Scarborough Biodiversity Action Plan

Scarborough Biodiversity Action Group

ENGLISH NATURE

North Yorkshire County Council

Adopted by the Scarborough Biodiversity Steering Group and Scarborough Borough Council in April 2005.

The draft BAP was prepared by the Scarborough Biodiversity Steering Group and was consulted upon in December 2004.

Following consideration of the responses received the BAP was revised by the BAP Steering Group and formally adopted by the Steering Group and Scarborough Borough Council in April 2005.

Additional thanks to the following people who prepared Habitat and Species Action Plans:

Graham Megson (North Yorkshire Count Council),
Bob Missin, Paul Bullimore (Sea Life Centre),
Scarborough Field Naturalists,
Simon Pickles and James Mortimer of the North and East Yorkshire Ecological Data Centre and
John Drewitt (North Yorkshire Bat Group).

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Tree at Throxenby Lane: (Photograph by Steve Wilson)

Summary

If keeping Scarborough rich in wildlife is important to you, then you can find out how it is planned to care for our special habitats and the species associated with them, in the following pages. It is not just the rare and threatened wildlife that this plan seeks to protect, commoner wildlife is important too. Around our towns, villages and homes wildlife contributes greatly to the quality of our lives.

The BAP is based around 12 Habitat Acton Plans and 11 Species Action Plans although others may be added when the BAP is reviewed. Each action plan considers conservation issues and suggests conservation measures through a series of targets and quantifiable actions. A partnership of organisations as well as Scarborough residents can work together to deliver these measures. The table listing the selected habitats and species is given on page 16.

What is Biodiversity?

Biological Diversity, shortened to Biodiversity, means simply, the whole variety of life within the natural world which both surrounds and sustains us.

It does not just include rare species of animal and plant life but encompasses the entire spectrum of life, including:

- All animals, plants and organisms from the smallest microbe to the Blue Whale and from toadstools and lichens to the biggest Oak.
- Habitats incorporating the wide variety of aquatic and land masses and the atmosphere.
- The variation between and within populations of organisms.
- The interrelationships of species and communities operating jointly to produce habitats and ecosystems.

THIS ALSO INCLUDES US.

Golden-shelled Slug: (Photograph by B.Cockerill)

Why is Biodiversity Important?

Biodiversity is vital to life and, in its simplest terms, enables life to exist on the earth. The air we breathe, the food we eat, the water we drink, are all linked together in a complex web, every plant and animal having its own small part to play. Even the places we know and the livelihoods that people have are largely dependent on the rich diversity of life around them and together give that sense of place that makes Yorkshire different from Essex or Gristhorpe different from Hunmanby.

Scarborough Borough has a very rich and varied biodiversity and landscape, ranging from magnificent coastal zones to the similarly impressive upland moors. With this comes a wealth of habitats and species, some of which are of national and international significance. This variety contributes to and enriches our everyday lives, perhaps without our noticing. It also contributes significantly, along with farming, fishing, tourism and industry, to our local identity, culture and economy. As such, action is needed to conserve and enhance these assets to allow them to continue to enrich both our lives and those of future generations.

Change though is a natural and important part of the natural world and development is both inevitable and necessary. It is therefore imperative that such development pays respect to the biodiversity of the region and seeks to maintain and enhance it for our future generations. This is what sustainability is all about.

This Biodiversity Action Plan (BAP) seeks to conserve what we have whilst providing a framework for guiding change and is aimed at protecting and improving our natural world for the benefit of all forms of life.

The National and Regional Framework.

As a result of the Rio Earth Summit in 1992, many countries agreed to take action to arrest the loss of biodiversity on a world wide scale. The UK was included within this group of nations who pledged to take action and as a result a nation-wide initiative to enhance biodiversity was first published in 1995 by the Government. The UK BAP [1] covers a wide range of species and habitats with its prime objectives

being to conserve and enhance the range of wildlife and their habitats within the UK. It specifically targets both species and habitats that have seen a decline in quantity or quality in recent times. As the UK BAP targeted the entire country it could not be used to promote or put into action plans at a local level. The UK BAP therefore encouraged the production of Local Biodiversity Action Plans (LBAPs) of which there are 163 across the country. To conserve biodiversity though, you need to know what you have.

At a regional level a biodiversity audit has been completed (Selman [2]) which was the first comprehensive review of the most important habitats and species in the Yorkshire and The Humber Region. It pulled together information from a wide range of sources and experts. A list of species and habitats were derived from work on national priorities produced by the UK Biodiversity Steering Group, which was set up to oversee the biodiversity conservation process on behalf of Government.

The regional audit asks the questions "what relevance does the national biodiversity action process have for the region?" and also "what can our region best contribute to the national biodiversity action plans for the UK?".

The answers the audit arrived at were that BAPS aid and inform the work of planners and policy and decision makers, focusing available resources onto those species and habitats in the region which nationally are scarce and declining or for which the UK has an international obligation to protect.

Further to the audit the Yorkshire and Humber Biodiversity Forum is currently working on the preparation of Regional Biodiversity Indicators (Headley [3]).

So, what is a Biodiversity Action Plan (BAP) and why does Scarborough need one?

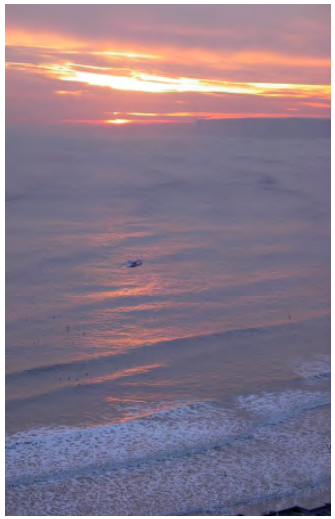
Biodiversity Action Plans are important tools for assisting in the protection and enhancement of selected habitats and species that have been identified as being of significant importance.

They can play a central role both in the conservation and enhancement of local biodiversity. Scarborough Borough, like most places in the UK has suffered from a decline in the variety and quality of species and habitats, often as a result of human intervention and development. The aim of the LBAP is therefore to:

- Translate national guidance within the UK BAP to action at a local level;
- Identify locally important habitats and species;
- Develop local partnerships to help maintain and improve
- Raise local awareness of biodiversity and its importance; and
- Set up effective monitoring systems.

Other benefits of the LBAP will be to inform and influence planning decisions, both to avoid harming wildlife and habitats and to encourage and pro-actively seek the restoration of habitats through the use of planning conditions.

It is, though, only a starting point. It is the first attempt at drawing together all the information that we have, assessing what needs the most attention and where we can help the most. It is not based on all that is known because there is a large amount of information, held by local people, that is not easily accessible. It is hoped that this report will stimulate the interest of everyone in getting involved and to help review and refine the Action Plan so that it helps maintain what everyone values most in their local environment.



Above: Sunrise Over Scarborough Bay.
Left: Sunset over Flixton Brow - Photographs by Steve Wilson

The Scarborough BAP

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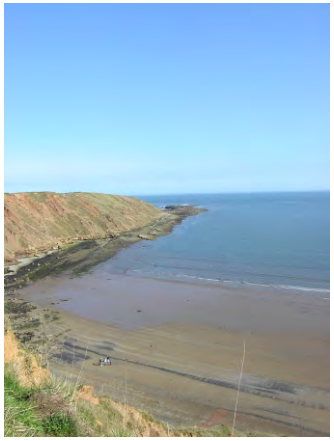
Scarborough Headland:
(Photograph by SBC)



Filey Brigg:
(Photograph by Steve Wilson)

The Scarborough BAP

What area does the BAP cover?

The BAP covers an area the same as that of the Borough Local Plan, a plan of which is shown in Appendix 2. It does not cover the North York Moors National Park, which has its own BAP.

Who prepared the BAP?

The first task was to set up a steering group (see Appendix 3 for a list of participants) whose aim was the preparation of a wildlife audit (Megson [4]) covering all habitats and species within the area. Following the completion of the audit, both habitats and species were prioritised for conservation action. For the purpose of this report the priority habitats and species identified have been termed as Local Priority Habitats (LPH) and Local Priority Species (LPS). The habitats and species included have been chosen following a criterion based selection exercise. The criteria involved the following:

Criteria for the selection of Local Priority Habitats

- Any habitat that occurs in the Scarborough Borough for which a UK BAP has been prepared (excluding the National Park).
- Any semi-natural habitat that occurs in the Scarborough Borough.
- Any habitat that is characteristic of the Scarborough Borough.
- Any habitat that is locally distinctive within the Scarborough Borough.
- Any habitat that supports a priority species and occurs in the Scarborough Borough.

Criteria for the selection of Local Priority Species

Species requiring national conservation action, such as the Water Vole, have been selected as UK BAP priority species. UK BAP species that occur in the Scarborough BAP area have been included in the Scarborough BAP, either as Species Action Plans or within the Habitat Action Plans.

Exceptions are:

- Very old records where the species is now extinct in the Borough, including Basking Shark (1937);
- Allis Shad fish (1940), Twaite Shad fish (1940), Burbot (1956) and Sturgeon (1987);
- Vagrant or passage species such as turtles, whales, dolphins and birds including Bittern, Roseate Tern, Red-necked Phalarope, Wryneck and Marsh Warbler;
- The grouped species action plan Commercial Marine Fish; and
- Individual marine fish, including Cod, Mackerel, Whiting, Plaice, Herring and Common Skate.

The following table lists the UK BAP priority species that occur in the Scarborough BAP area and which are included in the BAP.

1. Brown hare
2. Otter
3. Harbour porpoise
4. Pipistrelle bat
5. Water vole
6. Bullfinch
7. Corn bunting
8. Great crested newt
9. Grey partridge
10. Linnet
11. Reed bunting
12. Spotted flycatcher
13. Skylark
14. Song thrush
15. Tree sparrow
16. Turtle dove
17. White-clawed crayfish

- Any species (not including vagrants) that has recently occurred in Scarborough, and for which a UK BAP has been prepared.
- Any species recognised to be of conservation concern (such as Red Data Book listing, Nationally Scarce or red / amber listed birds) and has recently occurred in Scarborough.
- Any species that has statutory protection under European Directives or the Wildlife and Countryside Act 1981 and has recently occurred in Scarborough.
- Any species occurring in the Borough that is considered by experts to be regionally rare.
- Any species that is considered to be locally valued or distinctive.
- Any species that is considered likely to make a good flagship species for promoting action plans.

Taking Action and Monitoring

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Taking Action and Monitoring

The simple part of the process has now been completed. The Scarborough Local Biodiversity Action Plan (SBAP) has been adopted by the Steering Group and Scarborough Borough Council. Adopted. Now we need the help and assistance of local people and organisations to play their part in helping to deliver the actions for biodiversity in the Borough of Scarborough. The Steering Group with members from a variety of organisations with many interests has aided the production of this plan and will continue to exist in an attempt to deliver the objectives of the BAP. Each plan has been prepared by experts on the steering group and is in two sections.

The Action Plan.

This gives our objectives for the priority habitats and species in Scarborough and provides information on current status and reasons for decline. These are the plans that are included in this document.

The Action Programme.

This gives the UK BAP targets (if any) and a table of quantifiable targets and actions to be delivered locally. These tables do not form part of the published BAP but are available on request. They provide a broad menu of targets and actions that will be initiated when opportunities, funding and partner leadership is identified.

In addition the Steering Group will select active targets. These are targets and their actions, which have been or are likely to be initiated in the current twelve-month reporting period. All 'live' targets and actions will be input into the on-line Biodiversity Action Reporting System (BARS). The BARS software has been designed so that it can be set to communicate with the partners that have agreed action delivery, to prompt them to report progress.

Each year's active targets will be viewable on the website http://www.ukbap-reporting.org.uk/.

The Scarborough BAP aims to achieve conservation through targets based in order of importance, on protection, enhancement and recreation.

- The key means of protecting habitats and species is by protecting the existing resource at sites, which include Sites of Special Scientific Interest (SSSI), Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR) or other Nature Reserves (NR). Such sites require favourable management, often through Management Agreements with the owners.
- Enhancement seeks to improve existing degraded habitat to a state of favourable condition for wildlife.
- Re-creation seeks to expand the resource.

To work towards these objectives requires not just the assistance of the partners of the Biodiversity Steering Group, but the whole community.

The ways in which everyone within the community can get involved and play a part are highlighted in the following section entitled 'Getting Involved.'

Although a large number of people have been represented on this steering group and many others have been involved in the process, the publication of the LBAP does not mean that such public involvement should diminish. On the contrary, the publication of the LBAP is just the beginning of the process and should lead to the involvement of more local people in taking action, monitoring the progress of the action plans on habitats and species and providing more information (see 'How Can I Help ?').

There is also a good opportunity to link the Scarborough BAP to the National Curriculum, in order for it to be a valuable learning resource for the education sector.

Information and Data

In the past the extent of data available relating to habitats and species has been an unknown quantity, with pieces of information being held by various authorities, groups and individuals. Such information has been recorded in a variety of ways from advanced databases and spreadsheets to the naturalist's notebook or in someone's head.

This created the problem of not allowing a true picture to be established of the distribution and variety of biodiversity in Scarborough Borough.

Scarborough SSSIs

The following details the SSSIs In Scarborough and their interest, i.e. Biological or Geological.

Betton Farm Quarries - Geological

Cayton, Cornelian and South Bays - Biological & Geological

Filey Brigg - Biological & Geological

Flamborough Head (part) - Biological & Geological

Gristhorpe Bay & Red Cliff - Geological

Iron Scar & Hundale Point to Scalby Ness - Geological

North Bay to South Toll House Cliff - Geological
Ruston Cottage Pasture - Biological

Spell Howe Plantation - Biological

Whitby/Saltwick - Geological

Furthermore, without addressing this, the task of monitoring progress against targets becomes an almost impossible task. To assist in overcoming this problem Scarborough Borough Council has entered into a Service Level Agreement with North and East Yorkshire Ecological Data Centre (NEYEDC) to hold relevant information and make it available for work involved with the Biodiversity Action Plan and to other members of the Council who require detailed information on, for example, the whereabouts of a certain species.

The NEYEDC has analysed all the habitat and species data available to it, to produce baseline maps showing the resource of each priority habitat and species. These maps will be used as the baseline maps but it should be noted that this is the 'known resource' rather than the actual resource. Thus, some species baseline maps such as the Tree Sparrow show very few records. These maps will be updated as our information base grows. Maps are viewable on line on the NEYEDC website, which is www.neyedc.co.uk ~ click on Biodiversity Data BAPs - Local BAPs - Scarborough.

The Scarborough Museums Service, including Whitby Museum, plays an important role in terms of being a repository for voucher specimens, an archive for historical data and a source of reference collections for local naturalists, as well as enthusing the naturalists of the future.

The following actions are considered important with reference to the collection and collation of information.

- Scarborough Borough Council will review its commitment to the agreement with NEYEDC on an annual basis;
- The Biodiversity Action Plan Steering Group should continue to function following the adoption of the plan and re-assess its role on a continual basis;
- All recording should be encouraged and passed on to NEYEDC;
- Any existing information should be passed to NEYEDC; and Scarborough Borough Council will review its commitment to support the SINC Panel.

Sites of Special Scientific Interest in Scarborough

English Nature (EN), the Government's conservation agency, has designated the very best examples of biological and geological sites in the Borough as SSSIs. SSSIs are protected under the Wildlife and Countryside Act 1981 (amended).

The sites shown adjacent occur in the BAP area and a map showing these SSSIs can be viewed on the websites www.magic.co.uk or www.natureonthemap.org.uk

SSSIs that are of European importance come under European legislation - sites important for birds are designated as Special Protection Areas (SPA) and those that are important for habitats are candidate Special Conservation Areas (cSAC).

Flamborough Head & Bempton Cliffs SSSI is designated as both a SPA and a cSAC.

Sites of Importance for Nature Conservation (SINC)

Many of the best examples of semi-natural habitat in the Borough have been designated as Sites of Importance for Nature Conservation. The SINC system is the tier of sites below the statutorily protected Sites of Special Scientific Interest (SSSI). They are protected by a policy in the Scarborough Borough Local Plan and are part of the planning system, in that they require to be protected from significant effects of development. The SINC Panel is a broad partnership chaired by North Yorkshire County Council. This Panel has produced comprehensive scientific criteria for the classification of SINCs (SINC Panel 5), which are largely based on the national British Plant Community criteria known as the National Vegetation Classification (NVC) system. SINC data is managed on behalf of the SINC Panel by the North and East Yorkshire Ecological Data Centre (NEYEDC). SINCs are not necessarily sites that have public access and each has been surveyed to exacting standards with the permission of the landowner. Ongoing liaison with SINC owners is important, and biodiversity gains can be made through the offering of ecological, management and funding advice. The SINC Panel undertakes a rolling programme of SINC survey work to identify new sites and to re-survey existing ones. This element of monitoring SINC quality is important and should help to identify the state of the resource and where best to apply resources.

SINCs are shown on the Scarborough Borough Local Plan map, which can be viewed online at www.scarborough.gov.uk or at a Council Office. The table in Appendix 4 shows the relationship between BAP habitats and SINC habitats.

Other Strategies and Plans

It is imperative that the Scarborough BAP is not viewed as a stand alone document but is seen as a useful tool that can influence a variety of statutory and non-statutory plans, strategies and initiatives. Its implementation can also be assisted through these plans and strategies, which include the Local Agenda 21 Strategy (LA21), the Borough Local Plan and Planning Process and the Community Strategy. All of these strategies and plans currently recognise the need to sustain and enhance biodiversity and when reviewed and updated will take into account the content of the BAP. A brief description of these strategies and the linkages to the BAP is highlighted below.

Local Agenda 21 Strategy

Scarborough Borough Council has adopted a LA21 Strategy and through it, is promoting sustainability. A central theme of the Council's adopted strategy is the need for the Council to commission and publish a Biodiversity Action Plan. This plan therefore satisfies one of the main targets of the Council's Local Agenda 21 Strategy.

The Planning Process

The planning process is a statutory process which regulates and controls land use. As such the Local Planning Authority has a major role in conserving biodiversity. The current Local Plan covers biodiversity and specifically sets out a number of policies whose aims are centred around:

Local, National and International nature conservation sites;
Species and habitat protection;
Protection of water resources;
The protection of landscape features and
Protection of open space.

The BAP will have a significant impact on the future review of planning policy with reference to biodiversity.

The Biodiversity Action Plan highlights the need to protect and enhance the diversity of wildlife and it is hoped that the Development Control process will take full account of information contained within the BAP when considering and deciding upon development proposals. Planners are becoming increasingly involved in the process and recent examples of the importance attached to biodiversity have been seen at sites in Scarborough and Filey, where specific conditions have been attached to decisions ensuring that development will not harm existing flora and fauna including Great Crested Newts and Badgers.

Community Strategy

The Government has acknowledged that the community has a pivotal role in setting its own agenda. This has manifested itself in the establishment of Local Strategic Partnerships to produce Community Strategies which promote the economic, social and environmental wellbeing of the community. Scarborough has produced a Community Strategy for the period 2002 to 2007, and in line with Government expectations incorporates the principle of protecting biodiversity in the Borough.

A partnership between the community, Local Authority and other interested parties has been set up which seeks to 'PROTECT, SUSTAIN AND ENHANCE THE ENVIRONMENT'. A main aim of this group is to 'PROTECT AND ENHANCE THE BOROUGH'S WILDLIFE HABITATS AND SITES OF GEOLOGICAL INTEREST.

Reporting and Monitoring

Progress in hitting targets as set out in the Scarborough BAP Action Programme requires continual monitoring and reporting, both to the BAP Steering Group and to the public. The BAP also contains a general action plan (see following page), the aims of which are targeted towards the use of the BAP in informing other plans and strategies and the future role of the Steering Group.

Whilst the process of getting a BAP adopted has been a lengthy and complicated one, the need to monitor forms a similarly difficult but important task. This will form a large part of the work of the Steering Group, which will use the national Biodiversity Action Reporting System (BARS). The targets and actions for each priority have been formulated so that they fit BARS. This provides an efficient way of monitoring and local reporting, as well as feeding biodiversity gains up to the UK BAP level. The Scarborough BAP will also provide information to the regional level, where currently the Yorkshire and Humber Biodiversity Forum (YHBF) is preparing a suite of regionally important habitats and species.

Comprehensive reports will be generated from BARS and circulated prior to annual Steering Group meetings. At these meetings the Steering Group will discuss progress, review targets and activate targets and actions for the next year.

Review

The BAP will need to be reviewed in the light of both new information and information received as part of the annual monitoring process. The BAP should be seen as a strategy that can be continually updated to meet the needs of the ever-changing biodiversity of the area. New Habitat Action Plans and Species Action Plans can be added when information suggests that this is necessary. For example, it may become apparent that a previously populous species is identified as being in national decline. If this species is one which is common to the Borough, it would be sensible to add a SAP on that species.

There will be an on-going process of identifying new targets and actions, and these can be added to the BAP Action Programme at any time, while redundant ones can be removed. Targets and actions becoming active will be entered into BARS.

General Action Plan

General Aims and Objectives

As explained in the previous section the BAP has objectives, aims and targets set out in each of the individual Habitat and Species Action Plans. The aims set out opposite refer more to the overall aims of the BAP, to the purpose of developing the BAP, the need to update and review and the need for it to be viewed as an important document which can inform and affect policy making.

	Targets / Measures	**Responsible**	**Period**
Implementation	Review and establish future role of BAP Steering Group.	BAP Steering Group	Ongoing
	Involve the community.	Environment and Sustainable Development Officer, Parks and Countryside, BAP Steering Group, etc	Ongoing
	Use BAP to inform policy and strategy making.	SBC and other Local Authorities and Agencies	Ongoing
	Work towards individual targets of HAP's and SAP's.	Partner groups, SBC and BAP Steering Group	As per Action Programme.
Monitoring	Update database of baseline information.	BAP Steering Group, NEYEDC	Ongoing
	Identify new HAP's and SAP's and add to BAP as necessary.	BAP Steering Group	Annual
	Identify new targets and actions and add to Action Programme as necessary.	BAP Steering Group	Annual
	Input data for active targets into Biodiversity Action Reporting System (BARS), including costings	NEYEDC, NYCC	March 2005, then ongoing.
Review	Undertake annual review of progress with HAP's and SAP's.	BAP Steering Group	Annual
	Produce an Inter-Tidal HAP.	University of Hull, BAP Steering Group	April 2006
	Investigate the possibility of linking the BAP to the National Curriculum for educational use.	BAP Steering Group	April 2007

Getting Involved

Getting Involved

Conservation Volunteer looking for Reptiles:
(Photograph by NEYEDC)

Above and **Below:** Conservation Volunteers in action:
Photographs by Whitfield Benson

How Can I Help With This Biodiversity Thing?

First things first! Everyone can help improve the biodiversity within the Borough and small changes, cumulatively, can make a great difference.

We can use energy more wisely, make more use of environmentally friendly and recycled products, eat more organic food and recycle more of our rubbish. The Council is currently integrating a home recycling scheme and this will assist you in enhancing biodiversity in your area. By planting a wild corner in your garden, with nectar-rich flowers to attract butterflies and plentiful seeds and fruits for birds, you will have provided a small haven of biodiversity. Even if you do not have a garden, a planted window box or nesting/roosting boxes can help to bring life to urbanised areas.

Shown on this page are 16 things that you can do to encourage biodiversity to flourish.

Create a goldfish-free garden pond.

Use home-made compost or peat-substitutes instead of peat.

Make log piles for hibernating toads, frogs and newts in darker, damper corners of your garden.

Leave an area of lawn to grow into a meadow and patches of nettles to encourage insects and wildflowers.

A small area of tussocky grass could be used by nesting bumble bees.

Try to have some plants in flower from spring to autumn, to feed bees and other insects.

Install bird and bat boxes on trees and walls.

Build a bumble bee nest box for the garden.

Stop using slug pellets and chemicals which are harmful to hedgehogs, other animals and plants try alternative methods.

Join the Scarborough Conservation Volunteers.

Avoid cutting hedges during the bird nesting season from April to July.

Provide a bird feeding station all year round, including wild bird mix and fresh water.

If you are a cat owner, try to make it a less effective predator by fitting it with a bell.

Maintain bushy hedges with a high diversity of native shrub and tree species and grow native climbers as shelter and nest-sites for birds and insects

Look out for organised wildlife and nature events and open days.

AND/OR 'Become a biodiversity volunteer.'

But there is much, much more. If you believe you have something to contribute, we would love to hear from you. Everyone has some part to play. If you want, you can even get your hands dirty. For more information please contact the Biodiversity Co-ordinator: (Phone: 01723 383510)

Or write to: Scarborough Borough Council, Town Hall, St Nicholas Street, SCARBOROUGH, YO11 2HG
Or E-Mail us on at: forwardplanning@scarborough.gov.uk

Introduction to Scarborough's Wildlife Diversity

Throxenby Mere:
(Photograph by Steve Wilson)

River Lamprey:
(Photograph by Brian Morland)

Peasholm Lake:
(Photograph by SBC)

An Introduction to Scarborough's Wildlife Diversity

Although small, the BAP area for Scarborough cuts across four of English Nature's natural areas. These natural areas have been developed by English Nature and characterise areas of land with similar geological and biological interest, irrespective of any local authority or other artificial boundary.

Inland in Scarborough they include part of the Yorkshire Wolds, the Vale of Pickering and the North York Moors and Hills Natural Areas. In addition, with all of North Yorkshire's coast lying within Scarborough Borough, this lies within English Nature's coastal Saltburn to Bridlington Natural Area. This variety has provided the opportunity for a diverse range of habitats to develop and, associated with them, a diverse flora and fauna.

The Yorkshire Wolds - With its north facing scarp slope, open downland landscape and network of dry valleys it is of particular interest for its calcareous grasslands. Chalk reaches its northern limit in Britain here at Muston. These grade into neutral grasslands where leaching has reduced the lime in the soil. In extreme cases this leads to the development of Gorse and even Heather, plants usually associated with lime free soils.

In the Wolds, woodlands and hedges, although present, tend to be relatively recent in origin and of limited wildlife interest.

As one would expect for a chalk area wetlands are very limited but where they do occur, can be of great interest.

Usually these are as flushes and springs at the foot of the scarp slope along the edge of the Vale of Pickering. Rarely, flushes also occur on the chalk itself. Ponds, and particularly dewponds, are few in number but can be of interest, particularly for beetles and other invertebrates.

The Vale of Pickering on the other hand, following the junction of the Cretaceous chalk and Jurassic grits and limestone, is a low lying valley established on glacial and post-glacial deposits. These range from sands, gravels and clays to peat.

Naturally the area has restricted drainage, with the rivers flowing inland away from the sea. This has been caused by the glacial till deposits left as the last ice sheet retreated eastward.

Because of this, much of the valley would once have been wetland. This has largely been drained and natural wetlands are now very restricted and have, for the most part, been extensively modified. There are though a number of remnant wet grasslands containing species that would once have been common place.

The rivers and ditches, although canalised and heavily modified, can hold relics of the old flora and fauna. Some of these ditches and dykes are particularly interesting, being remnants of the original river Hertford channel or straightened sections of small watercourses that source along the edge of the Wolds.

As with the Wolds, woodlands are almost non-existent and are either plantation or secondary alder/willow scrub woodland. Equally hedgerows are also limited and occur mainly along the fringes of the Vale. They can, however, hold relicts of the old wet woodland flora, including Aspen and Alder Buckthorn. Brompton has particularly interesting and diverse hedgerows that include Dogwood, Buckthorn and Guelder Rose, again relics of the earlier, wetter conditions.

The coastal fringe of the Vale of Pickering is distinct in character from the rest of the Vale, reflecting its glacial history; with the ice sheet depositing a deep layer of till as it retreated eastward forcing the rivers Hertford and Derwent to flow west into the Ouse.

Within Scarborough's Landscape assessment this area forms a separate unit. It is characterised by a slightly higher, more rolling character ending in the coastal clay slope and cliffs of Filey Bay. Much of this till is slightly calcareous in origin and meadows would likely have been neutral to calcareous. These have largely been improved and remnant old meadow

grasslands are now infrequent. Within the overall landscape, there are pockets of marsh where drainage is particularly difficult and ponds are much more frequent and diverse.

Hedges are also of greater significance, tending to be more extensive and well developed, with a more diverse character. This reflects an older historical field pattern sometimes pre-dating the 16th Century. Due to past clearance, woodlands are almost non-existent except in some of the Wykes, where streams flow into the sea. Many of these are, however, secondary in character and of low floristic interest but can be of great interest for birds and insects.

The Coastal Slope itself, however, is of great interest and value and is perhaps the single most important area in Scarborough. The calcareous clays, with the variety of exposures and slip features enable a complex mosaic to develop containing elements of many other habitat types but with a strong maritime influence. The lack of interference on the slope itself has enabled species associated with old, unimproved habitats to survive. Thus grasslands range from acid, almost heath conditions to neutral or calcareous, depending on the superficial geology. These grasslands grade into dense scrub and woodland. In places there are ponds, flushes and wetlands established on slip back slopes and these too are diverse. Of particular interest are the numerous slip planes that provide bare clay for a number of rare and unusual invertebrates.

The Wykes, or small valleys where streams flow into the sea, are of especial interest, often being much more diverse than elsewhere and each containing its own particular range of species.

The Moors Fringe is more difficult to characterise, being associated with a variety of rock types. The western end is based on calcareous grits and limestones and, where still present, grasslands can be strongly calcicole or lime rich in nature, especially along the dry Valleys on the southern edge of the Moors. Where, these are overlain by glacial till, then more neutral grasslands similar to those found along the coastal strip, develop.

Woodlands become more extensive and can be semi natural in character. The hedge pattern here is often very old with a very diverse range of shrubs. Hedgerows are particularly important along the southern edge as the land grades down to the Vale of Pickering.

At Whitby, the local plan area is very restricted and falls within the Whitby to Saltburn Natural Area. Inland it is essentially similar to the Moors Fringe area with neutral to basic soils and neutral to calcareous grasslands predominating. The coast is though markedly different with more extensive coastal sand. The woodland is extensive and, although much altered, is of significant interest.

The River Esk and its estuary, however, provide opportunities for a further range of habitats to establish. These range from saltmarsh to brackish wet meadow and, although limited in extent, are unique within Scarborough and therefore of high value in maintaining the overall diversity. The more extensive sands between Whitby and Sandsend are the closest that Scarborough can boast of a dune system and, as for the Esk Estuary, hold plants not found elsewhere in the Borough.

Above: Bythinian Vetch
(Photograph by Nan Sykes.
Below: Scarborough Marine Habitat
(Photograph by B V Dove)

The Habitat and Species Action Plans

Contents

The Selected Habitat and Species Action Plans

The Selected Habitat and Species Action Plans

Individual Action Plans have been produced for 12 habitats and 11 species, with an additional 4 guidance notes prepared for Problem Species (e.g. American Mink), Gardens, Farmland and Development.

Each plan has been prepared by an expert in the field and provides information on the current status of the habitat or species, examines the reasons for its decline, examines the national and regional response if appropriate and sets objectives, targets and actions which can be monitored over a designated period (5 or 10 years).

With reference to the Habitat Action Plans, the important associated species present within them will be listed and will not necessarily have a separate Species Action Plans. The chosen species and habitats are shown below. The number of habitats and species may well increase over time as information builds up.

Habitat Action Plans

Woodland including;
Wet Woodland (Grey Sallow Scrub, Sallow / Birch / Reed Woodland)
Ash Woodland
Oak Woodland (Lowland Oak Acidic Upland Oak)

Lowland Wood Pasture, Parkland / Ancient Trees

Ancient and/or Species Rich Hedgerows

Unimproved Neutral Grassland

Calcareous Grassland

Acidic Grassland

Wetlands including;
Calcareous Flushes
Flood Plain Swamp
Reedbed
Herb Rich Fen
Fen Meadow
Floodplain Grazing Marsh and Lowland Meadows

Open Water including;
Mesotrophic Lakes
Species-Rich Ponds
Species-Rich Ditches

Coastal Wetlands including;
Salt Marsh
Brackish Grazing Meadow

Coastal Cliff Mosaics

Rivers and Streams

Species in Buildings

Species Action Plans

Water Vole

Otter

Bats

Harbour Porpoise

Tree Sparrow and House Sparrow

Reptiles including;
Adder
Slow Worm
Common Lizard

Great Crested Newt

White-clawed Crayfish

Golden-shelled Slug

Water Violet

Rare Flowers including;
Clary
Bithynian Vetch
Purple Milk Vetch
Baneberry
Meadow Rue
Sweet Galingale
Butterwort
Dyer's Greenweed
Pepper Saxifrage
Broad-leaved Helleborine
Parsley Water Dropwort

Guidance Notes

Problem Species including;
Himalayan Balsam
Japanese Knotweed
Giant Hogweed
Rhododendron
Australian Stonecrop
Water Fern
American Mink
Signal Crayfish
Floating Pennywort
Phytophera spp. (Sudden Oak Death fungus and Alder Root Disease)
Common Ragwort

Farmland

Gardens

Development

Woodland

Introduction

Woodland, for the purposes of this HAP includes Ash Woodland, Oak Woodland and Wet Woodland. This HAP will look at each of these areas individually.

Within England, there is little if any natural woodland left due to centuries of management. Some woods though do have a long history and have stood for many hundreds, if not thousands of years. Because of this they have a unique woodland flora and fauna derived indirectly from the original 'wildwood'. Some woodland species do not readily colonise new woods, even if they have been there for centuries and so only occur on these ancient sites. These are our ancient semi-natural woodlands.

Our objectives for Woodland are:

To increase the number of woods under favourable management and to increase the resource with new planting;
To promote their value for nature conservation;
To restore degraded ancient woodland sites.

Such woodlands are very special and, because they have often survived by chance, they are very rare. In fact less than 0.08% of our remaining woodland is ancient semi-natural. This makes them very important both historically and for nature conservation.

Management has had a strong influence not only on the survival but also on the character of woodland. Originally much woodland would have been managed as coppice for both timber (shipbuilding, house construction etc) and for charcoal. Coppice is where trees and shrubs are regularly cut down and allowed to re-grow, leaving only a few big trees each time.

This has changed in the past few hundred years or so to high forest. High Forest is where there is an even aged, tall woodland canopy with trees grown for straight timber.

A wood though is not just a group of trees; there are many types, each with a range of plants and animals suited to particular conditions. In Scarborough, these include, amongst others, Ash Woods, Lowland Oak Woods, and Wet woodland.

Ash Woodland
These occur mainly on lime rich soils and vary depending on whether they are on deep, moist soils or on thinner drier ones. In Scarborough, most of this woodland type will be lowland Ash wood developed on the deeper clay soils. Typically they would have Ash and English Oak as dominant canopy trees, with Hazel dominating the underwood. Other species would include Field Maple, Wych Elm, Cherry, Limes, Sallows and Spindle amongst many others. They support a rich ground flora often dominated by Dogs Mercury, with Dog Violet, Goldilocks (a woodland buttercup distinguished by having odd numbers of petals), Early Purple Orchid, Giant Bellflower, Primrose and, more rarely Herb Paris, Baneberry and Wood Spurge.

