

HARROGATE DISTRICT Biodiversity Action Plan

adopted December 2012



Biodiversity action partners:



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Preface

The Harrogate district is very fortunate in being able to boast such a high quality and diverse natural environment. Its wealth of wildlife: plant and animal species and their habitats and ecosystems (in short, its biodiversity) is of central importance to life in Harrogate district. Moorlands, wetlands and woodlands store carbon which helps to offset climate change and they help to regulate the water cycle which provides clean drinking water and helps control flooding. Productive agriculture is dependent on healthy ecosystems to maintain the fertility of its soils. Wildlife is a crucial element of the natural beauty which draws so many visitors to the district and plays a crucial part in our local economy. Finally access to green open spaces with wildflowers, trees and birdsong is a part of the quality of everyone's life and contributes to people's feelings of health and well-being.

However, wildlife is under threat - internationally, nationally, regionally and locally. As well as the decline of rare species, many once common species are becoming scarce; even skylarks and house sparrows. Loss of habitat and its fragmentation through agricultural intensification and development, pollution and the invasion of alien species are major threats. Action to reverse the decline of biodiversity needs to be taken at all levels from the global to the local.

The Biodiversity Action Partnership has identified key habitats and species within the district which are contained within the individual Habitat and Species Action Plans. These plans set out the importance of the species and habitats in the district, identify their local status, threats to them and opportunities to assist their recovery. Finally the Action Programme draws together the targets and actions which the partners are committed to undertake to help to reverse these declines locally.

The plan is a 'live' document so you can monitor our progress in achieving its actions and targets via the website at

www.harrogate.gov.uk/plan/Pages/Biodiversity-Harrogate.aspx

The council and the Partnership are committed to the Action Plan but its implementation is dependent on the support and involvement of local people and organisations. Everyone can play a part from householders, schools and businesses getting involved in wildlife friendly gardening or volunteering to help to manage a local open space as a wildlife habitat; to landowners signing up to Environmental Stewardship schemes. Support the Biodiversity Action Plan and help to make Harrogate district a haven for wildlife.



A handwritten signature in black ink, appearing to read "Alan Skidmore". The signature is written in a cursive style with a long horizontal line underneath.

Councillor Alan Skidmore

Cabinet Member for Planning Transport and Economic Development

1. Introduction

1.1 Caring for our district's wildlife

If keeping Harrogate district 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, more common wildlife species and habitats are important too. Around our towns, villages and homes wildlife contributes to the quality of our lives.

In the UK, the destruction of the countryside and the loss of wildlife has been such that a rich and healthy natural environment is no longer guaranteed. For example, 98 per cent of wildflower meadows and over two million skylarks have been lost in less than a lifetime. We need to halt these declines and, where we can, put back what has been lost - not just in protected areas or nature reserves, but in the wider countryside too. Neither the scale of the task nor the urgency of required action should be underestimated.

1.2 What is biodiversity?

The term 'biodiversity' was coined at the Rio Earth Summit in 1992. It comes from 'biological diversity' and means the whole variety of life within the natural world, which both surrounds and sustains us. This also includes us. It is not just rare species of animal and plant life but covers the entire spectrum of life. Biodiversity includes not only all species of plants and animals, but also their genetic variation, and the complex ecosystems of which they are all part.

1.4 Why is biodiversity important?

Biodiversity is vital to life and, in its simplest terms, enables life to exist on the earth. It provides the air we breathe,

the food we eat and many of the materials we use and medicines we take. These are all linked together in a complex web with every plant and animal having its own small part to play.

1.5 The need to conserve biodiversity

The world is losing biodiversity at an increasing rate, mainly as a result of human activity. The UK alone lost 100 species in the twentieth century, with many more species and habitats in danger. On a world scale, the rate of loss is now recognised to be a cause for serious concern, requiring international action. Loss of biodiversity impacts upon mankind in a number of ways:

- Ecosystems - natural systems provide our basic life-support structures. These provide our soil, food and oxygen.
- The natural world provides pollution control, for example forests to fix carbon, and flood control, for example lakes and marshes to absorb floodwater.
- Products - almost all of our food, fuel, medicines, cosmetics and construction materials are a product of biodiversity.
- Quality of life - the natural world offers enjoyment, health benefits, spiritual enrichment, learning, cultural diversity and artistic inspiration.
- Economic development - thousands of jobs rely on our natural environment, including agriculture and eco-tourism.
- Knowledge - the pursuit of scientific discoveries, inspired by the natural world.

2. The Policy Background to Biodiversity Conservation

2.1 The international framework

As a result of the Rio Earth Summit, many countries signed the Biodiversity Convention and agreed to take action to arrest the loss of biodiversity on a worldwide scale. In 2001 the European Union, with backing from the UK Government, undertook to 'Halt the loss of biodiversity by 2010' and this was endorsed by the United Nations (UN) in 2002. At the Nagoya Biodiversity Summit in 2010, new targets were set by the UN's Convention on Biological Diversity for the next ten years, to address the continued loss of biodiversity across the planet.

2.2 The UK Biodiversity Action Plan (UK BAP)

Subsequent to the Rio Summit, the UK Government pledged to take action, and as a result the UK BAP was published in 1994. The UK BAP is the UK's initiative to maintain and enhance biodiversity. Through this plan, the Government committed itself to a process designed to conserve and enhance:

- The range and numbers of wildlife species and the quality and extent of wildlife habitats.

- Species and habitats that are internationally important or characteristic of local areas.
- Species and habitats that have declined significantly over recent decades.

In 2002, 'Working with the Grain of Nature: A biodiversity strategy for England' set out a program to ensure that biodiversity became 'a natural consideration of policies and decisions and in society as a whole' including in the management of agriculture, water, woodland and in urban areas. See: <http://www.defra.gov.uk/publications/2011/03/29/pb7718-biodiversity/>

The 2010 target to 'halt the loss of Biodiversity' was not achieved, as although downward trends in a significant number of UKBAP habitats and species were reversed (e.g. otters, reedbeds), a much larger portion of them were still in decline. This was further emphasised by the 2010 Review, Making Space for Nature (<http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>), which found that nature in England is highly fragmented and unable to respond effectively to new pressures, such as climate and population change.

This led to the production in 2011 of the Natural Environment White Paper 'The Natural Choice' (<http://www.defra.gov.uk/environment/natural/whitepaper/>), the first white paper on the environment in 20 years. This outlines the Government's vision for the natural environment over the next 50 years, including a move to biodiversity delivery at landscape scale, rather than concentrating on individual species and habitats.

Building on this, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' (<http://www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-110817.pdf>) was produced in 2011, and sets out the strategic direction for biodiversity policy for the next decade on land (including rivers and lakes) and at sea.

2.3 Biodiversity duty on public bodies

Following on from 'Working with the Grain of Nature', the Natural Environment and Rural Communities Act 2006 places responsibilities onto public bodies to maintain biodiversity through Sections 40 and 41. Section 40 states 'Every public body must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. Areas where local authorities should conserve biodiversity include:

- Local policies, strategies and biodiversity
- Planning, infrastructure and development
- Management of local authority controlled land and buildings
- Education, advice and awareness

Government has produced guidance for local authorities on this duty which is available at: www.defra.gov.uk

Section 41 includes all the UK BAP priority habitats and species as part of this duty. This is the first specific statutory duty placed upon local authorities with regard to maintenance of specific habitats and species.

2.4 Conserving Biodiversity in the UK

In October 2007, the UK Government set out its strategic framework for the conservation of biodiversity in the document 'Conserving Biodiversity in the UK'. Within the integrating framework of an Ecosystem Approach, a series of guiding principles will be adopted to work towards the delivery of biodiversity objectives by putting sustained effort into the following six priorities:

- protecting the best sites for wildlife;
- targeting action on priority species and habitats;
- embedding proper consideration of biodiversity and ecosystem services in all relevant sectors of policy and decision-making;
- engaging people, and encouraging behaviour change;
- developing and interpreting the evidence base; and
- ensuring that the UK plays a proactive role in influencing the development of Multilateral Environmental Agreements, and contributes fully to their domestic delivery.

One of the main mechanisms of achieving these priorities is the work of the statutory agencies:

- Natural England ensures sustainable stewardship of the land and sea by working with farmers and land managers, mainly by managing the agri-environment agreements (see the Farmland Guidance Note for more information)
- The Forestry Commission is responsible for the protection and expansion of Britain's forests and woodlands, both through managing Forestry Estates and administering the England Woodland Grant Scheme.
- The Environment Agency concentrates on enhancing the country's rivers, water bodies and associated habitats and species, including flood protection, pollution and implementation of the EU Water Framework Directive.

2.5 The 2007 UK BAP Review

In 2007 a review was undertaken of the UK BAP priority habitats and species. While some priority species no longer considered to be under threat were removed, many more species and several habitats were added to the lists, providing much more comprehensive coverage with 1,149 species and 65 habitats now being listed.

New Priority Habitats include: Ponds, Calaminarian Grasslands, Upland Flushes, Fens and Swamps, 'Open Mosaic Habitats on Previously Developed Land'.

