Northumberland **Biodiversity** Partnership

OTTER SPECIES ACTION PLAN

Plan Co-ordinator	Rivers & Wetlands Group
Plan Author	Elaine Jaggs
Plan Lead	Northumberland Wildlife Trust
Latest version	May 2007

Working with Wildlife

Description

Only the Eurasian or European otter (Lutra lutra, *Linnaeus* 1754) is a native to Britain and Ireland and is one of their largest carnivores. It is a member of the *Mustelid* or weasel family, which includes weasels, stoats, badgers, polecats, martens and mink. A full-grown male otter averages 1.2m in length and weighs about 10.5kg. Females are smaller, weighing in at about 7kg and reaching little more than 1m in length.

The otter is beautifully adapted to its semi-aquatic life style. It has a long stream lined body powered by a thick rudder like tail and webbed feet on short powerful legs. Its senses, smell, sight, hearing and touch are all aligned to reveal as little of the animal as possible when in the water whilst maintaining their ability to continue their passage undisturbed through the water. The coat is waterproof and consists of 2 layers, a thick underlayer of insulating down like fur and an outer layer of longer guard hairs that trap air to form an insulation layer between.

Dives usually last between 10 and 40 seconds and they can travel for nearly 400m and reach speeds of 12km/hr underwater. Much of their life is actually spent out of the water sleeping; hunting bouts rarely last longer than half an hour. They are active at any part of the day but are usually nocturnal in reaction to the ease of catching the available prey, as the days lengthen they become very much active at twilight. Areas that are undisturbed reveal the daytime movements of the otter more frequently.

Travel is made extensively along rivers, streams and ditches as well as overland often lying up many metres from the water. Generally the otter rarely strays from its riparian habitat, resting in underground and above ground locations. Preferring somewhere with good escape routes, they are often beneath tree root systems close to the river's edge. Other locations may be in drains, undercut riverbanks, and rock cavities or above ground in thick vegetation or just somewhere quiet close to the river edge. Many sites are very traditional having been used by generations of otter. They have a large number of resting sites within a range, rarely using the same one more than a couple of nights.

Breeding can occur at any time of the year with a very distinct preference for the spring in Northumberland. Between 1 and 3 cubs are born in secure surroundings away from prospecting males and floods. Breeding sites are again traditional by nature and are often in riverbank trees or away from main river situations on ponds, lakes or tributary streams. The cubs stay with the mother for approximately 10 to 12 months, in which time the male acts as both protector and sometimes provider, particularly as the cubs grow. Up till about 18 months old, particularly female cubs will stay very close to their mother and home range before eventually finding there own ranges. Surviving the second year could see an otter reach 10 years old but generally their life span in the wild is about 4 to 5 years.

They principally feed on fish, feeding generally on the most abundant species available on the watercourse inhabited. Seasonal gluts are also taken advantage of as in the salmon run and spawning amphibians. In impoverished habitat they appear readily to adapt to catching voles, mice, rats and water birds rather than the usual fish species. In Northumberland principle dietary intakes are salmonids and eel, however, on the river Wansbeck they feed extensively on bullheads and Seaton burn, sticklebacks.

Otters occupy most freshwater habitats in the UK. There is some evidence for their selective use of parts of the Northumberland coast. They require relatively clean unpolluted water with adequate prey supplies, however as needs arise, they readily occupy and adapt to many impoverished habitats.

Range sizes can be large and are dependent on the quality and availability of resources. The more available prey resources become at lower altitudes and latitudes the more constricted ranges become.

Conservation Status

EC Habitats Directive, Annex II & IV
Bern Convention, Appendix II
Convention on International Trade in Endangered Species, Appendix I
IUCN, Vulnerable
Countryside & Rights of Way Act 2000, Species of Principal Importance
Wildlife & Countryside Act 1981, Schedule 5 & 6
Conservation (Natural Habitats) Regulations 1994
UK Red Data List 1993, Morris
UK BAP Priority Species

Current Extent in Northumberland

Over the past ten years relative otter presence in Northumberland has almost quadrupled with signs of presence increasing from 16% to 70%. At present every river catchment in Northumberland boasts signs of otter. In more recent years they have even started to populate urban centres such as Blyth, Morpeth and Newcastle upon Tyne. In many cases however, this expansion is into largely 'unsuitable' areas, which support impoverished prey resources and poor habitat qualities.

