

Wiltshire Biodiversity Action Plan 2008

The Wiltshire Biodiversity Action Plan 2008

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The review of the Wiltshire Biodiversity Action Plan (BAP) was coordinated by the Wiltshire BAP Steering Group, which is made up of representatives from Wiltshire Wildlife Trust, Wiltshire County Council, Natural England, Biodiversity South West, Wiltshire and Swindon Biological Records Centre, and the Cotswold Water Park Society.

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Cotswolds AONB	Council for the Protection of Rural England
County Recorders	Cranborne Chase & West Wilts Downs AONB
Deer Initiative	Defence, Science and Technology Laboratory
Environment Agency	Five Rivers Bat Group
Forest Enterprise	Forestry Commission
Farming and Wildlife Advisory Group	Game and Wildlife Conservancy Trust
Great Bustard Group	Great Western Community Forest
Independent Ecologist – Lindsay Carrington	Kennet District Council
Ministry of Defence	Mouchel
North Wessex Downs AONB	National Trust
Natural England	New Forest National Park Authority
North Wiltshire District Council	Peoples Trust for Endangered Species
Plantlife	Royal Society for the Protection of Birds
Salisbury District Council	Swindon BAP Partnership
Thames Water	Wessex Salmon and Rivers Trust
Wessex Water	West Wiltshire District Council
Wild Trout Trust	Wiltshire and Berkshire Canal Trust
Wiltshire & Swindon Biological Records Centre	Wiltshire Botanical Society
Wiltshire County Council	Wiltshire Fisheries Association
Wiltshire Greater Horseshoe Bat Project	Wiltshire Mammal Group
Wiltshire Ornithological Society	Wiltshire Wildlife Trust
Woodland Trust	

This document was edited by Sarah Wilkinson, Biodiversity Action Plan Officer at Wiltshire Wildlife Trust.

All maps were provided by the Wiltshire and Swindon Biological Records Centre. Images used are credited individually. Thanks go to Charlotte Watson for providing hand drawn images.

Any website links in this document are accessed at the user's own risk. The Wiltshire Biodiversity Partnership can not take responsibility for the content of external sites.

This document is available for download from www.biodiversitywiltshire.org.uk. Go to this website to find out the latest information on progress being made towards targets and actions and information about upcoming meetings and events, as well as more information about biodiversity in Wiltshire.

Wiltshire Biodiversity Action Plan 2008

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Executive Summary

Biodiversity in Wiltshire:

Wiltshire is a wonderful county for wildlife. It contains a great diversity of habitat types, from its internationally important chalk grassland and chalk rivers, to large networks of standing open water, and ancient hunting forests. The richness of habitats in Wiltshire is reflected in the diversity of species which occur here, including nationally important populations of Marsh Fritillary and farmland birds such as Stone Curlew.

Whilst Wiltshire is comparatively rich in terms of its biodiversity, its wildlife has declined at a truly alarming rate over the last 50 years in line with national trends. For example, lowland unimproved grassland, an important habitat type in Wiltshire, is now the single most threatened type of grassland habitat in the UK, and between 1934-1984 it is thought to have declined in extent by 97%. Species have also shown worrying declines, with groups such as farmland birds having declined on average by about 50% since the 1970s.

Why is biodiversity important?

The wealth of Wiltshire's wildlife makes it an interesting, beautiful and distinctive place to live. Living organisms are responsible for regulating the air we breathe, the climate we live in and the quality of water we drink. Without biodiversity we would not have soil, food or the other essentials for life as we know it. Biodiversity also provides us with economic benefits. A huge proportion of our medicines, food, raw materials and manufacturing and energy sources are a result of biodiversity. If biodiversity levels fall, the ability of natural systems to adapt to change, or the potential resource available for humans to make use of, declines. Therefore protecting and enhancing biodiversity is in all of our interests.

Why a Biodiversity Action Plan?

The threats facing wildlife in the UK have now been recognised for many years, and a range of organisations have and are working hard to make Wiltshire a better place for wildlife. The Wiltshire Biodiversity Action Plan is a tool which summarises and directs the activities of statutory, private and third sector organisations delivering biodiversity activity in Wiltshire. By pulling these actions into one plan, it creates a coherent plan of action which can be delivered through a partnership of organisations working together. It also acts as a vital reporting tool to help monitor key habitats and species.

The Wiltshire Biodiversity Action Plan

This document represents the radical revision of the Wiltshire BAP 2002. The new Wiltshire BAP will be updated annually so that it is kept up to date in the light of completed actions and changing circumstances.