New Priority Species include: Hedgehog, Brown Long-Eared Bat, Grass Snake, Adder, Toad, Lampreys, Curlew, Lapwing, Red Grouse, House Sparrow, Starling, Dinky Skipper, Small Heath. For the full list see: www.ukbap.org.uk/NewPriorityList.aspx

2.6 Regional biodiversity

The Yorkshire and Humberside Biodiversity Forum has produced a Regional Biodiversity Strategy which aims to integrate biodiversity into the wider policy agenda, by

identifying the positive role biodiversity should play in contributing to the economic, environmental and social development of the Region. This strategy identifies how this region will deliver its contribution towards implementing the England Biodiversity Strategy (<http://www.yhref.org.uk/pages/yhbf>).

2.7 Biodiversity across North Yorkshire

Local Biodiversity Action Plans (LBAPs) have been prepared and are starting to be implemented across the all the 7 North Yorkshire districts and 2 National Parks as well as throughout the wider Yorkshire and Humber Region. Work is ongoing at a sub-regional level, through the North Yorkshire Biodiversity Action Group led by NYCC, to identify wider habitat restoration priorities (see NY Biodiversity Opportunities Map in the appendices). It aims to co-ordinate sub-regional action for priority species and habitats and aim and to identify potential future funding mechanisms for landscape scale projects across LBAP boundaries.

The Sustainable Community Strategy (SCS) for North Yorkshire 2008/18 sets out the overarching strategic direction and long-term, sustainable vision for the economic, social and environmental well-being of North Yorkshire (www.nysp.org.uk/). Central Government has produced a single data list of targets regarding duties that all local authorities must report on. The target relating to biodiversity is to see an increasing number of Sites of Importance for Nature Conservation brought into favourable management (Single data list 160-01). These are sites of high biodiversity interest at a local level (see section 4.2 below)

2.8 Harrogate district Local BAP

The Government has recognised that biodiversity conservation will have to be delivered at a local level, so a suite of county and district plans, referred to as Local Biodiversity Action Plans (LBAPs) has been produced. The Harrogate district BAP is one such plan and links closely to neighbouring LBAPs.

These plans are being developed to help foster action for UK priority species and habitats at a local level, but also to determine and take action for wildlife of local importance.

The aim of the LBAP is 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 biodiversity and provide guidance on how to do this.
- raise local awareness of biodiversity and its importance; and set up effective monitoring systems.

The LBAP can help integrate biodiversity action into the decision-making of statutory and non-statutory bodies at a local level. For example, planners may use LBAPs as Supplementary Planning Documents, to influence planning decisions, both to avoid harming wildlife and to encourage the restoration of habitats through after-use conditions. Business and industry can use the BAP to identify wildlife priorities to be taken into account in their environmental management systems, such as ISO 2001. This is an audit that businesses can be accredited with, to demonstrate good environmental practice.

The preparation and use of the Harrogate Biodiversity Action Plan is an important process because, in addition to providing information, it identifies specific and positive actions that can be undertaken to conserve the district's biodiversity. The BAP also supports some basic approaches, such as:

- the precautionary principle.
- no net loss of habitat.
- like for like mitigation as a minimum requirement.
- protection of Sites of Importance for Nature Conservation (SINCs).
- the need for high quality ecological surveys.
- the need to work with the Local Records Centre on baseline data, monitoring and reporting .
- the importance of green space for quality of life.

The Harrogate district Biodiversity Partnership is already starting to implement the actions contained within the Plan and actions are recorded in the national Biodiversity Actions Recording System as they are achieved. There is a link from the HDBAP webpage to the BARS website, so progress in implementation can be tracked.

2.9 Harrogate district Biodiversity Action Group

Harrogate district Biodiversity Action Group (www.biodiversityaction.org.uk) works closely with the Biodiversity Action Plan Partnership. HDBAG acts as a task group to the Action for Environment Group (A4E), the Council's environmental forum, which is a thematic partner within the district's Strategic Partnership. HDBAG operates a Wildlife Friendly Garden Award Scheme and was instrumental in encouraging the Council to sign up to its Biodiversity Declaration (see Appendix)

2.10 Nidderdale AONB

The Nidderdale Area of Outstanding Natural Beauty (AONB) was designated in 1994. It covers about half of the Harrogate district and over 95 per cent of it lies within the district. It shares a common boundary with the Yorkshire Dales National Park immediately to the west. The primary purpose of the AONB designation is to conserve and enhance natural beauty and the legislation which provides for designation specifically recognises the role of flora and fauna in contributing towards that natural beauty.

The conservation of wildlife in AONBs is recognised as important in the National Planning Policy Framework. The AONB Management Plan aims to provide a framework for action by everyone with an interest in the AONB and addresses the need to manage change in the interests of maintaining natural beauty across a wide range of issues. Natural Environment is one of five themes addressed in the current plan (2009-2014).

The vision for the Natural environment is that "All nationally and internationally designated sites will be in favourable condition and being managed sustainably by farmers and landowners. Local biodiversity partnerships will be actively conserving priority habitats and species and the importance of the AONB's moorlands in programmes to combat climate change will be valued and widely understood across the region."

There are a range of policies and actions in the AONB Management Plan which complement those of the Harrogate district BAP. The AONB has recently instigated the Upper Nidderdale Landscape Partnership, which, working together with rural communities, including farmers and landowners, aims to restore heritage features like field barns, dry stone walls, hay meadows and ancient woodlands, deepen people's

understanding of the landscape, and create new opportunities for celebrating and enjoying Upper Nidderdale.

Details of the AONB Management Plan, including an extensive supporting evidence base and details of the Upper Nidderdale Landscape Partnership are available on the AONB website <http://www.nidderdaleaonb.org.uk/main.asp?page=0>

3. How does the BAP fit in with the Planning System?

3.1 National Guidance: The National Planning Policy Framework.

The planning process is a statutory process, which regulates and controls land use change. The Local Planning Authority, therefore, has a major role in conserving biodiversity, highlighted by central Government guidance in the National Planning Policy Framework (NPPF). The NPPF states that "the planning system should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, geological conservation interests and soils;
- Recognising the wider benefits of ecosystems services
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures

The NPPF clearly sets out the systematic approach that should be taken to biodiversity, through the application of the principles of the avoidance of harm, mitigation and compensation where harm is unavoidable, and provision of restoration and creation of habitats and species through planning gain.

The NPPF has a strong emphasis on replacing assets which have been previously lost, which is relevant to the LBAP target-setting process for restoration of key habitats and species. The guidance goes further, requiring local authorities and developers alike to maximise habitat creation opportunities for biodiversity through the planning process.

A Government Circular 'Biodiversity and geological conservation - statutory obligations and their impact within the planning system' (ODPM circular 06/2005) accompanies the NPPF. It relates planning to wider legislation that affects biodiversity including the Wildlife and Countryside Act, the Habitats Directive, the Countryside and Rights of Way Act and the Natural Environment and Rural Communities Act, all of which offer important safeguards to wildlife.

3.2 Harrogate district Local Plan (adopted February 2001, Selective Alteration 2004, Saved Policies 2007)

The Harrogate district Local Plan (HDLP) is in the process of being updated. Some of the policies have already been replaced by the Harrogate district Core Strategy (see below) or have been 'saved' until new development management policies and allocations are adopted. The following are Local Plan saved policies relevant to the BAP:

- Policy NC3 to protect local wildlife sites: Sites of Importance for Nature Conservation (SINCs) and Local Nature Reserves (LNRs)
- Policy NC4 to protect semi-natural habitats

The other nature conservation policies from the Local Plan have not been saved because they duplicate national policy and legislation and are therefore considered to be unnecessary.

On 6 April 2012, the Town and Country Planning (Local Planning) Regulations came in to effect. The regulations dispense with the Local Development Framework system (which has been in place since 2004), and instead move to a system of preparing Local Plans. A Local Plan is a document or a set of documents that set out how development in an area will be planned and managed over time. The Harrogate district Local Development Framework will now be called the Harrogate district Local Plan and will comprise the following Local Development Documents:

- The adopted Core Strategy Development Plan Document
- The Sites and Policies Development Plan Document

3.3 Harrogate district Core Strategy Development Plan Document (DPD) (adopted February 2009)

The Harrogate district Core Strategy sets out the planning strategy for the district up to 2021 (up to 2023/24 in terms of housing delivery). Policy EQ2 of the Core Strategy includes the following reference to the BAP: "The district's exceptionally high quality natural and built environment will be given a level of protection appropriate to its international, national and local importance. Priority measures to protect and enhance the district's natural and built environment include to: increase wildlife habitats and species in accordance with the district's Biodiversity Action Plan."

3.4 Harrogate district Sites and Policies DPD

The more detailed development management policies and site allocations that are needed to deliver the Core Strategy will be set out in the Harrogate district Sites and Policies DPD which is currently being prepared. Once adopted, the Sites and Policies DPD together with the Core Strategy will replace the Local Plan. Draft Policy EQ6, 'Area based natural assets', seeks to protect sites of biodiversity or geodiversity interest and to promote the preservation, restoration and recreation of priority habitats, species and ecological networks. Emerging policy IN2 'Green Infrastructure' promotes development that protects and enhances biodiversity, including BAP priority species and habitats.