Oak Woodland
These tend to grow on more neutral to acid sites and can range from heavy wet clays to drier, lighter sandy soils. Again they are dominated by Ash to a greater or lesser extent and Oak, but Sessile Oak or Sessile/English Oak hybrids are much more in evidence (English Oak has stalked acorns and unstalked leaves, whilst Sessile Oak has unstalked acorns and stalked leaves). Other trees include Elm, Limes etc but on the more acid sites, Birch, Rowan and Holly increase and Hazel disappears. The ground flora is often dominated by Bluebells, Bramble, Honeysuckle and Wood Anemone. More rarely species such as Chickweed Wintergreen occur. On more acid sites, the ground vegetation can be sparse being limited to Wavy Hair Grass, Woodrush, Bracken, Bilberry, Wood Sage, Hard Fern and Buckler Fern.

Wet Woodland
As the name suggests, these are the very wet woodlands found where soils are waterlogged. Such woods are dominated by Alder, Downy Birch and Willows, with Hazel, Guelder Rose, Oak, Hawthorn and Blackthorn occurring, depending on the conditions. Very often they can appear to be scrubby in character with smaller, multi-stemmed trees rather than tall woodland. They can also have a complex and rich flora and fauna associated with them varying from Sphagnum moss to Stinging Nettle, Sedges and Common Reed and can include such species as Marsh Marigold, Marsh Hawksbeard, Marsh Cinquefoil, Water Avens and Yellow Flag.

Above: Woodland in Spring .
Below: Ash Woodland
(Photographs by Graham Megson)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Bats, Otter, Rare Flowers incl. Baneberry, Woodcock, Marsh Tit, Willow Tit, Chickweed, Wintergreen, Song Thrush, Bullfinch and Spotted Flycatcher

Action Plans have been prepared for those in bold.

Woodland Sites in Scarborough

Ash/Maple - 15 sites

Oak - 13 sites

Upland Oak/Bracken - 3 sites

Wet Woodland - 10 sites

What you can do to help:

Enjoy woodland flowers and fungi without picking them.

Leave fallen timber to decay rather than burning it.

Try and keep to paths.

Because of their nature, wet woodland rarely forms extensive stands, mainly occurring as small patches within other woodland types where the conditions favour them, for instance around springs and flushes or along streamsides. The Vale of Pickering would once have had extensive stands of this type.

Associated with all semi-natural woodland types is a rich invertebrate and bird fauna. The structure of woodland is important in this and features that are especially valuable besides a diverse structure are the number of mature/senescent trees, the extent of dead and decaying timber, clearings, flushes, streamsides, silt areas etc.

The Resource

In Britain as a whole only 0.08% of woodland is ancient semi-natural broadleaved woodland, with Yorkshire and Humberside having 6.5% of the national total. Regionally there is thought to be some 436 ha of wet woodland.

Although the region and Scarborough Borough has a reasonably extensive and diverse woodland community, within the Local Plan area it is much more limited. Areas such as the Wolds and the Vale of Pickering are effectively devoid of any ancient woodland and what is present is essentially recent plantation and degraded in nature. The main areas of significant woodland occur on the fringes of the North York Moors. Here they tend to be concentrated on the sides of valleys that have been difficult to use for any other purpose.

This is especially the case around Whitby, which has some of the best woodlands within the plan area. In particular the Larpool and Cockmill Woods have a diverse flora including woodland on the banks of the tidal Esk. This has a saline influence including species such as Hemlock Water Dropwort.

Within designated Sites of Importance for Nature Conservation (SINC), however, there are only some 200ha of deciduous wood. The majority of this though is secondary woodland within other SINC sites; only 10 sites have been designated primarily for their woodland interest. These cover about 63.5ha but only 5 sites covering perhaps 24.5ha could be considered significant ancient semi-natural woodland. This is mainly Ash/Oak woodland with small areas of wet woodland. Information on the native woodland resource though is very sketchy and difficult to interpret and much in need of updating.

In the Wolds there are no woodland sites designated as SINCs although there is one SSSI. This is mainly a secondary woodland of interest for one plant species. There are no woodland SSSIs within the plan area.

In the Vale of Pickering, the extent is very limited and of the once extensive wet woodland tracts, none have survived. Its paucity now is due entirely to past drainage and agricultural improvement. Where they do occur, it is mainly because the conditions are such that the possibility of agricultural use is limited or has been abandoned. The only known sites that are of any significance are at Fox Covert and Wykeham, which have areas of Birch and Alder with Common Reed in the field layer.

Threats

In general, threats to remaining ancient woodland are much reduced, with the Forestry Commission (FC) exerting stricter controls on the felling and management of woodland. There is, however, still some threat to native woodland sites from inappropriate or changed management practices and from replanting ancient woodland sites. One particular problem can be balancing the needs of health and safety in managing or removing old trees, particularly those with cavities in, and their value for nature conservation.

A particular problem for certain woodland types is the spread of invasive alien species, notably in acid woodlands, Rhododendron in wet woodlands, and Himalayan Balsam in wet woodlands. These can both spread very aggressively and dominate the field or shrub layer.

Drainage can also be a problem with wet woodlands and for wet woodland mosaics within larger woodlands. Here the pressure to provide conditions for more productive species can lead to drainage that can have a direct effect on the extent of wet woodland. Scrub clearance of willow can also be a problem although it is not thought to be significant. Such work does not necessarily require licensing.

A further threat, at least to Alder, is the spread of Alder Root disease, a disease that could be as disastrous as Dutch Elm disease was. Such die back of a particular species has a knock on effect to the insects that are reliant on them.

Sudden Oak Death is another fungal disease to watch out for.

Potential for Enhancement

Aside from the remaining semi-natural sites, there is always room for enhancing a woodland site. These include:

- Management to encourage a diverse structure;
- Leaving some over mature trees;
- Providing bat boxes/ bird boxes if no suitable sites are available;
- The re-establishment of coppicing; and
- Creating diversity of habitat by leaving fallen and standing dead wood, managing rides, maintaining wet hollows, ditches etc.

Current Action

- The FC regulates timber harvesting through felling licences;
- A UKBAP action plan has been produced for Wet Woodland;
- The FC offers advice;
- Woodland planting, management and conservation is encouraged by Woodland Grant Scheme (WGS) and Woodland Improvement Grants Scheme (WIGS) available from FC;
- Woodland planting and conservation is encouraged by Agri-Environmental schemes; and
- Woodland advisory companies secure planting schemes using FC grant aid.

This picture: Acidic Woodland - (Photograph by Graham Megson)
Left: Spotted Flycatcher (Photograph by Whitfield Benson)

Lowland Wood Pasture, Parkland and Ancient Trees.

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Bats, Spotted Flycatcher, **Ancient Hedgerows,** Dead wood invertebrates, Fungi of veteran trees and associated pasture.

Action Plans have been prepared for those in bold.

Introduction

Lowland wood pasture and parkland is a UK Biodiversity Action Plan (UK BAP) priority habitat. Sites are products of historic land management systems and represent a vegetation structure rather than being a particular plant community. Typically this structure consists of large, open-grown often pollarded trees in grazed grassland. Wood-pastures and parkland are often of archaeological, historic, cultural and landscape importance.

Wood-pastures have been managed by a long-established tradition of grazing, with the survival of multiple generations of trees, characteristically with at least some ancient trees.

Our objectives for Lowland Wood Pasture, Parkland and Ancient Trees are:

Ensure positive management of all key sites;
Increase the area of wood pasture in the long term,by reinstating thehabitat on sites where it occurred historically; and
Retain ancient trees wherever they occur.

Ancient trees themselves are very old trees, often in excess of 200 years. They are typically large, with spreading crowns and have often been pollarded. There is always a considerable quantity of dead wood within them. Ancient trees are also found in a range of other habitats including woodland and hedgerows in farmland.

In parkland, the tree component can either occur as scattered individuals, small groups, or as more or less complete canopy cover. Abundant cavities provide for bats and nesting birds.

This is a key habitat for dead wood invertebrates and fungi of veteran trees and pasture. However, surveys for these groups have not been undertaken in Scarborough.

English Heritage (EH) has sought to conserve important parkland and designed landscapes for their historic value. Parks of national importance are recorded on the Register of Historic Parks and Gardens. These are graded in terms of their importance.

The Resource

There are few accurate figures for the extent of wood pasture but nationally the figure of 10,000 - 20,000 ha 'currently in a working condition', is given in the 'habitat statement' of the UK Biodiversity Steering Group report, as the current best estimate for the UK. Nationally, ancient trees are considered to be of European importance.

Within the region there are scattered examples, with Duncombe Park in the North York Moors National Park identified as nationally important, along with Studley Royal in Harrogate. A further good site has been discovered at Sheriff Hutton.

Within the Borough wood pasture is almost non-existent, although there are limited examples at Wydale, Wykeham and Ruswarp. None are on ancient sites though, and this may limit their invertebrate interest. Outside of these sites, no ancient trees are known, but some must exist.

Threats

The following are considered to be threats to the future retention and expansion of this type of habitat:

- Conversion to arable;
- Reduction or loss of grazing, leading to loss of habitat structure through bracken and scrub invasion;
- Over-grazing leading to browsing of bark and soil compaction;
- Isolation and fragmentation in the landscape;
- Loss of trees, especially ancient ones, because of public safety fears;
- Skewed age structure leading to a break in the continuity of old trees;
- Recreational access, leading to increased erosion or soil compaction around ancient trees;
- Removal of dead wood; and
- Changes to ground-water levels leading to stress.

Potential for Enhancement

Country estates and Lowland wood pasture are rare habitats in the Borough, and where they occur a continuity of old trees is desirable and this requires considerable forward planning. For sites that have a history of grazing, continuation of this management would be favourable for good wildlife condition.

Current action

- The Ancient Tree Forum promotes identification and conservation of lowland wood pastures, parkland and ancient trees;
- The designation and administration of Tree Preservation Orders by the Local Planning Authority; and
- Funding will be available through the Environmental Stewardship Scheme (ESS) run by Defra from 2005.

Ancient Trees:
(Photographs by Graham Megson)

Ancient and/or Species-rich Hedgerows

Yellowhammer:
(Photograph by Wayne Richardson)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Bats, Tree Sparrow, Farmland, Barn Owl, Turtle Dove, Linnet, Grey Partridge, **House Sparrow,** Yellowhammer, **Unimproved Grasslands, Lowland Wood Pasture and Veteran Trees**

Action Plans have been prepared for those in bold.

Introduction

Hedges have long been considered an important part of the English landscape and some hedges at least may pre-date the Roman occupation. However, they were not always as extensive and the network was increased dramatically during the Enclosure Period (1720 to 1840). In fact, at this time, many people decried the planting of hedges as despoiling the beauty of the English landscape. How things change. This was not uniform across the country, as many areas had already been enclosed at an earlier period.

Our objectives for Ancient and/or Species-rich Hedgerows are:

To encourage the conservation and good management of species-rich hedges;
To encourage the retention and replanting of hedgerow trees;
To encourage the planting of new hedgerows that re-establish or compliment the local field patterns and local hedge character;
To ensure development takes full account of the importance of hedges and that adequate mitigation is provided so that there is a net gain in the local context.

Ancient Hedgerows are considered to be those that pre-date this Enclosure Period. Such hedges tend to be more diverse either because they have been derived from woodland clearance, have had a long time to allow new species to colonise or were planted more diversely in the first place.

Species rich hedges are defined as having 4 or more woody species in a 30m section. In contrast, many late enclosure hedges are mainly Hawthorn, possibly with Elder. Whatever their origin, old, species-rich hedges tend to support a greater variety of wildlife and can be of great nature conservation and landscape significance.

Their value lies partly in their similarity to woodland edge habitats and they can contain many woodland plants and insects such as Bluebell, Primrose, Dogs Mercury and Comma Butterfly, This is particularly the case if they are connected either through time or place directly with old woodland. They criss-cross the countryside in a far reaching network and provide the primary habitat for a considerable number of species of concern in the countryside, for instance many farmland birds.

Often associated with them are other significant features such as old ditches, banks and hedgerow trees, especially ancient ones. These in turn provide habitat for other species not otherwise found in hedges including bats, Barn Owls, Tree Sparrows and a wider variety of insects and plants.

Historically, hedges can also be of great interest, being associated with ancient field patterns, old boundaries such as parish, township or estate boundaries or old woodland sites.

With agricultural change and the mechanisation of farming following World War II, however, hedgerow losses began to be increase as fields were expanded. It is estimated that 22% of hedges were removed between 1947 and 1985 and a further 21% between 1984 and 1990.

In 1993 it was estimated that there were approximately 329,000km left, of which 138,000km were considered to be species-rich or ancient in origin. Losses were thought to be continuing at about 5% a year.

Losses were not uniform but were greater in the eastern part of the country where arable intensification was greatest.

To offset this loss, the Hedgerow Regulations were introduced in 1997 requiring hedgerow removal to be notified and assessed by the local authority. This offered a measure of protection to old and species-rich hedges.

At the same time the Countryside (now Environmental) Stewardship Scheme had begun to make inroads into hedgerow loss through the offering of grants encouraging farmers to plant new hedges It also encouraged landowners to manage and improve their remaining hedges to offset one of the other major causes of hedgerow loss, that of neglect.

Many ancient hedges, although still present, are not in favourable nature conservation condition due to the way they are, or have been, managed.

Ancient and/or Species Rich are a UK BAP priority habitat.

The Resource

The extent of old hedges or their losses in Scarborough is little known, however, from what little information we do have, areas such as the North York Moors fringe and the northern edge of the Vale of Pickering are still likely to contain a significant proportion. For instance the old Enclosure award of 1771 for Scalby would suggest that there were already a significant number of hedges present and survey would indicate that many of these would be considered species-rich. Many of these still remain and survey would indicate that most of these would be considered species rich.

Similarly, limited surveys at Brompton also indicate a high proportion of very rich hedges on the Moors/Vale of Pickering fringe. As at Pickering, the hedgerow pattern here is very distinctive and historically significant.

In contrast, many hedges on the Wolds or within the Vale of Pickering are species poor. When one considers their history, this is logical with drainage of the Vale and enclosure of the sheepwalks occurring very late. There are though very important exceptions, particularly in the Vale of Pickering. Here some probably relict species from pre-drainage times have survived and been incorporated into what can otherwise be species-poor hedges. For instance Aspen is recorded in a hedge on Cayton Carr and Alder Buckthorn from North Lane, Flixton.

Areas of particular interest for hedges also occur around villages in the form of the old village closes; the small fields behind and often associated with, the old houses. These will often have pre-dated any enclosure award and can be significantly older and more diverse.

There are no SINC sites yet designated for hedgerows, although there are several that are known to fulfil the necessary criteria and will be considered. The SINC criteria are substantially more rigorous than both the UK Biodiversity Forum's definition and the Hedgerow Regulation's criteria. This is to ensure that only the very best hedges are designated in this way.

Threats

With regard to hedgerow removal, there are still losses occurring although this is much reduced. Loss to agriculture is controlled by the Hedgerow Regs 1997. However, the situation is complicated by the fact that the UK Biodiversity Forum's definition of a species rich hedge is slightly different (less rigorous) than for the Hedgerow Regulation's (1997). This means that some 'species-rich' hedges could still be lost.

Agricultural management can have a considerable impact on the quality of a hedge, even if losses from removal are much reduced. Unsympathetic cutting, herbicide and pesticide spraying into the hedge bottoms, grazing or ploughing up to or into a hedge bottom can all have a significant effect on the wildlife value of a hedge.

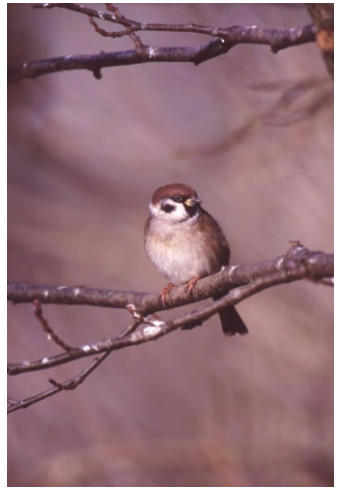
Although only a part of a hedge, hedgerow trees are a significant habitat within them and of conservation value in their own right. They are of particular value to species such as bats, Barn Owls, Tree Sparrows etc. They can be particularly important in very old hedges that have historical links with ancient woodland, potentially retaining species not otherwise found. These can be felled without felling consents and are difficult to protect. The scale of any changes in the numbers of hedgerow trees are not known and so their status is uncertain.

Losses from development can now be a major form of hedgerow loss and may disproportionately affect old species rich hedges. Development tends to be concentrated on the fringes of settlements or as infill and these sites are often as significant for their old hedges, as for old unimproved grassland. Once development has occurred, even if they are left in place they lose their protection from the Hedgerow Regulations and often suffer from inappropriate management.

Although not exactly a threat, inappropriate planting of species within existing hedges can be detrimental to their overall value. Where possible planting should be of native species and in character with other hedges in the locality.

Potential for Enhancement

Although losses have significantly decreased, there are considerable



The Tree Sparrow is a common user of species rich hedgerows: (Photograph by Whitfield Benson)

opportunities for enhancement both of the extent and quality of hedges. Environment Stewardship and management advice to farmers (see Guidance note on Farming) encourages planting and thickening of hedges.

Finding out the extent of species rich hedges and of hedgerow trees will enable a better understanding of the actions necessary to ensure the long term enhancement of this important habitat within the context of a farmed landscape.

Development almost invariably results in some hedgerow loss or, if not loss, then a reduction in value through unfavourable management. There may not be opportunities to compensate for this on site. Where this is the case Section 106 Agreements should be used to secure off-site mitigation to compensate for this loss. It may be possible to link these to landowners not in Environmental Stewardship and thereby enhance hedges that would otherwise not be improved. The targeting of these would be able to be derived from the proposed surveys.

The surveys would also indicate where the planting of new hedges was appropriate. This should be done using locally characteristic species rich mixes that are, if possible, native sourced.

Current Action

- A UKBAP action plan has been prepared that aims to halt the further loss of ancient, diverse hedges, maintain the present extent of hedgerow trees and ensure favourable management of 50% of all hedges by 2005.
- Implement the Hedgerow Regulations in such a way as to protect all qualifying hedges.
- Provision of advice to farmers through the Borough Council's Parks and Countryside section.
- Incorporation of appropriate hedge proposals within development consents.
- Encourage the uptake of Environmental Stewardship Schemes Agreements.

Hedgerows:
(Photograph by Graham Megson)

Unimproved Neutral Grassland

Introduction

As a result of changing farming practices, agriculturally unimproved meadows and pastures are now a rare resource in lowland Britain. Over the last ½ century, some 96% of all old wildflower meadows have been lost either to arable conversion or through improvement. Lowland meadows is a UKBAP priority habitat.

Within the Scarborough Local Plan area, most remaining unimproved grasslands occur on the neutral clay soils along the coast and on some leached soils overlying chalk and limestone. They support characteristic wildflowers such as Pignut, Great Burnet, Bird's foot Trefoil, Lesser Stitchwort and Betony along with grasses such as Browntop, Red Fescue, Sweet Vernal Grass and Crested Dogstail.

Our objective for Unimproved Neutral Grassland is:

To maintain and increase the resource and ensure that it is managed for favourable wildlife status.

They can be divided into old meadows and pastures characterised by Crested Dogstail-Common Knapweed grassland (MG5) in the National Vegetation Classification (NVC). Coastal mosaic grasslands and wet grasslands. These latter include small areas of flood meadow grassland characterised by Meadow Foxtail-Great Burnet (MG4), but these are as small pockets within more extensive species-rich neutral grassland and are not flood meadow grassland in the true sense. Whether they were once more extensive here is difficult to determine. Because of this uncertainty and their presence only as tiny remnants within other grassland types, they are incorporated into wet grasslands.

The coastal mosaic grasslands, although primarily neutral with characteristic species similar to the above, do have a unique character of their own strongly influenced by the sea. This allows certain species to thrive where they would not otherwise be found. This includes flowers such as Grass of Parnassus and Kidney Vetch. They are difficult to fit into the National Vegetation Classification used to identify other vegetation types and have a completely different set of threats. Because of this they are also considered under the Coastal Cliff Mosaic HAP as well as Unimproved Neutral Grasslands.

Many neutral grasslands are in complex mosaics, often as remnants within other grassland types and habitats and particularly associated with scrub.

Old Meadows and Pastures
On the clay soils of the coastal fringe, species-rich neutral grasslands occur either as small enclosed fields close to villages, sometimes with ridge-and-furrow, or as remnant unimproved grassland areas on wetter or steeper slopes. The characteristic plant community is Crested Dogstail - Common Knapweed grassland. Typical herbs include Common Knapweed, Bird's foot Trefoil, Betony and Pignut. Examples of this occur at Hunmanby, and Ruswarp.

On the chalk and limestone of the Wolds and Moors fringe, neutral grassland occurs as pockets within a calcareous sward where leaching has reduced the influence of lime. Examples here are found at Rudston and Hunmanby.

Elsewhere, on more easily accessible or better drained land, old meadows have virtually vanished from the farmed countryside as a result of modern agricultural methods.

Wet Grasslands & Flood Meadows
These grasslands are located principally in the Vale of Pickering through to the coast. As you would expect, they are found wherever drainage is poor and too difficult to improve. Because of this they are now very rare.

They tend to have a much richer sedge flora accompanied by plants such as Ragged Robin and very rarely Meadow Rue.

A particularly rare type is the old hay and flood meadow grassland (MG4). These are found on extensive flood plains in lowland England. The UK primary resource for this is in and around the Vale of Oxford and Vale of York. The characteristic plants of this community are the grass Meadow Foxtail and Great Burnet.

Above: Chimney Sweeper Moth
(Photograph by Damien Money)
Below: Snipe
(Photograph by Whitfield Benson)

What you can do to help:

Enjoy meadows without picking flowers.

As such, there are no flood plain meadows in the Scarborough area. There are though a number of MG4 remnants in association with other grasslands. As one would expect these are found primarily along the banks of the Derwent and in a few fields within the Vale of Pickering.

Elsewhere, wet grasslands can grade into more acidic conditions, notably at Flixton Carr and Wykeham and more unusual species occur. For instance Purple Moor Grass occurs at one location.

Regardless of what species are present, they are a much degraded resource, even when considered semi-natural.

Distribution of Neutral Grassland in Scarborough.

	Unimproved	Scattered Scrub	Semi-Improved	Total
Coastal - SINC - SSSI	 41.06ha 18.00ha	 13.63ha	 3.29ha	 57.98ha 18.00ha
Lowland Neutral	22.07ha	8.26ha	31.05ha	61.38ha
Wet Grassland	13.11ha			13.11ha
On Chalk Wolds	3.08ha	3.00ha	7.13ha	13.21ha
Limestone – Moors Fringe	2.71ha		7.50ha	10.21ha
Total	100.03ha	24.89ha	48.97ha	173.89ha

The Resource

The total Scarborough resource of neutral grassland is around 174 hectares. 125 ha of this could be considered unimproved and 49 ha semi-improved. Of the Unimproved Neutral Grassland, 72.7 ha are coastal and 8.8 ha. are on calcareous soils. This leaves only 43.4 ha. as neutral old meadow and pasture or wet grassland in lowland areas.

This is arguably the most threatened habitat both in Scarborough and in Yorkshire as a whole. For instance York only has approximately 19 ha of this habitat remaining, although it does have extensive areas of flood meadow grassland. Similarly Ryedale has only an estimated 26 ha and like Scarborough has lost most of its flood plain grassland.

The table above highlights the distribution of neutral grassland in the Scarborough area. As can be seen, the main location for Unimproved Neutral Grasslands is as part of the coastal slope mosaic from Scarborough through to Speeton and from Whitby to Sandsend. As one would expect there is little semi-improved grassland on the coast as opposed to the inland locations.

Outside of the coast, the majority of the neutral grassland is scattered throughout the Borough as odd fields often as small horse paddocks close to old villages. The most extensive area is at Ruswarp, as a neutral/acid grassland mosaic.

Wet grassland is almost entirely in the Vale of Pickering with the largest element being at Muston.

Another wet grassland type; coastal grazing land, is considered separately under Coastal Wetlands. These are found at Ruswarp on the Esk estuary.

Threats

The principal threat to this habitat in the past has been agricultural improvement but sites on the fringes of settlements are often sought after by developers for house building, and development is now a principal threat in the urban and urban fringe areas.

Abandonment of traditional management by hay making or grazing is also a problem, resulting in the encroachment and domination by coarse grasses such as False-oat and Cocksfoot.

A further possible loss is from erosion of the coastal resource by the sea. The impact of this is uncertain but much of the existing grassland on the coastal slope has been derived from the cliff top resource. This resource has now largely been destroyed through agricultural improvement and holiday camp development. The present interest is therefore being maintained by seeding back into newly created bare ground from the existing cliff/coastal slope vegetation. This potentially leaves some species open to extinction and therefore could lead to an impoverishment of the resource. This is discussed in more detail in the Coastal Mosaics HAP.

With regard to wet grasslands, the main threat has always been drainage and further river works to the Derwent and Hertford would certainly affect the remnants of old grassland on the flood banks.

Potential for Enhancement and Re-creation

It is most important to protect and manage existing grassland, with re-creation being of secondary importance. As with any habitat re-creation, great care is needed in order to ensure that the correct conditions

prevail. However, it is perhaps a little easier to ensure that conditions are suitable for neutral grasslands than for either acidic or calcareous ones. Wet grasslands are more complex, generally requiring wet conditions to be maintained throughout much of the year, but this can be achieved. The agricultural feasibility is also better. There are therefore opportunities to carry out wildflower establishment on agricultural land. There are also opportunities to establish wildflower grasslands as part of any major development proposal. The use of seeds of local provenance is desirable.

This re-creation though is primarily aimed at wildflowers. In some ways this is acceptable as it provides a key part of the basic ecological infrastructure. It is though also the visible face of nature conservation and important in convincing people to accept nature conservation habitat as part of their everyday environment rather than a neatly mown but sterile green 'carpet'.

It is accepted that this may not necessarily benefit all insects and particularly some of the rare species but until their habitat requirements are better understood, this may be the best that can be achieved. Where possible, however, consideration should always be given to managing or creating some grasslands for particular invertebrates or other organisms as well.

This lack of knowledge on the detailed life of many species, particularly insects and invertebrates, is the reason why it is so important to maintain our existing resource.

Both management of the existing resource, enhancement of semi-improved swards and re-creation are dependent on incentives to encourage landowners to implement them. The present Countryside Stewardship Scheme has done much to foster this and it is hoped that the forthcoming change to the Environmental Stewardship Scheme will continue this.

Wildlife gain through planning controls is also very much an important way of enhancing or increasing the resource.

Current Action.

- Recommendations are made with regard to landscape proposals and to landowners with regard to reseeding wildflower grasslands on suitable sites.
- No planning agreements have yet been negotiated with developers to protect remaining old neutral meadows.
- Advice and practical assistance has been provided to a number of owners as part of Countryside Stewardship Scheme applications.
- A number of Wildlife Sites have been identified as primary examples of these habitats. This includes sites such as Cayton Meadow, Hunmanby Meadow, Northgate Lane Meadow and the Derwent corridor.
- Scarborough Borough Council manage some of their own resource under Countryside Stewardship.
- Scarborough Borough Council is developing a major wetland recreation scheme at Star Carr that will include the development of some Wet Grassland and Flood Meadows.

Unimproved Neutral Grassland:
(Photograph by Graham Megson)

Links to Habitat and Species Action Plans and Guidance Notes.

Old Meadows and Pastures.

Ponds, Flushes, Species Rich Hedges, Coastal Cliff/Slope Mosaics

Wet Grasslands and Flood Meadows

Ponds, Ditches, Rivers

Unimproved Neutral Grassland

Chimney Sweeper Moth
Barn Owl
Green-winged Orchid

Wet Grasslands and Flood Meadows are often important for ground nesting birds such as Snipe, Redshank.

Action Plans have been prepared for those in bold.

Calcareous Grassland

Introduction

Calcareous Grasslands occur on rocks with a high pH, normally either chalk or limestone. They are nearly always free draining and occur on thin dry soils known as rendzinas.

In Yorkshire, the chalk of the Yorkshire Wolds is at its northern limit in Britain and the most northerly outcrop in the British Isles is at Muston.

As one would expect, the main Calcareous Grassland interest in Scarborough is in the Wolds.

Our objective for Calcareous Grassland is:

To maintain and increase the resource and ensure that it is managed for favourable wildlife status.

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Green-winged Orchid, Specialist invertebrates such as Marbled White Butterfly.

Action Plans have been prepared for those in bold.

However, there are also calcareous rocks on the northern side of the Vale of Pickering all along the foot of the North York Moors. Rather than chalk though, these are found on calcareous grits and limestones. There are also limited Calcareous Grasslands on the boulder clays that were derived from chalky rocks.

Unimproved Calcareous Grasslands are generally very species rich, indeed chalk grasslands can be some of the richest in Britain with upwards of thirty different plants in a square metre. They tend to be dominated by a short, well grazed turf of Agrostis and Festuca grasses with numerous flowering plants such as Rockrose, Salad Burnet, Lady's Bedstraw, Bird's Foot Trefoil and Thyme. Rarer plants include species such as Sawwort, Woolly Thistle, Autumn Gentian and Hairy Rockcress.

With such floristic diversity usually comes a diverse butterfly and insect fauna and nationally, chalk grasslands are renowned for their invertebrate interest. In the Scarborough area, however, invertebrate information is very limited, but there is no reason to believe the grasslands here are any different.

The rich grasslands are dependent on being very well grazed to keep the dominance of grasses and particularly coarse grasses like Tor Grass under control.

The history of these grasslands, especially in the Wolds, is closely tied to the intense grazing that was exerted, initially by bronze age shepherds and later through the medieval period by the extensive sheep walks, often controlled by the abbeys such as Whitby.

Calcareous Grasslands are found intermixed with neutral grasslands and scrub. These neutral grasslands have usually been derived from the strong leaching effects of rainfall on the chalky soils. Hedges and woodlands tend not to be of significant interest here. Likewise wetlands are rarely found on calcareous sites. Scree and chalky cliff faces are also of significant interest where they occur in conjunction with these grasslands.

The Resource

As for all grasslands, the extent of old unimproved Calcareous Grasslands has declined dramatically especially since World War II, and only a fraction now remains. The extent of this is seen in the table overleaf.

As expected the most extensive areas are on the Wolds and are found predominantly on the sides of the dry valleys that wind their way through the landscape, or on the northern scarp slope where the Wolds drop down into the Vale of Pickering.

The Calcareous Grasslands found on the north side of the Vale of Pickering are largely confined to the edge of the North York Moors and are more limited in extent.

Similarly, there are only very small amounts of Calcareous Grasslands associated with the boulder clays of the soft coastal cliffs. These can be associated both with particularly chalky clays or some of the sand lenses that can be found within it. They are always in mosaics with neutral grassland communities.

There are some 40,000 hectares of chalk and limestone grassland in Great Britain. Nationally therefore, the Scarborough grasslands are only a small fraction of the overall total. Even on a regional basis,

Scarborough does not have a significant proportion. Ryedale for instance has an estimated 300 ha.

However, these grasslands are extremely important within Scarborough and even nationally they are still significant, with Lowland Calcareous Grassland being a priority habitat in the UK BAP.

Distribution of Calcareous Grassland in the Scarborough area.

	Wolds	Calc Grits	Coastal	Other	Total
Unimproved	20.15ha	5.53ha	8.33ha	0.98ha	34.99ha
Semi-improved	9.22ha	2.31ha	1.47ha	0ha	13.00ha
Scattered Scrub	15.90ha	2.91ha	0ha	0ha	18.81ha
SSSI	0ha	0ha	0ha	0ha	0ha
Total	45.27ha	10.75ha	9.80ha	0.98ha	66.80ha

Threats

Over the years, there has been a significant reduction in the extent of chalk and limestone grassland, primarily due to agricultural improvement and intensification. Much of this would once have been Calcareous or Neutral Grassland. Now only 70 ha remain in Scarborough.

Intensification of agriculture and, in particular the conversion of grassland to arable has isolated sites so that they become less viable both in agricultural terms and in biological terms.

In ecological terms, sites can become too small, making it more likely that rarer species will be lost. In agricultural terms sites can become too small to manage economically so that the sites are left unmanaged. Reduction in sheep grazing because of the economic climate has had a detrimental effect.

This loss of grazing permits Tor grass and scrub to encroach with an overall reduction in diversity.

Overgrazing, especially by new cattle breeds, can also affect the grasslands leading to increased erosion and weed infestations.

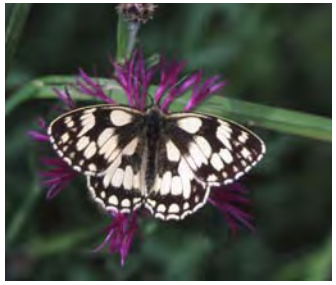
Such changes are not just a thing of the past but are occurring even now. A study of the Wolds' grasslands completed in the early 1990's indicated that some 60% of the remaining grasslands in the Wolds had been degraded in some way in the previous 10 yrs.

Potential for Enhancement

The economics of grazing chalk grassland sites is not good at the present time and incentives are certainly needed to encourage this. Countryside Stewardship Schemes have made a significant contribution to this in stemming further loses and encouraging good management. Payments are not high though. It is hoped that the forthcoming change to Environmental Stewardship will encourage landowners to manage sites effectively.

Agri-environment schemes provide the only realistic means of significantly increasing the resource.

Grassland re-creation on arable land is possible to some extent. However, it may be of greater benefit to concentrate resources on heavily grazed or semi-improved pastures or those that have had moderate scrub and Tor grass encroachment. These can often recover with correct management. These are likely to provide the best potential for increasing the value of the existing resource. Heavily scrubbed land, however, can be much more difficult to reverse and may well be of the greatest value as scrub.



Above: Marbled White Butterfly (Photograph by Whitfield Benson)
Below: Calcareous Grassland at Whitby (Photograph by Graham Megson)

What you can do to help:

Enjoy meadows without picking flowers.

Current action

Nationally a Lowland Calcareous Grassland UKBAP action plan has been produced with the aim of stopping further loss and improving the conservation status of existing sites. It has set a target of re-creating 1,000 ha of chalk and limestone grassland by 2010.

Locally, Scarborough Borough Council has been working on:

- Discussion with and advice to landowners concerning land management;
- Identification of the resource;
- Practical assistance with management through the Environmental Task Force (ETF) and Modern Apprentices (MA). These are part of the Government's New Deal Training proposals to assist young people to gain appropriate vocational qualifications; and
- Incorporation of enhancement objectives with planning applications.

Many landowners have already taken up Countryside Stewardship. This is a 10 year Scheme, which is due to be replaced by Defra's Environmental Stewardship Scheme in 2005.

English Nature is responsible for ensuring SSSIs are being managed to maintain or achieve favourable condition by 2010. To achieve this we carry out a monitoring programme and offer management agreements to site owners to carry out positive management of SSSIs. EN can also encourage SSSI owners to manage their sites to increase the area of calcareous grassland where feasible.

Common Spotted Orchid on Calcareous Grassland:
(Photograph by Graham Megson)

Acidic Grassland

Introduction

Acidic Grasslands are found on low pH soils and in Scarborough occur on three main soil types.

- podsols forming thin, droughty peat soils in the Vale of Pickering;
- base-poor soils overlying sandstones; and
- very leached soils in the Yorkshire Wolds.