The revised Wiltshire Biodiversity Action Plan contains Habitat Action Plans for: Woodland; Wood-pasture, Parkland and Ancient Trees; Hedgerows; Calcareous Grassland; Neutral Grassland; Traditional Orchards; Farmland Habitats; Built Environment; Standing Open Water; and Rivers, Streams and associated habitats. These are the most significant of the UK priority habitats within the county.

In addition a Bats Species Action Plan forms part of the overall Plan. A separate Action Plan has been included for bats as they utilise a wide range of habitats, and there are also some very specific issues relating to them. There are individual actions for some other species under the Habitat Action Plans, and a full list of Wiltshire BAP Species is included in Section Three of the overall Plan.

Finally activities supporting a wide range of habitats and species have been grouped under a Generic Action plan.

Each of these Habitat and Species Action Plans contains objectives, targets and actions that are clearly linked and which are easily measurable so that progress can be meaningfully and accurately determined. Partners have signed up to undertake each action listed, with lead partners responsible for reporting delivery of these actions to the allotted time frame. Each Action Plan has a working group responsible for implementation and taking the Plan forwards.

The Wiltshire Biodiversity Partnership has a new website at www.biodiversitywiltshire.org.uk, where the latest information about progress and working group meetings and events can be found. If your organisation is undertaking activity to maintain or enhance biodiversity in Wiltshire, which is not captured in this Plan, please let us know. Similarly if you feel that your organisation can contribute to any of the existing actions or take on responsibility for new actions to deliver the objectives of the Plan, please let us know.

Section One

Introduction

Introduction

1. The Biodiversity Action Plan Process

What is Biodiversity?

Biodiversity is a term used to describe the variety of living things. It includes all species of plants and animals, the **genetic variation** amongst them, and the complex **ecosystems** of which they are a part. The term itself is formed from the combination of the two words 'Biological' and 'Diversity'.



Figure 1: The term biodiversity encompasses all species of plants and animals, the complex ecosystems and habitats of which they are a part, and the genetic variation amongst them.
Photographs: Adonis blues © Richard Aisbitt; Fungi at Savernake © WWT, Birds Foot Trefoil © Tony Coultiss

The term 'biodiversity' was brought into prominence following the Rio de Janeiro Earth Summit in 1992, which was attended by 159 heads of Government, including our own. The Summit was held in light of the growing realisation that the world's environment was declining rapidly, while at the same time the quality of life of much of the world's population remained very low. One of the key outcomes of the Earth Summit was the Convention on Biological Diversity (CBD)¹. The CBD was the first treaty to provide a legal framework for the conservation of biodiversity. It required governments to take a wide range of actions to halt and if possible, reverse, the steady decline of species and natural habitats.

The UK Biodiversity Action Plan is the UK government's response to signing the CBD, and was published in 1994. It was followed by a series of action plans for priority habitats and species produced between 1995 and 1999. The UK BAP is currently undergoing its first full review - revised habitat and species targets have now been published, and a revised priority species and habitats list has been produced².

Over 100 BAPs have now been produced on a wide range of geographic scales in the UK. This reflects the fact that wildlife priorities will differ significantly from one area to another. Figure 2 shows how this relates to Wiltshire.

¹ Convention on Biological Diversity website: <http://www.cbd.int/>

² Go to the UK BAP website to view the revised habitat and species targets and view the new priority habitat and species lists – www.ukbap.org.uk