Improvements in water quality and habitat improvements have been largely responsible for the return of the otter to Northumberland's rivers. This has led to its much increased distribution in the past 5 years. It has also led to the sharp increase in the number of fatalities on the region's roads as the population expands to seek new territory. 42 recorded animals have been killed on the regions roads in the last 2 years. It is far too early to understand what impact this will have on a population of animals that naturally live at relatively low densities but it is understood that the majority of fatalities are young fit and healthy individuals. Females being equally prone to RTA pose other worries being the future for the next generation.

Current Factors Causing Loss or Decline

- Disturbance by boating, angling, dog walking and close proximity of urban areas
- Loss of habitat due to historical land drainage and flood defence works
- Obstructions such as road bridges and weirs restricting otter movement and encouraging them to exit the water on to busy roads
- Reduction in riparian habitat from intensive agricultural practices, grazing pressure and sites for angling which decreases available resting sites and foraging areas for otters
- Pollution of watercourses from fertilisers, pesticides, toxic discharges and sewage treatment works which reduces water quality and subsequently populations of prey species such as fish and crayfish

Associated Action Plans

Rivers and streams
Ponds, lakes and reservoirs
Fen, marsh and swamp
Reedbed
Saltmarsh and mudflats
Freshwater fish
White clawed crayfish

Further Information

The Mammal Society otter fact sheet - http://www.abdn.ac.uk/mammal/otter.shtml

This otter action plan links to the otter UK BAP action plan whose lead partner is the Environment Agency.

Targets

Maintain the current range of the otter in Northumberland by 2010

Increase the current range of the otter in Northumberland by 2015

Priority Actions	Date
Carry out an otter survey in Northumberland every 7 years	2007
Keep records of road mortalities for otters	ongoing
Encourage the use of otter proof fencing on new fisheries	ongoing
Ensure that designated otter sites are properly recognised within River Basin Management Plans as required by the Water Framework Directive	2009
Ensure all operations affecting watercourses take account of otters, retaining features such as old trees, scrub and overhanging root systems	ongoing
Encourage the creation of log piles and construction of artificial holts adjacent to watercourses where the habitat is considered to be suitable for otters	ongoing
Encourage land owners and managers to carry out favourable management of the riparian zone to protect river margins and encourage the expansion of otter populations	ongoing
Identify and prioritise sites where suitable enhancement, restoration and management works may be considered to benefit the otter	2008
Promote the otter as a high profile flagship species to highlight the importance of water quality and riparian habitats to biodiversity	ongoing

Northumberland **Biodiversity** Partnership

RIVERS & STREAMS HABITAT ACTION PLAN

Plan Co-ordinator	Rivers & Wetlands Group
Plan Author	Elaine Jaggs
Plan Lead	Environment Agency
Latest version	May 2007

Working with Wildlife

Description

Rivers and streams are by nature dynamic systems, continually modifying their courses and consequently, their immediate environment as they undertake their natural function of draining the surrounding land. Included in this plan are the main rivers and the burns/streams that feed them as well as associated features such as exposed riverine sediments and marginal and bankside ('riparian') vegetation. Exposed riverine sediments are sands, gravels and shingles of active streams and rivers. They support a rich invertebrate fauna including many rare and specialist beetles. Many of our rivers and streams have been heavily modified in the past, resulting in degraded habitats supporting fewer species. This trend is now being reversed with opportunities to recreate naturally functioning systems being implemented.

The habitat is of great value for wildlife, acting as important corridors that link together other wildlife features and provide safe routes for species to move between sites. They are also of value to humans through the various recreational uses associated with them such as fishing and canoeing.

Estuaries with a salt water or brackish influence are covered by the mudflat and saltmarsh action plan. Calaminarian grassland areas are covered in a separate action plan.