They are characterised by relatively species-poor grassland that grades at one end into dry heath and at the other into wet acidic mire communities. The sward is dominated by species such as Common Bent, Yorkshire Fog, Sheep's Fescue, Wavy Hair Grass, Sheep's Sorrel, White Clover, Catsear, Ribwort Plantain, Tormentil and Bird's Foot Trefoil. Other species that can occur include Heath Milkwort, Heath Bedstraw, Heath Speedwell, Heather and Bell Heather.

Our objective for Acidic Grassland is:

To maintain and increase the resource and ensure that it is managed for favourable wildlife status.

Because of the geology of the Scarborough BAP area, the conditions likely to suit the development of Acid Grassland are limited although in the upland areas of the North Yorkshire Moors, Acidic Grasslands are widespread. In the lowland areas it is, therefore, a much scarcer resource. This largely mirrors the national picture.

Because of this, Acidic Grasslands do not develop into any extensive heathland in the Scarborough area, although in a few coastal locations the grassland is verging on heath, with Heather and Bell Heather appearing as a restricted component of the flora.

The Resource

In the Scarborough plan area, the total known resource of this type of grassland amounts to 35.72 ha, of which only 18 are classed as Unimproved, the rest comprise semi-improved grassland with or without scattered scrub.

Distribution of Acid Grassland in the Scarborough area.

	Unimproved	Semi-Improved	Light Scrub
Acid Substrate	7.23ha	8.21ha	2.69ha
Leached Calcareous	9.56ha	6.31ha	
Coastal	1.26ha	0.46ha	
Total	18.05ha	14.98ha	2.69

Of this, only 6 sites are over 1 ha. These are:

Speeton Hills	10.53 ha
Wykeham Pits	5.08 ha
West End	4.26 ha
Goosedale	2.2 ha
Oliver's Mount	1.92 ha
Turnerdale Sack	1.36 ha

Acid Grasslands are divided almost equally between being derived from acid substrates, largely to the north of Scarborough, and leached calcareous soils on the Wolds. Speeton Hills is the most extensive area and is derived from leached calcareous soils, as are the West End Farm fields.

Pockets of acidic grassland also occur elsewhere on valley slopes in the Wolds but are difficult to define. In conservation management terms they are best considered under the Habitat Action Plan for Calcareous Grassland since they occur within larger units of unimproved chalk pasture.

The most extensive areas derived from acid substrates are at Wykeham. This is the only known site to have developed on podsolic soils, probably with an underlying iron pan.

Sites derived from acidic rock substrates are much more limited and, as on calcareous soils, tend to be in mosaics with other habitat types such as Neutral Grassland.

Above: Adder
(Photograph by James Mortimer)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Reptiles, Wet Flush and Mire Communities

Action Plans have been prepared for those in bold.

The most diverse of these is at Turnerdale Slack and it is now known that a further equivalent area is present within the same holding.

Elsewhere, Acid Grasslands occur as mosaics in mire communities and within the coastal slope.

Acid Grasslands also occur at a number of other sites, notably within the Seamer Carr Tip and at Jacob's Mount. Their status has yet to be verified.

In Ryedale, Acid Grasslands also occur on lime-deficient sandy soils along the southern edge of the Vale of Pickering, for instance at Ganton, but suitable conditions are limited in Scarborough to a small area at the A64 Roundabout at Staxton and there are no known examples there.

Lowland Dry Acidic Grassland is identified as a Priority Habitat in the UK BAP.

The invertebrate and faunal value of this habitat is inadequately known.

Acid Grassland at Whitby:
(Photograph by Graham Megson)

Threats

As with most grassland habitats the main threat has always been agricultural improvement and Acid Grassland is no different. In particular drainage and heavy marling very quickly impoverish the habitat.

In Scarborough, those sites in the Vale of Pickering have particular threats due to the nature of the ground on which they have developed. They tend to be on very poor drained podsolic soils that in agricultural terms are of very limited value. As such they have been targeted for other land uses, such as gravel extraction, refuse disposal and re-afforestation.

Because of the very limited extent of the coastal resource and particularly because of heath interest of some of the locations, erosion could have a very significant effect.

Potential for Enhancement

Within the Scarborough plan area, Acid Grassland is a very small and threatened resource. The restricted nature of suitable conditions for this habitat to develop, mean that this has probably always been the case. However, because of the specialised conditions under which they develop and the agricultural improvements that have been made, re-creation is likely to be difficult to achieve. Emphasis should therefore be on maintaining the existing resource and raising the conservation status of semi improved acid grassland.

Current action

Through the review of SINC sites, Acid Grassland sites have been identified and the extent of the resource is now known.

Wetlands

Introduction

These form a small but significant component within most of the major habitats in the Scarborough area and occur throughout. In the not so distant past they would likely have formed one of the major habitats in the area but, as with many others, there have been considerable losses over many years.

The Vale of Pickering itself would once have been a more or less continuous wetland from the coast to the Vale of York. Indeed this would have lasted right up to the 19th Century, until the major drainage works that culminated in the straightening of the River Hertford.

Our objectives for Wetlands are:

To maintain and improve the quality of existing Wetlands.
To re-create Wetlands, particularly in areas where they were historically present in a much greater quantity.

This is highlighted by the fact that the last wolf in England was purportedly killed in the mid 18th Century on a wooded 'island' behind Folkton, perhaps the focus of the local werewolf legend.

Elsewhere within the Borough, wetlands would also have been much more extensive, particularly within the undulating clay of the coastal strip where impeded drainage still creates flooding. Again drainage has largely removed this habitat from the landscape.

Wetlands themselves come in many forms that can grade into open water, wet meadow or carr (wet woodland) habitats. They range from reed beds and swamps to marshes, bogs and fens. Their nature being dependent on exactly how wet they are and whether there is a high level of lime in the water (base status). Swamps form where the water level is generally at or above the ground level, marshes form where there is a waterlogged mineral soil. Fens (dominated by sedges and flowers) and bogs (dominated by sphagnum moss) form where the soil is peaty; fens developing where the base status is high, bogs where it is low and acidic. There are no bogs known within the Plan area.

Common Reed, although frequent throughout the area, particularly in the Vale of Pickering, does not occur as extensive reedbeds. This is largely due to past drainage.

Most of Scarborough's wetlands are formed due to the shape of the land (topography), i.e. they form where water is trapped in a hollow. Another way that wetlands form is where water comes out of the rock as a spring or flush. These rarely form extensive wetlands but they are extremely valuable. They can be home to particularly uncommon plants; such as Butterwort and Marsh Lousewort, and are especially important to invertebrates. They therefore increase the overall diversity of an area substantially. Wetlands and many wetland species are identified in the UKBAP as priority habitats and species.

Most wetlands within the Scarborough area occur as small mosaic patches within other habitat types. In particular they grade into grasslands of various types and wet woodland (carr). In their own right, they only occur as extensive habitat in the Vale of Pickering.

The Resource

Wetland habitats occur throughout the Borough and local plan area, nearly always as part of a habitat mosaic. They are though very limited in the Wolds, primarily due to the free draining nature of the chalk.

Where they do occur in the Wolds, they are of great interest. Their occurrence however is limited to small flushes where fractures in the underlying chalk direct water out onto the surface. The most valuable of these is at Speeton where there are several flushes on the hillside that have an especially diverse flora and almost certainly a diverse invertebrate fauna.

There are also a whole series of springs that follow the foot of the chalk slope on the edge of the Vale of Pickering. Some of these have a relatively natural vegetation, others have been ploughed into fields and may or may not have had some drainage carried out. They do though still provide a valuable resource providing small, wet areas important for species such as Lapwing, which use them for breeding or feeding young.

Curlew:
(Photograph by Whitfield Benson)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Redshank, Snipe, Lapwing, Curlew, Reed Bunting, **Water Vole, Great Crested Newt, Otter**, Dromius sigma (a ground beetle), Enochorus melanocephalus (a beetle).

Action Plans have been prepared for those in bold.

Elsewhere, there are small areas of wetland left on the clays of the coastal zone, for instance on Sands Lane, Hunmanby and at Cloughton Marsh.

There are also some very valuable sites on the coastal slope, where slip planes and springs outcrop on the cliffs. These have a very wide variety of wetland plants including Bogbean, Marsh Valerian, Great Tussock Sedge and False Fox Sedge.

Springs on the more acidic areas around Hatterboard and Whitby also have their interest with plants such as Marsh Lousewort and Marsh Pennywort.

Wetlands outside of SINC sites can occur as small fragments along streamsides or within improved fields.

The extent of these habitats is shown in the following table.

Distribution of Wetland habitats in the Scarborough area.

	Coastal	Vale of Pickering	Inland	Total
Acid Flush	0.02ha		0.11ha	0.13ha
Basic Flush	1.44ha		0.16ha	1.6ha
Fen Mire	0.5ha		0.52ha	1.02ha
Basic Fen			0.76ha	0.76ha
Acid Fen		1.12ha		1.12ha
Marshy Grassland	2.31ha	8.32ha	2.46ha	13.09ha
Swamp	0.55ha	3.86ha	0.76ha	5.17ha
Total	4.82ha	13.3ha	4.77ha	22.89ha

Threats

Wetlands are now a particularly threatened habitat although in the past, they would once have been much more extensive. In some areas, such as the Vale of Pickering, they would have been primary habitat.

Past losses have occurred for a number of reasons but are mainly due to drainage for agricultural improvement and afforestation to maximise value from less productive land. These are still threats to the remaining areas today.

Other threats stem from pollution, both agricultural and industrial, and water extraction lowering water table levels.

A particular threat today is the reduction in management that has occurred due to their economic viability and the difficulty in managing the remaining sites because of their small size.

Basic Fen:
(Photograph by Graham Megson)

Potential for Enhancement

The re-creation of wetlands are one of the key BAP targets and are included within many of the Countryside Stewardship area targets and there can be many opportunities to do this either from raising water levels by blocking drains and ditches or by excavating to create pools or wet hollows. As such the physical formation of a wetland can be relatively straightforward. The development of a basic wetland flora can also be achieved relatively easily and within a relatively short time a valuable area can be developed which will attract a wide diversity of birds, insects and other species. More difficult to achieve is the development of a specific wetland type which requires a considerable degree of control on water levels. However, almost any wetland type can be of benefit to the diversity of an area and can be created in most situations other than on very free draining soils such as on chalk.

Current action

Locally Scarborough Borough Council has been working on:

- Identifying the resource;
- Providing advice and developing proposals with landowners to create wetlands as part of Countryside Stewardship and other proposals;
- Incorporating wetlands as part of SUDS (Sustainable Urban Drainage Systems) within planning consents; and
- Providing practical assistance with management through Environmental Task Force and Modern Apprentices.

In addition the Council along with partners such as the RSPB, is re-creating wetland habitat at Star Carr in the Vale of Pickering.

What you can do to help:

Keep dogs on a lead.

Don't collect frogs, toads and newts from wild ponds.

Open Water

Introduction

This Action Plan relates primarily to still or very slow flowing open water habitats including, lakes, ponds and seasonal flashes. It also covers species-rich ditches.

Open waters can be categorised by their nutrient status. This can be nutrient poor (oligotrophic), moderately nutrient rich (mesotrophic) or nutrient rich (eutrophic). Scarborough has no oligotrophic lakes; as these tend to occur on more acid geology, which, within the local plan area, is very limited. They occur more frequently within the North York Moors. It does though have both eutrophic and mesotrophic waters.

Our objective for Open Water is:

To maintain the current range, extent and diversity of wildlife rich ponds, water bodies and ditches throughout the area and encourage the sympathetic management of them and their adjacent habitat.

Nationally, mesotrophic lakes are uncommon being dependent both on the chemistry of the underlying rocks and a low level of pollution. They are very sensitive to changes in nutrient levels and fertiliser and other runoff can alter their status, making them more eutrophic. Thus in an intensively agricultural rural area, eutrophic waters are more common and would cover the majority of ponds in the area.

Where conditions are suitable however, such as on the fringes of the Moors and along the coastal slope where run off is limited, mesotrophic waters do occur.

Both eutrophic and mesotrophic waters can be very diverse, each with its own range of common and less common species.

Mesotrophic waters tend to be spring fed and are characterised by clear water throughout the year. Algal blooms rarely occur and they have a number of characteristic plants such as Water Crowfoot, Bogbean, Bladderwort and some rarer Potamogeton pondweeds. Marginal vegetation can also be distinctive with floating mats of sphagnum supporting a diverse flora with species such as Broad-leaved Cotton Grass.

This botanical interest is matched by the invertebrate populations and includes a number of rarer species.

Eutrophic waters tend to have extensive algal blooms in summer with dense stands of Water Milfoil. Larger sites often have considerable bird interest.

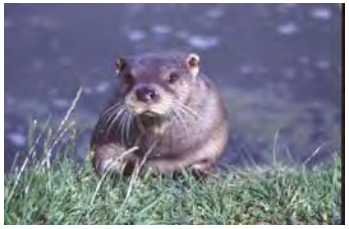
All types can hold extensive areas of other habitat types such as Hornwort beds and dense fringing vegetation such as reed bed, swamp, fen and marsh. Larger sites tend to have more limited amphibian interest due to the presence of fish stocks and large numbers of birds.

Ponds are largely eutrophic waters and are scattered throughout the area. There are though, several on the coastal slope which could be marginally mesotrophic and are therefore of interest.

They vary in origin from field ponds and dew ponds to fishponds, village ponds and garden ponds. Ponds on the coastal slope are of particular interest, being created though natural slumping and are therefore relatively short lived.

Their wildlife interest also varies enormously depending on how much nutrient enrichment occurs. Farm ponds and village ponds that have large numbers of ducks and geese or receive large amounts of enrichment from slurry etc. or are managed intensively for fishing tend to be very poor. Other, often more isolated ponds can hold extensive stands of aquatic vegetation and are of considerable interest. Ponds of the greatest significance tend to be clear, with extensive aquatic and emergent vegetation.

This can include various pondweeds, crowfoots, Water Plantain, various sedges, Marsh Cinquefoil, and many more. Some can also have more unusual species such as Tubular Water Dropwort, Greater Spearwort or Great Water Dock. Such ponds are also likely to have a significant invertebrate interest.



Otter:
(Photograph by Whitfield Benson)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Water Vole, Great Crested Newt and other Amphibians, Greater Spearwort, **Bats**, Reed Bunting, **Otter, Water Violet**

Action Plans have been prepared for those in bold.

Many ponds also hold populations of amphibians, including Great Crested Newt. Interestingly, whilst Smooth Newt and Great Crested Newt can occur in all water types, Palmate Newt, at least in the Scarborough area, appears to prefer mesotrophic or more acidic conditions. Their distribution is therefore very restricted.

Clusters of ponds are likely to be of more significance, particularly for amphibians, than individual, isolated ones.

Mature ponds that are beginning to dry out and seasonal ponds can also be of considerable wildlife interest, providing habitat for some rarer invertebrates and can significantly enhance areas as part of a wetland mosaic. They can also be of value to amphibians, depending on the period they remain wet.

It should be noted that some aquatic species are as dependent on the surrounding habitat as for the water body itself, such as amphibians and dragonflies. All sites need therefore to be considered and managed in the context of their surrounding land to ensure that their value is maximised.

Ditches are a more difficult group to deal with, as they can be both slow flowing and relatively fast flowing. Ditches in lowland wet areas are wet throughout the year and can be of great interest. This interest will vary depending on the rate of flow and water source. Some can be akin to streams and may in fact be canalised stream or river courses taking calcareous spring water. Others are drainage ditches within peat areas and are very slow flowing.

Their species interest is also difficult to define and they can hold species from both still and flowing water. However, in Scarborough they can hold Water Violet and Common Reed stands. Other unusual species seem to occur in association with more calcareous ditches within the Vale of Pickering although they are not strictly wetland or aquatic plants. Notable amongst these is Spurge Laurel, which occurs along some ditches at Flixton and Folkton.

Ponds, ditches and lakes can also be of great value for Water Vole. Their isolation from, for example, main rivers possibly provides protection from mink populations. Ditches in the Vale of Pickering seem particular strongholds.

What you can do to help:

Avoid leaving litter, eg: fishing tackle.

Don't collect frogs, toads and newts from wild ponds.

Both ponds and ditches are a much under recorded habitat both for vegetation and invertebrates.

Large mesotrophic and eutrophic standing waters are Priority habitats in the UK BAP.

There are 8 lakes or lake complexes of any size in the Scarborough area. Four would be considered eutrophic lakes and 4 mesotrophic. These are shown in table below.

Water Body, Type and Size

Water Body	Type	Size
Scarborough Mere	Eutrophic	8.21 ha
Hunmanby Clay Pit	Eutrophic	4.03 ha
Primrose Valley Lake	Eutrophic	0.92 ha
Throxenby Mere	Mesotrophic	1.76 ha
Brompton Mill Pond	Mesotrophic	0.28 ha
Wykeham Pits	Mesotrophic	10.76 ha
Burton Riggs	Mesotrophic	8.68 ha
Filey Dams	Eutrophic	2.41 ha

All of these lakes are man made, although two, Throxenby Mere and Scarborough Mere, are very old and may have been developed around natural water bodies. Their distribution is therefore dependent largely on man-made factors. The gravel pits being associated with the presence of underlying glacial gravel deposits and the clay pits at Hunmanby and Primrose Valley being located on good brick quality clay. Scarborough Mere, Brompton Mill pond and Throxenby Mere were associated with suitable water supplies to supply power for medieval industry and as fishponds.

Filey Dams is the only water body created specifically for wildlife purposes.

Within the region as a whole, large water bodies are limited although the resource has not been fully assessed. There are though, no regionally significant water bodies in the Ryedale, Scarborough, North York Moors and Wolds area.

Filey Dams:
(Photograph by Graham Megson)

Other waters occur as variously sized ponds. No estimate has been made of the number of ponds within the BAP area; the number though is likely to be high. Similarly, the extent of ditches has not been ascertained.

The distribution of ponds and ditches is largely dependent on more natural factors, notably the surface geology.

There is no regional assessment of ponds but, as for the Scarborough area, these will occur throughout.

Lakes

Of the larger water bodies, the best of these in wildlife terms is, by far, Throxenby Mere, a mesotrophic lake on the edge of the North York Moors National Park. This lake has a diverse, submerged and marginal fringe flora with a floating sphagnum bog and willow carr at the western end. As is typical of such sites, there is also a rich invertebrate fauna. Other mesotrophic sites are at Brompton (base rich) where the mill ponds are fed from a spring running from the calcareous grits on the fringe of the Moors and Wykeham Pits and Burton Riggs Gravel Pits, which are both aquifer fed. Neither of the latter two have an extensive marginal nor submerged flora, being deep and steep sided, with limited shallows.

Of the eutrophic waters, the Mere is probably the most significant. Records would suggest that this was once a mesotrophic water that has become increasingly eutrophic through increasing nutrient levels, as is common with such waters. Previously the lake was known to contain Bladderwort and a number of other species normally found in such waters, such as Rigid Hornwort. These were lost in the 1950's. A few such species still remain, notably Bogbean still grows as a small and stunted relict population on the margin of the central main island. Water quality analysis now shows high phosphorus and nitrogen levels that create extensive algal blooms in summer and Water Milfoil and Common Rigid Hornwort are the dominant submerged species.

The marginal fringe also includes Common Reed. This is now limited in the Mere, although it used to have a moderately extensive fringe at the southern end, holding several pairs of Reed Warbler. At the time, in the 1990's this was the most northerly breeding site in Britain. Although they still breed here, the reed fringe is much reduced due to incorrect assessment of the impact of dredging adjacent to it. Attempts have been made to compensate for this by allowing Common Reed to spread inland on the adjacent lake edge. This has though, only been partially successful. Reed Warbler still breed here but are now known to breed further north as far as Tyneside, perhaps a further indication of our changing climate.

Because of its extensive interest, Throxenby Mere is designated as a SINC. Its status is such that it is potentially of SSSI quality.

Scarborough Mere, and Brompton Mill Pond are also considered to be of SINC status as are the Wykeham and Burton Riggs Pits*.

The gravel pits are though, limited by their deep, steep sided nature. This not only makes survey difficult but also restricts plant growth. A further problem is the fluctuating water levels, again reducing the plant-growing zone. They are though of ornithological interest.

The Filey Dams area was created specifically for birds on a formerly seasonally flooded site and it is of great ornithological significance. For plants it is of more limited value, being a recent creation. It is though of major, possibly international, significance for Great Crested Newt.

Of the other lakes, both Primrose Valley and Hunmanby Pit are considered to be of limited interest due to their intensive fishing use.

[* - Burton Riggs doesn't qualify as a SINC for its plants or habitats, but may do under other criteria such as those for birds]

Ponds

Although ponds occur throughout the area, their distribution is concentrated on areas of clay where drainage is impeded and grazing is or was the primary land use. Therefore the coastal strip from Filey through to Scarborough hold the vast majority of ponds. On areas such as the Wolds, where the underlying rock is porous, the numbers are very limited and are restricted to a few dew ponds. Surprisingly though ponds are also rare in the Vale of Pickering. Probably this is because much of the land is now drained peatland used for arable and therefore not conducive to pond creation.

Dew ponds are a special case and are of interest in the historical context although their wildlife interest can be limited. No data is available for the

extent and interest of dew ponds in the Scarborough area.

Ditches

Ditches occur throughout the area but are only really of any significant interest within the Vale of Pickering. Here they may be diverted and canalised streams flowing from springs that flow from both sides of the Vale, although primarily from the chalk. Others are drainage ditches set within the peat and are variable in their water quality.

Little data is available on them but it is interesting to note that some of the more unusual relic species occur in association with ditches which used to form part of the original channel for the River Hertford or for streams flowing off the chalk.

Maintenance has a very powerful impact on the floristic interest of ditches and those which are not intensively managed are of substantial value. A new ditch cut adjacent to the Star Carr site is developing a rich and extensive flora of species known to have been present in the area but largely reduced in extent due to the increased maintenance necessary for arable production. The low management levels almost certainly are enabling this flora to flourish. Elsewhere, largely where grassland is still the primary land use, dense Common Reed filled ditches can be found of great value for species such as Reed Bunting, which are very local in the Scarborough area and a species that is nationally in decline. Similarly the extent of the Water Violet has been severally reduced in the past 10 years due to increased cleaning or slubbing out of the ditches that has occurred in recent years.

There is little data available for ditches as a whole in the area and only one has been designated as a SINC. Almost certainly others are of similar value, particularly in association with other habitats such as hedgerows. A number from the Brompton area are known to have considerable interest containing species such as blue and pink Water Speedwell and Water Vole.

Threats

These are many and numerous relating to increasing nutrient levels, pollution, infilling and management. The exact extent of the threat though varies from site to site and depending on what the water body is.

All sites are potentially threatened by pollution. Water courses and ponds that receive water from residential and industrial areas are under the highest threat but rural ponds etc can be severely affected by pollution from farms and agricultural practices, for instance from slurry pits or pesticide spillages.

Similarly, most sites are threatened by eutrophication, the process of increasing the nutrient levels within water. This can come from a number of sources, including the use of nitrate and organic fertilisers for agriculture and fishing, discharges of treated water from sewage works and large numbers of birds such as wildfowl and gulls. This is an especially important problem for mesotrophic waters as exemplified by the loss of species from the Mere in Scarborough.

Aside from the problems of eutrophication, large numbers of waterfowl can have a severe impact on the vegetation through trampling and grazing and this will have a knock on effect on both amphibian and invertebrate populations. This has especially been the case at both Seamer Mere and Throxenby Mere.

Fish stocking/overstocking is also a problem, particularly through the introduction of fish stocks to previously fish free ponds or the introduction of Carp and Bream. These latter species have a significant impact because, as bottom feeders, they disturb bottom silts and so increase nutrient levels in the water. The introduction of fish can be especially detrimental to amphibian populations and is the likely cause of the reduction in Great Crested Newt numbers recorded at Burton Riggs. Surveys in 2002 and 2003 indicate that Great Crested Newt may no longer be present at this site.

Infilling or, in the case of ditches, culverting, has been responsible for large-scale reductions in the resource, particularly through the last century. No figures are available for the Scarborough area but studies elsewhere have shown there has been at least a 30-40% decline in the number of ponds through infilling. This has largely been due to changing agriculture with pasture being converted to arable and to the use of piped water reducing the need for natural water supplies. This latter has especially affected dew ponds in the Wolds. Siltation of ponds can occur through agricultural run-off.

No ponds have been designated as SINCs in their own right although some are covered within other sites as part of habitat mosaics. This reflects the paucity of data available and needs to be addressed. Some are likely to be of SINC status simply for their amphibian status.

Management has also had its impact, either through neglect, allowing ponds and ditches to silt up and dry out, or through increased maintenance to ensure ditches drain arable land thoroughly. Unsympathetic management is also a problem, with management not taking account of the individual specific interest of each pond. Thus seasonal ponds may be deepened or densely vegetated ponds may be cleaned out without consideration of the individual interest of that pond. In such cases it may be that it is better to create a new pond close by than clean out the old pond that is drying out. This highlights the need for careful consideration of the resource on a site by site basis.

On larger water bodies, recreational use can also have a detrimental effect by increasing disturbance, stirring up of sediments or direct destruction of habitat.

Ditch at Royal Oak: (Photograph by Steve Wilson)

Invasive alien species can have a devastating effect on the water environment and be very difficult and costly to control. Himalayan Balsam is a particularly extensive problem, with dense stands around ponds and watercourses swamping the native vegetation. Other species though are also a considerable threat, with Australian Stonecrop and Floating Pennywort being particularly significant. Floating Pennywort can, when established grow at a rate of 0.5m/day and totally take over a pond. This plant was inadvertently introduced at Throxenby Mere in 1997 and its control is still being undertaken now. Often such introductions are from well-meaning individuals cleaning out garden ponds and putting material into natural ones without realising the harm that can be done. This is equally the case with frogspawn where introduced spawn from garden ponds can also introduce disease and other less welcome species.

A final problem may well be global warming. This is likely to impact on the water environment at an early stage due to the sensitivity of the species to change.

Potential for Enhancement

There are probably more opportunities to enhance the open water environment than for any other habitat.

Pond and ditch creation, management and restoration, including bankside treatment, are one of the most popular features of agri-environment schemes, and are included within the new Entry Level Scheme for Environmental Stewardship. This provides grants to encourage such work but outside of this, grant availability is limited.

Basic advice on pond and ditch management can substantially increase their value without necessarily having a detrimental effect on farming practices.

Option for margins along ditches in Entry Level Scheme, to buffer water courses.

The extension of gravel workings and the mitigation provided as part of any consent can significantly enhance the overall resource, not only for ponds and water bodies but for other wetland habitats as well.

Such mitigation/enhancement should target specific habitats and species to maximise benefits to biodiversity.

Where possible landowners should be encouraged to create pond clusters to provide opportunities to help develop meta-populations of amphibians and reduce the likelihood of local extinctions.

Care with drainage systems such as the development of Sustainable Urban Drainage Systems (SUDS) can not only help protect existing open water but create new water bodies as part of their construction.

Similarly, the development of 'natural' sewage filter systems will again both protect existing water and create new habitats.

Water quality improvement can relatively quickly improve the habitat and allow a more diverse flora and fauna to develop.

Gravel workings restoration should have target habitats and species, eg. provision of suitable banks for Water Voles, to increase the chances of maximising biodiversity gain.

Current Action

- Through advice to landowners and the use of agri-environment schemes, new ponds etc are being created.
- A number of the larger water bodies, such as Throxenby Mere, Wykeham Pits and Burton Riggs are being managed with wildlife in mind.
- Planning and mineral consents are incorporating pond and wetland creation as part of their mitigation proposals.
- The Star Carr and Cayton Meadow proposals include the establishment and management of ditches and pools specifically for their wildlife value. One new section of ditch has already been created to allow the development of a rich flora and fauna.
- Some limited ecological surveys have been carried out.
- Local Plan policies are relevant to the protection, enhancement and creation of open water habitats and species associated with them.

Coastal Wetlands

Coastal Saltmarsh at Whitby:
(Photograph by Graham Megson)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Sea Lavender

Action Plans have been prepared for those in bold.

Introduction

This Habitat Action Plan covers two UK BAP priority habitats that are found in coastal locations and which are influenced by saline conditions:

- Coastal Saltmarsh
- Coastal Grazing Marsh (Brackish grazing meadow)

Coastal Saltmarsh is found on low-lying, soft coastal shores, sheltered from heavy waves. It forms the lower end of the transition area between estuary mud and drier grassland and as such is frequently covered by salt water.

Our objective for Coastal Wetlands is:

To maintain, enhance and where possible increase the mosaic of estuarine habitats, which should be considered as a single ecological unit

Coastal Grazing Marsh forms at the higher end of the transition and as such is only infrequently inundated. It is usually pasture, which is grazed or cut for silage. The ground is enriched by water born silt and this habitat has a role to play in controlling flood waters.

Such habitats though require the absence of hard coastal defence structures, which otherwise prevent natural coastal systems. Coastal Saltmarsh is also recognised as helping with coastal defence by dissipating the force of tidal energy. Salt marsh though is a dynamic system that requires constant change. Naturally, a salt marsh will build up where deposition is occurring and will develop through the transition from salt marsh to grazing marsh, slowly building up new salt marsh in front of it and new dry land behind.

The estuarine habitats of the River Esk, although limited in extent are some of the most natural (habitats) in North Yorkshire. As such they (mosaic of estuarine habitats) should be considered as a single ecological unit. This is the only estuarine system in the county and is the only location that saltmarsh can occur. Small pockets of vegetation with a saline influence can occur elsewhere: for instance at the mouth of some of the coastal wykes where they are affected by high storm tides and surges. These cannot be classed as saltmarsh etc although they can occasionally contain some brackish/saline plants. They may though provide habitat for specialist invertebrates. Such areas are normally included as part of the more extensive coastal mosaics.

The types of plants found in Coastal Saltmarsh include at the lowest end species such as Sea Blite and Sea Aster. Sea Lavender and Sea Purslane come in higher up with Sea Plantain and Scurvy Grass coming in at the higher end of the marsh. Where freshwater seeps in to form brackish pools, plants like Sea Clubrush, Sea Couch, Sea Rush, Hemlock Water Dropwort and Parsley Water Dropwort appear.

The Coastal Grazing Marshes are, where semi-natural, dominated by grasses such as Creeping Bent and Red Fescue with plants like Parsley Water Dropwort and Spotted Medick.

This habitat qualifies for SINC status in its own right because of its limited extent.

The Resource

Nationally, there is 45,370ha of Coastal Saltmarsh in Britain. There is 300,000ha of coastal and floodplain grazing marsh in the UK (1994), but only 10,000 ha is considered semi-natural habitat.

Within the Yorkshire and The Humber Region, The Humber estuary holds the key Coastal Saltmarsh resource (648ha), in the districts of East Riding of Yorkshire and North Lincolnshire. Coastal Grazing Marsh mainly occurs around the Humber estuary.

Within the Borough there is only a tiny fragment of Coastal Saltmarsh occurring at Whitby, on the California Beck, a small inlet on the River Esk. Despite being less that 0.1ha in size, it exhibits some of the typical suite of saltmarsh plants, including Sea Lavender.
A localised area of Coastal Grazing Marsh occurs on the banks of the River Esk inland from Whitby at Ruswarp. The resource has not yet been fully examined and there may be more grazing marsh as yet unidentified, although all in the same general locality.

Threats

Coastal Saltmarsh is a vulnerable habitat due to its soft nature on the edge of a dynamic erosive force. It is threatened by erosion, dumping of dredged material, reclamation for agriculture or development and disturbance from moorings. Rising sea level erodes the front edge and if the rear edge is a hard sea defence, this habitat is lost in the process known as 'coastal squeeze'. Because it is a dynamic system, the retention of salt marsh at its present location in the longer term may be difficult because it is transitory. Thus what is salt marsh now will naturally progress and change. Unless new salt marsh is allowed or able to form or the salt marsh managed on a cyclical basis, it is likely to be lost.

As for other grassland types, a major threat to Coastal Grazing Marsh is agricultural improvement.

Potential for Enhancement

Within the Borough there is likely to be little opportunity for creating or enhancing salt marsh, the space available at tide level being limited either by cliff or property. However, careful investigation may provide some very small locations where this could occur. Coastal Saltmarsh development could be encouraged by the use of structures set onto estuarine mud to trap silt and allow the build up of material to the correct level (old tyres are excellent for this). These could then be seeded or allowed to colonise naturally if this is considered feasible.

Current Action

Little is done at present with regard to either of the main habitats except to try to conserve what small areas we have. There has been considerable pressure exerted to have the area of Coastal Salt marsh 'tidied up' or dammed to retain water at all times. This has been resisted, although some limited clean up has been carried out. This pressure is likely to continue but should continue to be resisted. The long term conservation of the marsh would best be accommodated by developing a management plan for this area that encompasses the adjacent Spital Vale. Money for this should be available through landfill tax, as one of the major problems was the recycling centre that, until 2003, was immediately adjacent to the site.

Some survey work has also continued in the Ruswarp area to try to define the extent of the Coastal Grazing Marsh. It has been targeted though through Countryside Stewardship as a priority location.

Coastal Saltmarsh at Whitby: (Photograph by Graham Megson)

Coastal Cliff Mosaics

Cliffs south of Scarborough:
(Photograph by Graham Megson)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Bats, Bythynian Vetch, Grass of Parnassus, **Reptiles** and Amphibians

Action Plans have been prepared for those in bold.

Introduction

The Borough of Scarborough has an extensive coastline covering some 40 miles, from the long sandy beach at Sandsend with its narrow backdrop of dune and soft cliff, through the high, hard rock cliffs between Whitby and Filey, to the long slumping soft cliffs of Filey Bay, ending with the chalk cliffs of Speeton. Although the BAP excludes the high cliffs of the North York Moors, there is still a great diversity of form and habitat.

Each of these areas has its own special interest but in wildlife terms, probably the most diverse are the soft cliff and undercliff sections that cover perhaps two thirds of the length of the coast.

Our objective for Coastal Cliff Mosaics is:

To ensure the long term survival of the coastal cliff semi-natural habitat mosaics.

Hard Cliffs

The hard cliff tends to be of limited biological interest, although it does provide nest sites for seabirds in small number and a few other rarer species such as Peregrine.

The thin cap of clay on the cliff top can though, harbour a narrow strip of diverse grassland with unusual plants in. For instance the only records for Pepper Saxifrage and Dyer's Greenweed, both rare plants of neutral grasslands are found here, the former at Gristhorpe, the latter at Whitby. The hard cliffs, however, are primarily of geological interest with the majority being SSSI.

Soft Cliffs

In contrast, the soft cliffs have a diverse structure and provide a wide range of habitats for many plant and animal groups. In fact the coastal slopes hold examples of most of the habitats found elsewhere in the BAP.

Although they have been strongly influenced by man, the vegetation is largely semi-natural, dependent on natural processes such as marine erosion, slumping, gullying, succession etc.

These processes control the type of vegetation found. Unstable slopes are predominantly bare clay with rapid colonists maintaining their hold, whilst more stable areas have a range of grassland types present, grading to scrub on the sheltered and most stable slopes. Woodland mainly occurs within the sheltered wykes.

Within this are other more specialised habitats such as flushes, back slope pools, marsh and sand deposits where old river channels outcrop.