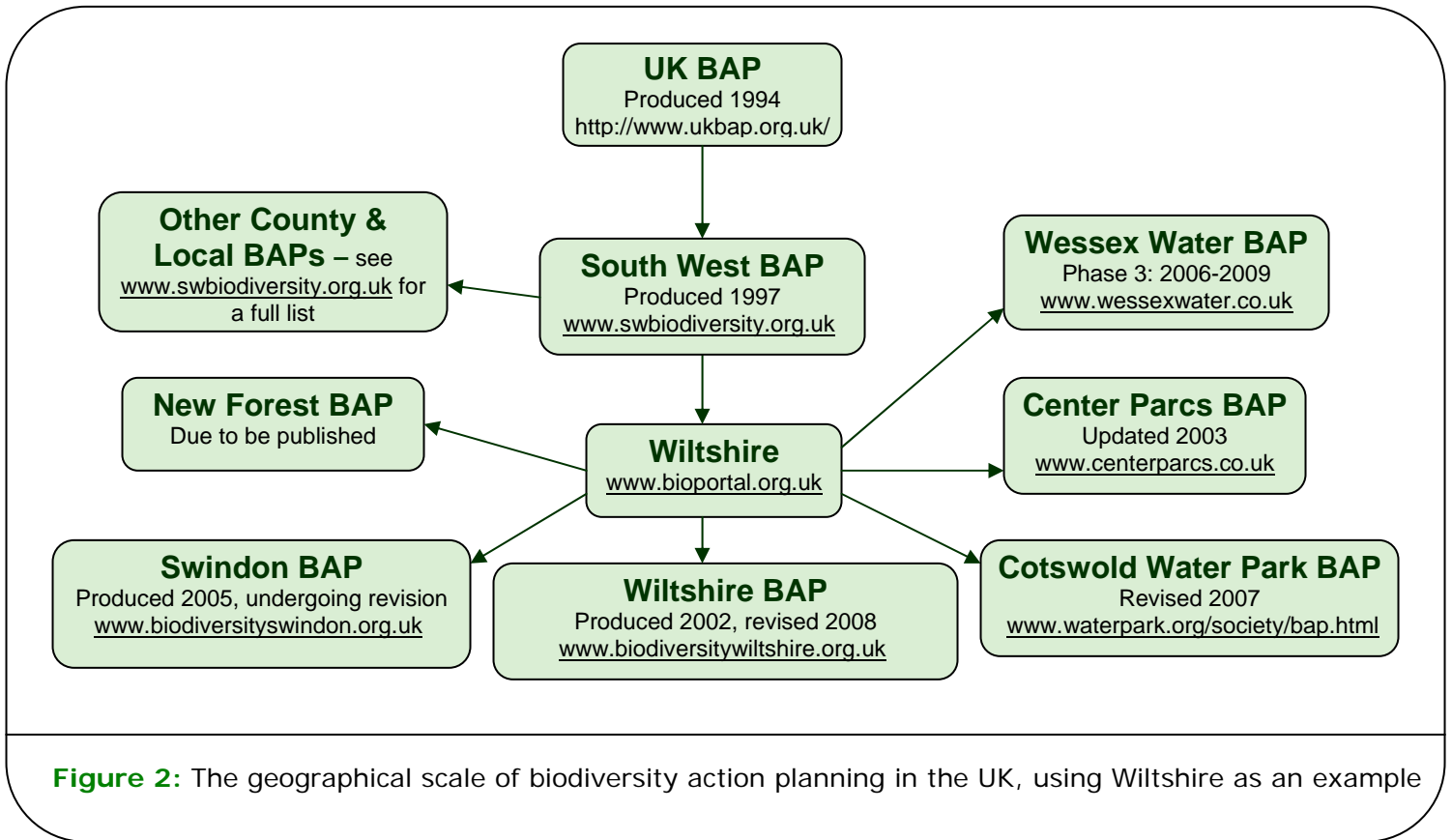


Figure 2: The geographical scale of biodiversity action planning in the UK, using Wiltshire as an example

2. Biodiversity in Wiltshire

Wiltshire is a large, predominantly rural, inland county covering approximately 3255km². It has a population of 433,000 nearly half of whom live in towns or villages with fewer than 5000 people. Wiltshire has a rich and unique heritage – inside its boundaries are the world heritage sites of Stonehenge and Avebury, and about 20,000 sites of archaeological or wildlife interest.