3.5 Supplementary Planning Guidance

Supplementary Planning Guidance (SPG) (<http://www.harrogate.gov.uk/pages/harrogate-6419.aspx>) which supplements the Local Plan is still relevant during the transition phase to the Sites and Policies DPD. SPGs will eventually be replaced by updated Supplementary Planning Documents. Relevant SDG includes:

- Harrogate district Biodiversity Design Guide - provides advice on biodiversity in relation to development. (Somewhat in need of revision).
- Harrogate district Landscape Design Guide - provides advice on Landscape issues e.g. appropriate planting schemes using native species in relation to natural areas etc.
- Harrogate Landscape Character Assessment - provides detailed guidance on constraints and opportunities for development and enhancement within the 102 different Landscape Character Areas that have been identified throughout the district.

3.6 North Yorkshire Minerals and Waste Development Framework

Minerals restoration provides very important opportunities for biodiversity enhancement in the district. The North Yorkshire Minerals Local Plan 1997 includes a nature conservation policy and an aftercare policy. A Minerals and Waste Development Framework is currently being prepared to replace the Minerals Local Plan, which is expected to contain similar policies.

3.7 Planning Applications: Harrogate district Validation Criteria for Biodiversity

Since May 2008 most applicants have to fill in a questionnaire to ensure that protected and BAP priority species and habitats are taken account of in the planning process. If any of these are likely to be present, a survey will be required to establish their extent and any likely impacts should be mitigated or compensated for. Opportunities for enhancement may be sought (see http://www.harrogate.gov.uk/Documents/DS-P_BiodiversityProforma11_B.pdf).

4. Protected Sites

4.1 Internationally important sites (SPAs and SACs) and nationally important sites (SSSIs)

The best wildlife sites, internationally important Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) and nationally important Sites of Special Scientific Interest (SSSIs), are notified by Natural England, the Government's wildlife advisor with powers and duties to protect and enhance the natural heritage in England. SPAs are designated for their European level importance to birds, while SACs are designated for their internationally important habitats or for non-bird species. In Harrogate district much of its upland heathland and blanket bog is double designated SPA/SAC as part of a huge upland Natura 2000 site (the North Pennine Moors SPA/SAC). The only other SAC in the district is a Great crested newt breeding pond at Kirk Deighton. There are 25 (SSSIs) in the district. SPAs, SACs

and SSSIs are shown on the Natural England and associated web sites, for example: www.naturalengland.org.uk and www.magic.gov.uk. The latest 'condition assessments' for SSSIs is also available to be viewed on the Natural England website.

4.2 Local Sites

- a) Harrogate district Sites of Importance for Nature Conservation (SINCs). A SINC is a non-statutory designation, used to identify high quality wildlife sites in the County. Local authorities have a responsibility to take account of sites of substantive nature conservation. They are protected by 'saved' policy NC3 of the Harrogate district Local Plan and are afforded protection, in accordance with their district-wide importance, from development likely to have an adverse effect on them. Local Plan Policy NC3 is soon to be replaced by Policy EQ6 of the Sites and Policies DPD, which will confer a similar level of protection. Partnership working with

SINC owners is desirable to keep the sites in favourable condition for wildlife.

The ratification of SINC is based on meeting the criteria laid down in a set of objective guidelines developed by the North Yorkshire SINC Panel. These criteria are largely based on the British plant community categorization system known as the National Vegetation Classification (NVC)¹. However, criteria also exist for other groups such as birds and insects. There are currently over 100 SINC in the Harrogate district. The Harrogate district BAP encompasses the wider countryside of the entire district but recognises that SINC are important biological units which represent locally important 'biodiversity hot-spots'. SINC are shown on the Proposals Map, but they are not necessarily sites that have public access.

¹ The NVC is a well-established national system for scientifically assessing and assigning plant communities to habitat types. The NVC tables are published in a series of books covering all of the main habitat types and these have been used for setting the criteria for the designation of SINC sites. However, NVC codes have not been widely used in the Habitat Action Plans in an attempt to avoid making the Plan too scientific. Table 1, on page 8, shows the relationship between Harrogate BAP habitats, UK BAP priority habitats, SINC habitat definitions and the National Vegetation Classification.

Location of SINC can be viewed on the Proposals Map which is available at: <http://www.harrogate.gov.uk/pages/harrogate-6434.aspx> (n.b. the Local Plan, of which this data is part, is being superseded by the Harrogate district Sites and Policies DPD (see section 3.4 above) .

b) Local Nature Reserves in Harrogate district. Local Nature Reserves (LNRs) are for people and for wildlife and do have public access. There are currently five in Harrogate district: Rossett Ponds, Hookstone Woods and Birk Crag in Harrogate and Quarry Moor and Hell Wath in Ripon. A further LNR is under consideration at Rossett Acres in Harrogate.

5. How was Harrogate district BAP drawn up?

5.1 The Harrogate district BAP

North Yorkshire County Council (NYCC) and Harrogate Borough Council (HBC) have led the Harrogate BAP initiative, with support and funding from Natural England. The initial task was to set up a biodiversity partnership and steering group (Appendix 1). A wildlife audit covering known habitats and species formed the basis of the decisions made by the steering group on the selection of habitat and species priorities. Individual Habitat Action Plans and Species Action Plans were then drawn up.

The Harrogate district BAP covers the administrative boundary of the Harrogate district.

This is the first attempt at drawing together all the information that we have, assessing what needs the most attention and where we can contribute the most.

Although all species of wildlife are important, the BAP concentrates on priority habitats and species.

5.2 The Habitat and Species Action Plans

Individual Action Plans have been produced for fifteen habitats (including associated priority species). In addition there are six species and one grouped species (bats) action plan.

Each plan has been prepared by experts on the steering group and provides information on the current status, the reasons for decline, examines the national and regional response if appropriate and sets objectives, targets and actions which can be monitored over a five year period.

The Harrogate district BAP aims to achieve conservation through targets based upon protection, enhancement and re-creation:

- The key means of protecting habitats and species are by protecting the existing resource at sites, often using designations such as: Site of Special Scientific Interest

(SSSI), Site of Importance for Nature Conservation (SINC), Local Nature Reserve (LNR) and Nature Reserve (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.

5.3 Criteria for the selection of local Priority Habitats

In most cases, it is recognised that conservation of habitats will be the main mechanism for conservation of associated species and HAPs (Habitat Action Plans) form the majority of the plans, incorporating actions, where appropriate for their associated priority species. Priority habitats were selected by the steering group, based on the following criteria:

- Any habitat for which a UK BAP has been prepared that occurs in the Harrogate district (There may now be one or two gaps since the 2007 BAP Review designated new UK priority habitats and to date these have not yet been incorporated into the district's priority habitats)
- Any semi-natural habitat that occurs in the Harrogate district.
- Any habitat that is characteristic or locally distinctive of the Harrogate district.
- Any habitat that supports a priority species and occurs in the Harrogate district .

As a result of the adoption of the above criteria, Harrogate district Priority Habitats don't always exactly mirror the UK Priority Habitats. For example, Moorland Edge and Garden and Urban Wild-space do not appear as national BAP habitats but were considered as locally distinctive or important by the Partnership. The table below illustrates the relationship between UK Broad Habitats, UK Priority Habitats and Harrogate district Priority Habitats.

BAP broad habitat	UK BAP habitat	Harrogate district BAP Habitat
Bogs	Blanket Bog	Blanket Bog
Dwarf Shrub Heath	Upland Heathland	Upland Heathland Moorland Edge
Broadleaved, Mixed and Yew Woodland	Upland Oakwood Upland Mixed Ashwoods Wet Woodland Lowland Mixed Deciduous Woodland Traditional Orchards Wood-Pasture and Parkland	Woodland Wood-Pasture and Parkland
Inland Rock	Calaminarian Grasslands	Upland Calcareous and Calminarian (Metaliferous) Grasslands
Calcareous Grassland	Upland Calcareous Grassland Lowland Calcareous Grassland	Magnesian Limestone Grassland
Neutral Grassland	Upland Hay Meadows Lowland Meadows	Lowland Hay Meadows and Floodplain Pasture
Improved Grassland	Coastal and Floodplain Grazing Marsh	
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps Lowland Fens Reedbeds	Fen Reedbeds
Standing Open Water and Canals	Oligotrophic and Dystrophic Lakes Ponds Mesotrophic Lakes Eutrophic Standing Waters	Standing Water
Rivers and Streams	Rivers	Flowing Water
Arable and Horticultural	Arable Field Margins	Arable Farmland
Boundary and Linear Features	Hedgerows	Hedgerows Gardens and Urban Wildspace
Inland Rock	Open Mosaic Habitats on Previously Developed Land Inland Rock Outcrop and Scree Habitats	

5.4 Criteria for the selection of local Priority Species included in HAPs

There are some hundred or so priority species (mostly UK BAP priority species) that have been identified as occurring in the district.

The majority of these species are briefly described and appropriate actions are incorporated within the relevant Habitat Action Plans for those habitats where they principally occur. These priority species were selected by the steering group, based on the following criteria:

- Any species (not including vagrants) that has recently occurred in Harrogate, and for which a UK BAP has been prepared. (Some widespread species which have been identified in the 2007 BAP Review primarily for research may not be included in the Harrogate district BAP)
- 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 Harrogate.
- Any species that has statutory protection under European Directives or the Wildlife and Countryside Act 1981 and has recently occurred in Harrogate.