This is further diversified by the nature of the underlying strata. The glacial tills that comprise much of the soft cliff, tend to be slightly basic in nature and have a generally neutral flora. However, this varies somewhat to include more calcicole species such as Bloody Cranesbill, Thyme, Common Rock Rose, Salad Burnett and Purple Milk Vetch.

Although more limited, there are also acid grasslands, based on the ironstones at Scarborough and the leached Jurassic clays at Reighton. Here plants such as Heather, Heath Milkwort, Heath Bedstraw and Common Butterwort appear within the sward. The diversity is further enhanced by the maritime location so that plants such as Primrose, Kidney Vetch, Restharrow and Grass of Parnassus are able to flourish in otherwise unlikely swards.

It is interesting to note that in many cases each little wyke or area has its own unique species rarely recorded elsewhere. For instance, north of Whitby is Bithynian Vetch, Scarborough has Yellow Wort, Filey has Northern Downy Rose, Primrose Valley has Bloody Cranesbill, Butch Haven has Yellow Rock Rose and Reighton has Lady's Mantle. The reasons for this little quirk are completely unknown.

Although defined by their floristic interest, the cliff mosaics also have a diverse and rare invertebrate fauna. This includes a number of local or rare species. In part these are present because the dynamic nature of coastal processes are constantly recreating the specialised habitats that some of these species require. In others it may be because the mosaic of unimproved and undisturbed habitats is extensive and provides the conditions suitable for their continuation. It is highly likely that the invertebrate interest is as significant or even more important than their

floristic interest. Invertebrates are often one of the main ecological interests of maritime soft cliffs and further survey work is desirable. Two nationally scarce diving beetles of coastal ponds are present as well as Red Data Book 'vulnerable' cranefly. Two Red Data Book molluscs, the Small Amber Snail and Glutinous Snail are both considered recently extinct.

The structure and diversity of the habitat are also excellent for birds, both for breeding and migration and most of the British mammals found in the area also occur here. The coast appears to be the stronghold for Slow Worm with most of the known records occurring here. It is also likely to be important for amphibians, with back slope and seasonal ponds providing suitable breeding sites for all five of the main British species supported by the surrounding, suitable terrestrial habitat.

Sandy Shore.

From Upgang, through to Sandsend, the coastal slope is set back from the sea with an extensive bank of sand forming a narrow foreshore area. This is dominated by coarse neutral to calcareous grassland but contains some species associated with sand dune systems, for instance Lyme Grass. In national terms these are not significant but these are the only examples regionally.

At Reighton, there is also an example of a sand complex established on an ancient river channel. Again this area is characterised by neutral to calcareous grasslands rather than species associated with more extensive sand systems elsewhere.

It is likely, however, that these sandy areas have a distinctive invertebrate fauna.

The reasons for the value of this coastal area are varied but certainly a major factor is undoubtedly the unstable and dynamic nature of the substrate and the constant flux that this creates. Whilst being destructive and potentially causing local extinction's; for instance the only known site for Purple Milk Vetch was lost to the sea in 1995, the continual movement constantly interrupts successional changes ensuring that dominance is not achieved by any particular group or habitat for any length of time and providing suitable substrate to allow natural colonisation to begin again.

Not only does this allow species that would otherwise not find a foothold such as Grass of Parnassus but allows species normally associated with other habitats to occur. For instance Primrose, a species normally found in woodlands occurs as a regular grassland component on coastal slopes.

However, the continual erosion of the cliff could also pose a long term threat. In the past losses may have been compensated for by recruitment from the cliff top when such areas were diverse. The grassland and habitats on the cliff top have though, been seriously impoverished by agricultural improvement in the last 50 yrs and now provide little of any interest as it slips down onto the slope. This means that diversity may be being maintained only through continual seeding back into the cliff. This is not necessarily a sustainable situation and could cause localised extinction's, as occurred with Purple Milk Vetch at Butcher Haven, and could occur with a number of other species such as Butterwort or Goldenrod. The impact of this on invertebrates and other groups is unknown.

The cliff at Primrose Valley is one of the few remaining sections of cliff top that is still botanically diverse and the species found here occur down onto the cliff face. The lack of knowledge on effects of coastal processes on biological diversity on the coastal fringe is potentially a serious problem.

The Resource

Effectively, the whole of Scarborough's coastline is considered of value either as SSSI or as SINC.

Within this extensive mosaic are examples of most of the habitats found elsewhere in the Borough but with interesting additions.

The extent of neutral grassland being a case in point with over half of the overall known Scarborough total occurring here but with substantially more unimproved as opposed to semi improved grassland being found.

Threats

Specific locations are constantly threatened by coastal erosion and losses obviously occur every year. However, overall the losses in habitat are likely to be compensated for by re-creation elsewhere on the cliff slope.

Top: Cliffs in distance:
(Photograph by Graham Megson)

Middle: Common Lizard:
(Photograph by James Mortimer)

Bottom: Cliffs south of Scarborough:
(Photograph by Graham Megson)

Filey Brigg: (Photograph by Steve Wilson)

for example ponds are regularly lost as drainage patterns change but new ones are formed. It must be noted that older established sites are more diverse. However, coastal erosion is essential to maintaining a range of sub-habitats and actively renews early successional features such as bare ground and pioneer vegetation which are of such importance for invertebrates.

With regard to some species found at perhaps only one location, these are very prone to local extinction. Allied to this is the possible loss of recruitment of both existing and new species through the destruction of cliff top habitats from agricultural improvement.

This situation may not be sustainable and could lead to the slow loss of species as erosion at the cliff base takes its toll. The affect though has not been researched and it is therefore impossible to say whether the effect overall is positive, neutral or negative. Research into this area would be of considerable interest. What effect rising sea levels and increasing rates of erosion will have is also uncertain but could exacerbate this situation.

A further threat is the loss of grassland to scrub encroachment. An increasing threat to the coastal wildlife resource is cliff and coastal protection work. As erosion rates increase and sea levels rise, there is increasing pressure to install drainage and other structures to try to control this or to plant up slopes with trees to help stabilise cliffs. Where this is carried out, the impact on the character and wildlife of the area can be devastating. In certain areas people pressure can also be considerable.

Some garden escapes also have the potential to locally dominate grasslands and force out native species. Crocosmia and Shasta Daisy are particularly problematic.

Potential for Enhancement

Although creation of new habitat will be difficult; as just about the entire coastal slope is already considered of value, there is some scope for localised enhancement through management. Scrub and woodland encroachment on existing rich grasslands can be detrimental and limited scrub control could therefore be beneficial. In particular, the Common Rock Rose at Butcher Haven is becoming overgrown with Bramble and the calcareous grassland being swamped by Hawthorn. Other areas may be suffering in the same way.

Similarly, the planting up of coastal slope grasslands with trees to help stabilise the slope should be resisted where these grasslands are already diverse. This is a particular problem on the South Cliff area in Scarborough.

Elsewhere, there is scope for the continuation of payments and advice through the Environment Stewardship Scheme, which should be encouraged to ensure the re-establishment of cliff top habitats.

Current Action

Through advice and agri-environment schemes, re-establishment of cliff top habitats, notably grassland, has been encouraged.

Very limited translocation work has been carried out to try to ensure particular localised plant species are not lost.

The North Yorkshire and Cleveland Heritage Coast partnership has prepared a Management Plan for areas of coast including parts of Scarborough that lie within the designated Heritage Coast. The plan provides a framework for the management of these areas and sets objectives, which revolve around the conservation, protection and enhancement of the natural beauty of the coast.

English Nature is responsible for ensuring SSSIs are being managed in a way that maintains or achieves favourable condition by 2010. To achieve this EN carry out a monitoring programme and offer management agreements to site owners to carry out positive management of SSSIs.

Rivers and Streams

Introduction

This broad habitat type covers any flowing water, including rivers, streams and flowing ditches. In their natural unmodified condition rivers are dynamic systems that are continually creating, maintaining and eroding a complex of habitats, including both aquatic and bank side ones.

Our objective for Rivers and Streams is:

To ensure an integrated and sustainable approach to river management with the key aims being environmental improvements and increased biodiversity.

They support a rich diversity of wildlife including birds, mammals, fishes and invertebrates as well as plants. Where the water is faster, the aquatic species are adapted to cope with the current and indeed are dependent on it. Species like Brown Trout, Bullhead, Brook Lamprey and Stream Water Crowfoot are found in waters such as these and can be found in the upper reaches of the Derwent and some tributaries. On certain rivers, Salmon and Sea Trout also occur. Others species such as Unbranched Bur-reed and a variety of coarse fish including Chub, Roach and Dace are typically found in moderate-slower flowing water and can be found in the Derwent and some tributaries in the Vale of Pickering. In addition to the river itself, the margins provide good habitat for a variety of invertebrate and plant species such as Water Cress, which is common throughout the Vale of Pickering.

Many of these species are now threatened because historically, rivers have been greatly changed through engineering works to control water flow and river catchments have been affected by changing land use. Rivers, such as the Hertford were canalised by act of parliament to allow the Vale of Pickering to be drained. This naturally had a dramatic effect on the wildlife present.

Such actions also have an effect on the pattern of water flow with the speed at which surface water drains into watercourses increasing, leading to more extensive and frequent flash flooding in flood plains. It is predicted that this will continue and probably increase with global warming.

Three UK BAP priority species are recorded from the Scarborough area, Water Vole, White-clawed Crayfish and Otter. These have dedicated species action plans.

Rivers and streams are a complex mosaic of habitats providing the habitat necessary for many priority species. They will all benefit from the following actions, and which will be promoted through this action plan:

- Good water quality;
- Adequate supply of water;
- A sustainable approach to water abstraction;
- An integrated approach to flood defence provision taking environmental considerations and opportunities for enhancement into consideration;
- Maintaining a range of river features;
- Good quality surrounding habitat benefits those species that do not spend all their time in water, such as dragonflies, and acts as a buffer between the watercourse and surrounding land use;
- Minimal disturbance - especially needed by breeding birds;
- Protection from pollution and excessive nutrient input;
- Ongoing management, especially to control non-native invasive species;
- Improvements in fish passage facilities at key points; and
- Promotion of a return to self-sustaining fish populations.

The Resource

There are two main river catchments in the region, the Derwent and the Esk. The Esk takes water from the northern part of North York Moors, although only a very small fraction of its length is in the Scarborough BAP area. It does though have some important habitats and features because of its tidal nature. Notably it has estuarine and brackish habitats that are not found on the river Derwent. It is also an important river for migratory fish such as Salmon and Sea Trout. The River Derwent on the other hand drains the southern side of the North York Moors and flows westward into the Ouse. Its habitats are entirely freshwater.

Riverside habitat:
(Photograph by Brian Morland)

Links to Habitat and Species Action Plans and Guidance Notes.

Priority habitats and species associated with this HAP:

Water Vole, Otter, Brown trout, Sea trout, Sea lamprey, Grayling, Atlantic Salmon, Brook lamprey, River lamprey**, White-clawed Crayfish**

Action Plans have been prepared for those in bold.

Above: River in Brompton: (Photograph by Steve Wilson)
Below: River Lamprey - Photograph by Brian Morland

What you can do to help:

Avoid disposal of chemicals, such as paint or car engine oil, down the drain.

Dispose of discarded fishing tackle safely.

Besides these two main rivers there are a number of smaller rivers and streams. Some of these, such as the Hertford and the Brompton Beck, feed into the Derwent, others drain directly into the sea through small valleys or wykes. Notable amongst these is the Scalby Beck, a small river that is fed primarily by the Burniston and Cowwath Beck but also takes water from the Derwent in times of flood via the Sea Cut, a channel cut in the 19th century as a flood relief channel. It contains at least two of the Priority BAP species and is the only river between the Esk and the Ouse that regularly have Sea Trout. The Brompton Beck is of interest because it is a calcareous stream flowing from the limestones on the edge of the Moors, which has a good native Brown Trout population. Other becks include, Primrose Valley Beck, Butcher Haven, Reighton Gill, Reighton Sands Beck and Speeton Gill. Little is known of their biodiversity interest.

The key river in the district is undoubtedly the Derwent which is designated as an SSSI and a Special Area of Conservation in recognition of its high wildlife value. Although the quality of some of these watercourses is variable, they nearly all have an intrinsic value as part of the waterside mosaic and all have great potential to enhance the overall biodiversity of the area.

Besides these rivers and streams though, there are a number of small streams/ditches that flow from springs on the edge of the Vale of Pickering and feed into the Hertford. These are a particularly difficult group to consider and overlap with the slow flowing or stagnant ditches considered under the Open Water HAP. They do though hold a significant wildlife interest with a wide diversity of species. Some are small calcareous streams that flow directly from the chalk of the Wolds, as at Folkton. Others are fed from springs and drains in the clay and peat. Little is known of their true status.

Threats

Rivers and other water courses play an important role in the environment, however, the health and vitality of the country's water courses are under a daily threat from many of the following:

- Wildlife interest is often secondary to flood defence measures and erosion control, and these can seriously affect riverine ecology by altering flow patterns or preventing movement of fish and other species;
- Pollution, which may be from agricultural, industrial or domestic sources;
- Water abstraction direct from rivers reduces flow rates;
- Efficient drainage in the upper catchments of river basins, reduces their ability to retain water. The increased speed at which rainfall passes through the system leads to flash floods and extensive flooding at some downstream locations. Such flash flooding can also have a serious effect on coarse fisheries where coarse fish cannot withstand the fast flowing conditions. Equally game fisheries can be damaged through washing out of breeding gravel areas during the winter months;
- Damage or disturbance to, for example, Otter and breeding birds, caused by recreational use, such as bank damage from the wash from boats; trampling of vegetation;
- Upstream activities and the land use alongside can affect rivers, such as high silt levels caused by soil erosion following forestry operations, crops growing right up to the edge of the river;
- River Water Crowfoot beds are at risk from changes in river chemistry;
- Introduced species of plant and animal can create havoc to natural systems. Problems include American Mink, Signal Crayfish, Canadian Pondweed, Giant Hogweed, Japanese Knotweed and Himalayan Balsam;
- Stocking of coarse fish into fisheries can affect the natural predator - prey balance;
- There is some conflict between anglers and fish eating animals, such as Otter, Cormorant, Goosander and Grey Heron; and
- Conflict between the different interests involved in managing waterways.

Potential for Enhancement

There are considerable opportunities for river enhancement and they can respond very quickly to improvement. However the key to success is for all the different bodies involved in river management to work together on a holistic basis to achieve improved water quality and management. This would involve:

- Partnership working with landowners and angling clubs to manage waterways, remove barriers to fish migration, manage banks, manage invasive plants and American Mink;

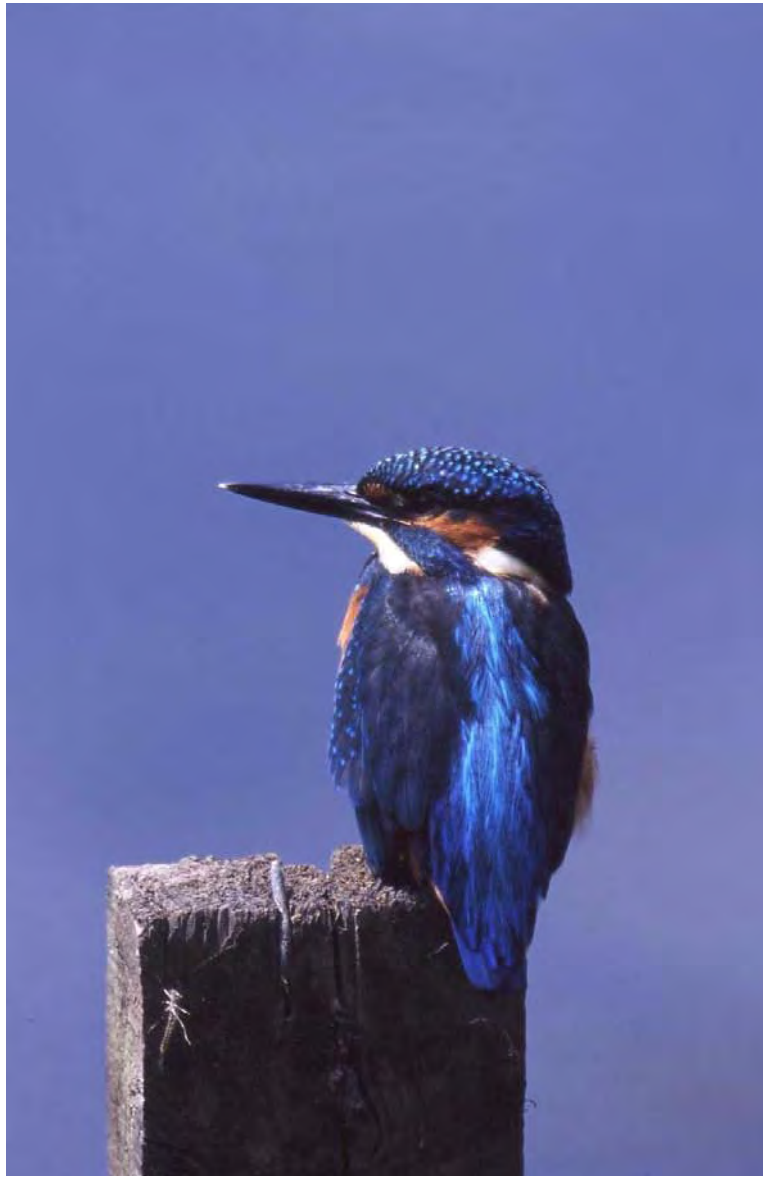
- Partnership working with EA and IDBs over water course management;
- Partnership working with landowners, FWAG and NFU to buffer watercourses from agricultural run off and diffuse pollution; and
- Partnership working with Yorkshire Water to help improve water quality.

The kind of physical works that can be introduced include diversifying the bankside and riverbed structure, setting back flood banks, the construction of fish passes, the retention/re-creation of natural river features such as meanders and ox-bows, stabilisation of some banks to reduce erosion, whilst leaving others for wildlife purposes, managing land to diffuse pollution, leaving some bankside and marginal vegetation as cover and, in extreme examples, re-aligning river channels on more natural lines.

Current Action

Considerable action is already being taken with reference to rivers and streams and the following gives examples of current action by different organisations in the area:

- Research and monitoring is undertaken by the Environment Agency (EA);
- River Derwent has SSSI status both upstream and downstream of the Scarborough BAP area;
- The EA is responsible for the delivery of some Defra Water Level Management Plans (mostly for SSSIs);
- Operations such as water abstraction are licensed by the Environment Agency;
- Many rivers are actively managed by angling clubs;
- Farmers can buffer agricultural run-off from flowing water, through Single Farm Payment cross compliance, set-a-side and Environmental Stewardship Scheme options;
- Environment Agency implementing CAMS to ensure sustainable water extraction and water flow appropriate to wildlife requirements;
- Environment Agency managing water resources to meet set water quality targets;
- English Nature gives advice on flood defence schemes that affect designated sites or protected species such as otters; and
- The River Esk Action Committee and the EA are presently funding several schemes to improve the salmon stocks of the River Esk.



Above: Kingfisher - Photograph by Whitfield Benson

Species in Buildings

Above: Barn Owl (Photograph copyright of The Barn Owl Trust)
Below: Buildings can attract many birds, plants and wildlife. (Photograph by Steve Wilson)

Introduction

Whereas most of the BAP deals with semi-natural habitats, there are some man-made structures that have a wildlife conservation role. For instance, some species live in close association with Mankind utilising buildings that replicate natural structures such as cliffs, caves and hollow trees.

Enhancing the value of buildings will allow everyone the opportunity to contribute towards biodiversity conservation. This Habitat Action Plan covers Barn Owl, Swift, Swallow; and House Martin.

Many other species use buildings, including a number of bats (see Bats SAP) and the House Sparrow (see the Tree Sparrow and House Sparrow SAP). Some walls are also good for ferns and lichens.

Our objective for Species in Buildings is:

To increase the opportunities for species that are associated with buildings.

Current Protection

- All bats have full European protection.
- Breeding birds are fully protected by the W&CA 1981.
- Nesting Barn Owls are protected from disturbance at or near the nest by the W&CA 1981.

Barn Owl

A bird of open country requiring rough grassland in which to hunt and dry cavities in which to nest. An increasing lack of prey-rich habitat and ideal places to roost and breed have led to a population decrease in the UK. Barn Owls readily take to man-made structures for nesting, such as church towers and modern or traditional farm buildings, and to purpose built provision in these as well as in modern or traditional rural dwellings. Advice on the design and installation of nestboxes and loft provision is widely available. The species is vulnerable to collisions with traffic, especially on trunk roads which are bordered by verges and hedgerows.

Swift

This common and widely distributed bird has decreased in numbers, possibly due to the reduction in aerial insects and loss of nesting opportunities. They nest in high buildings where they can gain access to roof spaces or similar. However, Swifts rarely nest in post-1944 buildings, nor in re-furbished older buildings, as they cannot gain access. The species would benefit from the provision of cavities in new buildings. This can be achieved through the installation of ready-made concrete Swift Bricks. Advice on siting and installation is widely available.

Swallow

This common and widely distributed summer visitor is a typical bird of the British countryside. However, it has decreased in recent years, possibly due to a general reduction in insect prey, loss of nest sites and migrational hazards, particularly hunting in southern Europe. The mud nest is constructed on open beams, and birds will nest in any building where they have continuous access. Sites are selected which are close to good feeding areas.

House Martin

This common summer visitor still nests on cliff faces, but the majority of pairs nest on buildings, making mud nests under the eaves. They nest in colonies. These birds are sometimes unpopular because of their droppings, however these can be caught by placing a wooden platform below nests. It is also illegal to destroy occupied nests. Artificial nests are commercially available to encourage nesting.

Threats

The species highlighted in this action plan are under threat from the following:

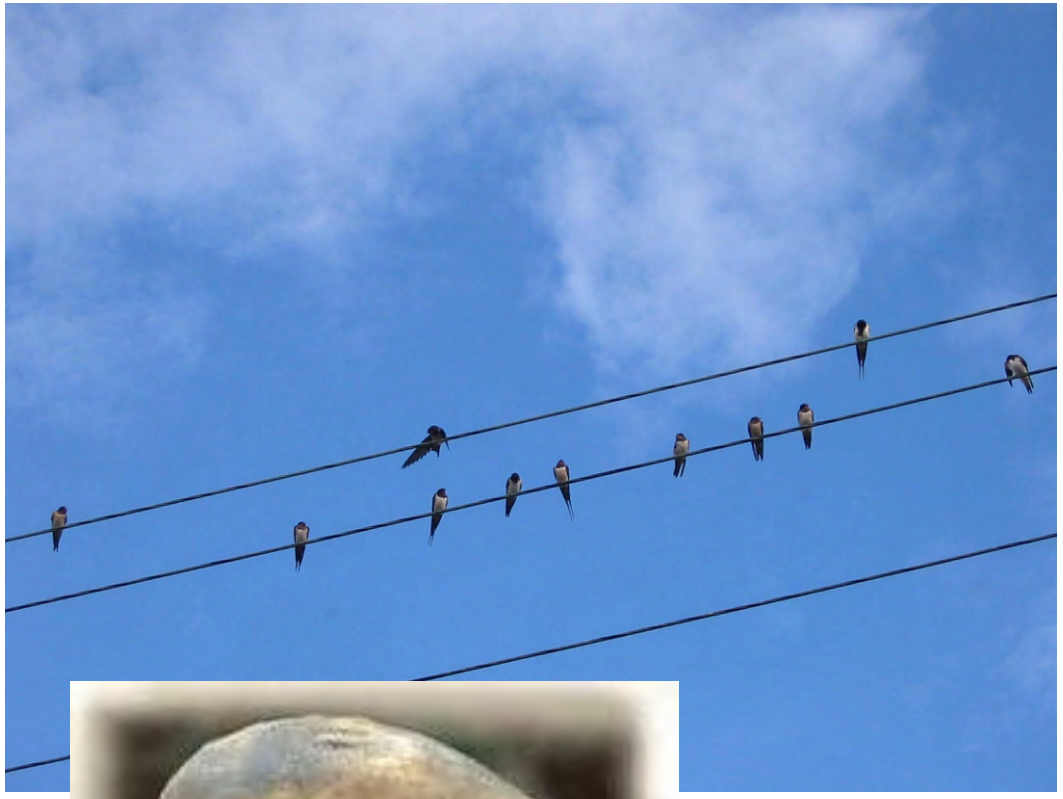
- Insensitive bridge or building works;
- Loss of access to roost/nest sites through building renovation and demolition;
- Use of timber treatment chemicals at bat roosts;
- Destruction of House Martin nests;
- Collisions between Barn Owls and traffic; and
  Loss of feeding habitat.

The Potential for Enhancement

There are a number of opportunities for enhancement and improvement to the habitat required by these birds and animals and the building industry can have a significant impact at the point of construction of new buildings or during renovation/improvement work by:

- Installing Swift bricks;
- Erecting House Martin nest boxes;
- Creating or retaining cavities in buildings;
- Ensuring bat and Barn Owl inspections are carried out prior to building works;
- Installing bat bricks/bat lofts/bat tiles or suitable soffits;
- Maintaining suitable foraging habitat;
- Retaining or constructing small open buildings for Swallows; and.
- Including Barn Owl lofts and boxes in suitable buildings.

Specialist advice can be obtained from the local authority, Wildlife Trust, the local Bat Group, English Nature, the Barn Owl Trust and the RSPB on the siting and detailed design of these or by checking websites.



Above: Swallows
(Photograph by Graham Megson)
Left: Barn Owl
(Photograph copyright of The Barn Owl Trust)

What you can do to help:

Erect nest boxes, fit bat boxes, fit Swift bricks or grow climbers up walls.

Water Vole

Water Vole: (Photograph by James Mortimer)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with the Water Vole:

Wetland, Rivers and Streams, Open Water

Action Plans have been prepared for those in bold.

Introduction

The Water Vole, Ratty of 'Wind in the Willows' fame, is the largest of the British vole species. It was once a frequent inhabitant of the banks of rivers, lakes, ditches and dykes where the gentle 'plop' as it entered the water used to be a common occurrence. However, during the past century the Water Vole population has witnessed an alarmingly rapid decline.

This dramatic decline is believed to be one of the largest of all current British mammals. The numbers have been in serious decline since the 1900's and more recently a survey by the Vincent Wildlife Trust (1989) revealed that Water Vole populations were absent from 67% of previously occupied areas.

Our objective for Water Vole is:

To contribute to the UK BAP by sustaining a stable Water Vole population in the Scarborough area.

The Water Vole builds its nest in extensive burrow systems on the banks of rivers, ditches and ponds and likes tall lush bank side vegetation. It is known to feed on over 200 species of plants including some broad-leaved species. Reedbeds, water meadows and expanses of wetland with tussocks of grass, sedge, rush or Common Reed can provide a more secure habitat than linear features in terms of refuge from predators. Ponds can also provide good habitat, isolated from American Mink. Water voles may also be present away from watercourses in rush or sedge beds, where they build above ground nests in the tussocks.

As Water Voles have particular habitat requirements, this means that they do not easily adapt to changes in their habitat. They breed prolifically in the summer months, though mortality during the winter is high.

The Water Vole is not currently a protected species in the UK , however, the Government has recommended full protection in the 2005 W&CA review. It does, however, receive limited protection from its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981. It has recently been given priority species status in the UK Biodiversity Action Plan. Their burrows and habitat are protected by law and it is an offence to obstruct Water Vole's use of this habitat.

Though Water Voles can be found in sub-optimal habitat, conditions preferred include slow flowing watercourses, less than 3m wide, around 1m in depth and without extreme fluctuations in water level. Suitable shore type for burrowing, are earth or clay, vegetated and with a stepped or steep bank of 45 or more. Water levels are obviously important, with dry areas to retreat to in times of flooding.

Cover from predators and food provided by tall riparian and water plants is important, but sites excessively shaded by shrubs or trees are less suitable, though some willow is valuable, with the flowers providing an important food source for pregnant females in early spring. Animals do not hibernate but spend most of their time in their burrows, so adequate autumn food supplies are stored. Connections between colonies to allow the functioning of meta-populations is beneficial.

The best opportunities for Water Vole conservation are likely to be on agricultural ditches, ponds and wetlands, rather than the main rivers. There are huge potential opportunities for this species through incentives for sympathetic ditch management, which will be available under the Entry Level Scheme of the Environmental Stewardship Scheme. There may be opportunities under the Higher Level Scheme, depending on what targets are selected.

There are also habitat creation opportunities as part of flood alleviation schemes and gravel pit restoration schemes.

Status and Distribution

The Water Vole was formerly common along the banks of waterways. However, during the 20th century it has declined significantly in both numbers and distribution, leaving populations scarce and fragmented in the north and west and strongest and most widespread in southern and eastern Britain.

Two national surveys carried out by the Vincent Wildlife Trust in 1989-1990 and 1996-1998 have shown that the decline of Water Vole has now

developed into a serious population 'crash' with a further loss of 60% of the occupied sites between 1990 and 1998. The Water Vole population in Yorkshire has crashed by 97% from previously occupied sites between 1990 and 1998.

Recent surveys have shown that, whilst the species is quite widespread in the borough, the populations are very low and dispersed. Many of its old haunts, such as the Derwent and the River Hertford have very few animals, although some of the side ditches to the River Hertford and some of the drains in the Vale of Pickering, such as at Brompton, still hold some. They have also been recorded from Muston and Hunmanby. There are particularly healthy populations on the North York Moors outside of the Scarborough BAP area.

Threats

There are two main problems associated with this species. One is the loss of suitable habitat, as a result of over-zealous bank management, re-grading, vegetation or erosion control, inappropriate spoil disposal, livestock grazing and river engineering. The second is the predation by American Mink, which can have a devastating impact on Water Voles, particularly where populations are already fragmented. Water Voles are also predated by cats, dogs, Stoats and owls. These problems increase the isolation of colonies through fragmentation of suitable habitat and loss of corridors for re-colonisation, which results in unviable populations. Sub-optimum water levels: both flooding and drying of watercourses and wetlands leave Water Voles even more vulnerable to predation.

There is evidence of poisoning by rodenticides, sometimes following mis-identification of Water Voles as Brown Rats, as well as persecution by deliberate shooting.

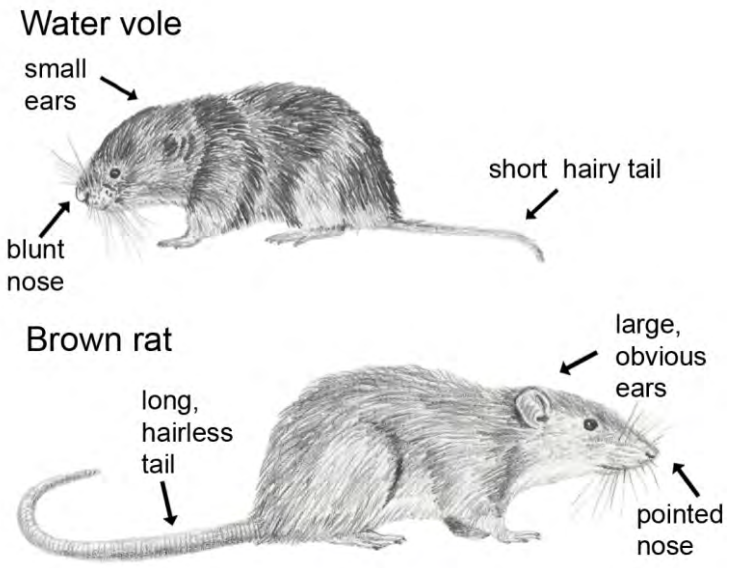
Current action

National surveys are undertaken by the Vincent Wildlife Trust and both the EA and YWT organise local surveys. Both YWT and NEYEDC collate records and YWT gives advice on Water Vole conservation and related wetland issues. Some conservation management is undertaken by organisations including YWT, EA, Yorkshire Water, landowners and the Internal Drainage Boards (IDB) and American Mink are controlled by some landowners, fisheries managers and gamekeepers. There has been national research on the interaction between American Mink and Water Vole completed by Wildcru and the EA.

The Water Vole Conservation Handbook is currently being up-dated in the light of new Water Vole research and conservation experience and the EA and EN have published a Water Vole Habitat Management Handbook and EN has published 'Water Vole: Guidance for planners and developers.'

The YWT has also released an initiative 'Know your Vole', to help promote the public's ability to distinguish between the Water Vole and the Brown Rat and thus prevent unnecessary killings and poisoning. The picture below shows the difference between these two species.

Drawing by James Mortimer.



Water Vole Latrine:
(Photograph by James Mortimer)

What you can do to help:

Report all sightings of Water Vole to NEYEDC or Scarborough Borough Council.

Avoid polluting ponds and waterways.

Otter

Above: Otter Footprint.
Below: Otter Spraint
(Photographs by James Mortimer)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Otters:

Woodland Wetlands
Rivers and streams Open Water
Coastal Cliff Mosaics

Action Plans have been prepared for those in bold.

Introduction

The Otter is a carnivorous mammal that inhabits rivers, streams, wetlands and coastal waters. These generally solitary animals feed on minor fish species such as Bullhead, coarse fish, salmonids, European Eel, crayfish, amphibians and occasionally small mammals and birds. On rivers typical range size is 10-25km for females and 25-50kms for males. Female ranges generally overlap whereas males are territorial.

Otter populations thrived throughout the UK until the 1960's when it was noticed that numbers were declining at an alarming rate. This population crash was thought to be due to poisoning from agricultural pesticides which drained into river systems. Otters are carnivores at the top of their food chain. Any poisons present in their prey are retained and build up to dangerous, often fatal, levels. Other contributing factors to the crash were:

Our objective for the Otter is:

To sustain a stable Otter population in the Scarborough area.

- Loss of habitat through urban development and agricultural intensification.
- Continued hunting pressure.
- Accidental deaths such as road kills and drowning in European Eel nets etc.
- Disturbance of breeding sites through recreational activities.
- Water pollution and riverbed engineering.
- Increased grazing pressure of riparian habitats.

The first national Otter survey in 1979 showed no sign of Otter in the Scarborough area. The following two surveys in 1986 & 1994 were also negative. Injured and re-habilitated Otters were re-introduced into the area and successfully established in 1994 when a released female bred with a native male and successfully reared young (noted in the 2002 survey results). These Otters helped form a small breeding population in the Scarborough area. There is now thought to be a good otter population inhabiting the rivers and wetlands of Scarborough District. Otters are occasionally seen on the coast, though the marine habitat is not thought to be suitable for otters to adopt a predominantly coastal lifestyle.

Otters mark their territories regularly with spraint or droppings. These are usually deposited in prominent positions, where another Otter will find them easily - on stones; tree roots; and ledges under bridges. Fresh spraint is olive green to black and tar-like, with a pleasant violet-scented smell. Some people say they smell of new mown hay or Jasmine tea. They can vary in size. Droppings are one of the best methods of identifying the presence of Otters.

American Mink scats or droppings on the other hand tend to be long and thin, usually less than 1 cm in diameter. They smell rancid and usually have a twist at one end. They contain hair and feathers as well as bones.

The Otter is listed in the Bern convention and the Convention on International Trade of Endangered Species (CITES). It receives special protection measures under the European Habitats Directives (92/43/EEC). Its listing in annex 2 requires the designation of Special Areas of Conservation (SACs) for sites supporting important Otter populations. The otter is also protected under two schedules of the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000), Schedule 5: making it an offence intentionally or recklessly to kill, injure, take or sell the animal or parts of it, destroy or obstruct access to their resting places. Schedule 6 restricts certain methods of killing.

