



# Water vole (*Arvicola terrestris*) Habitat Action Plan 2009-2013

<b>Plan Lead Organisation</b>	Tees Valley Wildlife Trust
<b>Plan Coordinator</b>	Kenny Crooks
<b>Action Group</b>	Wetland and Coastal Action Group
<b>Associated Plans</b>	Rivers and streams, reedbed, ponds, lakes & reservoirs, marsh and swamp
<b>Latest version</b>	Draft 20 July 2009

## Description

The water vole is Britain's largest vole, recognised by its hairy tail, rounded face and body and short ears. Water voles live on the densely vegetated banks of slow moving water courses, including rivers, streams and ditches and also certain ponds and lakes. They are predominantly vegetarian, feeding on a wide variety of plants, mainly grasses, reeds, sedges and rushes. They need to consume 80% of their body weight daily and are known to feed on over 200 species of plants, both terrestrial and aquatic. Water voles excavate extensive burrow systems into the banks of waterways. These have sleeping/nest chambers at various levels in the steepest parts of the bank and usually have underwater entrances to give the animals a secure route for escape if danger threatens. In favourable conditions they can breed several times a year, with an average litter size of six.

Once a familiar sight in lowland Britain water vole populations have plummeted. Since the 1900s its numbers have declined due to loss and fragmentation of wetland habitats because of changes in land use and more intensive land drainage systems. The Vincent Wildlife Trust carried out national water vole surveys in 1989-90 and 1996-98. Their surveys found that the species has disappeared from 94% of its habitat sites between the two surveys and remnant populations were scarce and fragmented. The population crash coincided with the establishment of mink along many of Britain's waterways. As a result of the decline of what was until recently a common British mammal the water vole is a legally protected species and a priority species in the UK

## Current factors causing loss and decline

- ◆ Predation by mink who are adept predators and unlike native predators are both accomplished swimmers and small enough to enter water vole burrows.
- ◆ Persecution due to confusion with rats. and use of rodenticides aimed at rats is a major threat in urban situations.
- ◆ Pollution of water courses.

- ◆ Fluctuation in water levels due to flooding, drought and abstraction. Excessive fluctuations in water levels due to land drainage or flooding can damage riverbanks and burrows. Drought conditions can expose burrows making the water vole more vulnerable to predators.
- ◆ Loss and fragmentation of suitable riparian and wetland habitats by:
  1. Intensive engineering, bank protection and maintenance works to water courses.
  2. Development on the floodplains of rivers leading to containment of river channels.
  3. Intensive mowing of the bank and vegetation clearance results in water voles being susceptible to predators.
  4. Lack of management can lead to degradation of the waterside habitat through siltation, drying out or invasion by scrub.
  5. Changes in agricultural practices such as land drainage and heavy grazing of bank sides.

## Conservation Status

Wildlife and Countryside Act 1981, Schedule 5 and Section 9  
 UK Biodiversity Action Plan Priority species  
 UK Mammal Red data book species

## The Species in the Tees Valley

The national decline of water voles is mirrored in the Tees Valley; however the species has strongholds on some urban becks. Detailed monitoring of the becks in Middlesbrough has found water voles to be thriving with populations on all five of Middlesbrough's becks (Marton West Beck, Ormesby Beck, Newham Beck, Bluebell Beck and Spencer Beck). It is believed that the success on urban becks compared to rural is due to the lack of predation by mink in these urban areas. There are however some rural and semi-rural populations on the River Leven and the Guisborough Becks.

North of the Tees, there are populations on Lustrum and Cowbridge becks in Stockton and Billingham but these are smaller and more fragmented. Saltholme and Cowpen Marsh have populations of water voles. In Hartlepool a population is well established on Greenabella Marsh. It appeared to have been lost from its main site on Greatham Beck in 2007/8 but has reappeared in 2009. It is recorded from several other sites in the borough but these are mainly small, sub-optimal sites and water vole records from them are sporadic.

A study in 2006 by Hartlepool Borough Council's Countryside Warden Service, repeating a 2002 survey of sites in the borough where Water Vole had been recorded. Of the 10 sites resurveyed, only 4 still had signs of water vole. Further surveys are being carried out in 2009 by Sunderland University in partnership with Hartlepool Borough Council.

## Current Activity in the Tees Valley

In Middlesbrough the Three Becks Project, a partnership between Tees Valley Wildlife Trust and Middlesbrough Council starting in 2005, increased awareness in local communities of water voles and understanding within the local authority of managing the becks to benefit water voles and other wildlife. This project has developed into the Middlesbrough Clean Becks campaign with the Environment Agency joining the partnership. Similar partnership projects are being developed in Stockton and Hartlepool and will include habitat enhancements along urban watercourses.