- 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.

5.5 Species Action Plans

A small number of Species Action Plans have been prepared for the Harrogate district:

- otter,
- water vole,
- hen harrier,
- great crested newt,
- chestnut click beetle
- thistle broomrape
- bats (grouped SAP)

It was considered that, for these species, special considerations meant that they could not be effectively conserved solely through incorporation into the relevant habitat action plans or because of their special place within the planning system or because the species concerned are 'flagship species'. That is to say they are high profile charismatic species, the conservation of which will also, *inter alia*, promote the conservation of other, less well known species.

5.6 Guidance notes

Four guidance notes have been prepared, with conservation tips for Farmland, Gardens, Town Development and Invasive non-native species.

6. Next Steps

6.1 BAP co-ordination and implementation

The most important part of the BAP process, is the co-ordination and delivery of projects based around the published actions, to achieve the action plan targets. This will require a high level of commitment from the partners. The co-ordination of BAP projects will require a degree of fund raising to initiate local projects.

6.2 Baseline information

The steering group has identified a lack of baseline data for some of the priority habitats and species. Where baseline data is patchy or absent, a true picture has not been established and without addressing this, the task of monitoring progress against targets will be difficult. To assist in overcoming this problem it is hoped that a partnership will be set up between Harrogate Borough Council and the North and East Yorkshire Ecological Data Centre (NEYEDC) to hold relevant information and make it available for work involved with the BAP.

The NEYEDC has prepared species distribution maps for each priority species, based upon current data held by NEYEDC. Maps can be viewed on the North Yorkshire BAPs page of the website (NEYEDC3), with an on-line recording form to encourage members of the public to add to the database.

6.3 Survey and monitoring

The need for on-going survey work has been identified, to enable the biodiversity partnership to establish and monitor the status of both habitats and species. Although the Harrogate BAP sets out to monitor biodiversity gain, there is no mechanism for measuring and recording biodiversity losses.

6.4 Reporting

BAP progress requires monitoring and reporting to the public, the BAP Steering Group and to the UK BAP. This will form a large part of the work of the steering group. Targets and actions for the individual action plans have been written so that they fit the national Biodiversity Action Reporting System (BARS), which is the approved system for reporting (www.ukbap-reporting.org.uk).

6.5 Review

The BAP will need to be reviewed in the light of monitoring information. The plan will initially cover a period of five years. It is anticipated that the Action Program is likely to be subject to more regular review, in the light of changing circumstances and the progress which will have been made.

6.6 Advice

If required, advice and expertise is available from local organizations such as , Farming and Wildlife Advisory Group (FWAG), Linking Environment And Farming (LEAF), Forestry Commission (FC), Environment Agency (EA), Natural England(NE), Harrogate Borough Council (HBC) and North Yorkshire County Council (NYCC) amongst others (for contact details see Appendix 5)

6.7 Good practice

While the individual action plans have specific targets and actions, the following table gives a number of areas of good practice, for which we can all have regard.

Good Practice	Rationale
Reduced disturbance	Wild animals require freedom from disturbance, so that they can concentrate resources on breeding, feeding or resting. Care should be taken to minimise disturbance, for example, when exercising dogs close to a concentration of birds (at a roost or where ground-nesting birds may be present).
Resist picking fungi and flowers	Leave flowers for others to enjoy and so that they can set seeds and function as part of the food web. Picking and collecting can damage populations and for some species is an offence.
Environmental education	Support the teaching of natural history, which is poorly represented in the National Curriculum. Young people also need to become stakeholders in the BAP process - understanding and taking responsibility for wildlife.
Giving records to the Local Record Centre	The North and East Yorkshire Ecological Data Centre manages biological records for the region and welcomes data. See: www.neyedc.co.uk
Careful siting of habitat creation schemes	The creation of habitats, such as a pond or a wood, should not be undertaken until the site has been checked for existing wildlife interest. This ensures that a better habitat is not unintentionally lost.
Protection of migrating birds in southern Europe	Summer visitors, including the priority bird species spotted flycatcher and turtle dove, pass through the Mediterranean region where illegal bird shooting and trapping is a serious issue. Support could be given to organisations such as the RSPB who are fighting this.

6.8 Contacts

If you believe you have something to contribute, we would be pleased to hear from you. For more information please contact:

Biodiversity Officer
 Countryside Service
 North Yorkshire County Council
 County Hall
 Northallerton
 North Yorkshire
 DL7 8AH

Telephone: 01609 533240
 01609 780780
 E-Mail: ecologist@northyorks.gov.uk

or

Rural Strategy Officer
 Department of Development Services
 Harrogate Borough Council
 Knapping Mount, West Grove Road
 Harrogate
 North Yorkshire
 HG1 2AE

Telephone: 01423 556594
 E-mail: dan.mcandrew@harrogate.gov.uk

An introduction to biodiversity in the Harrogate district

The Harrogate district encompasses a great variety of wildlife habitats. Their distribution reflects the influence of the underlying geology and the topology of the area. However, their modification by human land management is an equally important influence. Harrogate district includes parts of four of Natural England's 'natural areas': 'The Yorkshire Dales', 'The Pennine Dales Fringe', 'The Southern Magnesian Limestone' and 'The Vale of York'. The sequence of these divisions runs roughly from the high ground of the eastern fringe of the Pennines in the west of the district to the lowlands of the Vale of York in the East. These natural areas are cut through by the major dales rivers, which run very broadly in a northwest to south-easterly direction. The following concise introduction to the biodiversity of the Harrogate district follows a broadly similar sequence.

The uplands surrounding Nidderdale and the Upper Washburn Valley comprise the south-eastern part of the Yorkshire Dales natural area. The highest land in the district, at almost 700m, is on the upper fells of Great Whenside. The hill tops and higher rolling moorland of the western fringes of the district are mostly covered with blanket bog, underlain by deep peat, derived primarily from Sphagnum moss. Other dominant components

of bog vegetation include cotton grass, bilberry and heather. Sundew and bog asphodel also occur. Cloudberry and crowberry occurs on the highest slopes. On those upland sites where sheep grazing predominates, over-grazing may occur and heather is lost. However, management for grouse shooting is the predominant land use. It maintains a mosaic of stands of heather at different ages, which incidentally creates habitats which are also beneficial for many other species of birds. However, too frequent burning may result in a lack of mature heather and a loss of sphagnum moss. This loss of sphagnum means that peat formation can no longer occur, bringing the long-term future of the blanket bog ecosystem into question.

Most of the eastern moorlands lie on an undulating plateau between 300-400m and comprise a dry acid heath underlain by thin soils over millstone grit. This is a man-made habitat, derived from the clearance of oak birch woodlands in the Neolithic period (c. 400 yrs BC). Today controlled burning and grazing maintain heather moor-land. It exists in mosaics with wetter heath, which is characterised by the presence of different species such as cross-leaved heath and purple moor grass. Wet flushes provide good habitat for invertebrates and birds such as waders and pipits. The sponge-like character of blanket bog and wet heath helps to prevent ecologically damaging spate-flooding of the dales rivers downstream. Since the war, moorland has frequently been drained by 'gripping'. Many moorland landowners now recognise the value of wetter areas as sources of insect food for red grouse chicks and many moorland managers are now working to block grips.

These uplands hold internationally important populations of birds such as golden plover, merlin, short-eared owl and hen harrier for which large areas are designated as Special Protection Areas, although some birds of prey especially the latter still suffer from illegal persecution. These habitats are also designated under European legislation as Special Areas of Conservation for their plant communities, which are virtually unique to northern Britain. Upland heaths are also important habitats for adders and common lizard.

Around Greenhow there are outcrops of carboniferous limestone, outliers of the huge Craven block of the Yorkshire Dales National Park. Here there are mosaics of Calcareous grassland interwoven with more acid soils and spoil-heaps from the lead-mining industry. This produces a distinctive flora of spoil-heap specialists such as alpine penny-cress, spring sandwort together with limestone plants such as mountain pansy and frog orchid. Natural tarns are scarce in the Harrogate district but ponds associated with lead mining or the water industry

form some of the best habitat for acid pool specialists such as the black darter dragonfly.

The rough grassland on the upland fringes below the moorland wall was traditionally the 'in-bye', the extent of which has fluctuated with the economic fortunes of farming. Upland marshy grassland and flushes are important for breeding waders such as curlew, redshank lapwing and snipe, although intensive drainage or over-dominance by soft rush can both threaten this habitat. Black grouse depend on a habitat mosaic of unimproved permanent pasture with adjacent heather and scrub woodland. The loss of black grouse as a breeding bird in Harrogate district is indicative of agricultural improvement of much of the moorland fringe in recent years by drainage, fertilization and reseeded with grass monocultures. It is to be hoped that the uptake of Environmental Stewardship Schemes will enable the moorland fringe to be farmed less intensively and that we may soon see the birds such as black grouse and twite return to the district as breeding birds

The streams and gills at the heads of the dales rivers dissect the uplands. Upland streams are important habitats for species such as the golden ringed dragonfly and the dipper. Many of these are gills are clothed in Upland Oak Woodland which is another national BAP priority habitat associated with the North and West of Britain. It is characterised by oak and birch with varying amounts of rowan, holly and hazel in the understorey. These woods hold birds such as pied flycatcher and wood warbler and have a rich fern and bryophyte ground layer. Woodland would have been the predominant vegetation cover much of the uplands prior to clearance from the Neolithic period onwards. Despite being heavily influenced by human management over the centuries, much of what remains is ancient semi-natural woodland. Some of this will have been continuously wooded since the end of the last ice-age. However, most of the best timber trees have since been removed and in

many instances, oak has been replaced by non-locally native broadleaves or alien conifers. Rhododendron, introduced as an ornamental shrub and for pheasant cover is very invasive in some of these woodlands and casts an impenetrable shade.