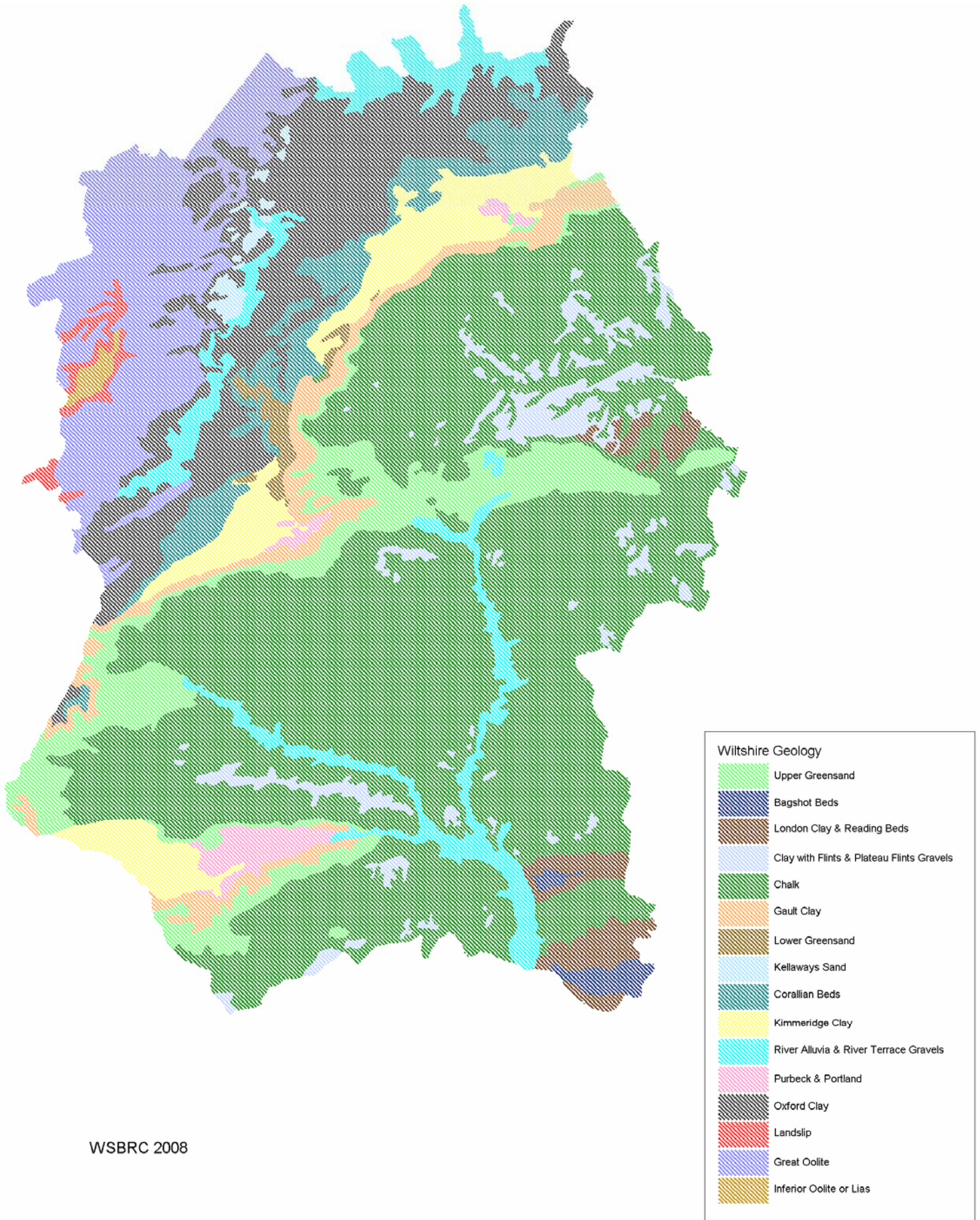
“Chalk and Cheese” have often been used to describe the two geological and landscape forms into which much of the county falls.

“Chalk” denotes the areas of rolling downland including the Marlborough Downs, Salisbury Plain and Cranborne Chase. Salisbury Plain, which supports the largest known expanse of unimproved chalk downland in northwest Europe at 12,933ha represents 41% of the British total of this important habitat, and divides the county from north to south. The chalk areas constitute more than half of Wiltshire’s land mass and dominate the southern, eastern and central parts of the county. The two largest SSSIs in Britain are found on the chalk grasslands of the Salisbury Plain Training Area (SPTA, 38,000 ha) and Porton Down (1562 ha). Chalk streams cut through the downs - the Salisbury Avon and its tributaries in the south, and the tributaries of the Thames in the Marlborough Downs. The Salisbury Avon is a Special Area of Conservation, designated for its wide variety of fish and invertebrates.

“Cheese” refers to the flatter pasture lands of north-west Wiltshire, which consist of beds of Oxford and Kellaways clays surrounded by a ridge of Corallian limestone. The clay vale is drained by streams that flow slowly through steep banks of alluvial silt into the Semington Brook, the Marden and the Biss before the water reaches the Bristol Avon.

Figure 3 describes the geology of Wiltshire in more detail.

Figure 3: The Geology of Wiltshire



WSBRC 2008

3. The Wiltshire BAP 2002

Why have a Wiltshire Biodiversity Action Plan?

- To prioritise action required to conserve Wiltshire's biodiversity
- To provide baseline information on our current knowledge
- To coordinate and focus action for biodiversity by creating a cohesive local partnership
- To raise awareness among all sectors in Wiltshire – conservation, public, private, local communities
- To provide a framework for monitoring
- To identify current issues and set out targets to work towards

A local action plan is essential in enabling the managers and deliverers of action on the ground to participate in and guide a process of positive action for biodiversity. It also provides opportunities to increase understanding of the issues and support for biodiversity amongst all sectors of the community, not just those actively involved in conservation.