Further to legal protection afforded to the Otter, it is also a priority species under the UK Biodiversity Action Plan.

The linear nature of the rivers and streams used by Otters and the limiting factor of food availability within these habitats means that Otters can have very large home ranges. A male Otter may use up to 40km of watercourse, including main river, becks, ditches along with ponds, lakes, riverside woodland and wetlands. This use of a wide geographical area and habitat type range means that a catchment-wide approach is essential to Otter conservation.

Their main requirement is a plentiful food supply, good water quality and secure undisturbed breeding sites with associated food resource. Secure and undisturbed lying-up/resting sites are also needed and these

are approximately every 1 km of watercourse.

Status and Distribution

The main rivers in this catchment area are the Esk, Derwent, Scalby Beck and the Hertford. There are also numerous becks, wetlands and ponds.

Otters have been recorded on the Esk, Derwent and Scalby Beck - where spraint are regularly found with the occasional sighting reported around the Muston area, the Hertford river and Brompton Beck..

It is likely therefore that there is a small but widespread population within the BAP area.

Breeding is known to have taken place recently on the Esk, Derwent and Scalby Beck. It is likely to have occurred in other places but little information exists.

Threats

Several Otters have been killed on local roads in the area in recent years. This is becoming an increasing problem due to increased traffic and a lack of mitigation measures, such as the creation of underpasses for new roads. Otters are particularly vulnerable during periods of high water flow, when they are forced to cross roads to bypass bridges.

On the Esk it has been suggested that some Otters have drowned as a result of entanglement in poacher's nets. Low prey biomass also poses a threat as a result of pollution and poor river management.

Development pressure is still prevalent along waterways and increased disturbance of habitat particularly for recreational reasons also poses a significant threat, especially when interfering with breeding habitats.

Current Action

Scarborough Otter Conservation Group (SOCG) has recently been affiliated to BTCV (formerly British Trust for Conservation Volunteers). Once funding is secured the group will commence a survey of local areas as set out in the standardised monitoring protocol from English Nature.

The group will be looking at carrying out some habitat restoration, including, if possible, ledges on Burniston Road and Scalby Road bridges. Surveys are also carried out by YWT through the Water for Wildlife project, and YWT acts as a contact point for people to report Otter sightings. Both the EA and YWT are available to give advice to fisheries owners on measures to protect their stocks from Otters. Road kills are also collected for Environment Agency approved experts to undertake autopsies.

Right: Photograph by Paul Bullimore.
Below: Otter
(Photograph by James Mortimer)

What you can do to help:

Report all sightings of Otters (dead or alive) to Environment Agency or NEYEDC.

If you own riverside land, leave tall, dense vegetation, bramble and old trees.

Bats

Bat:
(Photograph by Whitfield Benson)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Bats:

Woodland, Wood Pasture, Parkland and Veteran Trees, Ancient and Species-rich Hedgerows, Wetlands, Open Water, Coastal Wetlands, Coastal Cliff Mosaics, Rivers and Streams, Species in Buildings

Action Plans have been prepared for those in bold.

Introduction

There are 16 species of bat in Britain, 8 of which can be found locally. Each species has its own particular requirements, but as a group they may be found in all habitats and some use buildings, so bats have a special connection with humans.

During the past century most species are thought to have declined. Anecdotal evidence suggests that 'bats are not as common as they used to be' and some research projects have confirmed losses. However, the secretive nature of bats and the difficulties this presented for their study prior to the development of sophisticated technology makes it difficult to quantify the losses.

Our objectives for Bats are:

To sustain a healthy bat populations within the Borough.
To improve the habitats available to bats.

Bats feed on insects and in summer can often be seen hunting along rivers and woodland edges where insects are numerous. In winter, when insects are difficult to find they hibernate. Although summer roosts are usually in warm locations, hibernacula are often in cold places with stable temperatures, such as caves.

Status and Distribution

All bats and their roosts are afforded special protection under the Wildlife and Countryside Act 1981 and the European Habitats Regulations. This protection applies to roosts even when the bats are seasonally absent. To carry out any work on a dwelling house which might affect bats or their roosts requires consultation with English Nature (EN). In other buildings, structures and trees a licence from Defra may be required. The Horseshoe bats (not found locally) and Pipistrelle bats have priority species status in the UK BAP.

In Yorkshire and The Humber region 9 species are known to breed. These are listed overleaf together with their estimated UK populations.
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Only Common Pipistrelle, Soprano Pipistrelle, Daubenton's, Noctule and Brown Long-eared bats have been recorded in Scarborough Borough outside of the National Park. However, this is possibly the result of under-recording.

Threats

The main threats are loss of roost sites and hibernacula, both accidental and deliberate; reduction of food sources through the widespread use of insecticides or habitat removal and fragmentation of the landscape leading to disruption of commuting routes.

Current Action

North Yorkshire Bat Group (NYBG) holds records of all known bat roosts within the county and provides advice to householders, landowners and others in conjunction with English Nature. The Bat Conservation Trust (BCT), with the support of Government agencies and volunteers, runs the National Bat Monitoring Programme to monitor changes in populations of various species.

NYBG organises public events to foster a public understanding of bats and their conservation.

Developers wishing to carry out works which would impact on bat roosts are required to obtain a licence for such works and to provide suitable mitigation measures to enable bat populations to be maintained. The Local Planning Authority is required to consider bats as part of the planning process.

North Yorkshire County Council (NYCC) surveys all bridges prior to maintenance work.

English Nature gives advice on planning applications which affect bats. EN advise developers / agencies on the surveys and mitigation that are needed to maintain the population of this European protected species at favourable conservation status.

Estimated UK Bat Population

Whiskered and Brandt's
70,000 combined

Daubenton's
150,000

Natterer's
100,000
Common Pipistrelle
and Soprano Pipistrelle
2,000,000 combined

Noctule
50,000

Leisler's
10,000

Brown Long-eared
200,000

What you can do to help:

Report sightings including date and time to NYBG. Contact details are in the Appendix 7.

Include bat friendly features when carrying out loft or building extensions.

Harbour Porpoise

Harbour Porpoise:
(Photograph by NEYEDC)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Harbour Porpoise:

None

Action Plans have been prepared for those in bold.

Introduction

The Harbour Porpoise also known as the Puffing Pig because of the sharp sneeze-like sound of its blow, is the most common of the small cetaceans (whales and dolphins) seen in coastal waters off the Yorkshire Coast. It is small (1.4 1.8 m in length) but stocky and robust with a small rounded head. It lacks the prominent forehead or beak, typical of many of the dolphins. The dorsal fin is low and triangular and the swimming motion during breathing is a slow forward roll. When chasing prey it may roll to reveal a flash of its lighter under-belly or even leap in a very fast arc. The Harbour Porpoise may form large groups but is most often seen singly or in small groups. Unlike other small cetaceans, the Harbour Porpoise is usually uninterested in boats and does not usually "bow ride".

Our objective for Harbour Porpoise is:

To establish a local system to improve the recording and reporting of sightings of the Harbour Porpoise.

Status and Distribution

The Harbour Porpoise is found in the cold temperate and sub-arctic waters of the northern hemisphere, with semi-isolated populations in the Black Sea, Northern Atlantic and North Pacific.

There is some evidence for a species decline in the North Sea, but its true conservation status is unknown. Some of this uncertainty derives from the fact that the Harbour Porpoise is difficult to spot except in very flat sea conditions.

Little of the animal is visible when it breathes and the small dorsal fin is easily obscured, even in small wavelets. A recent survey of the species in the North Sea, Channel and Celtic Sea indicated a population of approximately 350,000.

The Harbour Porpoise is protected under Schedule 5 of the Wildlife and Countryside Act (1981) and listed on Appendix II of CITES. It is also covered by the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS), a regional agreement under the Bonn Convention.

The Harbour Porpoise is a UK BAP priority species, which is already recognised in the Durham and Norfolk LBAPS and its inclusion in the Scarborough District LBAP may help to provide a better picture of distribution of this species in the southern North Sea.

Threats

The biology of the Harbour Porpoise is not fully understood and the reasons for the reported decline remain unclear. It is thought that threats include direct persecution, noise disturbance, incidental captures and drowning in fishing gear, declining fisheries, ingestion of marine debris, disease, the effect of toxic substances at sea and the indirect influences of climate change.

Current Action

- Recording undertaken by Dolphincity Surveys.
- National database maintained by Natural History Museum and post mortems undertaken on some stranded cetaceans.
- Casual recording and reporting of the species, typically by birdwatchers viewing from headlands.
- Defra code of practice available.

Tree & House Sparrow

Introduction

Tree and House Sparrows are native birds of the UK and were, only a short time ago, a common sight on farmland, in parks, gardens and other areas. However, these popular birds have, as a result of numerous factors, suffered a dramatic decline over the past 20 years.

The Tree Sparrow

The Tree Sparrow is patchily distributed on farmland across Britain and Ireland. The main populations are now found across the Midlands, southern and eastern England. There are small populations within the region. Historical data suggests that the Tree Sparrow might undergo a long-term cycle of high numbers followed by low.

Our objective for Tree & House Sparrows is:

To reverse the decline in Tree and House Sparrow populations in Scarborough.

Numbers increased between 1960 and 1978, possibly due to an influx of birds from mainland Europe. Since then, the population has witnessed an estimated 85% - 95% decline (based on the Common Bird Census/Breeding Bird Survey, collated by the British Trust for Ornithology (BTO)). This is the largest decline within the group of declining common farmland species. The recent downward trend is of concern.

The Tree Sparrow also decreased in range by 20% over the same period, with particular losses in Wales and Scotland. It is a UK BAP priority species and is also RSPB red listed. The species is still common and widespread across mainland Europe. The Tree Sparrow is protected under the Wildlife and Countryside Act 1981 (W&CA) and the EC Birds Directive.

This is a hole-nesting species, and birds often nest in colonies. The number of suitable nest sites is a limiting factor in some areas. Like most seed-eating birds, Tree Sparrows need to feed their nestlings on invertebrate prey. This means that in addition to arable crops they must have access to semi-natural habitat such as woodland or wetlands. In the modern farmed landscape this has become a limiting factor to population expansion.

Flocks feed in arable areas for most of the year. Large numbers used to be associated with stubble fields and grain stores. However in recent times harvesters have become much more efficient, leading to less grain being left in the fields, and European Union regulations have led to the sealing of grain stores to minimise pests and contamination. Seed-eating birds have, however, benefited from the Countryside Stewardship Scheme option to retain winter stubbles. These provide a habitat for annual weeds such as Groundsel, Common Chickweed and Scentless Mayweed, on which finches feed throughout the winter.

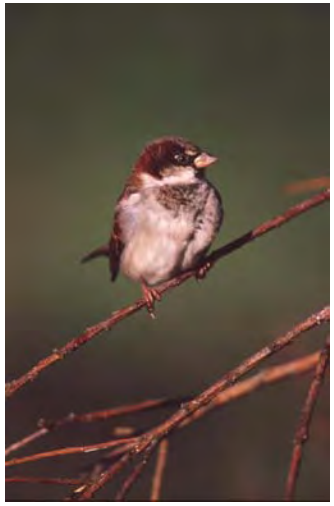
House Sparrow

Whilst not showing as dramatic a decline as the Tree Sparrow, the House Sparrow is also decreasing. The RSPB reports that over the last 25 years the population has more than halved. This decline has been most dramatic in urban areas and this was confirmed by the recent London House Sparrow survey and other urban surveys. This bird thrived earlier in the 20th Century exploiting man's waste, however, there is no doubt that they are declining in gardens and countryside locations. Whilst it is not a UK BAP species, its recent rapid decline has warranted it the classification of a RSPB red listed species. Unfortunately, it is also classified as a pest species under the General Licence system to kill or take pest birds in the W&CA. This needs to be reviewed, although there are probably few instances where it is controlled.

House Sparrows tend to breed in built up areas, nesting in buildings which are accessed through holes. During the winter months the House Sparrow may form large flocks in arable areas. Their feeding requirements, including invertebrate prey for nestlings, is the same as for the Tree Sparrow given above.

There are a number of theories for the decline in Tree and House Sparrows including:

- The lack of available grains in the wider countryside due to more efficient farming methods and changing agricultural



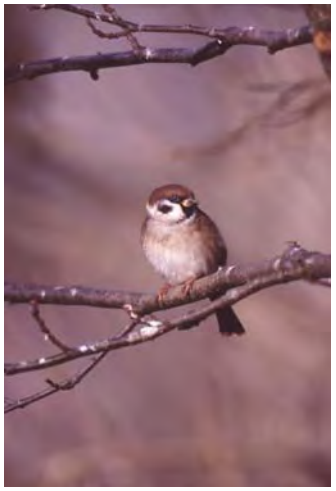
House Sparrow:
(Photograph by Whitfield Benson)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Tree & House Sparrows:

All habitats included in BAP.

Action Plans have been prepared for those in bold.



Tree Sparrow:
(Photograph by Whitfield Benson)

What you can do to help:

Put up nest boxes and maintain year-round seed feeders.

Provide dense bushes and wild, pesticide free areas of garden.

Encourage wild flowers in gardens and on farmland, to provide seeds and insects.

Farmers can help by winter-feeding with waste corn.

practices (including the change from spring sown to winter sown crops which reduces the amount of stubble in the winter).

- The loss of semi-natural habitat in the wider countryside leading to the loss of invertebrate prey.
- The lack of nest sites modern buildings offer sparrows fewer nesting opportunities.
- Predation by domestic cats.
- Loss of hedgerows and mature trees. Dutch Elms Disease wiped out many trees containing suitable nest cavities in the 1980s.
- Development of previously used ('derelict') land may have reduced food availability through the loss of invertebrate-rich, weedy areas.
- Increased use of pesticides in the countryside and gardens may have reduced the number of insects, which sparrows need to feed their young.

In order for sparrows to reverse their decline in numbers and increase their distribution, the following requirements are necessary:

- A good diversity of habitats.
- Less intensive agricultural practices, such as rotational cutting of cereal field margins and other marginal habitats.
- Widespread endorsement of Environmental Stewardship (due from 2005), which includes basic environmental standards for farming under the Entry Level Scheme and advanced conservation options under the Higher Level Scheme.
- Winter-feeding (for example with waste grain called tailings) and nest box schemes.

Status and Distribution

Regionally, the Tree Sparrow is widely distributed in the lowland areas. However, the 1994 - 2004 Breeding Bird Survey figures for House Sparrow, show that the number in Yorkshire and Humberside is down by 11%.

Locally, the full status of Tree Sparrow and House Sparrow is not known. However, Tree Sparrows occur on the edges of Filey, Scalby and Burniston.

House Sparrows definitely occur in Whitby, Burniston, Scarborough and Filey, and possibly in the majority of villages.

Threats

The key threat to both species of sparrow is the continuation of intensive agricultural practices, which tend to reduce habitat diversity on farmland, due to the loss of mixed farming and increased specialisation. For example the switch from spring sown to winter sown crops reduces winter stubbles, which provide grain and weeds for finches. Increasing use of pesticides reduces the abundance of weed seed and insects. The availability of insect prey for sparrow chicks is crucial, and birds will fly considerable distances to find these. The presence therefore, of islands and corridors of semi-natural habitat within the farmed landscape is critical. The loss of suitable nest sites, largely due to the loss of hedgerow trees is a further concern. Dutch Elm Disease wiped out many suitable nest sites in the 1980s. Predation by non-native species such as domestic cats adds to the pressure on declining populations. However, many farmers are improving the farmed landscape for wildlife, particularly with the un-coupling of subsidies from production and through agri-environment schemes.

Current Action

The RSPB, in association with FWAG and the Game Conservancy Trust, have published sheets on the management of farmland birds, including the Tree Sparrow. These are available from the RSPB (and online) and provide advice to farmers.

The British Trust for Ornithology (BTO) and Joint Nature Conservancy Committee (JNCC) organise the annual winter farmland bird survey. This encourages the public to record winter numbers, winter flock locations and aims to identify which farm habitats are being used by these species. The RSPB has carried out 'sparrow counts' with the assistance of its members, though not in this area.

The RSPB 'bird aid' winter-feeding projects aim to provide grain or tailings to key Tree Sparrow populations throughout Britain to aid winter survival and increase breeding success.

Agri-environmental schemes, such as Countryside Stewardship, Set-aside and Spring-Sowing are on-going.

Reptiles

Introduction

There are 4 species of reptile that are widespread in England: Common Lizard, Slow Worm, Grass Snake and Adder. The other two British species, the Sand Lizard and Smooth Snake have special habitat requirements that limit their range to specific sand dune or heathland sites and are not found in Yorkshire.

All species require suitable sites for hibernation during the winter months and habitat for foraging and basking from Spring through to Autumn. Requirements vary from species to species, however all reptiles generally prefer a mosaic of long grass or heathland with scrub or woodland.

Our objectives for Reptiles are:

To determine the status and distribution of reptiles in the Scarborough area.
To protect sites that support good populations of reptiles.
To improve the general public's understanding of reptiles.

Reptiles are protected under the Wildlife and Countryside Act 1981 (Schedule 5). This makes it illegal to intentionally kill or injure any animal.

Status and Distribution

Although reptiles are still reasonably widespread, over the last few decades all species are thought to have suffered a decline in numbers. Adders and Common Lizards are commonly sighted within the North York Moors National Park, however records of reptiles for the Scarborough BAP area are few and there have been no known recent sightings of Grass Snake. Slow Worms are thought to occur on the coastal slope.

Adder: (Photograph by Jimmy Wilson)

Threats

There are many threats to the status of reptiles in Britain. Some of them are obvious whilst others not so readily identified. Loss and fragmentation of habitat is a continued threat, as reptiles have poor dispersal abilities over unsuitable habitat. Loss of linear features, such as hedgerows, which act as corridors between areas occupied by reptiles, increases the likelihood of local extinctions because re-colonisation is inhibited.

Persecution can still pose a threat at sites where reptiles (particularly snakes) come into contact with humans.

The process of natural succession causes trees and shrubs to grow on areas of open habitat such as heathland and grassland, shading out basking areas. This occurs naturally, however it can also be as a result of inappropriate management. Management that is intensive poses a direct threat. Mechanical flailing and mowing can especially threaten Slow Worms and gravid (pregnant) snakes.

Current Action

No current actions.

What you can do to help:

Report all sightings of Reptiles to the NEYEDC.

Slow Worm: (Photograph by James Mortimer)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Reptiles:

Woodland, Ancient and Species Rich Hedgerows, Neutral Grassland, Calcareous Grassland, Acid Grassland, Coastal Cliff Mosaics

Action Plans have been prepared for those in bold.

Great Crested Newt

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Great Crested Newts:

Neutral grassland, Open water, Coastal cliff mosaics

Action Plans have been prepared for those in bold.

Introduction

The Great Crested Newt is one of six amphibians in Britain and the largest newt, growing up to 16cm long. It has held a fascination to children and adults alike through the ages. Many people will have fond memories of catching newts. Although dependent on ponds for breeding, adult newts spend much of the year on land. High quality foraging areas, especially pasture, and hibernation sites are essential. Adults usually remain within 500m of their breeding site, although juveniles can range widely.

Although the species has experienced a decline in recent years, Britain still supports one of the largest populations in Europe, where it is threatened in several countries. In suitable conditions, populations can increase quickly.

Our objective for Great Crested Newts is:

To contribute to the UK BAP by maintaining Scarborough District as a key area for Great Crested Newt population.

Scarborough has a healthy population of Great Crested Newts and therefore has an international responsibility to conserve this species. In order for Scarborough Borough to continue to hold an internationally important population of Great Crested Newts the following are required:

- Suitable breeding ponds;
- Adjacent high quality foraging ground; and
- Hibernation sites, such as earthworks, scrub, hedges and tussocks.

It is a UK BAP priority species and is protected by:

- Annexes 2 and 5 of the EC Habitats Directive;
- Appendix 3 of the Bern Convention (Conservation of European Wildlife and Natural Habitats); and
- Schedule 5 of the Wildlife and Countryside Act 1981.

Great Crested Newts may not be handled or their territory disturbed without a licence issued by English Nature (EN).

Status and Distribution

National Status - The Great Crested Newt is widespread in Britain. It has been estimated that there are around 18,000 ponds in Britain supporting populations of the animal, but only 3,000 sites have been confirmed. In Lowland England and Wales the species may be locally numerous, but it is absent from Devon and Cornwall and from Northern Ireland. It is local in Scotland. The species is declining and the annual loss of colonies has been put at 0.4 to 2%. Assuming 18,000 populations, then between 72 and 360 populations are being lost each year.

Regional Status - Locally common, especially in the Vale of York and Vale of Pickering, where there is a good supply of ponds.

Local Status - Locally common. Large populations are regularly found during survey work prior to developments. Over 1,800 adults removed from a housing development site adjacent to Filey Dams Nature Reserve in 2003. Large populations were found on the former Butlins Holiday Camp site at Amtree Park, Filey but illegal activities may have reduced this. Other locations include Muston, Cloughton, Hunmanby, Snainton, Scarborough and Whitby.

Threats

Whilst the Great Crested Newt does not appear to have significantly declined within the Scarborough District and is actually widespread, losses have occurred and it is still vulnerable to the following:

- Loss of habitat;
- Disturbance;
- Unlawful killing;
- Predation by cats;
- Inappropriate habitat management;
- Collection by children; and
- Development.

This is highlighted by the decline in populations at Burton Riggs and Amtree Park. At Burton Riggs a combination of adjacent development and the introduction of fish to the smaller pools has almost eliminated it from the site. At Amtree Park, the illegal clearance of the area without taking proper account of amphibians, has caused a significant reduction in the populations that used to be present.

Current Action

Currently in Scarborough the issue of protecting newts and their habitats is being taken very seriously and surveys for newts and mitigation plans are requested for all planning applications where newts are likely to be found.

Scarborough Borough Council has shown the importance of the protection of this species by taking action against individuals known to have destroyed or damaged newt populations and habitats. A developer was recently found guilty of such an act in the Magistrates Court and received a large fine and criminal record.

English Nature advise on planning applications which may affect Great Crested Newt populations. EN advise developers on the surveys and mitigation that are needed to maintain the population of this European protected species at favourable conservation status.

What you can do to help:

Don't collect Great Crested Newts.

Create a fish-free pond.

Report all sightings to NEYEDC or Scarborough Borough Council.

Great Crested Newt:
(Photograph by James Mortimer)

White-clawed Crayfish

White-clawed Crayfish habitat:
(Photograph by Brian Morland)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with White-clawed Crayfish:

Rivers and Streams

Action Plans have been prepared for those in bold.

Introduction

The White-clawed Crayfish is the only native freshwater crayfish in Britain. It has declined throughout Western Europe, including Britain and is a UK BAP priority species. It likes clean rivers with plenty of stones and roots etc, within which it can shelter.

The White-clawed Crayfish has considerable protection including protection under:

- Annexes 2 and 5 of the EC Habitats Directive.
- Appendix 3 of the Bern Convention (Conservation of European Wildlife and Natural Habitats).
- Schedule 5 of the Wildlife and Countryside Act 1981.
- Live Fish (England and Wales) Act 1980.

Our objective for White-clawed Crayfish is:

To contribute to the UK BAP by sustaining a stable White-clawed Crayfish population in the Scarborough area.

Furthermore, a licence is required to keep non-native crayfish under the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, and :

It is an offence to release or allow to escape, any of the non-native species (Schedule 9 of the W&CA).
It is an offence to use White-clawed Crayfish as fishing bait.
A licence is required to use a fixed engine trap or net, to catch any species of crayfish.

Numbers have declined nationally, particularly in the south. However, Britain is still thought to hold 24% of the world population. On a regional level there are important populations in both the Yorkshire Dales and North York Moors National Parks. The reasons for the decline involve the following.

Poor Water Quality

Pollution is the greatest immediate threat to White-clawed Crayfish populations. The species is susceptible to sewage and pesticides, particularly those which lower the oxygen concentrations in water. This can include discharges from treatment works and runoff from roads, farms or urban areas.

Site Management

Stream bed management can result in loss of habitat and reduction in habitat quality, and high sediment loads from soil erosion throughout a river catchment can clog the river bed making it unsuitable for the crayfish.

Crayfish Plague and Crayfish Farming

Crayfish plague is a serious factor in the national decline of the White-clawed Crayfish. It is unknown at present if the Scarborough populations are affected by Crayfish Plague. Crayfish Plague is a disease caused by a fungus Aphanomyces astaci. This is transmitted by the North American Signal Crayfish, introduced for commercial farming from the late 1970s. It is fatal to the native species, decimating whole populations within weeks.

Non-native Species

Escaped or deliberate release of Signal Crayfish and four introduced non-native species (Narrow-Clawed Crayfish, Noble Crayfish, Spiny-Cheeked Crayfish and Red Swamp Crayfish) into the wild is a major threat which, aside from the obvious threat of the plague, generally contributes to the displacement of native species.

The situation with reference to Scarborough Borough is currently unclear and needs to be established. However, for any such population to flourish the following is required:

- Ideal habitat requirements are for clear, alkaline, well-oxygenated water, in flowing and standing water.
- Crevices, gaps between stones, logs, aquatic plants and submerged tree roots provide cover and should be retained.

- In catchments that have important populations of White-clawed Crayfish, angling clubs should only stock fish from source that are free of non-native crayfish.
- Riparian habitat improvements such as the controlling of stock access to the bank, to reduce sediment input.
- Water quality to be improved or maintained through Environment Agency (EA) initiatives.

Status and Distribution

The White-clawed Crayfish occurs throughout England and was formerly particularly extensive in the Yorkshire Dales National Park.

Within Scarborough District, no comprehensive information is available but surveys have indicated that the main populations are found in the River Derwent, with a smaller population in the Scalby Beck. The River Derwent is thought to be one of the main rivers in Northern England for White-clawed Crayfish. The River Hertford is unlikely to be of any interest in its present condition but other tributaries of the Derwent, such as the Brompton Beck, need to be assessed either for the presence of or its suitability for, the introduction of crayfish. Some larger ponds may also be of interest and also need to be investigated.

Threats

A key issue affecting this species is the impact upon it from a fungal disease called Crayfish Plague, which is carried by the invasive American Signal Crayfish. This larger species was introduced to the UK as a food item, but has escaped or been released into river catchments, enabling it to spread (usually downstream of release points). Crayfish Plague has wiped out whole populations of White-clawed Crayfish in some Yorkshire locations. Further, even in the absence of crayfish plague the smaller White-clawed Crayfish is displaced by interspecific competition. Further threats include water pollution and siltation. The latter interferes with the animal's preference for clear water. Intensive river works can cause siltation and seriously disturb crayfish habitat.

The main threats are still much the same as they were when population declines were first reported. That is poor water quality and occasional pollution events and the spread of the Signal Crayfish and Crayfish Plague. The quality of many streams is improving and is continuing to be improved. This can only be to the benefit not only of Crayfish but to all other aquatic wildlife. The threat from Signal Crayfish is though still a major problem requiring extreme vigilance to ensure that any spread of the non-native species is quickly contained.

Other threats come from poor or inappropriate river management for angling and drainage.

Current Action

- The UK BAP has a target to research the feasibility of eradicating Signal Crayfish. An Environment Agency booklet is available with reference to the species involved.
- EA undertake survey work.
- A licence is required for keeping Signal Crayfish.
- Yorkshire Water Services Ltd is improving sewerage discharges and have developed plans for other agencies to help to reduce pollution.

White-clawed Crayfish:
(Photograph by Whitfield Benson)

What you can do to help:

If you are an angler, you can take measures to ensure that Crayfish Plague is not transferred on wet gear.

Report sightings to the NEYEDC.

Avoid stocking or introducing Signal or other crayfish into local waters. They can move long distances overland.

Golden-shelled Slug

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Golden-shelled Slug:

Gardens Guidance Note

Action Plans have been prepared for those in bold.

What you can do to help:

Take a closer look at the slugs in your garden to see if they are carrying a tiny shell.

Report any that are to the NEYEDC.

Introduction

Slugs, like most invertebrates, rarely receive any attention as part of our wildlife. They are though as much a part of our natural heritage as any other and fulfil their allotted role admirably, even if we do not always like the outcome of their activities. Like any other group, different species live in very different ways. Some are herbivores and eat plants and some are carnivores.

The Testacellas are a group of three species of terrestrial slug of West European distribution which are distinguished from other British slugs by the presence of a small external shell. They are carnivorous, feeding mainly on earthworms.

Our objective for Golden-shelled Slug:

Increase our understanding of the distribution of the species.
Encourage friendly gardening methods for sites and gardens where the slug occurs.

Status and Distribution

It is the most common of the three species of Testacella in Britain and over the years has been recorded in nearby counties. However, apart from Dewsbury, Sheffield and Rotherham in the 1970s and 1980s, the only records have been from Scarborough in the Valley Gardens and more recently (1983 to date) within a private residential garden in Scalby.

Threats

The main problems associated with the species is the lack of information available and the difficulty in identification by members of the public. Why the species has been unable to establish itself in other habitats is unknown, however, it has been assumed that this group of slugs cannot tolerate significant levels of disturbance. There is a significant lack of information with regard to this species. However, along with most species of slug and snail it is likely to be susceptible to slug pellets.

Current Action

No current actions. However, there is an opportunity for the BAP to encourage people not to use slug pellets. The use of slug pellets not only affects slugs but can also have an impact on other popular animals, such as Hedgehog and the declining (UK BAP priority species) Song Thrush Populations in both the Yorkshire Dales and North York Moors National Parks. The reasons for the decline involve the following.

Golden-shelled Slug: (Photograph by B Cockeri)ll

Water Violet

Introduction

Water Violet is a nationally uncommon water plant found in slow flowing streams and pools. It is often associated with fluctuating water levels and can be very prolific if left to grow unchecked. Its characteristic masses of finely divided, light green leaves and five petaled, pinkish-white flowers make it a very distinctive and attractive plant.

Nationally it is uncommon but it is not rare and is not a national BAP, nor is there any special legal protection for it.

In Scarborough, however, it is known from only one location.

Our objectives for Water Violet are:

To maintain the present population of Water Violet in its natural location.
To enhance the present population and extend its range.

In the past it is likely to have been much more widespread than today. Drainage and intensive management of ditches and watercourse have reduced its range considerably. This is mirrored in the local situation where its only known natural site is in a ditch near Folkton, in the Vale of Pickering,

This is, as one would expect, with much of the Vale originally being an extensive wetland. As such it is likely that, in this location, it is a relict of the original wetland flora of the Vale of Pickering.

The natural location is of particular interest as it is thought to be a section of the original channel of the River Hertford left in as part of the drainage system when the Hertford was canalised and the eastern end of the Vale drained.

Although there has been only one known location for many years, it has previously been much more prolific than at present. In recent years though it has decreased considerably in extent, largely due to the increased maintenance regime of the ditch carried out by the Muston and Yedingham Internal Drainage Board as part of the annual management programme.

The primary reason for its decline in the past has been through drainage and possibly changes in water quality. The present decline is due to the increased maintenance of the ditch.

There are though, particular problems associated with the ditch in which it is found. The watercourse is one of the primary drains for the land close to Cayton. The prolific growth of the plant can block the watercourse fairly rapidly and impede drainage. This, coupled with the increasing drainage problems in the Vale caused by peat shrinkage and raised water-levels, makes it very difficult to allow the plant free growth without affecting the agricultural viability of the land.

This could become increasingly critical as climatic and topographical changes accentuate water levels in the surrounding land.

The plant has been selected for inclusion as a Biodiversity Action plan species because:

- Of its restricted distribution in the Scarborough area.
- Its historical links with the Vale of Pickering's natural state.
- It highlights the problems associated with maintaining wildlife in an intensive agricultural system.
- Any work to conserve it is likely to assist in conserving other species.

Status and Distribution

Regionally, Water Violet is known from very few locations. Its main stronghold being Askham Bog in York.

In Scarborough, it is found naturally in only one ditch near Folkton, adjacent to the Cayton Low Rd.

20 years ago, this ditch was often choked with a mass of Water Violet for upwards of a mile or more. Today this is restricted to a few scattered locations where it grows from the small pieces of plant left after cleaning out has occurred.

Ditch with Water Violet: (Photograph by Graham Megson)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Water Violet:

Open Water / Ponds

Action Plans have been prepared for those in bold.

What you can do to help:

Don't pick wild flowers.

Enjoy them in their natural environment.

It has been translocated to two other small sites, one in a pond at Mowthorpe, the other a ditch adjacent to Filey Dams. Both sites had established and were slowly spreading, however, the site at Filey Dams was inadvertently destroyed by development in 2004.

It is likely that the plant will remain at its natural location for the foreseeable future provided the management is not increased even further. This will though only be as a small, scattered, remnant population following annual cleaning of the ditch.

If the population here is to be allowed to increase, then there will be a requirement either to reduce the level of maintenance on the ditch or to create suitable backwaters where it can be allowed to grow unhindered.

The former is likely to affect agricultural land even if sections of the ditch are kept clear.

The later would require landowners to create backwaters or allow the channel to be widened in places and this will take up limited areas of land and require some engineering work. This will not require any reduction in maintenance but could actually increase it slightly to compensate for the presence of larger quantities of plant.

A further option is to either find or create new sites to which the plant can be translocated. This has been carried out successfully on several sites in the area although it has been difficult and slow. Ideally it would be best to allow the plant to develop in sections of the existing site to provide an adequate supply of material and be retained here until the new sites are well established.

Threats

In Scarborough, the primary threat still lies with the present management regime of ditches and its restricted distribution. In 2004, one of the three sites for Water Violet was destroyed from the actions of a site development manager, whilst the management regime of the IDB seriously affects the primary site.

Current Action

Two translocation sites have been established and agreement has been made to try to translocate further material to Filey Dams.

A watching brief is kept both on the natural site and the two translocation sites, though one of the latter sites was destroyed in 2004.

Water Violet:
(Photograph by Whitfield Benson)

Rare Flowers

Introduction

This Species Action Plan covers a number of species of flowering plant, which are rare in the District.
These include :

- Clary
- Bithynian Vetch
- Purple Milk Vetch
- Baneberry
- Meadow Rue
- Sweet Galingale
- Common Butterwort
- Dyer's Greenweed
- Pepper Saxifrage
- Broad-leaved Helleborine
- Parsley Water Dropwort

Our objective for Rare Flowers is:

To maintain the current populations of the species and where appropriate increase the size and range of the populations.

There are a number of other species that are either covered by their own Species Action Plan, such as Water Violet or are covered within Habitat Action Plans, such Bloody Cranesbill within Coastal Cliff Mosaics; Green-winged Orchid within Calcareous Grassland / Unimproved Neutral Grassland and Sea Lavender within Coastal Wetlands.

There are likely to be other species that are not referred to here because as yet their status is uncertain. One in particular is of interest, that of May Lily on Oliver's Mount. This was translocated there in the 1920s and recorded for many years, but has not been recorded recently and the exact translocation site has now been lost.

Plants are rare because of many factors. It may be because the conditions that suit them are rare, as is the case with Baneberry. It may be that the species is naturally rare and, for whatever reason, it does not flourish. This is the case with Bithynian Vetch, Clary and Purple Milk Vetch. With others it may be that management has removed it or prevents its spread and this is likely to be the case with plants such as Meadow Rue.