More recent forestry and woodlands grants favour the re-establishment of native broadleaves, especially for plantations on ancient woodland sites. Although it will be many years before these policies bear full fruit, this is a very welcome development. Conifer plantations, however, can be a valuable wildlife habitat in their own right; the younger stages support populations of nightjar and tree pipit, while mature conifer plantations hold populations of long-eared owl and goshawk.

Dense stands of bracken in grazed woodlands where regeneration of trees has been inhibited or on better-drained valley sides may shade out an otherwise rich ground flora. However, bracken itself provides an important habitat for some species such as whinchat.

Many of the valleys of the upland fringe are underlain by impermeable gritstone and have been impounded for water supply. Though generally nutrient poor, the reservoirs support several rare aquatic and emergent plants. Some hold important wintering and passage populations of wildfowl and waders and Gouthwaite has long been a famous site among birdwatchers.

In the lower dales, much of the farmland is still under pasture, although the proportion, which has gone over to arable, has increased in recent years. Most of the grassland that remains has been subject to improvement and intensification. Where unimproved grassland occurs it is mostly acidic and although the characteristic species of this habitat such as heath bedstraw or heath milkwort may be relatively common, it forms an attractive and valuable plant community. Where it occurs on fairly level land, even semi-improved grassland supports import populations of ground-nesting birds such as lapwing and skylark. Nidderdale and the Washburn Valley are both still boast a relatively rich and varied countryside but the loss of lesser horseshoe bats since the end of the nineteenth century may indicate a general deterioration in the quality of the landscape.

There are many historic parklands in the district, some, such as Studley and Ripley deer parks date back to medieval times. Such parks hold significant numbers of veteran ancient trees some of which are around 800 years old. These veterans provide niches for many specialised invertebrates, such as stag beetle, and fungi such as oak polypore.

Many species of birds are associated with mature trees in parkland or in woodland. These include lesser spotted woodpecker, spotted flycatcher and hawfinch. Noctule bats breed almost exclusively in holes in mature trees

The middle reaches of the dales' rivers hold good numbers of trout and grayling which feed on the numerous mayflies, stoneflies, caddis flies and other insects at the base of the food chain. Salmon numbers are also slowly recovering. These salmonid fish depend on good water and habitat quality. The River Ure holds populations of the nationally declining migratory sea and river lampreys.

Since the banning of organochloride pesticides, the otter is now making a good recovery from virtual extinction in the district in the nineteen eighties. However, the water vole, once common is now almost locally extinct due to a combination of habitat loss and predation by the introduced American mink. The native white-clawed crayfish is rapidly losing ground on the Ure and the Wharf to the disease-carrying American signal crayfish. Many invasive alien plants also tend to follow water courses and the ubiquitous summertime pink of Himalayan balsam bears testament to what must now be one the most successful plants in the district.

Remnants of wet woodland along the river valleys of the middle and lower dales hold scarce species of plant such as Yellow Star of Bethlehem, declining birds such as willow tit and many rare insects. Examples of wet woodlands include Hackfall Woods, High Batts, Sharow Mires, Cow Mires and Upper Dunsforth Carrs.

A narrow ridge of Magnesian limestone runs through the district from Wetherby in the south to just east of Masham. It supports a unique flora and many scarce invertebrates. Attractive wildflowers associated with this limestone include clustered bellflower, carline thistle,

squincancywort and pyramidal orchid. Thistle Broomrape,

a species confined in the UK almost entirely to Magnesian limestone grassland in Yorkshire, has its stronghold in the Harrogate district. Unimproved Magnesian limestone grassland is nationally scarce and is included within the lowland calcareous grassland priority habitat action plan. Much of it within the district is designated as SSSI, such as at Burton Leonard, Quarry Moor and Ripon Parks. Management of this unique resource is crucial to its conservation.

On the calcareous soils associated with limestone, ash is the predominant woodland tree. Prior to the onset of Dutch elm disease, Wych elm was often co-dominant in woodlands and it often still persists through suckering. The understorey may be very diverse and may include shrubs such as guelder rose, dogwood, buckthorn and spindle.

Immediately to the east of the magnesian limestone escarpment, in the lower dales valleys, the rivers begin to meander and shingle beds are often exposed. These riversides and their floodplains provide habitats for typical lowland dales birds such as sand martin, common sandpiper, oystercatcher and lapwings. Yellow wagtail, once a common bird in this habitat, is now very scarce. The gravel beds, which were laid down in pre-glacial times along the courses of the proto-Ure and proto-Nidd (precursors of the current rivers) have been extensively exploited since the war. The presence of large expanses of open water, left behind by former gravel workings, is responsible for increases in many species of birds in the district such as little ringed plover, grey-lag goose and cormorant. Many of these former gravel pits are now managed as nature reserves and there are plans to further increase their biodiversity value by the establishment of extensive reedbeds which are likely to attract marsh harrier and bittern to breed in the district, probably for the first time since extensive wetlands in the Swale and Ure Washlands were drained for agricultural improvement at the start of the twentieth century.

Much of the lower land in the south east of the district lies within the floodplain of the lower reaches of the dales rivers, which eventually all join the River Ouse in the Vale of York. These lower

reaches are broader and apparently more slow flowing. They are often bordered by lines of alder or willow. They are muddy bottomed and typified by coarse fish and support the scarce depressed river mussel and emergent plants such as flowering rush and club rush.

Those wet meadows and fens which survive are the valuable remnants of what were once much more extensive wetlands. Several of the best remaining examples such as Farnham Mires, Bishop Monkton Ings and Aubert Ings are designated as SSSIs. Many of the richest sites have an underlying cal-careous influence. These fens are dominated by tall herbs, grasses and sedges and have a very diverse flora made up of plants such as meadow rue, sneezewort and gypsywort. They support populations of declining species of birds such as reed bunting and sedge warbler

The Vale of York is a flat, open landscape, mostly underlain by impermeable boulder clay. The many hollows and ponds support significant populations of great crested newts, including one site at Kirk Deighton, which is designated as a Special Area for Conservation for this species.

Most of the farmland on the Vale of York is arable, much of it very intensively farmed. Many of the typical farm birds of this habitat are in serious decline. These include corn bunting, tree sparrow, skylark, grey partridge and barn owl. Cereal field margins are now a national BAP priority habitat and agri-environment schemes, which promote conservation headlands, winter stubble and game/wild bird crops are now beginning to be taken up. However, it does not appear that these initiatives have yet begun to turn around the fortunes of many of the declining species in this district.

Across the district, human settlement provides important wildlife habitats. These range from farm buildings in the dales, utilised by bats and swallows to urban gardens which support butterflies and hedgehogs and declining birds such as song thrush and house sparrows. In the face of agricultural intensification garden ponds provide some of the most important refuges for frogs and toads. On the urban fringe, Local Nature Reserves such as Rossett Acres and Hookstone Woods in Harrogate or Quarry Moor in Ripon provide the opportunity to conserve wildlife whilst allowing local people to appreciate its beauty.

Whilst indicating some of the wealth of the district's wildlife, much of this brief outline catalogues a decline in biodiversity in recent years. This local biodiversity action plan, however, provides a tool, which can be used to help restore the balance. It can help to focus the efforts of statutory agencies, local voluntary conservation organisations and foster the engagement of the general public with wildlife. It could assist in the appropriate targeting of conservation measures through, for example, Environmental Stewardship and other environmental schemes and help to ensure that wildlife is taken into consideration in decisions taken about the control of development, mitigation of its impacts and even point the way towards enhancement through planning gain. Hopefully, this plan can contribute to ensuring that we conserve the immense richness of wildlife of our district.

Gardens Guidance Note



Why are gardens important to wildlife?

Gardens and gardeners play an important role in caring for the wildlife of Harrogate district. This guidance note is designed to highlight some of the ways in which we can all contribute to biodiversity and perhaps even avoid unwittingly destroying valuable habitat or species.

In common with other urban green space, such as parks, churchyards, village greens, allotments and schools grounds, gardens provide a home and food source to a whole range of species, including some declining species, for example Song thrush, Bullfinch and Tree sparrow. Some stonework (such as Knaresborough and Spofforth Castles and Fountains Abbey), brickwork and gravestones are important for flowering plants, ferns, mosses and lichens, as well as insects and spiders.