Saltholme has water voles and the recent wetland habitat creation projects could make it an important local stronghold once the reedbeds are established. In Hartlepool work is ongoing to limit the spread of Himalayan Balsam on Greatham Beck however it is thought that mink is the major cause of the decline there.

## Further Information

Strachan, R. & Jefferies, D. J. (1993) The Water Vole (*Arvicola terrestris*) in Britain 1989/90: Its distribution and changing status. The Vincent Wildlife Trust.

Strachan, R. & Moorhouse, T. (2006) Water vole conservation handbook (2nd ed.). Wildlife Conservation Research Unit, Oxford.

Natural England. (2008) Water voles-the law in practice. Guidance for planners and developers, Natural England (NE86),

Bright, P. & Carter, S. (2000) Halting the decline: Refuges and national key sites for water voles. English Nature Research Report (R386).

Natural England (2008) Water voles and Development: Licensing Policy. Natural England Technical information Note – TIN 042

### Websites

A water vole fact sheet is available from the Mammal Society website

[www.abdn.ac.uk/mammal/facts.shtml](http://www.abdn.ac.uk/mammal/facts.shtml)

For Natural England water vole publications and guidance on legal protection of water voles visit

[www.naturalengland.org.uk](http://www.naturalengland.org.uk)

## Vision Statement

To expand the range and population size of water voles in the Tees Valley

## Targets

WV.T1 To increase the range of water vole in the Tees valley by 2013.

Goal: Target will be monitored by annual monitoring of a subset of sites throughout the Tees Valley.

WV.T2 To increase the population size and reduce isolation of populations of water vole in the Tees Valley by 2013.

Goal: Target will be monitored by annual monitoring of a subset of sites throughout the Tees Valley.



## Actions

Code	Action	Organisational lead	Action contact	Partners	End date
WV.A1	Produce a database and GIS map for location and population details of Water voles in the Tees Valley. Update annually and share with emerging North East Records Centre (ERIC).	Tees Valley Wildlife Trust	Kenny Crooks	Hartlepool Council, Environment Agency ERIC (North east Regional Records Centre)	Dec 2009 Updated annually
WV.A2	Carry out annual monitoring of five sample sites where known water vole populations and sites where previous populations recorded.	Tees Valley Wildlife Trust	Kenny Crooks	RSPB, INCA, Hartlepool Borough Council, Stockton Borough Council, Middlesbrough Council, Redcar & Cleveland Borough Council	Ongoing
WV.A3	Identify sites where there is the potential to improve the habitat and monitor to see if the improvements to the habitat have resulted in an increase in water vole numbers	Tees Valley Wildlife Trust	Kenny Crooks	RSPB, INCA, Hartlepool Borough Council, Stockton Borough Council, Middlesbrough Council, Redcar & Cleveland Borough Council	Ongoing
WV.A4	Provide an advice service for water vole survey, management and legal protection to local authorities and riparian land owners and managers.	Tees Valley Wildlife Trust	Kenny Crooks	Hartlepool Borough Council, Environment Agency	Ongoing
WV.A5	Establish a strategic and systematic programme of mink control in the Tees valley and train volunteers.	Tees Valley Wildlife Trust	Kenny Crooks	BASC, (British association of Shooting and Conservation)	2010
WV.A6	Establish a project to carry out riparian habitat improvements to enable water voles to expand current range and reduce fragmentation of populations e.g. on Lustrum Beck.	Tees Valley Wildlife Trust	Jeremy Garside	Environment Agency, Stockton Borough Council, Groundwork North East	2013
WV.A7	Ensure existing populations are protected, and their habitat enhanced and extended through development control and flood risk operations.	Environment Agency	Katy Dickson	Hartlepool Borough Council, Stockton Borough Council, Middlesbrough Council, Redcar & Cleveland Borough Council	Ongoing
WV.A8	Establish a community focused water vole project on Chapel Beck, Guisborough, to improve habitat and raise community awareness.	Redcar and Cleveland Council	Jo Feary	Tees Valley Wildlife Trust	2010
WV.A9	Produce a strategic plan for habitat enhancements to facilitate water vole dispersal in Hartlepool and the borders of north Stockton.	Hartlepool Borough Council	Ian Bond		Dec 2010
WV.A10	Address priority recommendations from Hartlepool strategic habitat enhancement plan.	Hartlepool Borough Council	Ian Bond		2013
WV.A11	Increase appreciation of the plight of the water vole through, media and public events and community engagement projects such as Wild Places (TVWT), Middlesbrough's Clean Becks (Environment Agency), Borough Becks (Middlesbrough Council), Hartlepool (Hartlepool Countryside Wardens).	Middlesbrough Council	Anne Gladwin	Environment Agency Middlesbrough Council, Tees Valley Wildlife Trust, Hartlepool Borough Council, Middlesbrough Council	Ongoing