When considering what can be done about maintaining the populations, one consideration will be the possibility of enhancing the existing population and re-introducing it to other suitable sites. This last option raises the always very thorny question of re-introduction. Guidance on this must be agreed, not only for the above plants but also for other species as well. It is unlikely to be the same for each species and must take account of a range of issues, including the effect of global warming, but a general policy would be of value in guiding future introductions.

Status and Distribution

All of the above species are known from just one or two sites.

Clary is known from one site on the Castle Headland below the Castle walls. Nationally it is a local plant of the south and east. In the north it is very local.

Bithynian Vetch is known from one site at Sandsend and one unconfirmed site at Burniston Cliff. Nationally this is a very localised plant of the southern coast. In the north it is very rare.

Purple Milk Vetch - nationally a local plant of eastern distribution, regionally scattered locations in the Wolds. Locally previously known from two sites at Hunmanby and Muston although it is now thought to be extinct in the District.

Baneberry is known from one site, at Folkton. Nationally it is a rare plant confined to a belt stretching across northern England between the Humber and Newcastle.

Meadow Rue is known from one site at Seamer where it is recorded intermittently. Nationally it is an uncommon species of southern distribution and here it is toward the edge of its northern range. Within the region it is in a few scattered localities mainly in river flood plains.

Above: Baneberry
(Photograph by Susan Wilson)
Below: Baneberry
(Photograph by Graham Megson)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Rare Flowers:

Woodland, Unimproved Neutral Grassland, Acidic Grassland, Wetlands, Coastal Cliff Mosaics

Action Plans have been prepared for those in bold.

What you can do to help:

Don't pick wild flowers.

Enjoy them in their natural environment.

Sweet Galingale is known from one site in the Seamer Valley but there is an old record for another at Hunmanby (possibly Sands Lane Meadow). This species is outside what is thought to be its natural range where it is an uncommon plant of the south coast. Here it may be a Victorian introduction.

Common Butterwort is known from one site, on Wheatcroft Cliff near Scarborough.

Dyer's Greenweed is known from one site on Whitby Abbey Headland and has not been recorded for several years. Nationally it is a localised plant of old grasslands in England.

Pepper Saxifrage was recorded once from one site at Gristhorpe Cliff and has not been recorded since. Nationally it is a local plant of old, damp grasslands throughout England.

Broad-leaved Helleborine is recorded on one site at Whitby. Nationally it is an uncommon plant of old woods.

Parsley Water Dropwort is a local plant of wet grasslands with a markedly coastal or brackish distribution. Here it has been recorded at one site at Whitby. Elsewhere in the region it is found on the Humber.

Threats

The primary threats to any species that is reduced to only one location has to be accidental loss and inappropriate management. Clary is particularly threatened because of the need to maintain Scarborough Castle walls, desire to improve the footpath system, the pressure from people trampling the grassland to view the walls and the difficulty of managing the site.

However, other threats include the loss of reproductive viability because of the small population and the potential loss because of a natural occurrence such as a drought, heavy rainfall or cliff slippage. This later occurred with Purple Milk Vetch in 1994.

Current Action

At present, little concerted effort is made to do anything with regard to these species other than to monitor their presence (or otherwise). Some attempt has been made to protect and increase the Clary population and manage the Baneberry site but no sustained effort has yet been achieved.

Bithynian Vetch:
(Photograph by Nan Sykes)

Guidance Notes

Contents

Guidance Note on Problem Species

Introduction

The flora and fauna of Britain is constantly changing and has always done so. Sometimes this occurs naturally as a species extends its range and sometimes it occurs because it is introduced artificially by people. Because of this Britain has accumulated a large and diverse assemblage of non-native species. Most of these are harmless but a small number are invasive and create problems both for humans and for our natural wildlife.

Japanese Knotweed:
(Photograph by Graham Megson)

These less welcome species need not necessarily be recent introductions, the rabbit was originally introduced by the Normans over 1000 years ago as a food source but is now widespread and abundant throughout Britain, much to the dismay of farmers and foresters. Similarly the Romans introduced Ground Elder, that bane of all keen gardeners, again as a food source. Such species though are now so widespread and have been here so long that they have become an accepted part of our natural heritage.

Other, more recent introductions, are very different. Biological invasion goes through 4 stages, arrival, establishment, spread and persistence. The high impact species are those that spread quickly and have the ability to persist despite whatever we do to stop them.

These high impact species are aggressive invaders that colonise natural and semi-natural habitats quickly and easily and take over and create major problems for our native plants and animals.

The best time to prevent problems is at stage 1, arrival. If such species are prevented from arriving or are quickly controlled as they try to establish, then later difficulties are avoided.

It is illegal to release non-native species into the wild in the UK. There is a huge cost to the tax payer and others if expensive and time consuming control has to be carried out.

This action plan covers 10 such introduced problem species. It also covers one home grown species because not all problem species are introduced. Ragwort is a native plant that is highly toxic to animals. It has therefore been included because it is a major problem for livestock and the way that we manage land.

This list is not exhaustive and there are many other species that can, in certain circumstances, also create problems. These are though the ones that are presently considered to be the most harmful in the District.

- Himalayan Balsam
- Japanese Knotweed
- Giant Hogweed
- Rhododendron
- Australian Stonecrop
- Water Fern
- American Mink
- Signal Crayfish
- Floating Pennywort
- Phytophera spp. (Sudden Oak Death fungus and Alder Root Disease)
- Common Ragwort

Status

Himalayan Balsam

An annual plant introduced by the Victorians as an attractive garden plant. It is capable of rapid colonisation via its explosive seed. Seeds germinate freely giving rise to dense stands along water courses and in damp woodlands. Because of the density of plants, it dominates native vegetation and shades it out. At present Himalayan Balsam is present along all watercourses but in relatively small quantities, except along the Sea Cut. Control has largely been successful where hand pulling has been carried out in Forge Valley.

Japanese Knotweed

In the UK all plants are female and its spread has been via vegetative propagation, from fragments of rhizome. It is an extremely aggressive competitor in open woodland, hedgerows and along waterways. It has

colonised urban areas, particularly neglected sites such as churchyards, cemeteries and unused land. Once established it is very difficult to eradicate, even with herbicides, and requires special licensing to move off site. It is found scattered throughout the Borough. It is listed in the W&CA 1981, where it is an offence to cause it to grow in the wild (Sec. 14 Schedule 9 Part 2).

Giant Hogweed

Although similar to Common Hogweed, Giant Hogweed grows up to 5m tall. This robust species seeds prolifically and has spread along many major waterways. It dominates open areas along river banks and is now found even in the middle of Scarborough. The sap is toxic in sunlight and raises large blisters that heal slowly. It is listed in the W&CA 1981, where it is an offence to cause it to grow in the wild (Sec. 14 Schedule 9 Part 2).

Rhododendron

Brought into Britain as a garden plant in 1763, probably from the relict Spanish population. This evergreen perennial prefers acid soils and has become widely established. Large areas of secondary woodland, parkland and heathland now support thriving populations. Virtually nothing grows under its canopy. It produces huge numbers of tiny, air borne seeds, roots freely where branching stems touch the ground and sprouts vigorously from cut shoots. Within the BAP plan area, rhododendron is limited to a few small areas although elsewhere in the Borough, particularly in Raincliffe Woods, the problem is increasing.

Water Fern

An aquatic fern, introduced to the UK as an exotic pond plant, which has escaped into wild ponds. It spreads rapidly across smaller ponds and ditches, completely covering the surface and blocking out light. It occurs at Whitby in the Abbey pond and has been recorded on Throxenby Mere but has so far been successfully contained.

American Mink

Originally farmed for its fur, animals escaped or were released into the wild, and a sizeable feral population has built up. The animal is distributed throughout most of the UK including in Scarborough District. Research has indicated that American Mink is one of the contributory causes for the dramatic decline of the Water Vole. It ranges along all main watercourses in the Borough and some trapping has occurred to try to reduce the population.

Signal Crayfish

Introduced in crayfish farms for food, it has escaped into waterways and spread through many of our water catchments. Where it meets the smaller native White-clawed Crayfish, it usually drives it out because it is a larger, more aggressive species. It also spreads a disease to which it is largely resistant but to which the native species is highly susceptible. This has been one of the main causes of the decline of the native crayfish and the reason for its inclusion as a UK BAP priority species. It can travel long distances over land so that it can even spread from isolated ponds. At present it is not in the Scarborough area but the Derwent is one of the main populations for native White-clawed Crayfish and it is important that it does not become established.

Phytophera spp. (Sudden Oak Death fungus and Alder Root Disease).

Sudden Oak Death is caused by the fungus, Phytophthora ramorum, and in North America oaks have been dying in their thousands in the last few years. The first UK outbreak was found in April 2002 in England and the first in an established tree was announced in November 2003. The disease was found on a non-native Southern Red Oak tree in Sussex. The disease occurs in garden shrubs such as Rhododendron as well as oaks. It has since been discovered at 17 horticultural premises in Scotland and 110 in England and Wales. The disease is characterised by the presence of cankers of red and black sap oozing from the trunk, usually low down. Foliage may change colour rapidly and uniformly as the tree dies suddenly, with leaves remaining on the branches. It is not known if European oaks are susceptible. On Rhododendrons there is brown discoloration of shoots, die back and leaf blight.

Alder Root Disease is caused by the fungus, Phytophthora cambivora. It is a lethal stem disease which affects Alder trees and was first identified in 1993. On affected trees the leaves are normally small, yellow and sparse, and they frequently fall prematurely, leaving the tree bare. The stem base of a tree with severe crown symptoms often carries tarry or rusty spots sometimes occurring up to 2 metres from ground level. These spots indicate that the underlying bark is dead. The disease has been found across Europe, but it seems to be at its worst in parts of the UK and France, where destructive epidemics are developing, resulting in thousands of trees dying each year. The majority of affected trees are on

What you can do to help:

Please do not release or put anything from the garden out into the wild.

Report sightings of all of the above species to the North and East Yorkshire Ecological Data Centre (01904 557235) or the Countryside Officer at Scarborough Borough Council (01723 232323).

Left: Water Fern
Right: Himalayan Balsam (Photographs by Graham Megson)

riverbanks or on sites subject to flooding from adjacent rivers, however, many smaller tributaries have escaped the worst affects. However, the disease has also been found in orchard shelterbelts and in young woodland plantations. Interestingly some affected trees now appear to be recovering (EA pers com).

Australian Stonecrop

A small aquatic plant introduced as an oxygenator for garden and fishponds. It is exceedingly vigorous and can quickly dominate ponds to the exclusion of everything else. It is a scheduled species that must be reported to the Environment Agency if found. As with many of these species it can be propagated from the smallest of pieces so pulling it up is not likely to solve the problem and may make it worse.

Floating Pennywort.

Another aquatic plant introduced for ornamental purposes that is extremely vigorous. It can grow at the rate of 0.5m a day and if left will not only cover the pond but will spread up onto the marshy land beside it. It is a scheduled species that needs to be reported to the Environment Agency. Like Australian Stonecrop and Water Fern, even a tiny fragment left will spread again so control must be very carefully carried out and be very thorough. It was recklessly introduced to Throxenby Mere in 1998, possibly un-intentionally through releasing goldfish or tadpoles into the lake, and it has taken 5 years to control it. It may still be present and active measures will need to continue.

Common Ragwort

This is a native species that is toxic to grazing animals. When growing, animals avoid it but the main problem comes when it has been cut and allowed to dry. It then becomes palatable and will kill if any quantity is eaten in hay. The plant itself seeds prolifically but requires a light and open seedbed to germinate, so a well managed grass sward will not be suitable. Overgrazing or poor management, however, will provide a suitable environment that will allow it to spread. It can be a particular problem on arable land that has been put into set aside or on badly managed pony fields. It is one of 5 species listed as a Noxious Weed in the 1949 Weeds Act and it is an offence to allow the plant to proliferate on your land and spread to adjacent property. The Ragwort Control Bill (2003) has recently been passed to strengthen this. This native plant is host to at least 30 native invertebrate species and 14 fungi which are dependent on it, plus many other species which benefit from the supply of pollen and nectar.

Methods of Control

It is best to seek expert advice, but the following may be useful guidance.

Himalayan Balsam:	Hand pulling before seeding. Spray very dense stands where there is no underlying vegetation to damage. Repeatedly cut and do not allow to flower.
Japanese Knotweed:	Spray repeatedly with Glyphosate. Dig out and remove to licensed tip.
Giant Hogweed:	Cut flowering stem and burn on site or take to licensed tip. Dig up non-flowering stems and burn on site or take to licensed tip.
Rhododendron:	Cut stems, treat stumps to reduce re-growth, pull out stumps.
Water Fern:	Remove all floating plants, repeat as necessary. Clean footwear and any equipment thoroughly, to avoid spread.
Australian Stonecrop	Cover stands with black polythene, leave until all plants are dead. Clean footwear and any equipment thoroughly, to avoid contaminating other sites.
Floating Pennywort floating	Carefully hand pull any plants that are or shallowly rooted. Spray any well rooted plants with the appropriate herbicide.
Ragwort	Pull plants and dispose of at registered waste disposal site to tip (do not compost). Weedwipe in grazed pastures where plants are standing tall.

Guidance Note on Gardens

Introduction

This Guidance Note covers private gardens, but also village greens, churchyards, parks and school grounds. Garden habitats are important for many things but are particularly valuable for a number of bird species such as Song Thrush and Bullfinch, both of which are UK BAP priorities. Gardens are also significant for other groups such as bumble bees, all species of bat, newts, Common Frog and Common Toad. It has been shown that gardens are especially important habitats for invertebrates as well, including some quite scarce species. Such sites are often connected by the network of corridors formed by hedgerows, streams, ditches, wooded shelter belts, road verges and railway corridors. These linear habitats linking gardens to semi-natural habitat tend to be accessible to the general public, making them ideal candidates for public involvement in conservation.

Garden areas can be covered by an array of legislation, including the Town and Country Planning Act 1990, Countryside Rights of Way Act 2000, Allotment Act 1952, Wildlife and Countryside Act 1981 (covers protected species) and the Habitats Directives for certain species such as Great Crested Newt and Bats.

For gardeners to successfully assist in promoting and improving biodiversity in Scarborough the following initiatives are considered important:

- Management of habitats to maximise their wildlife value, e.g. fish-free ponds and meadow grasslands.
- Reduced use of pesticides such as slug pellets.
- Use of plants which provide an all year round supply of nectar, fruits and berries.
- Composting schemes.
- Practical assistance for school and community group projects.
- Publicity of wildlife information and access to general information and advice.

Whilst the above opportunities are welcomed, many threats still exist, such as:

- Non-native species that can be invasive, competing with native species and reducing biodiversity. See the action plan on Problem Species for examples.
- Excessive use of chemicals including pesticides, herbicides and fertilisers can damage habitats and kill wildlife.
- Use of peat products, which is poor environmental practice because peat is a non-renewable resource that is dug from peatlands that are in themselves of international wildlife value, destroying them in the process.
- Intensive management, which can suppress wildlife, through lack of good habitat and food supply.
- Loss of established habitats due to development and changing land use.

Information within the general BAP introduction under the section 'Getting Involved' provides further information on ways in which individual members of the community or groups can assist in promoting biodiversity within private gardens. Other methods to help are highlighted overleaf.

Advice

Opportunities to improve garden habitats currently exist through initiatives which involve community groups, schools and churches to create wildlife areas. Tree planting weeks are common and should be encouraged and expanded.

Further initiatives exist with garden centres to promote nature conservation in gardens and to supply environmentally friendly products. Recycling measures such as composters and water butts are readily available and the County Council along with the Water Companies have promoted the use of such items with discounted prices and local roadshows.

Above and **Below:**
Simple bird box and feeding station
(Photographs by Graham Megson)

Above: A simple garden pond
Below: Bird bird feeding station, composter and decaying logs
(Photographs by Steve Wilson)

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Gardens:

Great Crested Newt, House Sparrow, Bats, Reptiles, Species in Buildings, Problem Species

Action Plans have been prepared for those in bold.

Things you can do in your garden to help:

Plant native species, which will be beneficial to local wildlife.

Avoid slug pellets - try to use alternative methods of pest control.

Buy and use only peat- free compost or make your own compost from organic kitchen waste and garden cuttings.

Provide shelter for Hedgehogs, which will prey on slugs.

Grow flowers that will be favoured by bumble bees.

Feed the birds and provide fresh water.

Put up open fronted and tit nest boxes.

Create a wildlife pond, without fish!

Leave fallen timber to decay.

Grow dense shrubbery for nesting Song Thrush and other birds.

Plant fruit trees, currant bushes and berry-bearing shrubs to provide food for birds.

Allow areas of gardens to become 'wild' with less intensive management, such as a corner or bank of meadow instead of lawn.

Guidance Note on Farmland

Introduction

Farmland is the single largest land use in Britain, and long-term research has established that the farmed countryside is very important for biodiversity. For instance, the British Trust for Ornithology (BTO) has monitored changes in the population of wild birds through national recording schemes for many years. However, many species, particularly flowering arable annual plants and farmland birds, have declined dramatically and are now UK BAP priority species. Farmland is also important for bats and the bumble bee group and these too have declined. It is therefore vitally important that wildlife is considered alongside the farming industry's primary role of food production if Britain's natural heritage is to survive.

Farmland is not a natural habitat, but a mosaic of habitats managed within a food production unit. Many farms include areas of good wildlife-rich semi-natural habitat, the best of which are designated as Sites of Special Scientific Interest (SSSI) or Sites of Importance Nature Conservation (SINC). Some of these habitats are considered separately under their own individual Habitat Action Plans because of their own intrinsic value; for instance species-rich Neutral Grassland and Ancient and Species-rich Hedgerows. Others, however, are not covered, yet are still an indispensable resource for certain of our rare, common and declining wildlife. Some of these habitats are nationally important and includes the key habitats of Cereal Field Margins and Boundary and Linear Features, both of which are UK BAP priority habitats. This may seem strange but such areas hold specialist plants and insects that need cultivation in order to thrive. These can be very prolific and provide the food for many of our farmland birds etc. Thus farmland is important for arable weeds, bumble bees and farmland birds. All have suffered serious declines in recent years, partly through intensification of farming methods.

Some of the biological declines seen in farmland habitats can be attributed to the technological advances and production-orientated agricultural policies seen since 1945, and driven forward by Central Government and the European Union. However, many farmers manage their land for wildlife and game as well as crop production to the benefit of both habitats and species. Chemical and fertilisers use on farmland has fallen and has become more targeted in recent years, hedgerow loss has been reversed and many farmers typically farm in a more environmentally friendly way.

Under the England Rural Development Plan, Defra is delivering biodiversity conservation through its agri-environment schemes and its Rural Development Service (RDS). Defra is also responsible for EN.

CAP reform

Some significant changes in farming policy are currently being implemented. Through European Union changes to the Common Agricultural Policy (CAP) in June 2003, there has been a move to un-couple crop production from subsidies, which is generally agreed, will benefit the natural environment on farms and marks a significant change in agricultural policy. From January 2005 the Single Payment Scheme will be made to farmers, based on farm receipts. This will give farmers much more freedom to follow the market. The Single Payment Scheme will be phased in over eight years. Under the Single Payment Scheme, a number of cross-compliance measures will be set, to ensure the Good Environmental and Agricultural Condition of land. These will include measures such as the requirement for 2m buffer strips alongside watercourses, ditches and hedges.

The amount of set aside for each farm has been set at 8% for 2005. Set aside includes all arable land and temporary grassland. Farmers will still be able to set aside more land than the minimum 8%, as in the past. Derogations for specific management for certain wildlife species are available. For example 6m and 10m set aside strips are available alongside watercourses, hedges, ditches and woodland.

Environmental Stewardship

Defra is planning a new agri-environment scheme, called the Environmental Stewardship Scheme, (which will replace both the Countryside Stewardship Scheme (CSS) and the Environmentally Sensitive Area (ESA) scheme) to be in place by 2005. This will be made up of three levels of environmental good practice an Entry Level Scheme (ELS), an Organic Entry Level Scheme (OELS) and a Higher Level Scheme (HLS).

The ELS and OELS applications will be automatically accepted providing they meet an area based points threshold and will be self-assessed. Examples include hedge and field margin management, winter stubbles and low nutrient input grasslands. The two entry-level parts of

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Farmland:

Arable Margins, **Ancient and Species-rich Hedgerows, Neutral Grassland, Calcareous Grassland, Acid Grassland, Species in Buildings,** Brown Hare, Barn Owl, Grey Partridge, Turtle Dove, Corn Bunting, Reed Bunting, Skylark, **Tree Sparrow and House Sparrow,** Linnet**, Water Vole**

Action Plans have been prepared for those in bold.

Key agri-environment options which may help biodiversity on farms

Wild bird cover

Conservation headlands

Hedgerow management

Arable field margins

Beetle banks

Arable crops on livestock farms

Rush management

Rotational set-aside

Non-rotational set aside

Environmental Stewardship represent a major change in agricultural policy with the intention of bringing about widespread and more wildlife friendly management practices on farmland in order to bring about biodiversity gains on a landscape scale. It is intended that the schemes should achieve at least 70% ELS and 15-20% HLS uptake across the country.

The Higher Level Scheme will be competitive and will have more advanced conservation options and applications will be scored on a points system. A Defra targeting statement will set the criteria for scoring. The existing ten-year CSS agreements will run their course and wherever possible will be renewed under the appropriate ESS.

Nitrate vulnerable zones (NVZ)

Under the Nitrates Directive, Member States of the European Union are obliged to protect watercourses from the effects of agricultural nitrogen. In 2002 the areas affected were considerably extended and may include parts of the borough. Farmers are obliged to introduce 'action programmes' on agricultural land limiting fertiliser inputs to 170kg/ha/yr of organic nitrogen, on all arable land.

Things you can do as a landowner

Land managers can maintain a good diversity of habitats to encourage a wide range of wildlife. Important features include ponds, hedgerows, old hedgerow trees, copses, odd corners of scrub, grassland and wetland. Even wet areas in arable fields are important to some species such as Lapwing. Old buildings, old trees and nest boxes can provide nesting/roosting sites for owls, Swallow, bats etc. Recent research has demonstrated that leaving 10 foot square bare patches within arable fields, greatly increases the breeding success of Skylark without any significant lowering of yield.

Maintain any especially rich wildlife areas identified on your farm, such as unimproved or semi-improved grasslands, rushy areas, fens, streams and ponds.

Plant new trees and hedges where appropriate to the good management of the farm. These should be species native to the area and ideally Sourced from nurseries that supply locally sourced trees. Wherever possible, maintain veteran standing trees and leave fallen timber in place to naturally break down.

Cut hedges to a minimum height of 1.5 to1.7m. Depending on its orientation, leaving a hedge to grow taller does not necessarily mean that it will cast shade and reduce yields. Cut in late winter before birds are breeding to avoid nests and to allow birds to feed on the berries first. If possible do not cut all hedges every year but leave some to be cut every other year. Having a variety of hedge heights and shapes will attract a greater variety of breeding birds. Avoid ploughing and spraying into the hedge bottom.

Wildlife benefits from arable margins having a variety of grass sward lengths, including short grass, hay, tall herbage and tussocks. Some rank margins could be left over the winter for hibernating insects etc. Bumble bees nest in tussocky grass, Harvest Mice use tall herbage such as False Oat Grass, Reed Canary Grass and Hogweed and Field and Bank Voles need rough grassland.

Consider planting some low input and spring crops or leaving some land to summer fallow or winter stubble.

Lapwing:
(Photograph by Whitfield Benson)

Reducing herbicide, pesticide and fertiliser inputs through targeting and timing of application can reduce costs and be more environmentally friendly.

When converting old buildings incorporate wildlife friendly features into the design. It costs nothing but can be of enormous benefit for wildlife. Consider putting up Barn Owl, bird, bat boxes etc.

Create new wildlife habitat at places convenient to you. This can include just about anything you want from a few trees to a pond or reversion of arable to wildflower grassland or woodland.

Adopt winter farmland bird feeding by spreading corn tailings.

Advice for much of this is available from Scarborough Borough Council, FWAG, Defra, Linking Environment And Farming (LEAF), English Nature, Yorkshire Wildlife Trust, the RSPB, Environment Agency and the Forestry Commission . Measures that are monitored will help Defra to refine the agri-environment options and will assist the BAP process.

All of the above are potentially grant aided through Environmental Stewardship.

Above and **Left:**
Differing types of Farmland
(Photographs by Whitfield Benson)

What you can do to help:

Follow the Country Code when on farmland.

Buy local produce. Support low input farming methods.

Support local conservation volunteer groups and the Yorkshire Wildlife Trust etc.

Keep dogs on a lead during the breeding season (March July).

Guidance Note for Development

Links to Habitat Action Plans and Guidance Notes.

Priority habitats associated with Development:

Bats, Great Crested Newt, Kestrel, Masonry bees, **Water vole**, Common Frog, Common Toad, Smooth Newt, **Species in Buildings**

Action Plans have been prepared for those in bold.

Introduction

This guidance note covers the development of land and the role of development control planning officers. It also covers the associated work of engineers, architects and landscape architects.

It should be noted that brownfield sites can be as valuable to wildlife as a good greenfield site. In some instances it can be better and it is important to ensure that all necessary information is available at the outset to prevent long delays whilst the relevant information is gathered.

The principle of biodiversity action is one that developers can incorporate into their development proposals when seeking planning permission from the local planning authority. There are a number of easy, biodiversity based actions, which developers can include in development proposals, and which district council planners can encourage. Architects, engineers, landscape architects and other professionals should consider these at the design stage. Some examples of actions that developers could consider are given below.

Developers.

- Take account of existing wildlife habitat and wherever possible retain existing rich areas.
- Create new wild-space, such as scrub, rough grassland, ponds, bogs, species-rich hedges.
- Consider appropriate Sustainable Urban Drainage Systems (SUDS), especially those that incorporate wetland features.
- Where appropriate, consider green or living roof systems to enhance the biodiversity potential of an area as well for rainwater runoff and energy saving.
- For large schemes that will be landscaped at the end of their working period, such as mineral extraction and landfill, design ambitious habitat creation schemes principally to benefit biodiversity. These to include significant wetlands, reedbeds, species-rich grassland and woodland as appropriate.
- Create opportunities for the harmless species that use buildings, such as Swift, bats, House Martin, Swallow, Barn Owls and House Sparrow.
- Undertake comprehensive ecological surveys at the pre-application stage and pass results to the NEYEDC.
- Liaise with the BAP Steering Group for advice on biodiversity measures.

Development Control Planning Officers

- Ask for ecological surveys to support planning applications, preferably well in advance so that they can be undertaken at the correct time of year. Write in a request for survey findings to be passed on to the North and East Yorkshire Ecological Data Centre.
- Ask for bat surveys prior to work being undertaken on buildings particularly where these involve demolition.
- Seek appropriate wildlife mitigation measures that are linked directly to BAP targets to account for any wildlife loss.
- Establish Town and Country Planning Act, Section 106 Agreements with developers.
- Liaise with the BAP Steering Group for advice.

Engineers

- Design 'Managed retreat' and soft sea defences.
- Maintain the integrity of the District's dynamic Coastal Cliffs through imaginative engineering.
- Incorporate bat cavities into bridge and other construction projects.
- Incorporate Otter walkways under bridges.
- Avoid culverting streams.
- Design balancing ponds that maximise marginal habitats such as bare ground, emergent vegetation and bank-side scrub.
- Ensure drains and gullies are designed to allow frogs, toads and newts to climb out.
- Consider the timing of operations where habitats might be damaged, for example ditch clearance.
- Avoid drastic habitat damage, such as hedge removal, during the bird-nesting season (March July).
- Manage the richest wildlife road verges for their nature conservation interest, rather than undertaking blanket management of strimming and mowing.
- For projects which have removed top soil, consider re-creating good grassland habitat by re-seeding with an appropriate

conservation mix directly onto subsoil.
- Seek advice from ecologists.
- Undertake ecological surveys prior to engineering works and pass results to the NEYEDC.

Architects

- Incorporate Swift bricks giving access to the roof spaces of buildings, to be used by Swifts.
- Incorporate cavities into buildings, to be used by bats.
- Incorporate small cavities in brick or stonework for masonry bees, especially on south-facing walls.
- Erect artificial House Martin nesting boxes onto buildings.
- Swallows can be encouraged by providing a flat nesting platform or a ledge inside a building with easy access through an opening of 5x7cm.
- Erect secure, nest platforms for Kestrels.
- Erect multiple sparrow nest boxes onto buildings, especially on east facing walls.
- Use 'green roofs', made of species-rich turf.
- When converting buildings provide an owl loft and access, for use by nesting Barn Owls.

Landscape Architects

- Use native species of local provenance in landscaping schemes.
- Include flowering plants and shrubs in landscaping schemes.
- Consider habitats other than shrub beds in landscaping schemes. Be adventurous and consider what habitats would have been present in the area, what habitats are being or can be created. From wetlands and species rich grasslands to bare sandy substrates for bees and invertebrates, all are possible with a little imagination and can fulfil more than one function e.g. water retention, SUDS, education, whilst still looking attractive.
- Use berry-producing species in landscaping schemes.
- Use climbers in landscaping schemes.
- Trees and bushy hedges alongside buildings provide quickly accessible feeding areas for bats.

Appendices

Contents

Appendix 1:

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Appendix 2:

Map of BAP area

Appendix 3:

BAP Steering Group Members

E Addisons	Whitby Naturalist Club
Linda Antill	Whitby Town Council
Len Aukland	Scarborough FNS and YNU (beetles)
John Beech	North Yorkshire and Cleveland Heritage Coast
Mr I Brett	CPRE
Eric Bowles	Internal Drainage Board
Cath Brason (check)	Dinosaur Coast Community Officer
Paul Bullimore	Sea Life Centre
Brian Cockerill	Scarborough Field Naturalists'
Brian Dove	Scalby Beck Angling Club
John Drewett	North Yorkshire Bat Group
Geoff Edmund	North Riding Badger Group
John Edwards	Derwent Angling Club
Miles Foulger	Yorkshire Water Services Ltd.
Robert Goodison	RDS, Defra
Sylvia Jay	Water for Wildlife Project
Phil Lyth	FWAG
Ian Massey	Scarborough Field Naturalists Soc
Jane Mee	Scarborough Museum
Graham Megson	North Yorkshire County Council
Bob Missin	York City Council
James Mortimer	North and East Yorkshire Ecological Data Centre
Sue Pacey	Environment Agency
Simon Pickles	North and East Yorkshire Ecological Data Centre
Stewart Rowe	Scarborough BC
Christa Sinclair	Bourne Leisure
Robert Sword	Wykeham Estate
Nan Sykes	Amateur naturalist
Frank Thompson	Scarborough Field Naturalists' Society
Brian Walker	Forest Enterprise
Chris Wilson	Farmer
Susan Wilson	English Nature
Steve Wilson	Scarborough Borough Council
Philip Winter	YNU (Amateur naturalist – moths)

Appendix 4:

UK BAP, Scarborough BAP and SINC Relationships

Scarborough BAP Habitats	**UK BAP priority habitat**	**SINC Panel habitat types (including NVC types where known)**
Woodland Ash woodland Oak woodland Wet woodland Including scrub	 Upland mixed ash woodland Upland oakwood Wet woodland -	 Upland mixed ash woodland (W9) Lowland mixed ash woodlands (calcareous-neutral, W8) Upland oakwood (W10, W11, W16, W17) Lowland oak/birch rowan woodlands (acid, W10, W16) Wet woodland (W1 - W7) Scrub (W21-W25)
Lowland wood pasture, parkland & veteran trees	Lowland wood pastures and parkland	Parkland (MG6, MG7, W10 + more see UK BAP).
Ancient and/or species-rich hedgerows	Ancient and/or species rich hedgerows	Ancient and/or species rich hedgerows (W8, W10, W21-W25) Dry ditches and banks (see NVC for relevant vegetation types)
Unimproved neutral grassland Old meadows and pastures Wet grasslands and flood meadows	 Lowland meadows. Coastal and floodplain grazing marsh.	 Unimproved and semi-improved neutral grassland (species-rich) (MG1, MG3 - MG6)
Calcareous grassland	Lowland calcareous grassland	Calcareous grassland (CG2-CG7, CG9 & CG10)
Acidic grassland	Lowland dry acid grassland	Acid grassland (U1, U2, U4, U5, U6, U20, M25)
Wetlands (rich fen, reedbed, fen meadow, flood plain swamp, calcareous flushes)	 Reedbeds Fens Coastal and floodplain grazing marsh.	 Reedbed (S1, S3, S4) Fen, carr (W1-W6) Wet grassland (MG8, MG9-MG11, MG13), marsh and swamp (S5-S10, S12, S14, S15, S17-S23, S25-S28; M1/2 unlikely, M3, M10, M13, M16 M21-M23, M25-M27, M36)
Open water	Eutrophic standing waters Mesotrophic lakes Aquifer fed naturally fluctuating water bodies	Standing water (includes reservoirs) (A2, A5, A7, A8-A13, A14?, A15, A16, A19, A20, A24)
Coastal Wetlands Coastal saltmarsh Coastal grazing marsh	Coastal saltmarsh Coastal and floodplain grazing marsh	Saltmarsh (SM1-28), Intertidal mudflat (No NVC) Wet grassland (MG8, MG9-MG11, MG13),
Coastal cliff / slope mosaics	Maritime cliff and slope	Maritime cliff and slope (MG1, MG5, MG9, CG6, MC9, MC11, MC8, MC10, W8, W22, W23, W24, W25, W8, M22, H10, U1, U2, U4, M22, A9, S14, S25 and S28)
Rivers and streams	Chalk rivers	Rivers and streams (A2, A5, A8-A12, A15-A18, S14, S22, S23 & S26) sub-heading for chalk streams

Appendix 5:

Glossary of Terms

Arable weeds.
Wild flowers, often annuals, that grow in regularly disturbed soil in an arable environment. This does not include pernicious weeds such as Thistles and Cleavers.

BAP
See Biodiversity Action Plan

BioDAT
Software for recording SINC information, using a Microsoft Access database and a MapInfo, GIS mapping system.

Biodiversity
The variety of life. The term embraces the full range of habitats, species, and the variation found within species (including genetic variation).

Biodiversity Action Plan
A plan to conserve or re-create biodiversity. The term may be used to describe the whole process by which this happens, or sometimes a document that sets out how this is to be achieved.

Cetacean
Group of marine mammals, that include whales and dolphins.

cSAC
Candidate Special Area of Conservation.

Distribution
The extent of a species' range.

Ecosystem
A community of inter-related organisms.

Eco-tourism
The generation of income through 'green' tourism, such as wildlife holidays, bird watching.

GIS
Geographic Information System.

Habitat
A type of landscape (e.g. wet woodland, lowland heathland) characterised by particular communities of vegetation and animals.

Habitat Action Plan (or HAP)
One of two sorts of plans contained within the BAP document (see also Species Action Plan). A plan geared towards the conservation or re-creation of a particular habitat, such as Lowland heathland.

Habitats Directive
See below.

Habitat Regulations
The Conservation (Natural Habitats &c) Regulations 1994, known as 'The Habitat Regulations', are UK regulations passed to deliver the EC Council Directive 'The Habitats Directive'. They refer to planning, land use, land management and environmental regulation, with emphasis on the roles of Local Authorities (called Competent Authorities). The Regulations are the basis of the Natura 2000 series of sites known as SPAs, SACs and cSACs. The Habitats Regulations aim to protect site of European Community (EC) importance.