Gardens provide a significant habitat resource for both species that live in or close to our towns and villages or those that use these urban green spaces as part of a corridor linking the areas of more open landscape. With a little careful thought, the value of these important spaces to wildlife can be enhanced without affecting our enjoyment of our gardens - indeed we may derive considerable pleasure from watching the wildlife thrive.

Gardens of course range in character from carefully manicured lawns, borders and shrubberies to unkempt or neglected areas. Whatever the style of garden you choose, there are things you can do to improve the value of your garden to wildlife. For example, by selecting plants and shrubs that provide a food source, you can improve the habitat for birds and insects and perhaps even attract new species to your garden.

The attractiveness of the countryside and the plants and animals it supports contribute significantly to the quality of life residents of Harrogate district enjoy. Hopefully, this guidance will provide some food for thought on what you can do to help maintain that rich diversity.

Responsible gardening - protected species

Birds, plants and animals in garden areas, just like the wider countryside, are protected and controlled by various pieces of legislation, some of which will be familiar, others less so. For example, bats, Badgers, Great crested newts and Water voles, all of which are protected by specific legislation, could reside or use your garden. Disturbing or causing harm to the species or their habitat is illegal. But help is at hand, and should you be concerned, Natural England will be pleased to give advice.

Perhaps less obvious is that to knowingly disturb nesting birds is also illegal. So care needs to be taken when for example, cutting hedges or removing shrubs and trees. The best time to undertake such work is in early spring before the birds have begun nesting or wait until after the young birds have fledged (not forgetting to get the appropriate approval if the trees or hedge are themselves protected).

Responsible gardening - improving habitat

There are many ways in which existing gardens can become more attractive for wildlife without major change. In many cases a slight change in how we manage our gardens can make a large difference to its wildlife value. Here are some simple ideas:

- Plant fruit trees, berry bushes and soft fruit. Avoid cutting fruit and berry bearing hedges and shrubs too early in the season, allowing the fruit and berries to provide autumn and winter food for birds.
- Leave seed bearing flower heads to mature and provide food for birds before winter pruning.
- Reduce the use of pesticides, including slug pellets, to a minimum - try alternative methods of pest control.
- Use varieties and a mix of flowers, shrubs and trees (native ones where possible) that provide a continuous supply of nectar, fruit and berries.
- Grow native climbers such as ivy as shelter and nest-sites for birds and insects.
- Create a compost heap and buy only peat-free compost.
- Set aside a small part of the garden to become 'wild' with less intensive management. Allow an area of lawn to develop into a wildflower meadow for plants and insects.
- Leave windfall fruit for foraging birds and insects.
- Leave fallen timber to decay and make log piles for hibernating toads, frogs and newts in damp corners of your garden.
- Feed the birds and provide fresh water.
- Provide nest boxes for birds such as House martins, as well as bumble bees and bats or perhaps create a nesting site for the Mason bee using special bee bricks. Leave openings in barns and outhouses to give entry to nesting Swallows.
- Avoid cutting hedges during the bird-nesting season from March to August.

- Avoid introducing garden plant material (tubers, roots, seeds), including pond plants into the wild - some are very invasive, and avoid dumping cuttings in the countryside.
- Consider creating a wildlife pond - without goldfish. Advice on the design of wildlife ponds is readily available.
- If you have a cat, fit a collar with a bell - large numbers of wild animals are killed by cats.
- Avoid buying rockery limestone that may have come from limestone pavements which are irreplaceable.

Some of the Harrogate BAP species that will benefit from wildlife gardening:

- Bats
- Bullfinch
- Swallow
- House martin
- Smooth newt
- Common toad
- Mason bee
- Song thrush
- House sparrow
- Swift
- Great crested newt
- Common frog
- Bumble bees

Farmland Guidance Note



Why is farming important to biodiversity?

Farmland is a very important land use in the district and includes the key habitats of Arable Field Margins and Hedgerows, both of which are UK BAP priority habitats. Farmland is also important for arable weeds, bumblebees and farmland birds, which have all suffered serious national and local declines.

Since 1945 farming has undergone many changes, and the technological advances and the move towards production-orientated farming practices since this time have played a major role in the losses of natural habitat and the decline of some of the species in farmland habitats. However, many farmers manage their land not just for crop production, but also for its wildlife interest. This may involve a reduction in the use of chemicals on farmland and recently the net loss of hedgerows in England has been reversed. Many farms include areas of good wildlife habitat, the best of which are designated as Sites of Important Nature Conservation (SINC). The long running Defra Stewardship Schemes, which pay farmers for income foregone if they undertake environmental works, has been very successful in both lowland and upland areas, with many farmers entering the ten-year agreements.

CAP reform - Some significant changes in farming policy are currently being implemented, Through European Union changes to the Common Agricultural Policy (CAP). There has been a move to uncouple crop production from subsidies, which is generally agreed will benefit the natural environment on farms and marks a significant change in agricultural policy. In January 2005 Single Farm Payments began for farmers, which are dependent on a reasonable degree of environmental cross compliance detailed under Good Environmental and Agricultural Condition (GEAC).

Environmental Stewardship - A new agri-environment scheme, the Environmental Stewardship Scheme, replaced Countryside Stewardship in 2005. This comprises 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 are automatically accepted providing they meet an area-based points threshold and are

self-assessed. Examples include buffers around waterways and in-field trees, hedge and field margin management, winter stubbles and low nutrient input grasslands. The two entry-level parts of 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 per cent uptake across the country. In February 2011 60 per cent of utilisable agricultural area was in ELS and OELS (www.naturalengland.org.uk)

The Higher Level Scheme is competitive and has more advanced conservation options. Applications are 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.

Key agri-environment options

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

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, including parts of lowland Harrogate district for the first time. Farmers are obliged to introduce 'action programmes' on agricultural land limiting fertiliser inputs to 170 kg/ha/yr of organic nitrogen, on all arable land. Defra has attempted to phase in reductions on other land, mostly grassland.

What farmers can do to help

For farmers owning semi-natural habitat designated as SINC, these can be managed positively for their wildlife value. SINC form important refuges for species, and islands from which restored and re-created habitats can be colonised. They may need to be buffered to safeguard them from adverse effects such as spray drift.

Farmers can contribute a great deal to the biodiversity of Harrogate district. Some ways of helping farmland wildlife require relatively little effort and expenditure.

For example:

- Maintain a good diversity of habitats to encourage a range of wildlife.
- Maintain areas of unimproved pastures and meadows to provide a varied grass sward and range of insects.
- Manage permanent pasture to increase the range of plants.
- Cut silage or hay from the centre out, so that birds and mammals are pushed away from machinery and not trapped in a diminishing island of tall vegetation.
- Differential management of arable margins to include some tussocks and some tall herbage. Leave some uncut and un-grazed for nesting birds, small mammals and insects.
- Rotational cutting of cereal field margins.
- Retention of winter stubbles followed by the planting of low input crops, bird cover or a summer fallow.
- Grow low-input, spring-grown arable fodder crops such as cereals and root crops.
- Raise the water level in some fields to provide a rich source of invertebrates.
- Use targeted rather than broad-spectrum pesticides.
- Ensure hedges are thick and well managed.
- Cut hedgerows every two to four years rather than annually.
- Plant new hedgerow trees.
- Wherever possible, apply herbicides by spot treatment or weed wiping.

Focusing on a particular species can be a good approach. Priority Farmland species are listed in the box below. Advice is widely available from appropriate organisations.

Some of the species that will benefit:

- | | |
|---------------------------|-------------------------|
| ● Lapwing | ● Redshank |
| ● Curlew (UK BAP) | ● Snipe |
| ● Grey partridge (UK BAP) | ● Turtle dove (UK BAP) |
| ● Skylark (UK BAP) | ● Swallow |
| ● Song thrush (UK BAP) | ● Linnet (UK BAP) |
| ● Tree sparrow (UK BAP) | ● Corn bunting (UK BAP) |
| ● Yellowhammer (UK BAP) | ● Brown hare (UK BAP) |
| ● Bumblebees | |

Advice

The following section gives information on the national status of the priority species and some tips on how to manage farmland for them. Information on conservation status is taken from the British Trust for Ornithology (www.bto.org). Detailed but highly accessible information is available from the RSPB, which has produced a set of advice leaflets in partnership with the Farming and Wildlife Advisory Group (FWAG) and the Game Conservancy Trust (GCT).

Lapwing - 44 per cent decline since 1983. Also occurs in upland habitats. A ground nesting species preferring large open fields.

Opportunity: Spring crops and permanent grassland with low chemical input for nesting and feeding areas. Short, tussocky sward. Create and retain damp meadows. Open areas in cropped fields. On arable land avoid nests during cultivation, hoeing or rolling and undertake all operations in the same week so that failed birds can re-nest.

Redshank - 63 per cent decline since 1983. Ground nesting bird found on upland and lowland farms.

Opportunity: Retain boggy ground with short grassland with tussocks of sedges, rushes and grasses. Retain fringes alongside ditches or damp areas. Control rushes when covering over 30 per cent by cutting at a suitable time of year and avoiding the wettest areas. Create wet areas. Delaying silage cutting until late June is probably not an economic option for farmers, however, wildlife friendly cutting from the centre out should be promoted.