"A Vision for Wildlife in Wiltshire, a draft Biodiversity Action Plan", was published in October 1996. This vision document began the process of positive action for biodiversity in the county, by providing a guide for the Local Agenda 21 process and Structure and Local Plan development. One of its key recommendations was the development of local habitat and species action plans. In 2002 the Wiltshire BAP was published,

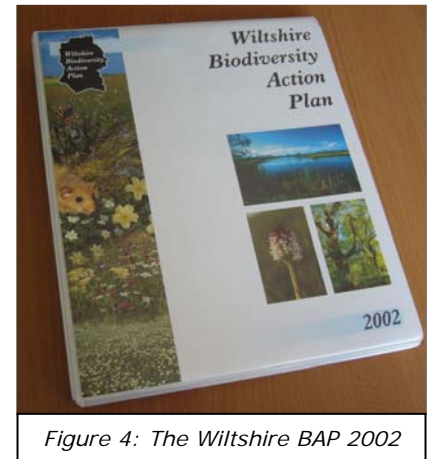


Figure 4: The Wiltshire BAP 2002

containing 9 Habitat Action Plans (HAPs) and one grouped Species Action Plan (SAP) for Bats.

4. Coordination of the BAP

The Wiltshire BAP is coordinated by the Biodiversity Manager and Biodiversity Action Plan Officer at Wiltshire Wildlife Trust, supported by the Wiltshire BAP Steering Group. The Steering Group is made up of representatives from the Wiltshire Wildlife Trust, Natural England and Wiltshire County Council (the three main funders of the BAP) as well as the Cotswold Water Park Society (CWPS), the Wiltshire and Swindon Biological Records Centre (WSBRC) and Biodiversity South West (BioSW).

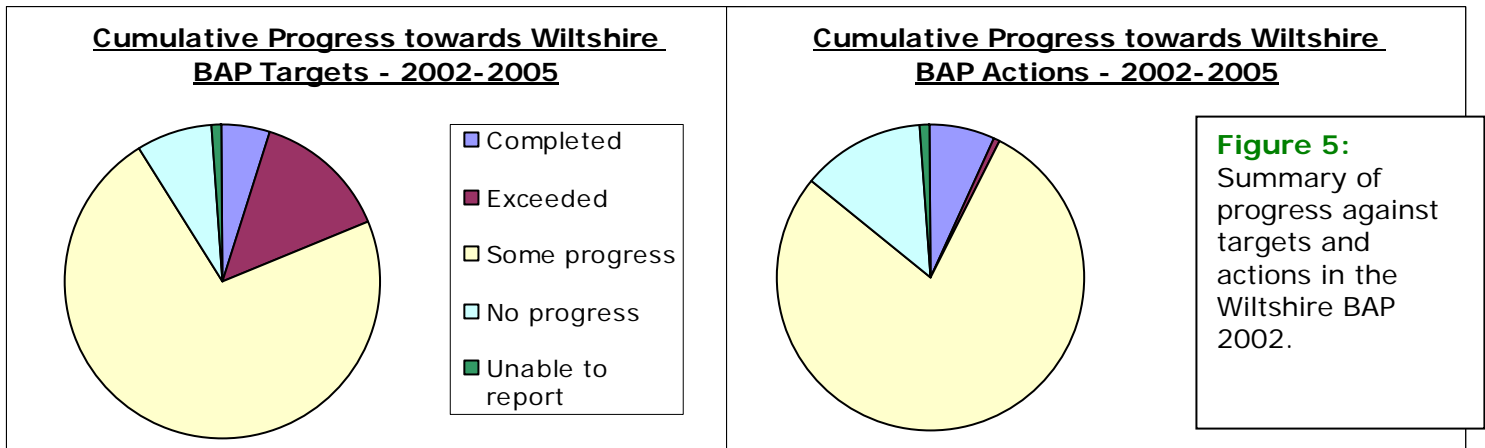
Over forty different partners are signed up to deliver actions in the BAP – these organisations make up the Wiltshire BAP Partnership. The Wiltshire BAP Forum is broader again, and acts as the arena for the sharing of information about biodiversity and the BAP in Wiltshire and to raise awareness. Anyone can become a member of the Forum if they want to learn more about the Wiltshire BAP Process, and can attend events organised by the Steering Group or Partnership, as well as receive newsletters and other information.

5. Progress towards the actions and targets set out in 2002

The Wiltshire BAP 2002 has been at the forefront of biodiversity action in Wiltshire over the past seven years, including the guiding and influencing of development, land acquisition, community activity, voluntary action, data gathering, land, river and water body management, habitat restoration and re-creation, and agri-environmental/forestry stewardship schemes

In December 2006 a Progress Report was published, illustrating progress against the targets and actions in each HAP and SAP since the inception of the BAP in 2002. A summary of

progress is given in figure 2. Some progress highlights are given under the supporting text for each specific HAP in this revised BAP.



