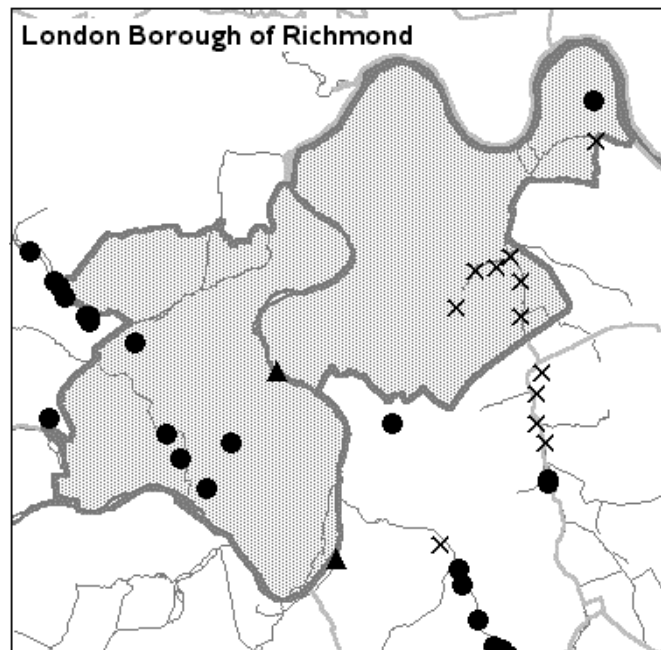


Fig 1. Records for water voles in Richmond 2001-2003.
 Positive survey = •, negative = x, mink = ▲
 (source: London Water Vole Project)

4. Specific Factors Affecting the Species

The many factors that influence the survival of this species are outlined below. They are listed in order of priority, but each may have a greater or lesser local effect depending on the robustness of the individual populations and their habitat.

4.1 Fragmentation and isolation of habitats and populations

This is viewed as being a major factor of concern. Loss of wetland habitats has reduced populations and left them more vulnerable to other threats such as predation. Development, land drainage, low water levels, river engineering and changes in waterside management have all destroyed habitat. Intensive grazing and trampling by livestock along watercourses also contributes greatly to habitat loss in some of the more rural boroughs, but equally might apply to LB Richmond where the impact of both livestock and deer herds should be considered.

4.2 Predation by mink

The arrival and spread of mink along a waterway has been found to have serious consequences for Water Voles and rapid extinction of some Water Vole colonies has been recorded. Mink predation is influenced and exacerbated by other threats such as habitat loss. The current status



of mink in the London boroughs is unknown. However, there have been recent reports of mink in LB Richmond at Ham Lands, Longford River, River Crane and the River Thames towpath at Teddington in 2001. These reports flag up the vulnerability of extant Water Vole populations, which lie in close proximity to where mink have either been seen or left field signs.

4.3 Disturbance of riparian habitats

In the past, channelisation and subsequent dredging operations as part of flood defence management caused the most significant form of disturbance. These modifications have had a drastic effect on Water Vole habitat causing the destruction of burrows, loss of emergent and in-stream vegetation and the re-profiling or hard engineering of the banks. Mechanical cutting and removal of bankside vegetation may also be highly disturbing to Water Voles.

Water Voles are relatively tolerant of human recreational activities (dog walking, angling and boating) along waterways as long as they have vegetation cover in which to hide.

4.4 Deterioration of riparian habitats and reduction of flow

Water voles appear to be relatively tolerant of low water quality, but the full impacts of different types of pollution such as industrial effluent are unknown. Low flows and droughts such as those caused by over-abstraction of groundwater can lead to the loss of Water Voles. By contrast, prolonged flooding can also be detrimental. Furthermore, increased shading by trees and the spread of Indian (Himalayan) Balsam adds further pressure to riparian vegetation along margins of the River Crane, over time making the habitat less suitable for Water Voles.

4.5 Rodenticides and rat control

Poisoned grain or similar rodenticides placed for rats or mice may be taken by Water Voles if placed along a watercourse. The proliferation of rats along a waterway, attracted by litter and human refuse, may be detrimental to Water Voles which may be out-competed or even fall prey to their larger cousins. Carried out carefully, rat control has been shown to be beneficial to Water Voles.