Curlew - 26 per cent decline since 1983. A ground-nesting bird utilising a wide variety of upland vegetation types.

Opportunity: Retain moorland and rough damp grassland. Create a tussocky sward via cattle grazing. Retain/create damp areas, wet flushes or small shallow pools as feeding areas for chicks.

Snipe - 76 per cent decline since 1995. A ground-nesting bird found in wet flushes on moorland, damp pasture and the edges of watercourses.

Opportunity: Wet areas, ditches and drains, unimproved pasture, moorland grip blocking, wet flushes, avoid large moorland burns.

Grey partridge - 76 per cent decline since 1983.

Ground nesting bird requiring rich invertebrate food source to feed chicks.

Opportunity: Wild bird cover on set-aside, autumn brood rearing cover. Natural regeneration of rotational set-aside. Delay use of broad-spectrum pesticides. Bushy hedgerows, conservation headlands, grass margins, un-cropped grass margins, winter stubbles and beetle banks provide cover for nesting and invertebrate food. Cut hedges one year in three. Small plots of wild bird cover in pastoral areas. Under-sown cereal crops.

Turtle dove - 84 per cent decline since 1983. Nests in tall mature hedgerows and areas of scrub or woodland edge over 4 metres tall.

Opportunity: Set-aside with small plots of wild bird cover, natural regeneration of rotational set-aside. Arable field margins, conservation headlands, retain stubbles, rotational and wild bird cover options. Fodder crops or wild bird cover in pastoral areas, restore hay meadows.

Skylark - 84 per cent decline since 1983.

Opportunity. Natural regeneration of rotational set-aside and grass cover. Delay use of broad-spectrum pesticides. On arable land include spring cereals or a spring break crop, retain weedy stubbles. Beetle banks. Implement wildlife friendly silage cutting, re-create hay meadow, introduce arable fodder crops in pastoral areas (avoiding existing good habitat and good landscape).

Swallow - 20 per cent increase since 1998. Nests in barns and outbuildings.

Opportunity. Supply of nest sites in barns and outbuildings. Retain and create wet areas and retain fringes alongside ditches or damp areas. Reduced broad-spectrum pesticide applications from March. Conservation headlands, un-cropped cultivated margins, grass margins with red clover, permanent grasslands with low input, pollen and nectar mix.

Song thrush - 27 per cent increase since 1995. Nests in woodland and thick woody vegetation. Associated with thick hedgerows, native woodland and damp ground, especially grazed pasture

Opportunity: Good hedgerow management, including bushy hedgerows, cut one year in three. Copses, beetle banks, reduced pesticide applications from March, permanent grasslands with low input. Wet features such as damp grasslands and ditches. Small plots of wild bird cover.

Linnet - 41 per cent decline since 1983. Nest in thick, thorny hedgerows, scrub and bramble areas.

Opportunity: Grass margins adjacent to thick hedges, over-wintered stubbles, Set-aside wild bird cover and feeding with corn tailings/wild birdseed mix. Conservation headlands and a variety of crops. Reduced pesticide applications from March. Provide seed-rich habitat in pastoral areas. Uncut verges and waste ground, areas of scrub including gorse and bramble.

Tree sparrow - 87 per cent decline since 1983.

Nests colonially in holes and cavities. Nestlings require invertebrates.

Opportunity: Grass margins adjacent to thick hedges, over-wintered stubbles, corn tailings/wild birdseed mix,

conservation headlands, reduced pesticide applications from March, supply of nest boxes.

Corn bunting - 77 per cent decline since 1983.

Ground-nesting bird in arable fields, field margins and unimproved grassland.

Opportunity: Grass margins adjacent to thick hedges, over-wintered stubbles, corn tailings/wild birdseed mix, conservation headlands, reduced pesticide applications from March.

Yellowhammer - 57 per cent decline since 1983. Nest on or close to the ground in ditch vegetation or at the base of short, thick hedgerows and scrub.

Opportunity: On arable land - grass margins adjacent to thick hedges, over-wintered stubbles, wild bird cover, feeding with corn tailings/wild birdseed mix. Conservation headlands, reduced broad-spectrum pesticide applications from March. Small plots of wild bird cover in pastoral areas. Hedgerows of differing sizes (some below 2m tall) cut one year in three.

Brown hare - widespread and stable population.

Opportunity. Conservation headlands, grass margins, permanent grassland, over-wintered stubble, thick hedgerows, coppices.

Bumblebees - Very important for pollination, particularly as they are active at lower temperatures than Honey bees.

Opportunity. Conservation headlands, un-cropped cultivated margins, grass margins with Red clover, permanent grasslands with low input, pollen and nectar mix.

What members of the public can do to help:

Improve our knowledge of 'local status' by sending records of the above species to the BAP partnership or 'on-line' via the Local Record Centre website at www.neyedc.org.uk.

Follow the new Country Code when on farmland.

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

Development Guidance Note



Benefiting wildlife through development

This guidance note is designed to act as a prompt to those involved in the development process to consider not only those nature conservation aspects of projects that may have specific planning or legislative requirements, but also the wider issue of biodiversity mitigation or enhancement through development.

Developers, and those involved in advising upon or regulating development, should be aware that some species and

habitats are protected by legislation. Equally, they should be aware that as part of the planning process, specific requirements in relation to the assessment of nature conservation interests exist.

However, the opportunity to conserve and enhance the population and range of species and habitats (biodiversity) goes well beyond simply complying with legislation relating to protected species and habitats. With care, the development process can make a positive contribution to the rich and

varied wildlife of Harrogate district and with it improve the quality of life for residents and visitors.

Bearing in mind that the best conservation option is to protect and manage existing good habitat and that enhancing degraded habitats and re-creating habitats are secondary options, the BAP supports some basic principles related to the development process. These are:

- Protection of Sites of Importance for Nature Conservation (SINCs) - for a list of these, see Appendix 9.
- Protection of UK and Harrogate district BAP priority habitats and species.
- Support the precautionary principle, in exercising caution when wildlife might be adversely affected.
- No net loss of habitat with a minimum level of 'like for like' mitigation.
- Enhancement should be considered.

The BAP also recognises the value of green space, not only for wildlife and ecosystem services but also for the quality of life of residents and visitors. Development of the multifunctional value of green space is encouraged through the Sites and Policies DPD draft policy IN3 on 'Green Infrastructure'.

Set out below, are some of the ways in which each sector of the development process can make a contribution towards that goal.

Ways in which the different sectors can help

Development Control Planning Officers:

- Ask for ecological surveys to support planning applications well in advance, including when giving pre-application advice, 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 (NEYEDC). Consider whether there needs to be a survey for the presence of bats when dealing with applications involving buildings.
- Ensure that applications are in keeping with Section 11 'Conserving and enhancing the Natural Environment' in the National Planning Policy Framework and with Core Strategy Policy EQ2 'The Natural and Built Environment and Greenbelt', and Sites and Policies DPD Policy EQ6 'Area Based Natural Assets'.
- Consider preparing Supplementary Planning Document and/or an advisory leaflet on planning and wildlife.

Further Information:

The Biodiversity Planning Toolkit is a new versatile online resource, aimed at helping users to incorporate biodiversity into the planning system and new development. The Toolkit has been created by the Association of Local Government Ecologists (ALGE) in partnership with a wide range of conservation and planning organisations across the United Kingdom <http://www.biodiversityplanningtoolkit.com/>

PAS 2010 - "Planning to halt the loss of biodiversity"
<http://shop.bsigroup.com/en/ProductDetail/?p id=000000000030154979>

'Biodiversity by Design: A Guide for Sustainable Communities', Town and Country Planning Association
<http://www.tcpa.org.uk/pages/biodiversity-by-design.html>

Developers and Consultants:

- Ensure that proper surveys of the site or buildings exist to verify the extent of any nature conservation interest and pass the data on to NEYEDC.
- Make sure that surveys are carried out at an appropriate time of the year, and if necessary repeated. For example, undertaking a survey of flora during the winter months on grassland is unlikely to provide the data required. Equally, be aware that some protected species (e.g. bats) occupy sites for only part of the year. Good information at the outset will reduce the risk of delays later in the process. (see 'further information' below for appropriate timings for surveys).
- Look for opportunities to conserve existing wild-space and to link areas of good habitat, for example by introducing hedging or planting between isolated tree groups to form a continuous corridor for wildlife or by protecting and strengthening existing landscape features such as old hedge lines, ditches etc. Create new wild-space, such as scrub, rough grassland, ponds, bogs, species-rich hedges.
- Consider using hedging and planting to define boundaries rather than fencing or walls, particularly in areas that would provide continuous wildlife corridors through a site.
- For large schemes that will be landscaped at the end of their working period, such as large housing schemes, mineral extraction and landfill, seek advice and design ambitious habitat creation schemes principally to benefit biodiversity. These to include significant reedbeds, Species-rich grassland and woodland as appropriate.

Further Information

Harrogate district 'Guidance on Wildlife Species and Habitats'
http://www.harrogate.gov.uk/Documents/DS-P_BiodiversityProforma11_B.pdf

Natural England Standing Advice on Protected Species
<http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/default.aspx>

Landscape Designers

- When planning landscaping schemes, specify native species of local provenance and include flowering plants, climbing ivy, trees and berry producing shrubs.

