

# Otter

*(comprehensive revision of SAP in 2004)*

## 1. A Definition

The European otter (*Lutra lutra*) is the only species of otter found in the UK, occupying both coastal and fresh waters and wetlands.

This is a large carnivorous mammal, eating mainly fish and eels, but also able to catch other small prey.

The female raises the young on her own, keeping them with her for up to a year. In this time they learn the skills needed for their independence, such as swimming and catching prey, before establishing their own home ranges.

Otters in Devon now frequent most watercourses and wetlands, and are recorded on the coastal streams. As highly mobile mammals, they have large home ranges, encompassing up to 40 km of watercourse, lakes, marshes, streams and small ditches. When travelling around this range they also cover long distances across dry land and will cross water sheds between river catchments.

## 2. Why an Action Plan?

Devon has an internationally important otter population and one of the strongest in the lowlands of the UK, and as such we in the County have a great obligation to ensure the conservation of this species.

In Devon there has been a marked population recovery since the 1980s and now otters are found in all watercourses and wetlands throughout the County. Water quality improvements and the retention of many excellent riverside habitats has undoubtedly contributed to this. The national targets for the species given below illustrate the need for this stronghold to be protected and encouraged to expand further, especially building on their successes in the east of the county in the last decade to connect with populations that are establishing in neighbouring areas.

The most critical continuing threats to otters throughout the county are posed by deaths on roads and the reputation they are gaining as predators at managed still water fisheries. Data collected since the late 1980's on dead otters and the mid 1990's on predation at fisheries now helps inform measures that can help reduce the impact of these threats.

### 3. Relevant ecology

In the UK, the European otter is found in both coastal and fresh water habitats. They are carnivorous, catching mainly eels and fish but also taking small mammals, amphibians and water birds. Needing about 2kg of food per day, otters vary their diet to whatever is most abundant or easily caught. They do not have any natural predators themselves in the UK, being at the top of the food chain.

Otters establish a large home range rather than a defended territory. A home range can extend over 40 km of watercourse, and include a network of rivers and streams, wetlands and ponds. Within this there are estimated to be up to 30 different resting places, which may be secure enough to form breeding holts, or more temporary lying up sites used by an otter travelling around its range. Holts may be found in riverside tree root systems, old drainage pipes and boulder piles, and temporary lying up sites may also be in tall vegetation found in marshes and reedbeds, bramble patches, bracken, grasses and nettles.

Female otters can breed in their second year, raising a litter of two to five cubs. Infant mortality is high, and often only one or two of these will reach maturity. The female raises them alone, the cubs staying in the natal holt for up to three months. They are gradually weaned and over the next few months taught to swim and catch food. At around a year they become independent and have to establish their own home range. This is another time of high mortality as the inexperienced young often travel large distances. It is likely that many otters do not survive much longer than five years in the wild, although they are capable of living to twice that age.

Otters are mostly nocturnal, but are becoming increasingly active during daylight hours in Devon. The reasons for this are unclear but may be linked with greater numbers of otters, a greater tolerance to disturbance or, following activity patterns of coastal otters, feeding when their prey are most active.

### 4. Distribution of otter in Devon

Our knowledge of otter distribution has improved over the last decade with regular volunteer surveys run by the Devon Biodiversity Records Centre and the England Survey in 2000–2002. The most noticeable change since the previous one in 1991–94 is the recovery in east Devon with the Sid, Otter and Axe now supporting breeding populations.

Otter signs are found throughout Devon including parts of the county from which they were thought to have disappeared during the 1960s and 1970s. With this evidence of an ongoing recovery otters are found in all river catchments in Devon and it is reasonable to assume that the species is now utilising all watercourses and wetlands in the County to some degree, including the coast, minor streams, moorland and many isolated ponds.

One of the more surprising aspects of this recovery is that otters are now

found regularly in the rivers and wetlands within Devon's urban areas. Exeter, Barnstaple, Okehampton and Tiverton are examples of towns and cities where otter signs are a regular feature on river, stream and canal banks.

## 5. Current population

**In Devon:** The County supports a stronghold of the UK otter population, which is of international importance. Although numbers are not easy to estimate, the South West has the greatest otter concentration of any lowland region of England.

**Elsewhere in Britain:** Figures from national surveys shown in the table below (from Lenton et al, 1980, Strachan et al 1990, Strachan and Jeffries 1996, Crawford 2003) show a steady increase in the number of survey sites having otter signs for the County. The importance of the County's population is clearly shown in a national context.

The table below shows the results from three national otter surveys for the South West Region, which covers Devon and Cornwall:

Survey year	No. survey sites	No. positive survey sites	% of sites found +ve	% of total sites found +ve (England)
1977 - 79	388	91	23.45	5.8
1984 - 86	388	169	43.04	9.6
1991 - 94	388	259	66.75	23.4
2000 – 02*	388/399	322/332	82.99/83.21	36.3

\* 2000–02 survey included 11 new survey sites in square SX s/e, so figures are presented as comparison with 1977-79 sites/all sites.