When controlling rats near watercourses there are a number of ways in which unnecessary destruction of water voles can be avoided:

1. Check thoroughly for water vole signs before treatment on waterways.
2. If water voles are present the only safe option is to live trap. These should be carefully sited and checked twice per day to release captured voles.
3. Do not use back-break or snap traps.
4. If there is no feasible alternative, poison should be covered or enclosed in a bait box and placed at least 5m from the water's edge.
5. Do not place poison or traps in burrow entrances (This would constitute a breach of the law).
6. Place poison off the ground if possible as water voles are less likely to climb than rats.
7. Avoid the use of poisoned grain, pellets or liquid bait, use instead wax or soap blocks.
8. The treatment site should be frequently inspected. If any dead water voles are found immediately review the control method used.
9. Report any water vole sites to your local wildlife trust.

5. Current Action

5.1 Legal Status

The Water Vole has been given legal protection under the Wild Mammals (protection) Act 1996 and Schedule 5 of the Wildlife & Countryside Act 1981 (as amended).

This Wildlife & Countryside Act protection makes it an offence intentionally to:

- Damage, destroy, or obstruct access to any structure or place which Water Voles use for shelter or protection
- Disturb Water Voles while they are using such a place

This species is expected to receive full protection under the Act (in 2005 or later) making it an offence to take, possess or intentionally kill a water vole.

5.1 Mechanisms Targeting the Species

These current actions are ongoing. They need to be supported and continued in addition to the new action listed under Section 7.

5.2.1 Advice

Practical advice about Water Vole conservation and habitat management has been summarised in The Water Vole Conservation Handbook (Strachan 1998), currently under revision. Educational resources include water vole images available on CDROM through The Wildlife Trusts (note that permission from The Wildlife Trusts must be sought before use), and an education pack from English Nature: *Habitats, Interdependence and Adaptation – the Water Vole*. There are also a number of water vole resources available on the internet.

5.2.2 Waterway management

Flood defence management of waterways is being carried out in accordance with best practice guidelines to maintain Water Vole populations.

Local Environment Agency Plans (LEAPs) and Water Level Management Plans consider the requirements of Water Voles and implement actions when appropriate. This applies to all LEAPs produced for rivers in LB Richmond.

Richmond Local Authority, LA21 Richmond Biodiversity Group, LWT (Crane Park Island), WWT (London Wetland Centre) and other organisations are already promoting Water Vole conservation through habitat enhancement projects, surveys, talks and other publicity campaigns.

5.2.3 Research

National Research is currently underway, investigating translocation and reintroduction as methods to aid the species recovery. This includes the Water Vole introduction undertaken in May 2001 at WWT London Wetland Centre.

6. Objectives, Actions and Targets

Most of these actions are specific to this species. Please note that the partners identified in the tables are those that have been involved in the process of forming the plan. It is not an exclusive list and new partners are both welcomed and needed. The leads identified are responsible for co-ordinating the actions – but are not necessarily implementers.

Objective 1: Establish a baseline for future monitoring.

Target: Status and key populations assessed by end of 2001 (achieved)

Target 2: Provide an assessment of the status of water voles in LB Richmond by 2006

Action	Target Date	Lead	Other Partners
1.1 Involve the London Water Vole Project Officer in actively promoting Water Vole conservation in LB Richmond	Achieved	LWT	LA, LA21 RBG, WWT
1.2 Collate existing records of Water Vole and mink in LB Richmond	Achieved	LWVPO	EA, LA, LNHS, GLA, TRP, HRP, WWT
1.3 Identify key populations and areas where new survey and monitoring should be focussed	Achieved	LWVPO	EA, LA, LWT, TRP, HRP, WWT



1.4 Establish a programme of future monitoring of existing and newly established populations within LB Richmond	2005	Working group	LA, LWT, TRP, HRP, WWT
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Objective 2: Maintain Water Vole distribution and abundance at their 2001 levels
Target: No significant decline by 2011