Conservation Status

UK BAP Broad Habitat

Current Extent in Northumberland

There are seven designated main rivers that flow within Northumberland. The Environment Agency measures the biological and chemical water quality of rivers and estuaries through a methodology known as General Quality Assessment (GQA). Each river is split into reaches and each reach is scored. The ranges of scores for each of the rivers in Northumberland from 2005 are identified below.

River	Biological GQA	Chemical GQA
Aln	a/b	a/b
Blyth	a-c	b
Coquet	a/b	a-c
Till	a/b	a
Tweed	b	a/b
Tyne	a/b	a/b
Wansbeck	a/b	a/b

The length of Northumberland's main rivers is 1530km (EA Draft Plans 1997)
The length of the smaller burns and ditches is not currently known

A recent survey of beetles on exposed riverine sediment (ERS) in Northumberland reported three river systems to be of national importance; the rivers Till and Coquet were found to have the best exposed riverine sediment quality scores of all English rivers previously surveyed, the South Tyne was also fourth on the list. The quality of ERS sites is measured using the ERS Quality Index (QI) score. This is used to compare the conservation interest of different sites and can be pooled to provide a single score for each catchment. The results from the 2005 survey are:

River	ERSQI
Till	489
Coquet	471
South Tyne	429

Associated Action Plans

Otter
Water vole
River jelly lichen
Bats
Freshwater pearl mussel
White-clawed crayfish
Freshwater fish

Current Factors Causing Loss or Decline

- Pollution including eutrophication and acidification from herbicides, pesticides, slurry, sewage, industrial effluent, minewaters and runoff which changes water quality
- Excessive ground water and surface water abstraction
- Construction of weirs, dams and reservoirs
- Physical modification and management for land drainage, flood defence works and navigation - intensive engineering
- Overgrazing or excessive mowing of bank vegetation leading to increased rates of erosion
- Introduction of invasive plants and species
- Development within the floodplain affecting catchment flows
- Peat stripping
- Removal of coniferous plantations at the edge of watercourses
- Re-alignment of watercourses, reductions in flow and loss of floodplain habitat from mineral extraction
- Water transfer schemes between rivers

Further Information

General Quality Assessment methodologies for the classification of river and estuary quality - http://www.environment-agency.gov.uk/science/monitoring/184353/

Eyre, M.D. and Luff, M.L, 2002. The use of ground beetles (Coleoptera: Carabidae) in conservation assessments of exposed riverine sediment habitats in Scotland and northern England. Journal of Insect Conservation, 6 (1), pp 25-38

This rivers and streams plan links to the rivers and streams UK BAP action plan, whose lead partner is the Environment Agency.

Targets

Achieve 100% of River Basin Management Plan targets by 2010

Improve 50 kilometres of riparian habitat by 2010

Maintain the average ERSQI per river by 2010

Priority Actions	Date
Achieve Water Framework Directive target of Good Ecological Status	2010
Identify habitat creation opportunities utilising the Northumbria Area Wetland Feasibility GIS layer and seek to implement	2010
Promote the use of buffer strips along watercourses to improve riparian habitat and water quality	2010
Identify opportunities for reconnection of watercourses to their floodplains through sustainable flood risk management	2010
Carry out grip blocking and native woodland planting to restore the water-retaining capacity of the upland mire systems	2011
Raise awareness of problems associated with non-native invasive species and encourage their control by riparian owners and other interested parties	2009
Increase and promote understanding of the wider functions of watercourses and their catchments among all relevant sectors	2009
Write and distribute gravel management guidance for exposed riverine sediment to ensure appropriate management of the habitat	2007
Maintain the monitoring system for exposed riverine sediment quality. Resurvey every five years	2010

Northumberland **Biodiversity** Partnership

NATIVE WOODLAND HABITAT ACTION PLAN

Plan Co-ordinator	Native Woodland Group
Plan Author	Richard Pow
Plan Lead	Forestry Commission
Latest version	May 2007

Working with Wildlife

Description

Native woodland represents an important habitat type in Northumberland and the following four main native woodland types are found in the county:

- Upland Oak
- Upland Mixed Ashwoods
- Wet Woodland
- Lowland Mixed broadleaved Woodland

Northumberland also contains a small area of Juniper.