6. The need for review

The Wiltshire BAP Progress Report 2002-2005 illustrates that the Wiltshire BAP has been a successful tool enabling a more focused delivery of priority conservation work in Wiltshire. However, the Progress Report highlighted some quite significant barriers towards progress, and this led to the initiation of a full review of the Wiltshire BAP by the BAP Steering Group at the beginning of 2007.

Why changes were required to drive forward Wiltshire BAP implementation:

- Many actions and targets in the 2002 BAP had a deadline of 2005 or earlier and are now out of date
- Objectives, targets and actions were not clearly linked in the 2002 BAP. This is necessary to report nationally to the Biodiversity Action Reporting System (BARS), so that work done in Wiltshire is shown to contribute to national targets in the UK BAP

Biodiversity Action Reporting System (BARS) <http://www.ukbap-reporting.org.uk/>

The UK BAP is being delivered by over 1500 organisations, four country biodiversity strategies and programmes, and about 150 local BAPs. While this success in engaging partners into biodiversity conservation is a cause for celebration, it makes it difficult to assess both what is and is not being achieved at UK, country and local levels. This led to the development of BARS, completed in 2004. BARS is an information system that supports the planning, monitoring and reporting requirements of national, local and company BAPs. It also allows users to learn about the progress being made with local and national BAPs.

Wiltshire BAP Progress will now be input regularly onto BARS – go to www.ukbap-reporting.org.uk to view the latest updates.

- In order to report progress against the targets and actions in the BAP, they need to be SMART (see information box below)
- The recent review of the UK BAP has informed the review of the Wiltshire BAP
- Working groups set up to take forward the action plans in the 2002 BAP had begun to fall apart, and many required reinvigorating. It was also felt that by refreshing the BAP, the steering group would be able to engage a wider partnership
- The targets in the Generic Action Plan are not measurable or reportable against, they are simply statements
- Swindon was included in the 2002 Wiltshire BAP, but now has its own BAP. Therefore references to Swindon have been removed

Swindon

As Swindon is a Unitary Authority, a separate BAP was published for the Borough in 2005. This was decided after the Wiltshire BAP was published, and thus Swindon currently receives double coverage. The decision was therefore taken by the BAP Review Working Group to remove reference to Swindon when reviewing the Wiltshire BAP. Therefore any figures given in the reviewed action plans do not include Swindon where possible. See www.biodiversityswindon.org.uk for further information about the Swindon BAP.

- The BAP Forum has recognised the need for a more inclusive approach allowing appeal to a wider audience, to engage a wider partnership and to include conservation work at the landscape scale. The WBAP 2002 is a very 'exclusive' document with a limited appeal, i.e. to conservation professionals.
- Responsibility for delivery needs to be assigned appropriately, and agreed. The original BAP contained actions for groups such as "garden centres" for which agreement had not been gained, and individuals had not been named. Therefore it was very hard to determine whether there had been any progress against these actions.
- The 2002 BAP included a great deal of ongoing work, rather than prioritising the added value required to meet the conservation requirements of Wiltshire's habitats and species.
- The sheer number of actions in the 2002 BAP hampered both progress and reporting
- The Habitat Action Plans (HAPs) in some cases did not follow national BAP titles, and in addition the HAPs included required review to make sure that all of the priority habitats found in Wiltshire were covered.
- The UKBAP Habitat and Species review has culminated in the removal of several species from the Priority Species List, and the addition of many others. New habitats have also been named, and others have been revised. The review of the Wiltshire BAP meant that these changes at a national level could be taken into account.
- The 2002 WBAP format does not allow for changes or updates to be made. This is required to ensure that the BAP is a live, up-to-date and current document
- There have been many major changes in policy and attitude since 2002 – these are explained in detail in Appendix One.

SMART target setting

The Wiltshire BAP targets and actions set out in 2002 varied substantially in the amount of information that they conveyed. Many were not quantitative and did not contain end dates, making reporting a subjective process. This also made it difficult to integrate UK and local BAP targets in any meaningful or quantitative way. Therefore, in order to keep the Wiltshire BAP in line with the UK BAP, the Review Working Group decided to follow the guidance given by the UK BAP in setting SMART targets:

S – Specific - the type of target needs to be defined and targets should represent quantitative milestones towards a point at which the habitat or species are likely to be viable in the long term.

M – Measurable – it must be possible to monitor and report progress towards each target.