## 6. Current problems for otter in Devon

**Accidental deaths:** In Devon 233 otter deaths have been recorded between 1990 and April 2004, of which approximately 75% were killed on roads. The proportion of the population that is lost to these incidental deaths is not known. Mitigation put in place since 2002 at some of the known black spots on the M5 and ongoing on some main A roads should help reduce the likelihood of further deaths, but it is not possible to eliminate the risk to otters at all sites.

**Fragmented and isolated populations:** Fragmented populations recorded during the 1990's on the Axe, Sid, Otter, Avon, Erme, Plym and Yealm seem largely to have consolidated. There is good evidence to show that these previously isolated populations are now breeding successfully.

**Recognition of otters' needs:** Our understanding of otters' needs has improved vastly with the publication of the Life in UK Rivers project reports.

These cover Ecology of the European Otter, Otter Breeding Sites Conservation and Management and Monitoring the Otter. These can be found at [www.riverlife.org.uk](http://www.riverlife.org.uk). The recognition of their needs is especially important in relation to planning and development control issues, with recognition that otters are found on all watercourses and wetlands in the County. Possible impacts on the species need to be taken into account in planning matters.

**Water quality:** Localised pollution incidents occur in Devon. As a rural county with a high number of dairy and beef herds and grazing livestock, farm management is constantly aiming to reduce fertiliser runoff and prevent insidious seepage of silage and slurry. There are also incidents of PCBs, organo-chlorines and heavy metals entering watercourses. Water quality in the County is continuously improving with the farming community, the Environment Agency and the water utilities company working to achieve higher standards.

**Food supply:** Possible lack of prey in some river catchments may lead to otters not being able to make the most of particular stretches of watercourse. This is unlikely to be a major problem in Devon, but may be temporary where fish kills occur.

**Habitat quality and continuity:** Impoverished, degraded or destroyed bank side habitat can mean a lack of suitable breeding and resting sites on some river stretches.

**Recreational disturbance:** Recreational activity on river banks may increase disturbance in more vulnerable places, or where it is increased in formerly quiet areas. Radio tracking has shown that otters will move away from an area of disturbance, diving out of view and surfacing some distance away before resuming their previous activity. However it seems safe to conclude that the recovery of the otter population is not being impeded by human disturbance.

**Economic impacts:** Reported incidents of otters feeding at fish farms and fishing lakes have increased as more of these facilities are opened and otters become more prevalent. There are many ways of reducing the impact of natural predators that can be implemented by fishery owners. Advice is available from the Environment Agency.

**Possible shootings:** A very few reported incidents occur of otters being shot where they are deemed a nuisance.

**Disease:** Post mortem examinations reveal remarkably few infectious diseases.

## 7. Recent changes in population

Otters were formerly widespread throughout the UK, but they experienced a rapid decline from the 1950s to the 1970s and were effectively lost from much of England by the 1980s. Reasons for this crash included water pollution and loss of good habitat. Now, barring large-scale declines in environmental standards, it seems likely that otters will continue to re-colonise those parts of Britain where they became extinct, with the Devon population showing a relatively rapid re-colonisation during the 1990's.

## 8. Current protection

Appendix 1 of CITES.

Appendix II of the Bern Convention.

Annexes II and IV of the EC Habitats Directive.

Schedule 5 of the 1981 Wildlife and Countryside Act.

## 9. Current positive initiatives for otter in Devon

### **Policy and Protection:**

- JNCC has published a *UK Framework for Otter Conservation in the UK 1995-2000* which clearly states the work required to continue promoting otter conservation. This was produced and is supported by a wide range of organisations and agencies involved in otter conservation.
- The River Camel SAC in Cornwall is designated for otters in the South West under the EC Habitats Directive as an indicator of the importance of the south west peninsula's otter population. Additionally the South Dartmoor woodlands SAC includes river stretches used by otters, as does the River Axe SAC.
- The European otter is listed as globally threatened on the IUCN/WCMC Red Data List.

### **Survey and Monitoring:**

- National surveys are carried out every 5-7 years, which cover 386 survey sites over three 50km squares of Devon.
- Local monitoring by the Devon Biodiversity Records Centre, the Environment Agency and other organisations and volunteers has helped establish present distributions on some catchments, and highlighted areas where there is

still room for future natural expansion of the population. Devon Biodiversity Records Centre *Operation Otter* is a quarterly survey of sites covering the whole County, carried out by trained volunteers.

### **Habitat management work:**

- Conservation management has been carried out for a number of years including tree planting for future holts, holt protection, log pile and artificial holt building, and has proved successful. Initially this was led by the Vincent Wildlife Trust's Otter Haven Project, and until recently by Devon Wildlife Trust's Otters and Rivers Project. The Environment Agency and Forest Enterprise are active in otter conservation work within their own work programmes. Local authorities and individual landowners also manage otter habitats sympathetically.