Action	Target Date	Lead	Other Partners
2.1 Safeguard current or potential Water Vole sites where land is grazed and encourage the protection of water courses by fencing	Reviewed annually	LA	EN, EA, TRP, HRP, WWT
2.2 Undertake the humane control of mink as a conservation tool where they threaten Water Vole populations	Reviewed annually	EA	EA, LA, LWT, TRP, HRP, WWT, angling clubs
2.3 Ensure the use of rodenticides in areas supporting Water Voles is avoided by providing leaflets and advice	Reviewed annually	LA / LWVPO	LBBF
2.4 Ensure that reviews of Environment Agency projects and plans in LB Richmond take account of strategic habitat enhancement projects focused on expanding Water Vole populations	As reviewed	EA	LA, LWT (Central Office), LWVPO

Objective 3: Facilitate recolonisation of a number of past sites and establish populations at suitable new sites

Target: Carry out reintroduction of the species in at least two suitable sites by 2008

Action	Target Date	Lead	Other Partners
3.1 Identify historic sites in addition to current sites	Achieved	LWVPO	EA, LA, LNHS, GLA, LWT, WWT
3.2 Identify at least 2 sites suitable for reintroduction	Achieved	LWVPO	EA, LA, LWT, TRP, WWT
3.3 Ensure sympathetic land management is in practice on suitable sites	2007	EN	EA, BTCV, LWT, GLA, LA, TRP, WWT
3.4 Carry out reintroduction on at least 2 sites with suitable publicity	2008	EA	TRP, WWT, LWT, LA

Objective 4: Generate an awareness of Water Voles and their requirements not only to field surveyors, but also to the general public, as well as anglers, site owners / managers and planners

Target: Undertake a series of awareness raising activities of Water Voles in LB Richmond annually (reviewed 2007)

Action	Target Date	Lead	Other Partners
4.1 Produce a flyer leaflet about Water Voles in the LB Richmond	Achieved	Working group	LA, LWT, TRP, HRP, WWT
4.2 Hold one on-site field survey workshop per year to train surveyors / volunteers to look for and report field signs of Water Voles	Annually	LWVPO	LWT, WWT, SWT
4.3 Hold at least one walk / talk per year about Water Voles	Annually	LWT / WWT	LWVPO, LA
4.4 London Water Vole display board – display at a minimum of two different venues per year	Annually	LWVPO	BTCV, RBGK, WWT, TRP, LA

Relevant Action Plans

Local Plans

Reedbeds; Tidal Thames

London Plans

Water Vole; Tidal Thames; Canals; Marshland; Reedbed; Rivers and Streams

National Plans

Water Vole; Chalk Rivers; Rivers & Streams Habitat Statement; Canals Habitat Statement; Fens, Carr, Marsh, Swamp & Reedbed Habitat Statement

References

London Mammal Group (1998) *Greater London Water Vole (Arvicola terrestris) Survey*. London

Strachan, C, Strachan R & Jefferies, DJ (2000) *Preliminary Report on the changes in the water vole population of Britain as shown by the National Surveys of 1989-90 and 1996-98*. WWT, London

Strachan R (1998) *Water Vole Conservation Handbook*. EA, WildCRU, EN Oxford

UK Water Vole Steering Group (1997) *Species Action Plan for the UK: Water Vole, Arvicola terrestris* EA

Abbreviations

BTCV - British Trust for Conservation Volunteers

EA - Environment Agency

EN - English Nature

GLA – Greater London Authority

HRP - Historic Royal Palaces (+ Friends of Bushy & Home Parks)

LA – Local Authority (London Borough of Richmond upon Thames)

LA21 RBG - LA21 Richmond Biodiversity Group

LBBF - London Borough Biodiversity Forum

LNHS - London Natural History Society

LWVPO - London Water Vole Project Officer

LWT - London Wildlife Trust (Crane Park Island)

RBGK - Royal Botanic Gardens Kew

SWT - Surrey Wildlife Trust

TRP - The Royal Parks (Richmond & Bushy Parks Wildlife Groups)

WWT - Wildfowl & Wetlands Trust

Working group: representing LWT, LA, TRP and WWT this group meets regularly to promote conservation of this species within the borough.



Contact

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LB Richmond Water Vole Species Action Plan has largely been adapted by the LB Richmond Water Vole Species Action Plan working group from the London Biodiversity Action Plan Water Vole Species Action Plan written by Rob Strachan, Water Vole Officer for the Environment Agency.