Invertebrate
Any animal lacking a backbone. This group include insects (e.g. butterflies, moths, flies, bees, wasps, beetles) and non-insect invertebrates (e.g. worms, molluscs such as snails and slugs and crustaceans such as crabs and crayfish).

Local Agenda 21 (LA21)
A term describing the actions that must be taken locally to promote sustainability. Local Agenda 21 has its roots in the Rio Earth Summit. Sustainability has been described as "the ability to meet our needs without compromising the needs of our children".

LNR
Local Nature Reserve. A site designated by the Local Authority under the National Parks and Access to the Countryside Act. A Local Nature Reserve has an educational as well as a wildlife remit.

National Vegetation Classification (NVC)
A system for surveying habitats and allocating them to a recognised scientific type. The NVC is a nationally accepted system.

Phase 1 habitat survey
A nationally recognised system for allocating land into broad habitat types.

Phase 2 habitat survey
More detailed habitat survey than phase 1, based on individual sites.

Ramsar
European system for designating internationally important bird sites, named after the town in Iran where the treaty was signed.

Range
The area across which a species can be found.

Riparian
The corridor of habitat along a water course.

SAC
Special Areas of Conservation notified under The Habitats Regulations 1994, as part of the Natura 2000 series of nature conservation sites.

Selby Biodiversity Action Plan
The Selby Biodiversity Action Plan is the plan that leads the process by which action is taken locally to conserve wildlife. It includes those habitats and species for which Selby has a special responsibility under the UK BAP.

SINC
Site of Importance for Nature Conservation. A non-statutory site designated by the Local Authority for its nature conservation interest.

SSSI
Site of Special Scientific Interest. Nationally important site given legal protection by the Wildlife and Countryside Act (1981), as amended. SSSIs are designated by English Nature.

Species
A taxonomic group into which a genus is divided, the members of which are capable of interbreeding. For example, the blackbird (Turdus merula) and song thrush (Turdus philomelos) are related. They are in the same genus so share the genus name Turdus. However, they are different species and so have specific second names.

Species Action Plan (or SAP)
One of two sorts of plans contained within the BAP document (see also Habitat Action Plan). A plan geared toward the conservation or re-introduction of a particular species.

Steering Group.
A group formed by representatives of local authorities, conservation organisations, communities and business, who oversee the Local BAP process.

SPA
Special Protection Area, notified under The Habitats Regulations 1994, as part of the Natura 2000 series of nature conservation sites.

UK Biodiversity Action Plan
The BAP for the United Kingdom, which has its roots in the 1981 Rio Earth Summit. The UK Government has produced 391 SAPs and 45 HAPs, which detail actions necessary for a wide range of the Country's habitats and most threatened plants and animals. The UK BAP forms the basis for all Local Biodiversity Action Plans as well as other initiatives.

UK BAP
See UK Biodiversity Action Plan

Appendix 6:

Abbreviations

ASCOBANS	Agreements on the Conservation of Small Ceteceans of the Baltic and North Seas
AP	Action Plan
BAP	Biodiversity Action Plan
BARS	Biodiversity Action Reporting System
BBS	Breeding Bird Survey
BCT	Bat Conservation Trust
BioDAT	Database for managing North Yorkshire SINC site information
BC	Butterfly Conservation
BTCV	British Trust of Conservation Volunteers
BTO	British Trust for Ornithology
CA	Countryside Agency
CAP	Common Agricultural Policy
CAMS	Catchment Abstraction Management Strategy
CBC	Common Bird Census
CFMP	Catchment Flood Management Plans
CITES	Convention on International Trade in Endangered Species
CLA	Country Land and Business Association
CPRE	Council for the Protection of Rural England
CSS	Countryside Stewardship Scheme
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EC	European Community
EH	English Heritage
ESELS	Environmental Stewardship Entry Level Scheme
ESHLS	Environmental Stewardship Higher Level Scheme
EN	English Nature
EU	European Union
EWGS	England Woodland Grant Scheme
FBOG	Filey Brigg Ornithological Group
FC	Forestry Commission
FCE	Forestry Commission England
FE	Forest Enterprise
FoE	Friends of the Earth
FRCA	Farming and Rural Conservation Association
FWAG	Farming and Wildlife Advisory Group
GCT	Game Conservancy Trust
GIS	Geographical Information System
ha	hectare
HAP	Habitat Action Plan
IACS	Integrated Administration and Control System
IAW	Inventory of Ancient Woodland
ICT	Invertebrate Conservation Trust
IDB	Internal Drainage Boards
JNCC	Joint Nature Conservancy Committee
km	kilometre
LA21	Local Agenda 21
LBAP	Local Biodiversity Action Plan
LEAF	Linking Environment And Farming
LNR	Local Nature Reserve
M&YIDB	Muston & Yedingham Internal Drainage Board
Na	Nationally Notable category a
Nb	Nationally Notable category b
NEYEDC	North & East Yorkshire Ecological Data Centre
NFU	National Farmers Union
NR	Nature Reserve
NS	Nationally Scarce
NT	National Trust
NYBG	North Yorkshire Bat Group
NYCC	North Yorkshire County Council
OS	Ordnance Survey
PAWS	Plantation on Ancient Woodland Site
PPG	Planning Policy Guidance
RDA	Regional Development Agency
RDB	Red Data Book
RDS (Defra)	Rural Development Service
RSPB	Royal Society for the Protection of Birds
SA	Soil Association
SAP	Species Action Plan
SBC	Scarborough Borough Council
SEPA	Scottish Environment Protection Agency
SFNats	Scarborough Field Naturalists
SINC	Site of Importance for Nature Conservation
cSAC	candidate Special Areas of Conservation
SOCG	Scarborough Otter Conservation Group
SPA	Special Protection Area
sp	species
SSSI	Site of Special Scientific Interest
TPO	Tree Preservation Order
UK	United Kingdom
UK BAP	UK Biodiversity Action Plan
WIGS	Woodland Improvement Grant Scheme

WGS	Woodland Grant Scheme
WLO	Wildlife Liaison Officer (police)
WNC	Whitby Naturalists Club
WT	Woodland Trust
WTs	Wildlife Trusts
WWP	Water for Wildlife Project
YAS	Yorkshire Agricultural Society
YHBF	Yorkshire and Humber Biodiversity Forum
YNU	Yorkshire Naturalists' Union
YOARP	Yorkshire Otters And Rivers Project
YW	Yorkshire Water Services Ltd
YWT	Yorkshire Wildlife Trust

Appendix 7:

Useful Contact Details

Ancient Tree Forum c/o Woodland Trust
Autumn Park, Dysart Road, Grantham, Lincolnshire, NG32 6LL.
Tel: 01476 581111
Fax: 01476 590808
www.woodland-trust.org.uk/ancient-tree-forum/

BTCV
3, 5 & 7 Leake Street, off Lawrence Street, York, YO10 3BR.
Telephone: 01904 644 300
Fax: 01904 644 302

Buglife-The Invertebrate Conservation Trust
High Street, Fletton, Peterborough, PE2 8DT.
(Temporary Address)
Telephone: 01733 760881
Fax: 01733 760884

Butterfly Conservation
Manor Yard, East Lulworth, Wareham, Dorset, BH20 5QP.
Telephone: 0870 7744309
Fax: 01929 400210
E-mail: info@butterfly-conservation.org

English Nature
Genesis Building One, University Road, Heslington, YORK, YO10 5ZQ
01904 435500
E-mail: susan.wilson@english-nature.org.uk

Environment Agency
Coverdale House, Aviator Court, Amy Johnson Way, Clifton Moor, YORK, YO3 4UZ

Farming and Wildlife Advisory Group
Racecourse Lane, Northallerton, North Yorkshire, DL7 8BR.
E-mail: northyorks@fwag.org.uk

Forestry Commission
Wheldrake Lane, Crockey Hill, York, North Yorkshire, YO19 4FF
Phone: 01904 448778

The Limestone Pavement Action Group
c/o Cumbria Wildlife Trust
Plumgarths, Crook Road, Kendal, Cumbria, LA8 8LX.
Phone: 01539 816300
Fax: 01539 816301
E-mail: info@cumbriawildlifetrust.org.uk

The Mammal Society
2b Inworth Street, London SW11 3EP.
Telephone: 020 7350 2200
Fax: 020 7350 2211
E-mail: enquiries@mammal.org.uk

North and East Yorkshire Ecological Data Centre (NEYEDC)
5 College Street, York, YO1 7JF.
Telephone: 01904 557235
Fax: 01904 557236
E-mail: info@neyedc.co.uk

North Yorkshire Bat Group
3 Victoria Row, Eppleby, Richmond, North Yorkshire, DL11 7BE
Tel. 01325 718133
E-mail: mail@drewettj.freeserve.co.uk

North Yorkshire County Council
Heritage Team, Countryside Services, County Hall, Northallerton, North Yorkshire, DL7 8AH.
Telephone: 01609 780780.
Fax: 01609 532558.
E-mail: ecology@northyorks.gov.uk

Oxford Bee Company Ltd
Ark Business Centre, Gordon Road, Loughborough, LE11 1JP.
Tel 01509 261654
Fax 01509 643465
E-mail: info@oxbeeco.com

Plantlife International
14 Rollestone Street, Salisbury,Wiltshire, SP1 1DX
Tel: 01722 342730
Fax: 01722 329035
E-mail:enquiries@plantlife.org.uk
www.plantlife.org.uk

The RSPB
The Lodge, Sandy, Bedfordshire, SG19 2DL
Tel: 01767 680551
E-mail: wildlife@rspb.org.uk

RDS Yorkshire and the Humber North Team, Defra Leeds,
Government Buildings, Otley Road, Lawnswood, Leeds, LS16 5QT.
Tel: 0113 230 3789
Fax: 0113 230 3963
General enquiries E-mail address:
enquiries.yorkshumber@defra.gsi.gov.uk
or Robert.Goodison@defra.gov.gsi.uk.

Scarborough Borough Council,
Town Hall, St. Nicholas Street, Scarborough, YO11 2HG.
Tel: 01723 232323
E-mail: Forward.planning@scarborough.gov.uk

Scarborough Otter Conservation Group
E-mail: post@scarboroughotters.org.uk

The Vincent Wildlife Trust
3&4 Bronsil Courtyard, Eastnor, Ledbury, Herefordshire, HR8 1EP.
Phone: 01531 636441
Fax: 01531 636442
E-mail: vwt@vwt.org.uk

Water for Wildlife (formerly Yorkshire Otters and Rivers Project).
Hollybush Conservation Centre, Broad Lane, Kirkstall, Leeds, West Yorkshire,
LS5 3BP.
E-mail: yorksotters@cix.co.uk
The Wildlife Trusts
The Kiln, Waterside, Mather Road, Newark, Nottinghamshire, NG24 1WT.
Telephone: 08700 367711
Fax: 08700 360101

The Woodland Trust
Autumn Park, Grantham, Lincolnshire, NG31 6LL.
Tel: 01476 581111
Fax: 01476 590808

Yorkshire Naturalists' Union
Mr J A Newbould, Stonecroft, 3 Brookmead Close, Sutton Poyntz,
Weymouth, Dorset, DT3 6RS.
E-mail: janewbould@aol.com

Yorkshire Wildlife Trust
10 Toft Green, York, YO1 6JT.
Telephone: 01904 659570
E-mail: yorkshirewt@cix.co.uk

Appendix 8:

Scientific Names of Species in Text

English name	Scientific name
Mammals	
American mink	*Mustela lutreola*
Badger	*Meles meles*
Bank vole	*Clethrionomys glareolus*
Blue whale	*Balaenoptera musculus*
Brandt's bat	*Myotis brandtii*
Brown hare	*Lepus europaeus*
Brown long-eared bat	*Plecotus auritus*
Brown rat	*Rattus norvegicus*
Common pipistrelle bat	*Pipistrellus pipistrellus*
Daubenton's bat	*Myotis daubentonii*
Field vole	*Microtus agrestis*
Harbour porpoise	*Phocoena phocoena*
Harvest mouse	*Micromys minutus*
Hedgehog	*Erinaceus europaeus*
Leisler's bat	*Nyctalus leisleri*
Natterer's bat	*Myotis natteri*
Noctule bat	*Nyctalus noctula*
Otter	*Lutra lutra*
Rabbit	*Oryctolagus cuniculus*
Soprano pipistrelle bat	*Pipistrellus pygmaeus*
Stoat	*Mustela erminea*
Water vole	*Arvicola terrestris*
Whiskered bat	*Myotis mystacinus*

Birds	
Barn owl	*Tyto alba*
Blackbird	*Turdus merula*
Bullfinch	*Pyrrhul pyrrhula*
Cormorant	*Phalacrocorax carbo*
Corn bunting	*Miliaria calandra*
Curlew	*Numenius arquata*
Goosander	*Mergus merganser*
Grey heron	*Ardea cinerea*
Grey partridge	*Perdix perdix*
House martin	*Delichon urbica*
House sparrow	*Passer domesticus*
Kestrel	*Falco tinnunculus*
Kingfisher	*Alcedo atthis*
Lapwing	*Vanellus vanellus*
Linnet	*Carduelis cannabina*
Marsh tit	*Parus palustris*
Peregrine	*Falco peregrinus*
Redshank	*Tringa totanus*
Reed bunting	*Emberiza schoeniclus*
Reed warbler	*Acrocephalus scirpacues*
Skylark	*Alauda arvensis*
Snipe	*Gallinago gallinago*
Song thrush	*Muscicapa striata*
Spotted flycatcher	*Turdus philomelos*
Swallow	*Hirundo rustica*
Swift	*Apus apus*
Tree sparrow	*Passer montanus*
Turtle dove	*Streptopelia turtur*
Willow tit	*Parus montanus*
Woodcock	*Scolopax rusticola*
Yellowhammer	*Emberiza citrinella*

Reptiles	
Adder	*Vipera berus*
Common lizard	*Lacerta vivipara*
Grass snake	*Natrix natrix*
Sand lizard	*Lacerta agilis*
Slow worm	*Anguis fragilis*
Smooth snake	*Coronella austriaca*

Amphibians	
Common frog	*Rana temporaria*
Common toad	*Bufo bufo*
Great crested newt	*Triturus cristatus*
Palmate newt	*Triturus helveticus*
Smooth newt	*Triturus vulagris*

Fishes	
Atlantic salmon	*Salmo salar*
Brook lamprey	*Lampetra planeri*
Brown trout	*Lampetra planeri*
Bullhead	*Cottus gobio*
Carp	*Cyprinus carpio*
Chub	*Leuciscus cephalus*
Common Bream	*Abramis brama*
Dace	*Leuciscus leuciscus*
Goldfish	*Carassius auratus*
Grayling	*Thymallus thymallus*
River lamprey	*Lampetra fluviatilis*
Roach	*Rutilus rutilus*
Sea lamprey	*Petromyzon marinus*
Sea trout	*Salmo trutta*

Crustaceans	
Signal crayfish	*Pacifastacus leniusculus*
Narrow-clawed crayfish	*Astacus leptodactylus*
Noble crayfish	*Astacus astacus*
Red swamp crayfish	*Procambarus clarkii*
Spiny-cheek crayfish	*Oronectes limosus*
White-clawed crayfish	*Austropotamobius pallipes*

Invertebrates	
A ground beetle	*Dromius sigma*
A beetle	*Enochorus melanocephalus*
Bumble bee spp	*Bombus spp*
Chimney sweeper moth	*Adezia atrata*
Comma butterfly	*Polygonia c-album*
Golden-shelled slug	*Testacella*
Glutinous snail	*Myxas glutinosa*
Mason bee	*Osmia rufa*
Small amber snail	*Succinea oblonga*

Vascular plants	
Alder	*Alnus glutinosa*
Alder buckthorn	*Frangula alnus*
Annual sea blite	*Suaeda maritima*
Ash	*Fraxinus excelsior*
Aspen	*Populus tremula*
Australian stonecrop	*Crassula helmsii*
Autumn gentian	*Gentianella amarella*
Baneberry	*Actaea spicata*
Beech	*Fagus sylvatica*
Betony	*Stachys officinalis*
Bilberry	*Vaccinium myrtillus*
Blackthorn	*Prunus spinosa*
Bladderwort	*Utricularia vulagris*
Bluebell	*Hyacinthoides non-scriptus*
Bloody cranesbill	*Geranium sanguineum*
Bird's-foot trefoil	*Lotus corniculatus*
Bogbean	*Menyanthes trifoliata*
Bracken	*Pteridium aquilinum*
Bell heather	*Erica cinerea*

Vascular plants (Contd)	
Bithynian vetch	*Vicia bithynica*
Bramble	*Rubus fruticosus agg*
Broad-leaved cotton grass	*Eriophorum latifolium*
Broad-leaved helleborine	*Epipactis helleborine*
Common bent	*Agrostis capliiaris*
Buckler fern	*Dryopteris dilatata*
Buckthorn	*Rhamnus cathartica*
Canadian pondweed	*Elodea canadensis*
Catsear	*Hypochaeris radicata*
Chickweed wintergreen	*Trientalis europaea*
Clary	*Salvia verbendca*
Cocksfoot	*Dactylis glomerata*
Common Butterwort	*Pinguicula vulgaris*
Common chickweed	*Stellaria media*
Common knapweed	*Centaurea nigra*
Common lady's mantle	*Alchemilla vulgaris*
Common meadow rue	*Thalictrum flavum*
Common ragwort	*Senecio jacobaea*
Common reed	*Phragmites australis*
Common rigid hornwort	*Ceratophyllum demersum*
Common rock-rose	*Helianthemum nummularium*
Common sea lavender	*Limonium vulgare*
Common scurvygrass	*Cochlearia officinalis*
Common water crowfoot	*Ranunculus aquatilis*
Creeping bent	*Agrostis stolonifera*
Crested dog's-tail	*Cynosurus cristatus*
Dog's mercury	*Mercurialis perennis*
Dog violet	*Viola riviniana*
Dogwood	*Cornus sanguinea*
Downy birch	*Betula pubescens*
Dyer's greenweed	*Genista tinctoria*
Early purple orchid	*Orchis mascula*
English elm	*Ulmus procera*
English oak	*Quercus robur*
European lime	*Tilia x europaea*
False oat grass	*Arrhenatherum elatius*
False fox sedge	*Carex otrubae*
Field maple	*Acer capestre*

Field wood-rush	*Luzula sylvatica*
Floating pennywort	*Hydrocotyle ranunculoides*
Giant bellflower	*Campanula latifolia*
Giant hogweed	*Heracleum mantegazzianum*
Goldilocks buttercup	*Ranunculus auricomus*
Gorse	*Ulex europaeus*
Great burnet	*Sanguisorba officinalis*
Greater spearwort	*Ranunculus lingua*
Great water dock	*Rumex hydrolapathum*
Grass of Parnassus	*Parnassia palustris*
Great tussock sedge	*Carex paniculata*
Green-winged orchid	*Anacamptis morio*
Ground elder	*Aegopodium podagraria*
Groundsell	*Senecio vulgaris*
Guelder-rose	*Viburum opulus*
Hairy rock-cress	*Arabis hirsuta*
Hard fern	*Blechnum spicant*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Heath bedstraw	*Galium saxatile*
Heath milkwort	*Polygala serpyllifolia*
Heath speedwell	*Veronica officinalis*
Heather	*Calluna vuilgaris*
Hemlock water dropwort	*Oenanthe crocata*
Herb Paris	*Paris quadrifolia*
Himalayan balsam	*Impatiens glandulifera*
Hogweed	*Heracleum sphondylium*
Holly	*Ilex aquifolium*
Honeysuckle	*Lonicera periclymenum*
Japanese knotweed	*Polygonum cuspidatum*
Kidney vetch	*Anthyllis vulnereria*
Lady's bedstraw	*Galium verum*
Lesser stitchwort	*Stellaria graminea*
Lousewort	*Pedicularis sylvatica*
Lyme grass	*Lymus arenarius*
Marsh hawkbeard	*Crepis paludosa*
Marsh cinquefoil	*Potentilla palustris*
Marsh marigold	*Caltha palustris*
Marsh pennywort	*Hydrocotyle vulagris*

Vascular plants (Contd)	
Marsh valerian	*Valeriana dioica*
May lily	*Malanthemum bifolium*
Meadow foxtail	*Alopecurus pratensis*
Montbretia spp	*Crocosmia spp*
Northern downy rose	*Rosa mollis*
Parsley water dropwort	*Oenanthe lachenalii*
Pepper saxifrage	*Silaum silaus*
Pignut	*Conopodium majus*
Pondweed spp	*Potomogeton spp*
Primrose	*Primula vulgaris*
Purple milk vetch	*Astragalus danicus*
Purple moor grass	*Molinia caerulea*
Ragged robin	*Lychnis flos-cuculi*
Red fescue	*Festuca rubra*
Reed canary grass	*Phalaris arundinacea*
Rest-harrow	*Ononis repens*
Ribwort plantain	*Plantago lanceolata*
River water crowfoot	*Ranunculus fluitans*
Rowan	*Sorbus aucuparia*
Rhododendron	*Rhododendron ponticum*
Salad burnet	*Sanguisorba minor*
Sallow	*Salix atrocinerea*
Saw-wort	*Serratula tinctoria*
Scentless mayweed	*Tripleurospermum inodorum*
Sea aster	*Aster tripolium*
Sea club-rush	*Bolboschoenus maritimus*
Sea couch	*Elytrigia atherica*
Sea plantain	*Plantago maritima*
Sea purslane	*Atriplex portulacoides*
Sea rush	*Jancus maritimus*
Sedge spp	*Carex spp*
Sessile oak	*Quercus petrae*
Shasta daisy	*Leucanthemum vulgare x superbum*
Sheep's fescue	*Festuca ovina*
Sheep's sorrel	*Rumex acetosella*
Silver birch	*Betula verrucosa*
Spotted medick	*Medicago orabica*
Spurge-laurel	*Daphne laureola*

Stinging nettle	*Urtica dioica*
Sweet vernal grass	*Anthoxanthum odoratum*
Tor grass	*Brachypodium rupestre*
Tormentil	*Potentilla erecta*
Tubular water dropwort	*Oenanthe fistulosa*
Unbranched bur-reed	*Sparganium emersum*
Wavy-hair grass	*Deschampsia flexuosa*
Water avens	*Geum rivale*
Watercress	*Roripa nasturtium-aquaticum*
Water milfoil spp	*Myriophyllum spp*
Water plantain	*Alisma plantago-aquatica*
Water speedwell	*Veronica anagallis-aquatica*
Water violet	*Hottonia palustris*
Wild cherry	*Prunus avium*
Wild thyme	*Thymus drurei*
Willow spp	*Salix spp*
Wood anemone	*Anemone nemorosa*
Wood sage	*Teucrium scorodonia*
Wood spurge	*Euphorbia amygdaloides*
Wych elm	*Ulmus glabra*
Yellow flag iris	*Iris pseudacorus*
Yellow wort	*Blackstonia perfoliata*
Yorkshire fog	*Holcus lanatus*

Lower plants	
Sphagnum moss spp	*Sphagnum spp*
Wall rue fern	*Asplenium ruta-muraria*
Water fern	*Azolla filiculoides*

Fungi	
Alder root disease	*Phytophera spp*
Crayfish plague	*Aphanomyces astaci*
Sudden oak death	*Phytophera spp*

Appendix 9: Schedule of Responses to Public Consultation

Ref. No.	Consultee	Comments Made	Suggested Response
1.	BAP Steering Group	Document considered lengthy and technical with many actions and targets which will be difficult to achieve. Suggestions made to split BAP into two sections: (1) the BAP with general text known as the action plan (2) technical appendices with actions and targets known the action programme. In addition Active targets that are likely to be acted upon in the current year should be selected from the action programme and entered onto the BARS system.	Agreed. This makes for a simpler and more 'public friendly' main document with the actions and targets retained in a Technical Document. The targets and actions become more manageable as the Steering Group will select a limited number to be entered or taken out of BARS on a regular basis. The split of the document is explained fully in the BAP introduction.
2.	North Yorkshire County Council	Possible need for stronger links between BAP and SINC's. Add to 'Introduction'.	Paragraph added and reference to table in Appendices.
3.	As above	Enclosed list of UKBAP species that occur in Borough. These need to be included at some point, probably 'Introduction'.	Paragraph added to 'Introduction'.
4.	As above	Should look at 'costing' the Action Plans.	Will be entered into BARS.
5.	Head of Engineering and Procurement.	Recommendations are fine. Harbour Master will deliver issues relating to Harbour Porpoise.	Support noted.
6.	English Nature	English names of plants and animals should be in lower case.	Noted but not agreed. BAP is for general public and upper case allows easier recognition of species.
7.	As above	Would be useful to include scientific names of all species.	Included in Appendix as intention is to keep main document readable for public.
8.	As above	Should include a map with all the SSSI's and SINC's marked on.	Already in Local Plan and on English Nature Web-site. Reference added explaining this.
9.	As above	Various comments and alterations within HAP's and SAP's.	Noted and amended as appropriate.
10.	Whitby Naturalist Club	Please alter 'Whitby Field Naturalists' to 'Whitby Naturalist Club'.	Amended.
11.	The Barn Owl Trust	Suggested amendments to 'Species in Buildings' HAP.	Amended.
12.	As above	Please remove 'The Barn Owl Trust' from responsibilities column. We are a small charity organisation based in Devon and cannot offer practical involvement.	Noted.
13.	As above	Suggests that development control guidance is drawn up for the provision of Barn Owl nesting.	Added as an action.

Ref. No.	Consultee	Comments Made	Suggested Response
14.	As above	Missed opportunity not including a Barn Owl Species Action Plan.	Barn Owls are adequately covered under the Species in Buildings Action Plan. Have to limit the number of HAP's and SAP's. Possibly re-evaluate at review.
15.	Buglife	More emphasis needed on invertebrates in Coastal Cliff/Slope Mosaics HAP, although I understand information is limited. Should mention Red Data Book and BAP invertebrates.	Extra information on invertebrates added.
16.	As above.	Suggest alterations to 'Threats' section of above HAP. It is contradictory.	Re-worded.
17.	Highways Agency	Nothing that warrants concern and pleased to see sustainability is promoted.	Support noted.
18.	North Yorkshire Bat Group	Unsure why only Common Pipistrelle has been added to Species in Buildings HAP. All bats with exception of Daubenton's and Natterer's may be found roosting in buildings	Agreed, bats removed from Species in Buildings except reference to Bats SAP.
19.	As above	Suggested alterations to Actions on Species in Buildings HAP.	Noted and amended as appropriate.
20.	As above	Suggested alterations to Bats SAP.	Noted and amended as appropriate.
21.	Jane Mee (SBC Museums and Gallery Officer)	Geology requires a mention in 'Why is bio important?' Section.	Decided previously not to include this as will be in Geo-diversity Action Plan.
22.	As above	Need reference to raising public awareness in 'Why does Scarborough need one?'.	Noted.
23.	As above	Mention Whitby Museum in info and data section and add bullet suggesting voucher material should be lodged with Scarborough Museum and Gallery for reference purposes.	Whitby Museum added. Voucher reference not required as public would not understand reference and specialists already submit vouchers to relevant body.
24.	As above	General public info should be in a shorter document targeted at non-specialist audience.	Noted and to be looked at, at a later date. Resources and time prevents doing so prior to formal adoption of BAP.
25.	Burniston Parish Council	Hoped that BAP could be used as SPG, or if not, in an advisory capacity for future planning applications. Also aspects of BAP should be incorporated into new Local Plan.	Noted.
26.	North and East Yorkshire Ecological Data Centre	Suggested minor alterations to spelling, grammar, etc.	Noted.
27.	Environment Agency	Suggested alterations to Rivers and Streams HAP, Water Vole and Otter SAPs.	Noted and amended as appropriate.

Ref. No.	Consultee	Comments Made	Suggested Response
28.	Throxenby Mere Angling Club	Geese have caused serious damage to Throxenby Mere. Mink is also a widespread problem and are regularly taking small birds and mammals. The Otter population has increased in this area. More needs to be done to educate the public on the environment.	Noted.
29.	As above	Proposed Throxenby Mere Management Plan appears to have no consultation/input from Angling Club.	Though not a responsible partner Angling Club should be consulted upon during any plan making.
30.	East Riding Council	No objections	Noted.
31.	North York Moors National Park Authority	Welcomed. Should mention Saltburn to Bridlington Natural Area.	Agreed and information on English Natures Natural Area designations.
32.	Newby and Scalby Parish Council	Support the plan and state it provides a useful reference when considering future planning applications.	Support noted.
33.	Shona Turnbull (resident and Hull Biodiversity Co-ordinator)	Have an executive summary.	Short summary added to introduction. Not possible to cut down entire BAP to executive summary and remain meaningful.
34.	As above	Should produce a shortened version for public.	See response for 24.
35.	As above	Costings for each action would be useful.	Agreed but see response for 4.
36.	As above	Clearer definition between UK BAP and Scarborough targets in tables required. Currently a little ambiguous.	Agreed and altered.
37.	As above	Various comments and suggestions on main text.	Noted and amended as appropriate.
38.	Yorkshire Wildlife Trust	Suggested alterations and additions to HAPs and SAPs.	Noted and amended/added to as appropriate.
39.	Scalby Beck Angling Club	Photographs and information submitted.	Received with thanks.


Adopted by the Scarborough Biodiversity Steering Group and Scarborough Borough Council in April 2005

Scarborough Biodiversity Action Plan

Local Actions and Targets

Scarborough Biodiversity Action Group

ENGLISH NATURE

North Yorkshire County Council

Adopted by the Scarborough Biodiversity Steering Group and Scarborough Borough Council in April 2005.

Contents

The Scarborough BAP Action Programme.

Introduction

This document is the second part of the Scarborough BAP programme.

The complete BAP consists of the following two parts:

Part 1. The Action Plan. This gives our objectives for the priority habitats and species in Scarborough and provides information on current status and reasons for decline.

Part 2. The Action Programme (Technical Appendices). This gives the UK BAP targets (if any) and a table of quantifiable targets and actions to be delivered locally. These tables do not form part of the published BAP but are available on request. They provide a broad menu of targets and actions that will be initiated when opportunities, funding and partner leadership is identified.

In addition the Steering Group will select **Active targets**. These are targets and their actions, which have been or are likely to be initiated in the current twelve-month reporting period. Each 'live' target and action will be input into the on-line Biodiversity Action Reporting System (BARS). The BARS software has been designed so that it can automatically communicate with the partners that have agreed action delivery, to prompt them to report progress.

The Action Programme provides a menu of targets and actions for each priority, which if implemented, will make progress towards the objectives set out in each action plan. The BAP Steering Group will meet annually to review progress and to add new targets and actions or delete obsolete ones. Actions where partners, funding and a delivery mechanism have been identified will become active and be entered into BARS.

The Habitat Action Plans:

Targets and Actions

Woodland Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Maintain the total extent (50,000-70,000 ha) and distribution of Wet Woodlands.
- ✓ Maintain the current area (currently estimated at 24,000-30,000 ha) of ancient semi-natural Wet Woodlands.
- ✓ Achieve favourable condition over 50% of the total resource of Wet Woodlands by 2010.

(*Note: Lowland Ash Woodlands and Lowland Oak Woodlands are not National BAP priority habitats, although Wet Woodland is.)

No.	Long Term Targets	Target Goals
Woodland		
W-T1	Increase the area of semi-natural woodland through the planting of new sites.	Create 15ha.
W-T2	Encourage the management of woodlands for nature conservation, particularly small woodlands and/or degraded ancient woodland.	Enhance 25ha.
W-T3	Promote the Nature Conservation of woodlands through a woodland event.	Organise 1event.
W-T4	Increase the known resource of ancient woodland.	Survey 21 parish areas.

No.	Action	Link to Target No.	Action Goal	Responsibility
Woodland				
W-A1	Create new semi-natural woodland as part of the High Deepdale Community Woodland and on other sites within the Plan area.	W-T1	Create 15ha	SBC(Planning, Property Services, Parks & Countryside) FC/FWAG/Defra
W-A2	Work with owners to agree and implement management plans.	W-T2	Enhance 25 ha.	SBC(Planning, Property Services, Parks & Countryside) FC, FWAG, Defra
W-A3	Survey the Ancient Woodland resource	W-T4	Survey 4 parish areas.	NEYEDC
W-A4	To organise an annual woodland event at Raincliffe Woods.	W-T3	Deliver 1 woodland event per year.	SBC (Parks & Countryside)

Lowland Wood Pasture, Parkland/Ancient Trees Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Protect and maintain the current extent of 10,000 to 20,000 ha and the current distribution, in a favourable ecological condition.
- ✓ Initiate, in areas where there are derelict examples, a programme to restore 2,500 ha to favourable ecological condition by 2010.
- ✓ By 2002 initiate the expansion of 500 ha in appropriate areas to help reverse fragmentation and to educe the generation gap between veteran trees.

No.	Long Term Targets	Target Goals
Lowland Wood Pasture, Parkland/Ancient Trees		
LWP-T1	No net loss of current resource of Lowland Wood Pasture and Parkland.	Maintain quality and extent of 3 sites.
LWP-T2	Raise awareness of the importance of Lowland Wood Pasture and Parkland.	Maintain quality and extent of 1 site.
LWP-T3	Survey then promote and conserve the Ancient Tree resource.	Establish the extent of Ancient Trees in 21 parish areas.

No.	Action	Link to Target No.	Action Goal	Responsibility
Lowland Wood Pasture, Parkland/Ancient Trees				
LWP-A1	Undertake condition surveys of Lowland Wood Pasture and Parkland sites, subject to landowner permission, at Wydale, Wykeham and Ruswarp.	LWP-T1	Maintain quality and extent of Lowland Wood Pasture on 3 occupied sites.	SBC(Ecologist)
LWP-A2	Survey Lowland Wood Pasture and Parkland sites at Wydale, Wykeham and Ruswarp, for dead wood invertebrates.	LWP-T1	Maintain geographical range of 3 occupied sites for dead wood invertebrates.	SBC(Ecologist)
LWP-A3	Survey Lowland Wood Pasture and Parkland sites at Wydale, Wykeham and Ruswarp, for fungi of Ancient trees and associated pasture.	LWP-T1	Maintain geographical range of 3 occupied sites for dead wood and pasture fungi.	SBC(Ecologist)
LWP-A4	Give advice on management and grants for Lowland Wood Pasture and Parkland to interested parties, such as for sites at Wydale, Wykeham and Ruswarp through the Environmental Stewardship Scheme.	LWP-T1,2	Maintain quality and extent on 3 occupied sites.	SBC(Parks & Countryside), FWAG, Defra

No.	Action	Link to Target No.	Action Goal	Responsibility
Lowland Wood Pasture, Parkland/Ancient Trees (Contd)				
LWP-A5	Publish information promoting Lowland Wood Pasture and Parkland and Ancient Trees.	LWP-T2	Publish 1 article.	SBC(Ecologist)
LWP-A6	Survey the Ancient Tree Resource.	LWP-T3	To survey 4 parish areas.	NEYEDC

Ancient and/or Species-rich Hedgerows Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Halt the net loss of Species-rich Hedgerows through neglect and removal by the year 2000.
- ✓ Halt all loss of hedgerows which are both ancient and species-rich by 2005.
- ✓ Achieve favourable condition for 25% (c.47,500 km) of Species-rich and Ancient hedges by 2000.
- ✓ Achieve favourable condition for 50% (c.95,000 km) of Species-rich and Ancient hedges by 2005.
- ✓ Maintain the overall national number of individual hedgerow trees (estimated by CS2000 to be 1.8 million in Great Britain in 1998), by maintaining the number of such trees within each county or district, through ensuring a balanced age structure.