### **Research:**

- 157 dead otters in Devon have been retrieved for post-mortem and tissue analysis. Results from this analysis give information on the condition of those otters killed and provides useful information on the build up of heavy metals and other pollutants. This research is also showing up other aspects of the condition of the region's otter population. The Environment Agency is continuing to fund this as part of a mainstream environmental monitoring programme studying the ecological effects of new and existing chemicals in the environment.
- National research on the implications of heavy metals and PCB contamination in fish and aquatic/wetland ecosystems may have relevance to the conservation of the south west otter population.

## 10. Biodiversity planning context

### National BAP Context

Species of principal importance in England (NERC Act, S.41):

- Otter

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

### Associated Action Plans within the Devon BAP:

- Rivers, flood plains and fluvial processes

- Rhôs pasture
- Freshwater reedbed
- Alder/willow woodland
- Estuaries
- Atlantic salmon
- Water vole
- Freshwater pearl mussel
- White-clawed crayfish

## 11. Biodiversity objectives and targets for otter in Devon

### Objective 1

Safeguard and strengthen existing populations so the range of otters increases through natural re-colonisation.

Target:

- By 2010, breeding otters restored to all catchments where they have been recorded since 1960. Continued monitoring of population/distribution thereafter.

### Objective 2

Determine the Devon resource and distribution trends.

Target:

- Ongoing, compiling surveys on an annual basis.

### Objective 3

Reduce or, where possible, eliminate prevalent threats to otters.

Target:

- By 2010, and ongoing monitoring thereafter.

### Objective 4

Improve knowledge of the ecology and conservation of the otter through appropriate research.

Target:

- Ensure participation in appropriate research projects. Ongoing, as applicable.

## Objective 5

Use the otter as a flagship species to promote good riparian habitat.

Target:

- Ensure all interested parties are aware of the requirements for riparian habitat management by 2010, and then ongoing.

## 12. Wider benefits from pursuing these objectives

The pursuit of the objectives and targets set out above will not only benefit the otter. Conservation has wider benefits and advantages for society, by providing a resource that is the basis of many aspects of the local economy, and by adding to the quality of life of the people of Devon in ways that are beyond financial measure. Thus enhancing the interests of biodiversity also enhances the interests of society as a whole. Some of these wider benefits are as follows:

- The otter, firmly established in our local folklore by Henry Williamson's evocative book *Tarka the Otter*, has come to represent the vitality of Devon's rivers and wetlands, attracting visitors from far and wide to experience the otter's environment and maybe catch a glimpse of this elusive species. There are therefore benefits to traditional and "green" tourism from protecting and enhancing Devon's otter population and its habitat.
- Good rivers and wetland management practice will benefit all species dependent on these habitats, and enhance diversity where found to be impoverished for non-natural reasons.
- The huge popular appeal of the otter engenders an appreciation of not only the species, but of wider issues of the natural environment.
- Wider understanding of river and wetland ecology, with benefits for wildlife and humans.

- Improved water quality with direct benefits to wildlife and humans.

### 13. Priority or indicative actions for otter in Devon

Action	Key Partners
1. Continue to enhance and protect riparian strip and water quality through agri-environment schemes, farm waste management, pesticide buffer zones, and through habitat management by landowners and land managers.	DEFRA; EA; DWT; FWAG; EN; CLA; NFU
2. Ensure wetland and riparian habitat is protected by implementing policies and legislation through the planning system.	LAs; EN; EA
3. Continue to monitor otter populations through schemes such as 'Operation Otter'. Record road and other incidental otter deaths. Data to be collected by the Environment Agency and Devon Biodiversity Records Centre and contributed to national database.	DBRC; EA
4. Continue to advise the Highways Agency and Local Authorities of the needs of otters on roads and development schemes, and work together on mitigating the effects of road kill black spots.	EA; DWT; LAs; HA
5. Continue to raise awareness of otters needs with the public, key groups, landowners, riparian owners, anglers and river users through the press and the publication of leaflets, booklets, posters and national publications as well as events and training. Include advice on protecting managed still water fisheries from otter predation.	EA; DWT; FWAG; EN; CLA; SWWSL; WRT
6. Assist in research including post mortems and eco-toxicological analysis of otter corpses.	EA; VIC; DWT; DBRC

#### Otter Action Plan Champions - Environment Agency

#### Abbreviations used in text and table

BAP	Biodiversity Action Plan
CLA	Country Landowners Association
DBRC	Devon Biodiversity Records Centre
DEFRA	Department of Environment, Food and Rural Affairs
DWT	Devon Wildlife Trust
EA	Environment Agency
EN	English Nature
FWAG	Farming and Wildlife Advisory Group
HA	Highways Agency
LAs	Local Authorities
SWWSL	South West Water Services Ltd
VIC	Veterinary Investigation Centre
WRT	Westcountry Rivers Trust