Native woodlands can be divided into two main categories: Ancient and Semi-Natural Woodland (ASNW) and Other Semi-Natural Woodland (OSNW) or secondary woodland. ASNW is on the whole more valuable and important because it is woodland that has occupied the site, normally with minimal human change to the tree species composition, since at least 1600AD. It is the closest we have to natural woodland in the UK and is an irreplaceable part of our heritage. The other form of ancient woodland is Plantation on Ancient Woodland Site (PAWS). This is ancient woodland that has been altered by man, normally through felling and replanting that has changed the tree species composition. Although the conservation value of PAWS is generally less than that for ASNW many of them can be effectively restored to native species.

A simple description of each of the native woodland types occurring in Northumberland is included as an appendix to this action plan.

Current Extent in Northumberland

A detailed survey of the ancient woodland in Northumberland was undertaken between 2003 and 2006 by the Northumberland Native Woodland Project. The final report provides detailed information on the nature, extent and condition of the County's ancient woodland and has been drawn on in compiling this HAP.

There is approximately 81,000ha[1] of woodland in Northumberland of which 12,500ha is broadleaved. 3,222ha or 4% is ASNW and 2,432ha or 3% is PAWS. Ancient woodland occupies just 1% of the total land area of Northumberland so represents a tiny fragment of the native woodland cover that was found prior to significant human influence several thousand years ago. The table below shows the total area of ancient woodland broken down by woodland type.[2]

[1] National Inventory of Woodlands and Trees, Forestry Commission, 2002.
[2] Data on ancient woodland provided here only includes woodlands greater than 2ha.

Woodland Type	ASNW (hA)	PAWS (HA)	All Ancient (HA)
Upland Oak	1444	1646	3090
Upland Ash	1205	505	1710
Lowland Mixed Broadleaf	399	270	669
Wet Woodland	163	11	174
Juniper	11		11
Total Area	**3222**	**2432**	**5654**

The extent of OSNW is not known but is likely to be around 2,000ha. This is made up of ancient woodlands that are less than 2ha in size and non-ancient semi-natural woodlands and includes approximately 1,000ha of new native woodlands that have been planted on formerly open land over the last 10 years.

The condition of ancient woodland in Northumberland can be summarised as follows:

- 61% of Ancient Woodland (ASNW and PAWS) is in an unfavourable declining or partially destroyed condition
- 44% of ASNW is in an unfavourable declining or partially destroyed condition
- 82% of PAWS is in an unfavourable declining or partially destroyed condition

Conservation Status

UK BAP priority habitat
Planning Policy Statement 9
EU Habitats Directive

Factors causing loss or decline

- Lack of regeneration caused by inactive management and no protection from grazing animals
- Conifer canopy out competing native broadleaved species
- Invasive alien species such as rhododendron
- Regeneration of non native tree species such as sycamore, beech and most conifers
- Loss and/or fragmentation due to development
- Opencast mining

Associated Action Plans

Red Squirrel
Dormouse
Black Grouse
Farmland Birds
Trees and hedges

Further information

Forestry Commission, 2006, Northumberland Native Woodland Project, Final Report
http://www.forestry.gov.uk/forestry/infd-6w6jwj

Forestry Commission, 2003, The Management of Semi-Natural Woodlands, Forestry Commission Practice Guides

This native woodland action plan links to the native woodland UK BAP action plan, whose lead partner is the Forestry Commission.

Targets

Maintain the current extent of ASNW in Northumberland of 3,222 hectares by 2010.

Maintain the condition of the 1804 hectares (56%) of ASNW in Northumberland currently assessed as favourable by 2010.

Achieve favourable condition of 2,255 hectares (70%) of ASNW in Northumberland by 2015.

Ensure that 730 hectares (30%) of PAWS in Northumberland have been restored or are under gradual restoration by 2015.