Further Information:

Harrogate district Landscape Design Guide
<http://www.harrogate.gov.uk/pages/harrogate-6419.aspx>

Architects

- Buildings can be good homes for bats and birds without causing significant problems. Look to incorporate Swift bricks into the roofs of buildings, to be used by Swifts, and cavities to be used by bats. Swallows can be encouraged by providing a flat nesting platform or a ledge inside a building with easy access through an opening of 5x7 cm, and when converting buildings, Barn owls can be provided for by leaving access in to the roof spaces of outbuildings (RIBA 'Biodiversity for Low and Zero Carbon Buildings: A

Technical Guide for New Build' <http://www.ribabookshops.com/item/biodiversity-for-low-and-zero-carbon-buildings-a-technical-guide-for-new-build/70194/>)

- Consider the environmental advantages of designing buildings with 'living roofs', sometimes referred to as green roofs - made of thin soils, gravels, rocks, turf, etc. There are some excellent examples from the Canary Wharf developments in London (further information on the website www.livingroofs.org).

Engineers

- Incorporate bat cavities into bridge and other construction projects.
- Design schemes that include surface drainage rather than culverts, and consider Sustainable Urban Drainage Schemes (SUDS). Design balancing ponds that consider safety requirements while maximising 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 that damage habitats, for example ditch clearance and schedule for the best time of year. Avoid drastic habitat damage, such as hedge removal, during the bird-nesting season and manage the richest wildlife road verges for their nature conservation interest.

Further Information

CIRIA Working with Wildlife: Guidance for the construction Industry http://www.ciria.org/service/Home/AM/ContentManagerNet/HomePages/CIRIA_1502_20080929T115140HomePage.aspx?Section=Home

Species that could benefit from wildlife friendly development practices include:

- Bats
- Barn owl
- Swift
- House martin
- Great crested newt
- Common toad
- Mason bee
- Water vole
- Kestrel
- Swallow
- House sparrow
- Common frog
- Smooth newt

Guidance Note on Non-native Problem Species



Why some species are a problem for our wildlife

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 people have introduced a species artificially. 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 native wildlife.

These less welcome species need not necessarily be recent introductions - the Rabbit was originally introduced by the Normans about 1,000 years ago as a food source but is now widespread and abundant throughout Britain, causing problems to farmers, foresters and conservationists. 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 a stable and accepted part of our natural heritage.

Other, more recent introductions are very different. Biological invasion goes through four stages - arrival, establishment, spread and persistence. The high impact species are those that spread quickly and have the ability to persist.

These high impact species are aggressive invaders that colonise natural and semi-natural habitats, creating major problems for our native plants and animals.

The best time to prevent problems is at stage 1 - arrival. If 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 taxpayer and others if expensive and time consuming control has to be carried out.

This guidance note covers ten such introduced problem species. It also covers one native species - Common ragwort - which is toxic to livestock, particularly horses. It has therefore been included because it is affected by 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 the ones that are presently considered to be the most harmful in the district.

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

Himalayan balsam

An annual plant introduced by the Victorians as an attractive garden plant. It is capable of rapid colonisation via its explosive seed, and when seed is transported by flowing water. Seeds germinate freely giving rise to dense stands along watercourses and in damp woodlands. Because of the density of plants, it can dominate and shade out native vegetation. At present Himalayan balsam is present along the banks of many of the district's rivers and streams and has spread into many damp woodlands and grasslands.

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 derelict land. Once established it is very difficult to eradicate, even with herbicides, and requires special licensing to move it off site. It is found scattered throughout the district. This species is listed in the Wildlife and Countryside Act 1981 (Sec. 14 - Schedule 9 part 2), making it an offence to cause it to grow in the wild.

Giant hogweed

Related to the native 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 occasionally seeds into urban areas. Its sap reacts with sunlight to cause blisters. This species is also listed in the Wildlife and Countryside Act 1981 (Sec. 14 - Schedule 9 part 2), making it an offence to cause it to grow in the wild.

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.

Phytophthora 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 the thousands in recent 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 base of a tree with severe crown symptoms often carries tarry or rusty spots sometimes occurring up to 2 m 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 riverbanks or on sites subject to flooding from adjacent rivers (less so on smaller tributaries). However, the disease has also been found in orchard shelterbelts and in young woodland plantations. The Forestry Commission is carrying out research and the Environment Agency has produced local guidelines in an effort to limit its spread. Interestingly, some affected trees now appear to be recovering.

Water fern (Azolla)

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.

Australian stonecrop (Crassula helmsii)

This species is a growing problem in the district. A small aquatic plant introduced as an oxygenator for garden and fishponds. It is exceedingly vigorous and can quickly dominate ponds and adjacent damp ground to the exclusion of everything else. It is a scheduled species that must be reported to the Environment Agency (EA) 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. It can be unintentionally introduced to ponds when releasing frogspawn from garden ponds.

Floating pennywort

Another aquatic plant introduced for ornamental purposes that is extremely vigorous. It can grow at the rate of 0.5 m 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 EA. 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 can be unintentionally introduced to ponds when releasing frogspawn from garden ponds.

Common ragwort

Although this note is titled Non-native problem species, mention needs to be made of one native species - Common ragwort. Being native, this species differs from the others in being part of a natural ecosystem and therefore having a number of associated species, including 30 invertebrate species not least of which is the distinctive Cinnabar moth and 14 fungi. Many other species benefit from the supply of pollen and nectar.

Common ragwort is toxic to 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 a 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 five 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.

Signal crayfish

Introduced and bred in crayfish farms for food, this species has escaped and been released into waterways and spread into many water catchments. It is able to outcompete the smaller native White-clawed crayfish because it is a larger, more aggressive species. Signal crayfish also spreads Crayfish plague, 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.

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. Research has indicated that American mink is one of the major contributory causes for the dramatic decline of the Water vole and may have an impact on other species e.g. waterfowl. It ranges along all main watercourses in the district and targeted trapping is recommended to maintain relict Water vole populations.

Grey squirrel

The Grey squirrel, introduced from North America in the nineteenth century, can have adverse effects upon the growth of various species of broadleaved tree, the native Red squirrel and songbirds. Grey squirrels cause tree damage through bark stripping, which affects tree vigour, form and health. They have been a contributory factor to the decline of Red squirrels as they both carry a virus to which the Red squirrel is more susceptible, and out-competes it in the search for food resources. Grey squirrels also actively take birds' eggs and affect breeding success. They could be a key factor in the decline of tree nesting birds such as the Hawfinch.

The most cost-effective method of controlling Grey squirrels is the use of warfarin poison (full details are given in the Forestry Commission Practice Note 4 [revised April 2004]) but its use is currently under review by the EU Plant Protection Directorate and there is no timetable as to when a decision is to be reached.

Warfarin may not be used where Red squirrel or Pine marten (chiefly Scotland) populations are present. Cage trapping is an effective but more costly alternative and activities such as shooting and drey-poking (removing the nests where Grey squirrels breed) have a limited effect. Grey squirrel control should be considered where:

- Young or newly planted woodlands are being damaged or are likely to be damaged by Grey squirrel populations.
- Semi-mature woodlands are being thinned and the rise of phloem associated with increased growth is likely to attract bark-stripping activity.
- Populations of Red squirrel or songbirds are being adversely affected.

Methods of Control

Himalayan balsam

Repeatedly hand pull or cut before seed is set. Spray very dense stands with Glyphosate where there is no underlying vegetation to damage. NB: An EA licence is needed for spraying near watercourses. Where not fully established grazing may be effective.

Japanese knotweed

Spray repeatedly with Glyphosate. NB: An EA licence is needed for spraying near watercourses. It is advised that expert opinion is sought. Dig out and remove to a tip licenced to take it. It is an offence to dispose of it anywhere else.

Giant hogweed

Cut flowering stem and burn on site or take to a tip licenced to take it. Dig up non-flowering stems and burn on site or take to a tip licenced to take it. Only handle wearing protective clothing. Seeking expert advice is recommended.

Rhododendron

Cut stems, treat stumps with an appropriate herbicide to reduce re-growth, pull out stumps. Note that Rhododendron can provide good cover for Otter, so this should be taken into account.

Water fern

Remove all floating plants and compost or remove to a waste disposal site. Repeat as necessary. Thoroughly clean footwear and equipment to avoid spreading it.

Australian stonecrop

Cover stands with black polythene, leave until all plants are dead. Applications of Glyphosate may be appropriate, but a licence would be required from EA. Thoroughly clean footwear and equipment to avoid spreading it.

Floating pennywort

Carefully hand-pull any plants that are floating or shallowly rooted. Spray any well-rooted plants with the appropriate herbicide.

Common ragwort

Pull plants and dispose of at registered waste disposal site (do not compost). 'Weedwipe' plants in grazed pastures where plants are standing tall.

What you can do to help:

Please do not release anything from your garden pond, out into the wild. Report sightings of all of the above species to the North and East Yorkshire Ecological Data Centre (01904 641 631).

Further information on problem plant species and how to control them from the GB Non-Native Species Secretariat web site: www.nonnativespecies.org

Join a conservation task group to tackle invasive species colonisation.