A – Achievable - in proposing new targets, Lead Partners were asked to ensure that they are achievable both biologically and pragmatically, making reasonable assumptions about the availability of space, resources and other factors such as climate change.

R - Relevant - the targets should, wherever possible, represent progress towards achieving long-term viability.

T – Time-bound - the targets must incorporate a series of time-limited milestones and a deadline.

The revised Wiltshire BAP is an up-to-date, live, strengthened document with increased reportability, ownership and accessibility, which in turn will lead to a stronger partnership and Forum that is better equipped to push forward the implementation of the targets and actions within the BAP.

Wiltshire BAP 2008

What has been reviewed?

1. HAP and SAP titles (and habitats and species covered)
2. Objectives, targets and actions (structure and content) in each HAP/SAP
3. WBAP Vision and individual HAP/SAP Visions
4. Wiltshire BAP species
5. Generic Action Plan
6. Taking Action Plans forwards

What has been reviewed 1: HAP and SAP titles

The aim of this part of the review was to bring HAP and SAP titles in line with UK BAP. The table below shows the changes that have been made and the reasons behind these changes.

2002 HAP/SAP Title	2008 HAP/SAP Title	Changes in scope	Comments
Generic Action Plan	Generic Action Plan	Now takes into account changes in policy/attitudes	
Woodland	Woodland		No change to title
Wood-pasture, Parkland and Ancient Trees	Wood-pasture, Parkland and Ancient Trees		No change to title
Hedgerows	Ancient and Species Rich Hedgerows		Title changed to bring the HAP in line with the title of the UK BAP HAP
Rivers, Streams and Associated Habitats	Rivers, Streams and Associated Habitats	Comprehensive coverage of invasives	No change to title.
Standing open water	Standing open water	To include ponds, wetland mosaics, former mineral sites, reedbed, fen and marsh	No change to title. HAP now includes ponds to bring in line with UK BAP
Arable Farmland	Farmland Habitats	To include farmland birds, wet grassland and rare arable plants	Title changed to include mixed farming and allow Farmland Birds to be included in the HAP rather than requiring a separate SAP.
Calcareous Grassland	Calcareous Grassland		No change to title
Unimproved Neutral Grassland	Unimproved Neutral Grassland		No change to title
Urban Areas	Built Environment	To include post-industrial sites and road verges	Title changed to allow the HAP to encompass all built structures, not only those found in urban areas. Post industrial sites have a new HAP at UK level, but have been included under the Built Environment HAP in the Wiltshire BAP.
Bats	Bats	Now covers all bats in Wiltshire, rather than just a select list	No change to title. Now covers all bats found in Wiltshire.
	Traditional orchards		New HAP in line with UK BAP

What has been reviewed 2: Objectives, targets and actions

Objectives, targets and actions were not clearly linked in the 2002 BAP. Each of the reviewed action plans is based on the simple model shown below.

Objective	
Target	Action
	Action
	Action
Target	Action
	Action

The new model allows objectives to be linked to targets which in turn are linked to actions. Each action is also linked to a partner and has a deadline.

Annual updates on progress will still take place in the working groups, but this should now be much easier with a more streamlined BAP and the setting of SMART targets. The BAP itself is a live document, in that actions and targets can be amended annually as part of a yearly update – if they become inappropriate for example, or if circumstances change. A full progress report will take place in 2010 – to coincide with the culmination of Countdown 2010.

What has been reviewed 3: Wiltshire BAP Vision

The Wiltshire BAP 2002 did not have an overall vision – something aspirational that shows everyone where we want to see Wiltshire’s wildlife and habitats in 50 years time.

A Vision for the Wiltshire BAP

Wiltshire – a place where people make space for wildlife.

Where biodiversity is second nature to everyone, valued by all for its beauty, wildness, and as an important resource for future generations.

A landscape where wildlife has space to move and people have room to breathe, helping Wiltshire to flourish in a changing climate.

Each HAP and SAP now also has a vision, which illustrates where the partners involved in creating that Action Plan would like to see that habitat or species in 2030.

What has been reviewed 4: Wiltshire BAP species

The 2002 BAP gave species variable coverage, and it wasn’t clear which species were and were not on the Wiltshire BAP Species List. See Section Three of this Action Plan for more information about how the Wiltshire BAP Species List and targets and actions for species have been reviewed.

What has been reviewed 5: Generic Action Plan

The Generic Action Plan (GAP) is a section of the Wiltshire BAP containing overarching themes that apply to many or all of the other Action Plans. However, many of the actions in the 2002 BAP GAP were just statements; they were not quantifiable or reportable against. The Wiltshire BAP Review Working Group has reviewed the GAP.