No.	Long Term Target	Target Goals
Ancient and/or Species Rich Hedgerows		
AH-T1	Increase our knowledge of the resource of species-rich hedges.	To establish extent in 21 parishes.
AH-T2	Increase the length of species-rich hedges.	Plant 5km.
AH-T3	Increase the known resource of hedgerow trees.	To establish extent in 21 parishes.
AH-T4	Increase the number of hedgerow trees.	Establish 200 trees.
AH-T5	Enhance existing species-poor hedges.	Increase the diversity to an average of at least 5 species of shrub per hedgerow for 5km of hedgerow.
AH-T6	Promote awareness of the value of hedges and their management through leaflets, etc.	Deliver 1 leaflet.

No.	Action	Link to Target No.	Action Goal	Responsibility
Ancient and/or Species Rich Hedgerows				
AH-A1	Provide advice to landowners on hedgerow creation and management.	AH-T2,4,5,6	Advise 50 landowners	SBC(Parks & Countryside), Defra, FWAG, YWT
AH-A2	Establish additional native hedgerow trees.	AH-T4	Plant and/or establish 200 native trees.	Defra, FWAG, SBC(Parks & Countryside)
AH-A3	Establish new hedgerows, each hedge comprising of at least 5 native species.	AH-T2	Plant 5kms.	Defra, FWAG, SBC(Parks & Countryside)
AH-A4	Enrich existing species poor hedges of existing hedgerow to increase diversity to at least 5 native species.	AH-T2,5	Gap up 5km.	Defra, FWAG, SBC(Parks & Countryside)

No.	Action	Link to Target No.	Action Goal	Responsibility
Ancient and/or Species Rich Hedgerows (Contd)				
AH-A5	Work with Agencies to produce hedgerow leaflets and other publications.	AH-T6	Deliver 1 hedgerow leaflet.	Defra, FWAG
AH-A6	Survey hedgerow tree resource using aerial photographs and ground truthing.	AH-T3	Survey 4 parishes.	NEYEDC
AH-A7	Survey the hedgerow resource.	AH-T1,2	Survey 4 parishes.	NEYEDC

Unimproved Neutral Grassland Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Arrest the depletion of Unimproved Lowland Meadow throughout the UK.
- ✓ Within SSSIs, initiate rehabilitation management for all significant stands of Unimproved Lowland Meadow in unfavourable condition by 2005.
- ✓ Wherever biologically feasible achieve favourable status of all significant stands of Unimproved Lowland Meadow within SSSIs by 2010
- ✓ For stands outside SSSIs, secure favourable condition over 30% of the resource by 2005.
- ✓ For stands outside SSSIs, wherever biologically feasible, secure favourable condition over 100% of the resource by 2015.
- ✓ Attempt to re-establish 500 ha of Lowland Meadow of wildlife value at carefully targeted sites by 2010.

No.	Long Term Targets	Target Goals
Unimproved Neutral Grassland		
UNG-T1	Maintain the quality and extent of Unimproved Neutral Grassland.	Maintain quality and extent of 125 ha.
UNG-T2	Increase the area of Old Meadows and Pastures neutral grassland by reseeding with appropriate seed of local provenance.	Create 5 ha.
UNG-T3	Increase the area of Wet Grassland and Flood Meadows by reseeding with appropriate seed of local provenance.	Create 5 ha.
UNG-T4	Restore semi-improved neutral grassland to favourable status.	Restore 10ha.
UNG-T5	Increase our knowledge of known populations of invertebrates in neutral grasslands.	Survey 21 parishes.

No.	Action	Link to Target No.	Action Goal	Responsibility
Unimproved Neutral Grassland				
UNG-A1	Encourage and promote grassland management and re-creation Old Meadows and Pastures, through the negotiation of management agreements and Environmental Stewardship.	UNG-T1,2,3,4	Create 5 ha. Restore 10 ha. Maintain 125 ha.	Defra, FWAG, SBC(Parks & Countryside, Ecologist)
UNG-A2	Map this habitat on cliff top & coastal slopes and assess the effects of coastal erosion on the neutral grassland resource and the feasibility of mitigation.	UNG-T1,2,3	Establish 1 study.	SBC(Ecologist), S.Pickles
UNG-A3	Survey the neutral grassland resource for invertebrates.	UNG-T5	Survey 4 parishes.	NEYEDC

No.	Action	Link to Target No.	Action Goal	Responsibility
Unimproved Neutral Grassland (Contd)				
UNG-A4	Create Wet Grassland and Flood Meadows at Star Carr.	UNG-T2,3	Create 5 ha.	SBC(P&C, Ecologist)

Calcareous Grasslands Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Arrest the depletion of Lowland Calcareous Grassland throughout the UK.
- ✓ Attempt to re-establish 1000 ha of Lowland Calcareous Grassland of wildlife value at carefully targeted sites by 2010.

No.	Long Term Target	Target Goals
Calcareous Grassland		
CG-T1	Maintain the quality and extent of unimproved Calcareous Grassland.	Maintain quality and extent of 66.8 ha.
CG-T2	Increase the area of Calcareous Grassland by reseeding with appropriate seed of local provenance.	Create 10 ha.
CG-T3	Restore semi-improved Calcareous Grassland to favourable status.	Restore 5 ha.
CG-T4	Increase our knowledge of populations of invertebrates in Calcareous Grasslands.	Survey 21 parishes.

No.	Action	Link to Target No.	Action Goal	Responsibility
Calcareous Grassland				
CG-A1	Encourage and promote grassland management and re-creation through the negotiation of management agreements and Environmental Stewardship.	CG-T1,2,3	Create 10 ha. Maintain 66.8 ha. Restore 5 ha.	Defra, FWAG, SBC(Parks & Countryside)
CG-A2	Surveys the calcareous grassland resource for invertebrates.	CG-T4	Survey 4 parishes.	NEYEDC

Acidic Grasslands Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Arrest the depletion of Lowland Acid Grassland throughout the UK.
- ✓ Attempt to re-establish 500 ha of Lowland Acid Grassland of wildlife value at carefully targeted sites by 2010.

No.	Long Term Targets	Target Goals
Acidic Grassland		
AG-T1	Maintain the quality and extent of unimproved acidic grassland.	Maintain quality and extent of 18 ha.
AG-T2	Restore semi-improved acidic grassland to favourable status.	Restore 5ha.
AG-T3	Increase our knowledge of populations of invertebrates in acidic grasslands.	Survey 21 parishes.

No.	Action	Link to Target No.	Action Goal	Responsibility
Acidic Grassland				
AG-A1	Encourage and promote grassland management and re-creation through the negotiation of management agreements and Environmental Stewardship.	AG-T1,2	Maintain 18 ha. Restore 5 ha.	Defra, FWAG, SBC(Parks & Countryside)
AG-A2	Survey the acidic grassland resource for invertebrates.	AG-T3	Survey 4 parishes.	NEYEDC

Wetlands Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Initiate restoration of priority Fen sites in critical need of rehabilitation by the year 2005.
- ✓ Ensure appropriate water quality and water quantity for the continued existence of all SSSI Fens by 2005

No.	Long Term Targets	Target Goals
Wetlands		
WET-T1	Protect quality and extent of the existing resource.	Protect quality and extent of 22.9 ha.
WET-T2	Increase the area of wetland.	Create 7 ha of wetland habitat.
WET-T3	Promote the importance of wetland habitat at Cayton and Flixton Carr.	Establish 1 wetland project.
WET-T4	Increase ~~known~~ our knowledge of the resource of wetlands.	Survey 21 parishes.

No.	Action	Link to Target No.	Action Goal	Responsibility
Wetlands				
WET-A1	Support the Cayton and Flixton Carr Project.	WET-A1,2,3	Appoint 1 Wetland Officer for the Vale of Pickering.	SBC, EN, RSPB, EA
WET-A2	Create new wetland habitat as part of Cayton and Flixton Carr Project.	WET-T2,3	Create 5 ha of wetland within the Vale of Pickering.	SBC(Wetland Project Officer)
WET-A3	Encourage and promote wetland enhancement and re-creation through the negotiation of management agreements and Environmental Stewardship, particularly in the Vale of Pickering.	WET-T1,2,3	Create 2 ha. Maintain 22.9 ha.	Defra, SBC(Wetland Project Officer), FWAG
WET-A4	Survey the wetland resource.	WET-T4	To survey 4 parishes.	NEYEDC, SBC(Ecologist)

Open Water Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Maintain the condition of all important sites currently judged as in favourable condition.
- ✓ By 2005 initiate action to restore to favourable condition (typical plant and animal communities present) other important sites that have been damaged by human activity.
- ✓ Ensure that no further deterioration occurs in the water quality and wildlife of the remaining sites.

No.	Long Term Targets	Target Goals
Open Water		
OW-T1	Increase the number of Open water sites targeted for biodiversity gain (including lakes, wildlife ponds and scrapes), while not affecting existing areas of high nature conservation value.	Create 20 sites.
OW-T2	Prepare and implement management plans for key Open water sites, including Scarborough Mere, Throxenby Mere and Burton Riggs ponds.	Enhance quality of 3 sites.
OW-T3	Eradicate Floating pennywort from Throxenby Mere.	Maintain quality of 1 site.
OW-T4	Notify Burton Riggs as a LNR.	Deliver 1 LNR.
OW-T5	Increase our knowledge of Ponds and their wildlife value.	To establish the extent and value of Ponds in 21 Parishes.
OW-T6	Increase our knowledge of Ditches and their wildlife value.	To establish the extent and value of Ditches in 21 Parishes.

No.	Action	Link to Target No.	Action Goal	Responsibility
Open Water				
OW-A1	Create Open water sites, in addition to those in the Great crested newt SAP.	O-T1	Create 20 sites.	Defra, FWAG, SBC(Parks & Countryside)
OW-A2	Liaise as appropriate and prepare site management plans for Scarborough Mere, Throxenby Mere and Burton Riggs.	O-T2	Maintain and enhance 3 sites.	SBC(Ecologist), NYCC, YWT(Burton Riggs)
OW-A3	Undertake practical tasks to eradicate Floating Pennywort from Throxenby Mere.	O-T3	Enhance 1 site.	SBC(Parks & Countryside), Throxenby Mere Angling Club

No.	Action	Link to Target No.	Action Goal	Responsibility
Open Water (Contd)				
OW-A4	Collate information, liaise with appropriate organisations and prepare Committee Report for the designation of Burton Riggs as a LNR.	O-T4	Protect 1 site.	NYCC
OW-A5	Survey the Pond resource and value.	O-T5	Survey 4 parishes.	NEYEDC
OW-A6	Survey the Ditch resource and value.	O-T6	Survey 4 parishes.	SBC(Ecologist)

Coastal Wetlands Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ There should be no further net loss (currently estimated at 100 ha/year) of Coastal Saltmarsh. This will involve the creation of 100 ha/year during the period of this plan
- ✓ Create a further 40 ha of Coastal Saltmarsh in each year of the plan to replace the 600 ha lost between 1992 and 1998, based on current estimates
- ✓ Maintain the quality of the existing resource in terms of community and species diversity
- ✓ Maintain the existing extent and quality of Coastal and Floodplain Grazing Marsh (300,000ha).

No.	Long Term Targets	Target Goals
Coastal Wetlands		
CW-T1	To maintain the extent and quality of Coastal Saltmarsh.	Maintain the extent of 0.1ha.
CW-T2	To maintain the extent and quality of Coastal Grazing Marsh.	Maintain and extent of 1ha.
CW-T3	To raise the status of Coastal Saltmarsh to one of favourable wildlife status.	Enhance quality of 0.1ha.
CW-T4	To raise the status of Coastal Grazing Marsh to one of favourable wildlife status.	Enhance quality 1ha.

No.	Action	Link to Target No.	Action Goal	Responsibility
Coastal Wetlands				
CW-A1	Liaise with landowners and prepare a management plan, for the Coastal Saltmarsh site at California Beck Whitby.	CW-T1, T3	Enhance quality of 0.1ha.	SBC(Ecologist, Property Services)
CW-A2	Liaise with landowners and prepare a management plan, for the Ruswarp Coastal Grazing Marsh.	CW-T2, T4	Enhance quality of 2ha.	SBC(Ecologist)
CW-A3	Engage with landowners and land managers and offer management and grant advice – for the site of the Ruswarp Coastal Grazing Marsh.	CW-T4	Enhance quality of 2ha.	Defra, FWAG, SBC(Ecologist)

Coastal Cliff Mosaics Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Seek to maintain the existing maritime cliff resource of cliff-top and slope habitat, of about 4000 km
- ✓ Maintain wherever possible free functioning of coastal physical processes acting on maritime cliff and slope habitats
- ✓ Retain the amount of maritime cliff and slope habitats unaffected by coastal defence and other engineering works
- ✓ Where possible increase the amount of maritime cliff and slope habitats unaffected by coastal defence and other engineering works
- ✓ Increase the area of cliff-top semi-natural habitats by at least 500 ha over the next 20 years
- ✓ Improve by appropriate management the quality of at least 30% of the maritime cliff and slope habitats, including cliff-top vegetation, by 2010
- ✓ Improve by appropriate management the quality of as much as possible of the remaining maritime cliff and slope habitats, including cliff-top vegetation, by 2015

No.	Long Term Targets	Target Goals
Coastal Cliff Mosaics		
CC-T1	Establish at least 20 metre deep semi natural vegetation on the cliff top.	Establish 5kms.
CC-T2	Promote the value of buffer strips along the cliff top, not only for nature conservation but to help reduce erosion and improve the recreational resource.	Support 1 Heritage Coast Project.

No.	Action	Link to Target No.	Action Goal	Responsibility
Coastal Cliff Mosaics				
CC-A1	Assess the effects of coastal erosion on the resource and the feasibility of mitigation.	CC-T1	Establish 1 study.	S.Pickles
CC-A2	Encourage and promote natural habitat re-creation through the negotiation of management agreements and Environmental Stewardship.	CC-T1,2	Establish 5 agreements on clifftop sites. Create 2 ha.	Defra, FWAG, SBC(Parks & Countryside), Heritage Coast Group, Bourne Leisure
CC-A3	Continue to support the Heritage Coast Project.	CC-T2	Part fund 1 Heritage Coast Project.	SBC(Planning

Rivers and Streams Objectives, Targets and Actions.

Rivers and Streams is not currently a UK BAP priority habitat.

No.	Long Term Targets	Target Goals
Rivers and Streams		
RS-T1	To maintain river, stream and ditch habitat in a favourable condition for wildlife.	Enhance quality of 10 km of ditch.
RS-T2	To return rivers and streams to their natural ecological status by removing or bypassing barriers to fish migration.	Increase geographical range of migratory fish, by 1 population/occupied site.

No.	Action	Link to Target No.	Action Goal	Responsibility
Rivers and Streams				
RS-A1	Work with appropriate agencies and landowners in order to install fish passes on Scalby Beck, necessary for the migration of fishes.	RS-T1,2	Increase the geographical range of 1 population for each of: Atlantic Salmon, Brown Trout, Sea Trout, River Lamprey, Sea Lamprey, Brook Lamprey, Grayling.	EA, Scalby Beck Angling Club
RS-A2	Manage ditches to a high nature conservation standard during engineering and maintenance operations.	RS-T1	Enhance quality of 10 km of ditch.	SBC(Ecologist)

Species in Buildings Objectives, Targets and Actions.

Species in Buildings is not currently a UK BAP priority habitat.

No.	Long Term Targets	Target Goals
Species in Buildings		
SB-T1	Increase the distribution of Barn Owl.	Increase the geographical range of the Barn Owl by 2 occupied 10km squares.
SB-T2	Increase the populations of any local priority species, which utilises buildings.	Increase population size of 7 species by 25 Breeding pairs.

No.	Action	Link to Target No.	Action Goal	Responsibility
Species in Buildings				
SB-A1	Raise awareness of, and promote the use of, buildings for local priority species. Use the media and make direct contact with appropriate businesses (architects, engineers, farmers, etc) and liaise with SBC development control officers.	SB-T1,2	Increase population size by 10 breeding pairs of the following: Swift, Swallow, House Martin.	SBC(Ecologist)
SB-A2	Draw up a code of practice for Scarborough Borough Council housing and building maintenance officers, to encourage the provision of nesting locations for Swift.	SB-T2	Deliver 1 code of practice.	SBC(Ecologist)
SB-A3	Draw up a development control guidance note on the provision of Swift nesting locations for appropriate new build and refurbishment developments.	SB-T2	Deliver 1 guidance note.	SBC(Ecologist, Planning)
SB-A4	Draw up a development control guidance note on the provision of Barn Owl nesting locations for appropriate new build and conversions/renovation developments. Erect Barn Owl nest boxes at suitable locations.	SB-T1	Increase population distribution by 2 10km^2.	Defra, FWAG
SB-A5	Encourage house builders or building contractors to install Swift bricks.	SB-T1	Deliver 10 advice notes.	SBC(Ecologist)

The Species Action Plans:

Targets and Actions

Water Vole Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ Maintain the current distribution in order to arrest the decline of the species in Britain.
- ✓ Maintain the current abundance in order to arrest the decline of the species in Britain.
- ✓ Restore water voles to their former widespread distribution, using the Vincent Wildlife Trust Survey of 1989/90 as a baseline, by the year 2015.

No.	Long Term Targets	Target Goals
Water Vole		
WV-T1	Determine the current distribution and abundance of Water Vole and American Mink in Scarborough District.	1 database.
WV-T2	Protect all known Water Vole colonies and their habitat and take into account in all relevant planning applications.	Maintain range.
WV-T3	Increase the number of watercourses that are favourable for Water Vole through habitat expansion, creation and management, in order to increase populations and to encourage spread into neighbouring areas.	Increase geographical range by 5 occupied sites.
WV-T4	Promote best practice in riparian and wetland management to benefit Water Voles.	1 training day.
WV-T5	Protect existing Water Vole populations from American Mink.	Maintain 3 populations.

No.	Action	Link to Target No.	Action Goal	Responsibility
Water Vole				
WV-A1	Provide advice to planners to ensure Water Voles are given consideration in all relevant developments.	WV-T2,3	Deliver 1 workshop	EN
WV-A2	In reviewing Environmental Stewardship Scheme targets ensure they identify key habitats for Water Voles and include incentives for wetland habitat enhancement.	WV-T2,3	1 consultation.	Defra, RDS YWT
WV-A3	For sites with viable Water Vole colonies, work with landowners to agree management plans to protect sites and undertake enhancement work along 2km of adjacent watercourse, to allow population expansion.	WV-T2,3	Enhance quality of 2 sites.	YWT, EA, Defra, M&YIDB
WV-A4	Promote best practice in water vole conservation by disseminating information packs and giving advice on EES, to land managers, IDBs and developers.	WV-T1,2,3,4,5	Disseminate 1 advice pack.	YWT, EA, FWAG, Defra

No.	Action	Link to Target No.	Action Goal	Responsibility
Water Vole (Contd)				
WV-A5	Liaise with relevant professionals to ensure Water Voles are not destroyed or disturbed as part of pest control programmes.	WT-T2	1 meeting, advice pack `or training day.	SBC(Ecologist)
WV-A6	Identify areas where American Mink are present and where Water Vole populations are threatened by their presence, and work with landowners and relevant agencies to trap American Mink.	WV-T1, T2, T5	Maintain geographical range of 5 occupied sites.	YWT, EA
WV-A7	Carry out survey work to determine population status of Water Vole. Monitor existing sites.	WV-T1, T2	Survey 10 potential water courses and colonies.	YWT, EA, SBC(Ecologist)
WV-A8	Promote Water Vole conservation to the public.	WV-T1, T2	Deliver 1 leaflet.	EA, YWT, SBC(Ecologist)

Otter Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ To maintain and expand existing Otter populations.
- ✓ To restore breeding Otters to all catchments and coastal areas where they have been recorded since 1960, by 2010.

No.	Long Term Targets	Target Goals
Otter		
O-T1	Increase our knowledge of the population of the Otter.	Identify 10 breeding areas.
O-T2	Increase the geographical range of the Otter.	Increase geographical range by 2 occupied sites.

No.	Action	Link to Target No.	Action Goal	Responsibility
Otter				
O-A1	Survey and locate breeding areas.	O-T1	Identify 10 breeding areas.	NEYEDC, SOCG, YWT
O-A2	Removal of 1 un-authorised BMX track at Scalby Beck.	O-T2	Maintain geographical range of 1 occupied site.	EA, SBC(Property Services)
O-A3	Raise awareness of Otters with local landowners and angling clubs.	O-T1	Deliver 1 article.	SOCG, FWAG
O-A4	Research into provision of suitable Otter habitat and mitigation measures for Starr Carr project.	O-T2	Increase population size by 1 occupied site.	SBC(Wetland Project Officer)
O-A5	Promote the creation artificial Otter holts.	O-T2	Increase geographical range by 1 occupied site.	Defra, FWAG, SOCG, YWT
O-A6	Monitor activity on coastal streams.	O-T1	Survey 5 coastal streams.	SOCG
O-A7	Identify and record highway ‘black spots’.	O-T2	1 database.	SOCG
O-A8	Improve highway ‘black spots’ for Otters through liaison and implementation of engineering schemes.	O-T2	Remove 1 ‘black spot’.	SOCG, NYCC, SBC(Ecologist)

Bats Objectives, Targets and Actions.

The UK BAP Objectives are:

The UK action plan has specific Actions and Objectives on a number of the bat species including, Pipistrelle, Barbastelle, Bechstein's, Greater Mouse-Eared, Greater Horseshoe and Lesser Horseshoe. Whilst all have individual targets the common theme is the maintaining of existing numbers and/or ranges and the expanding of populations into new geographical areas.

No.	Long Term Targets	Target Goals
Bats		
B-T1	Increase our knowledge of the populations and range of all species of Bat.	Establish the extent of Bat populations in 21 parishes.
B-T2	Promote the nature conservation value of Bats to specialist staff (e.g. architects, engineers, etc).	Organise 1 promotional advice note.
B-T3	Promote the nature conservation of Bats to the public and landowners.	Organise 1 promotional event.
B-T4	Ensure that bat surveys are carried out on all Council properties prior to building work.	Undertake 20 surveys.
B-T5	Increase the number of Bat roosts.	Create 1 roost site.

No.	Action	Link to Target No.	Action Goal	Responsibility
Bats				
B-A1	Survey for Bats.	B-T1	Survey 4 parishes.	NYBG
B-A2	Promote participation in the National Bat Monitoring Programme to householders.	B-T1	Survey 4 parishes.	NYBG
B-A3	Promote the importance and management of mature trees for roosting bats, to arboriculturalists, contractors and council staff.	B-T2	Deliver 1 guidance note.	NYBG, SBC(Ecologist)
B-A4	Organise the production of a media article on the nature conservation importance of Bats.	B-T3	Deliver 1 guidance note.	SBC (Ecologist), NYBG
B-A5	Survey buildings and bridges for Bats prior to building work and then protect any Bat interest.	B-T4	Undertake 20 surveys.	NYBG, NYCC, SBC(Ecologist)

No.	Action	Link to Target No.	Action Goal	Responsibility
Bats				
B-A6	Encourage the construction of Bat roosts in engineering/building projects, through development control advice and mitigation.	B-T5	Create 1 roost site.	NYBG, NYCC, SBC(Ecologist)

Harbour Porpoise Objectives, Targets and Actions.

The UK BAP Objectives for Harbour Porpoise are:

- ✓ Maintain the current geographical range of the Harbour Porpoise.
- ✓ Maintain the current abundance of the Harbour Porpoise.
- ✓ In the long-term ensure that no anthropogenic factors inhibit a return to waters that it previously occupied.

No.	Long Term Targets	Target Goals
Harbour Porpoise		
HP-T1	Monitor status of the Harbour Porpoise.	Prepare 1 database.
HP-T2	Promote conservation issues relating to the Harbour Porpoise	Deliver 2 articles

No.	Action	Link to Target No.	Action Goal	Responsibility
Harbour Porpoise				
HP-A1	Encourage the reporting of sightings of the Harbour Porpoise.	HP-T1	Maintain 1 database.	SBC(Ecologist), SBC(Harbour Master) NEYEDC
HP-A2	Develop a local code of good practice to reduce disturbance from recreational water users.	HP-T2	Deliver 1 code of practice.	SBC(Harbour Master)

Tree and House Sparrow Objectives, Targets and Actions.

The UK BAP Objectives for Tree Sparrow are:

✓ To reverse the decline in numbers by the year 2003, then see a sustained recovery so numbers are 50% higher than 1996 and a measurable increase in range is achieved by 2008.

(* Note: the above relates only to Tree Sparrows as House Sparrows are not currently a UK BAP priority species)

No.	Long Term Targets	Target Goals
Tree and House Sparrow		
THS-T1	Increase knowledge of the population of the Tree Sparrow.	To establish extent of population within 21 parishes.
THS-T3	Increase distribution and population size of Tree Sparrow.	Increase geographical range by 10 occupied 10km squares.
THS-T2	Increase knowledge of the population of the House Sparrow.	To establish extent of population within 21 parishes.
THS-T4	Increase distribution and population size of House Sparrow.	Increase geographical range by 10 occupied 10km squares.

No.	Action	Link to Target No.	Action Goal	Responsibility
Tree and House Sparrow				
THS-A1	Organise and Survey for Tree and House Sparrows and collect existing records.	THS-T1,3	Organise 1 public survey.	NYCC, NEYEDC
THS-A3	Encourage the nestbox programme at Filey Dams Local YWT Nature Reserve.	THS-T2	Increase population size of Tree Sparrow by 50 breeding pairs (all actions).	SBC(Ecologist)
THS-A4	Identify a suitable site with a Tree Sparrow presence, liaise with landowner and set up a Tree Sparrow nest box scheme.	THS-T2	Increase breeding pairs of Tree Sparrow by 50 breeding pairs (all actions).	SBC(Ecologist)
THS-A5	Encourage farmers to establish winter feeding stations (using corn tailings) for finches, which will benefit Tree Sparrow and House Sparrow.	THS-T2,4	Increase population size of Tree Sparrow by 50 breeding pairs (all actions) and House Sparrow by 50 breeding pairs (all actions).	RSPB, Defra, FWAG, SBC(Ecologist)
THS-A6	Promote the use of House Sparrow nesting boxes in towns and villages.	THS-T4	Increase population of House Sparrow by 50 breeding pairs (all actions).	SBC(Ecologist)

Reptiles Objectives, Targets and Actions.

The commoner reptiles are not currently a UK BAP priority species.

No.	Long Term Targets	Target Goals
Reptiles		
R-T1	Increase our knowledge of the resource of all species.	Survey 21 parishes.
R-T2	Promote reptile conservation.	Organise 1 promotional event.

No.	Action	Link to Target No.	Action Goal	Responsibility
Reptiles				
R-A1	Collate and analyse all existing reptile records.	R-T1	Create 1 database.	NEYEDC
R-A2	Organise ongoing survey work to identify sites that support reptiles.	R-T1	Survey 4 parishes.	NEYEDC, SFNATS
R-A3	Organise 1 promotional event.	R-T2	Deliver 1 promotional event.	NEYEDC
R-A4	Ensure reptiles are considered in development proposals.	R-T2	Maintain geographical range of 1 population.	SBC(Ecologist, Planning)
R-A5	If found, ensure that reptile sites are managed appropriately.	R-T2	Enhance quality of 1 site.	Defra, FWAG, SBC(Parks & Countryside)

Great Crested Newt Objectives, Targets and Actions.

The UK BAP Objectives are:

- ✓ 100 re-colonisations to offset losses, including new ponds to offset losses due to neglect.
- ✓ Prevent site loss through development.
- ✓ Restore populations to 100 unoccupied sites each year 1998 to 2002, creating new ponds.
- ✓ Maintain the range, distribution and viability of existing populations.

No.	Long Term Targets	Target Goals
Great Crested Newts		
GCN-T1	Increase our knowledge of populations of the Great Crested Newt.	Survey 21 parishes.
GCN-T2	Maintain the current geographical range.	Maintain geographical range for 5 populations/occupied sites.
GCN-T3	Create new Great Crested Newt habitat.	Create 1 ha of terrestrial land including 10 ponds.

No.	Action	Link to Target No.	Action Goal	Responsibility
Great Crested Newts				
GCN-A1	Survey for Great Crested Newts.	GCN-T1,2	Survey 4 parishes.	NEYEDC, SBC(Ecologist), EN
GCN-A2	Identify appropriate areas for pond habitat creation that would give maximum benefit to consolidating or increasing the range of populations of Great Crested Newt. Encourage landowners to create ponds and manage adjacent terrestrial habitat in these areas. Ponds should be fish-free and suitable for great Crested Newt colonisation. NB: These ponds should be in addition to those created under the Open Water HAP.	GCN-T2,3	Maintain geographical range of the Great Crested Newt for 5 populations/occupied sites. Create 1 ha of terrestrial land including 10 ponds.	Defra, FWAG, SBC(Ecologist)

White-clawed Crayfish Objectives, Targets and Actions.

The UK BAP Objectives for White-clawed Crayfish are:
To maintain the present geographical distribution of this species.

No.	Long Term Targets	Target Goals
White-clawed Crayfish		
WC-T1	Maintain geographical range of White-clawed Crayfish.	Maintain geographical range of 10 populations / occupied sites.
WC-T2	Promote conservation issues concerning White-clawed Crayfish.	Maintain geographical range of 10 populations / occupied sites.
WC-T3	Prevent the spreading of Crayfish plague, during the stocking of waterbodies with fish for angling purposes.	Maintain geographical range of 10 populations / occupied sites.

No.	Action	Link to Target No.	Action Goal	Responsibility
White-clawed Crayfish				
WC-A1	Sites holding populations of White-clawed Crayfish to be run through the SINC process.	WC-T1,2	Designate 5 SINCs.	NYCC
WC-A2	Liaise with landholders of Scalby Beck, and the Scalby Beck Angling Club, and agree a management plan for the Beck, which will safeguard existing populations of native crayfish.	WC-T1,2	Maintain geographical range of 1 population / occupied site.	EA
WC-A3	Liaise with landholders and angling clubs of key sites and agree management plans.	WC-T1,2	Maintain geographical range of populations / occupied sites.	EA
WC-A4	Liaise with all local angling clubs, to ensure that the risks of transmitting Crayfish plague via angling and fish stocking activities are minimised.	WC-T1,2,3	Deliver 1 advice note.	EA
WC-A5	Undertake targeted surveys for White-clawed Crayfish and identify key sites for targeted liaison and the formation of management plans.	WC-T1,2,3	Survey 10 sites.	EA, NEYEDC
WC-A6	Prepare and disseminate advice on White-clawed Crayfish conservation, including statutory requirements, to appropriate parties.	WC-T1,2,3	Deliver 1 advice note.	EA

Golden-shelled Slug Objectives, Targets and Actions.

Golden-shelled Slug is not currently a UK BAP priority species.

No.	Long Term Targets	Target Goals
Golden-shelled Slug		
GS-T1	Maintain geographical range of Golden-shelled Slug.	Maintain geographical range of Golden-shelled Slug at 2 populations/occupied sites.
GS-T2	Increase our knowledge of the species.	Survey 21 parishes.

No.	Action	Link to Target No.	Action Goal	Responsibility
Golden-shelled Slug				
GS-A1	Re-survey all old site records in the Scarborough area.	GS-T1,2	Survey 1 parish.	SFNats
GS-A2	Survey potential new sites in the Scarborough area.	GS-T1,2	Survey 1 parish.	SFNats
GS-A3	Raise awareness amongst Scarborough BC parks staff regarding the habitat and ecological requirements of Golden-shelled Slug. Encourage officers to search for and report the Slug.	GS-T1,2	Increase known geographical range of Golden-shelled Slug by 2 populations/occupied sites.	SBC(Ecologist)
GS-A4	Raise public awareness of the presence of Golden-shelled Slug. Encourage reporting of new sites.	GS-T1,2	1 presentation.	SBC (Ecologist)
GS-A5	For any public parks found to contain the species, negotiate the non-use of slug pellets by SBC staff.	GS-T1	1 colonised park to be free of slug pellets use.	SBC (Ecologist, Parks & Countryside)

Water Violet Objectives, Targets and Actions.

Water Violet is not currently a UK BAP priority species.

No.	Five Year Target	Target Goals
Water Violet		
WV-T1	Increase our knowledge of the population and extent of Water Violet in the Vale of Pickering.	Establish extent 10km of ditch.
WV-T2	Increase the size of the natural population.	Increase the length of ditch with Water Violet in by 500m.
WV-T3	Increase the distribution of Water Violet.	Increase the number of sites that water Violet occurs to 5.

No.	Action	Link to Target No.	Action Goal	Responsibility
Water Violet				
WV-A1	Survey the extent of Water Violet at Cayton/Folkton.	WV-T1,2	Survey 2 kms of ditch at Cayton/Folkton.	SBC(Wetland Project Officer), SFNats
WV-A2	Survey for the presence of Water Violet in the Vale of Pickering.	WV-T1,2,3	Survey 8 kms of ditch.	SBC(Wetland Project Officer), SFNats
WV-A3	Establish new locations for Water Violet within the Vale of Pickering.	WV-T3	Establish 3 new locations for Water Violet.	SBC(Wetland Project Officer), SFNats

Rare Flowers Objectives, Targets and Actions.

The Rare Flowers contained within this Action Plan are not currently UK BAP priority species.

No.	Five Year Target	Target Goals
Rare Flowers		
RF-T1	Monitor the known resource to establish the extent and distribution of all rare flowers populations at their known localities and survey suitable sites.	Prepare 1 database.
RF-T2	Maintain or increase the size of the existing populations where species are threatened and where conditions are appropriate.	Maintain 5 of the rare flower populations and increase the number of plants in 5 of the rare flower populations by 5.
RF-T3	Increase the distribution of each species where this is appropriate.	1 new site for each rare flower population.

No.	Action	Link to Target No.	Action Goal	Responsibility
Rare Flowers				
RF-A1	Survey all known sites to determine the number and/or extent of each species.	RF-T1	Survey 10 sites.	SBC(Ecologist), NEYEDC, SFNats
RF-A2	Survey sites considered potentially suitable and confirm the presence or absence of rare flowers.	RF-T1	Survey 10 sites.	SBC(Ecologist), NEYEDC, SFNats
RF-A3	Liaise with landowners and seek to manage existing sites.	RF-T2	10 management agreements.	SBC(Ecologist)
RF-A4	Identify suitable areas or sites for extending rare flower populations.	RF-T2, T3	Identify 10 sites.	SBC(Ecologist)
RF-A5	For appropriate species, collect seed from Scarborough sources (or if not available then seed of Yorkshire provenance) and propagate.	RF-T2, T3	Propagate 10 species.	SBC(Ecologist)
RF-A6	Plant propagated plants at identified sites.	RF-T2, T3	Establish 1 new site of 10 plants for each extant species and 2 sites of 10 plants for each extinct species.	SBC(Ecologist)