Increase the extent of native broadleaved woodland in Northumberland by 1,000 hectares through new woodland creation by 2015.

Increase the extent of native broadleaved woodland in Northumberland by 600 hectares through the introduction of native species to plantations when restocking by 2015.

Priority Actions	Date
Encourage planning authorities to resist development adversely impacting on ASNW in line with Planning Policy Statement 9	ongoing
FC and NE to work with partners to target support at ASNW in unfavourable declining condition	2007 onwards
Create and distribute leaflet on the results of the Northumberland Native Woodland Project	2007
Provide support through EWGS to encourage restocking of PAWS with native species	ongoing
Begin to restore all FC owned PAWS by 2015	2015
Provide support through EWGS and HLS to encourage the creation of new native woodlands in priority areas	ongoing
Provide support through EWGS to encourage an increase in diversity in conifer plantations by increasing the proportion of native broadleaves	ongoing
Increase the diversity of FC owned conifer plantations by increasing the proportion of native broadleaves	ongoing
Maintain the database of extent and condition of native woodland in Northumberland through BARS. Resurvey sites every 10 years.	2015

Appendix

All native woodland types are equally valuable, hosting a range of different dependent plant and animal species. Below are simple descriptions of each of the native woodland types occurring in Northumberland.

Upland Oakwoods

Upland oakwoods are the most common type of native woodland occurring in Northumberland. They occur on acid soils and are characterised by a predominance of oak (most commonly sessile, but locally pedunculate) and birch in the canopy, with varying amounts of holly, rowan and hazel as the main understorey species. The range of plants found in the ground layer varies according to the underlying soil type and degree of grazing from bluebell-bramble-fern communities through grass and bracken dominated ones to moss-dominated areas. Most oakwoods also contain areas of more alkaline soils, often along streams or towards the base of slopes where much richer communities occur, with ash and wych elm in the canopy, more hazel in the understorey and ground plants such as dog's mercury. Many of these woodlands are grazed and have a history of coppice management.

Upland Mixed Ashwoods

Upland mixed ashwoods are the second most common native woodland type in Northumberland. They occur on base-rich soils in upland areas. In most ash is a major species, although locally oak, birch, wych elm and even hazel may be the most abundant species. Yew may form small groves in intimate mosaics with the other major tree species and alder may occur where there are transitions to wet woodland. Despite variations in canopy composition the ground flora remains broadly similar and is characterised by dogs mercury and ramsons (wild garlic). Most upland mixed ashwoods are probably ancient, but ash is a vigorous colonist of open ground, so upland mixed ash is a common form of secondary woodland.

Wet Woodlands

Wet woodlands are found on poorly drained or seasonally wet soils, usually with alder, birch and willows as the predominant tree species, but sometimes including ash and oak on the drier riparian areas. They are found on floodplains, as successional habitat on fens, mires and bogs, along streams and hill-side flushes, and in peaty hollows. They generally only occupy small areas or small parts of other woodlands where they form part of a mosaic of different woodland types. They account for just 5% of the total area of ASNW in Northumberland. These woodlands occur on a range of soil types including nutrient-rich mineral and acid, and nutrient-poor organic ones, but all are poorly drained or frequently flooded. Most alder woods are ancient. Wet woodland combines elements of many other ecosystems and as such is important for many plant and animal species.

Lowland Mixed Broadleaved Woodland

This woodland type occurs in the lowland parts of the county such as the south-east and forms about 12% of the total area of ASNW in Northumberland. These woods are dominated by oak, ash, and hazel and are typically associated with fertile moist loam and clay soils and support a rich ground flora. Where the soils are alkaline or neutral, ash normally dominates the canopy with dogs mercury *(Mercurialis perennis)* the characteristic field layer dominant. On the more acid soils oak dominates the canopy and bluebell, wood anemone, bramble, honeysuckle and bracken are often found. Historically these woods were often managed as coppice or coppice with standards although there is often little management activity today and these woods are typically surrounded by intensively farmed agricultural land.