

# WATER VOLE *Arvicola terrestris*

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**Water Voles and anywhere they use for shelter or resting are protected by UK legislation. The greatest threats to Water Vole populations are through loss of suitable habitat through agricultural intensification and predation by the non-native mink.**

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Water Vole ©Michelle Waller

## Legal and Conservation Status

- UK Protected Species
- UK Biodiversity Action Plan Priority Species and Species of Principal Importance in England
- Cumbria Biodiversity Action Plan species

### ***The Water Vole is protected under:***

- Section 9 of the Wildlife and Countryside Act 1981 (as amended) (Schedule 5)

### ***It is an offence to:***

- Intentionally kill, injure or take a wild Water Vole
- Have in possession or control any live or dead Water Vole or any part of it
- Damage, destroy or obstruct access to any structure or place which Water Voles use for shelter or protection
- Disturb Water Voles while they are occupying such a place

(This is a summary of the main points of the law, not a complete statement.)

## Habitat

Water Voles live in and around streams, rivers and other water bodies. Water Voles have been shown to prefer banks greater than 1m high, with slopes of less than 35°, and vegetation down to the water's edge.

It is widely thought to be a mainly lowland species, found at higher densities on slow flowing streams, 1-3m wide, with muddy bottoms.

However, in upland moorland areas, such as the North Pennines, Water Voles are found on small upland streams, possibly at altitudes that mink do not normally reach. In the absence of suitable banks to burrow they can build nests of reeds and grasses in tussocks of grass.

***Cumbria Key Habitats that are particularly important for Water Voles include:***

[Rivers](#)

[Lakes, ponds and tarns](#)

## Ecology

Water Voles live along waterways, in burrows, above and below the water. They are active both day and night, usually for periods of 2-4 hours. They leave their droppings in latrines which often show a trampled mass of old droppings with fresh ones on top.

In summer, they actively range along waterways, but most of the winter is spent within the burrow, although they do not hibernate and need a year round food supply. They are herbivorous, and eat green shoots in preference to fruits and seeds; they rely more on below-ground rhizomes during the winter.

The low life expectancy of Water Voles (average life-span 5 months) if coupled with high predation rates and low immigration from other vole populations, can lead to local extinctions of populations.

## Distribution

Water Voles were once common throughout Cumbria from Furness to the Scottish borders (Macpherson, 1892).

Declines have been due to habitat degradation and loss, habitat fragmentation and predation, especially by Mink.

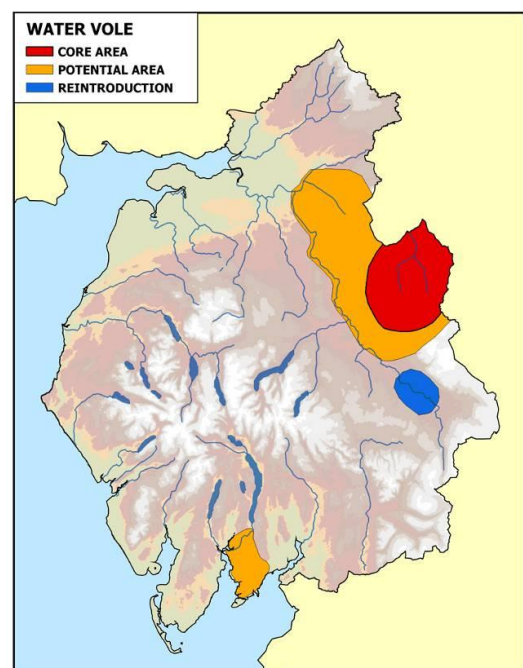
Survey work by Cumbria Wildlife Trust and others found that the core population was in the Alston area. In addition a nearby population was also found on a couple of streams in the Eden catchment, in the Renwick/ Melmerby area.

There may still be isolated, small populations in parts of Cumbria where Water Voles have been recorded post 1980 but not in recent surveys. The potential area may, therefore, be more extensive than shown.

Water Voles could potentially occur throughout Cumbria however the presence of mink throughout the county, and slow re-colonisation rates, make it unlikely that this will occur in the near future. Reintroductions and mink control on the River Eden may extend the population as shown on the plan, with appropriate habitat enhancement.



Water Vole habitat, Alston © Stephen



## Conservation Issues

Predation by mink is thought to be the main cause of declines in Water Vole populations. This is exacerbated by habitat loss and fragmentation due to heavy grazing of river banks, river engineering, dredging, creating culverts and clearance of bankside vegetation. Water pollution by chemicals such as PCBs and heavy metals, and inputs from agriculture and sewage works could have a detrimental effect.

## Planning Considerations

- Any modification or management of the banks can impact upon resident Water Voles, such as ditch clearance, flood alleviation works and putting in culverts.
- Any proposed development which may affect the rivers or streams within the Water Voles' current range will potentially affect Water Vole habitat and distribution and should therefore require a Water Vole/ Water Vole habitat survey.
- It should be noted that, since it is possible that there may still be isolated, small populations in parts of Cumbria where Water Voles have been recorded post 1980 but not recently, developments that significantly affect suitable watercourses should consider the possibility of Water Voles being present.
- Any development that would impact upon Water Vole or Water Vole habitat would require adequate protection and mitigation measures.
- In areas where Water Voles may occur the potential for enhancement and long-term management of the river/ streamside habitat should be maximised.

## Enhancement Opportunities

- Reduction in the amount of habitat damage, disturbance and burrow destruction by promoting better and more timely bank-side management, e.g. so as not to affect both banks at the same time.
- Protection and/ or creation of enhanced bank-side vegetation through fencing and planting and reduced grazing levels, especially within the Water Vole re-introduction area.

## Further Information

Water Vole Conservation Handbook, 3<sup>rd</sup> Edition, 2011, Rob Strachan, T. Moorhouse, M. Gelling. ISBN-13:9780954637651

The Water Vole Mitigation Handbook. 2016 Mammal Society. ISBN 13: 9780993567308

[Water voles: surveys and mitigation for development projects Natural England March 2015](#)

[Pre-submission screening service: advice on planning proposals affecting protected species. Natural England Oct 2015](#)

[Protected species: how to review planning applications. Natural England August 2016](#)

[UK Biodiversity Action Plan](#)

[Cumbria Biodiversity Action Plan](#)

## Contacts

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