What has been reviewed 6: Taking Action Plans forwards

The 2002 BAP set up working groups to take each action plan forwards. Several of these worked very well, however after 5 years, and with significant staff turnover, most of these

groups have now stopped meeting, or have fallen apart. A key part of this review has been the emphasis on taking forward and implementing the revised action plans, and therefore it has been essential to reinvigorate and set up new working groups. The new working group structure is shown in the table below. If you do not currently sit on a working group but would like to, or would like to receive email correspondence, please contact the working group lead, or the Wiltshire BAP Coordinators. One key point that has come out of the review is that the structure of each group need not be uniform, and that each group should be able to develop how it pleases, taking whatever format works for that particular group.

Working Group	Action Plans covered	Lead and contact details	Organisations currently represented	Format of group
Woodland	Woodland, Wood-pasture, Parkland and Ancient Trees, Hedgerows	Ian Briscoe, Forestry Commission (Woodland and Wood-pasture) ian.briscoe@forestry.gsi.gov.uk Roger Griffin (Hedgerows) roger.griffin@naturalengland.org.uk	Forestry Commission (FC), Natural England (NE), Wiltshire County Council (WCC), Wiltshire Wildlife Trust (WWT), RSPB, CCWWD AONB, North Wessex Downs AONB, Great Western Community Forest	Twice yearly
Rivers, Streams and Associated Habitats	Rivers, Streams and Associated Habitats	Dianne Matthews (Natural England) – dianne.matthews@naturalengland.org.uk	NE, WCC, WWT, Wessex Water, Environment Agency (EA), Wiltshire Fisheries Association, Action for the River Kennet	Twice yearly
Standing Open Water	Standing Open Water	Gareth Harris (Cotswold Water Park Society - CWPS) - gareth.harris@waterpark.org	CWPS, NE, WWT, British Waterways, Wilts and Berks Canal Trust, Wiltshire and Swindon Biological Records Centre (WSBRC), RSPB	Twice yearly
Farmland Habitats	Farmland Habitats	Simon Smart (Black Sheep Environmental Management) – simonsma@tiscali.co.uk	NE, RSPB, Game Conservancy Trust, WWT, Plantlife, MOD, Black Sheep Countryside Management, Wiltshire Ornithological Society	Twice yearly
Calcareous Grassland	Calcareous Grassland	Robert Lloyd (Natural England) robert.lloyd@naturalengland.org.uk	NE, WWT, Plantlife, Dstl, National Trust, RSPB, WSBRC, WCC	Twice yearly
Unimproved Neutral Grassland	Unimproved Neutral Grassland	Isobel Whitwam (Natural England) – isobel.whitwam@naturalengland.org.uk	NE, WWT, WSBRC, WCC, WSBRC	Twice yearly
Built Environment	Built Environment, GAP Planning Section	Louisa Kilgallen (Wiltshire County Council) - louisa.kilgallen@wiltshire.gov.uk	WCC, WWT, NE, WSBRC	Three times yearly
Road Verges (existing group)	Road verges (BEO2 under Built Environment HAP)	Fiona Elphick (Wiltshire County Council) – fiona.elphick@wiltshire.gov.uk	WCC, WSBRC, Mouchel Parkman, Lindsay Carrington Ecological Services (independent consultant)	Between two and four times a year
Bats	Bats	Purgle Linham (Wiltshire and Swindon Biological Records Centre) purgle.linham@wiltshirewildlife.org	WSBRC, Natural England, WWT, CWPS	Twice yearly

Traditional Orchards	Traditional Orchards	Working group being set up to develop this HAP. Contact Neil Pullen – neilp@wiltshirewildlife.org for more information	Small working group established between WWT and Natural England	Being taken forward in 2008
Generic Action Plan	Generic Action Plan	Overview maintained by WBAP Steering Group. Individual sections taken forwards by Built Environment Working Group, CWS Steering Group and WSBRC Management Group. Contact Sarah Wilkinson for more information – sarahwilk@wiltshirewildlife.org .		

The purpose of the working groups is to:

1. Monitor progress
2. Drive forward action plan implementation
3. Report effectively
4. Determine whether Action Plan updates are required
5. Discuss new issues and possibilities, and provide a forum for discussion
6. Develop and improving working relationships, and join up on common goals
7. Ensure that the overall BAP Partnership is maintained and strengthened

The Format of the Review

A subgroup of the Wiltshire BAP Steering Group (termed the Wiltshire BAP Review Working Group) was set up in January 2007 to organise and implement the review of the Wiltshire BAP. The Review Working group called a General Meeting in May 2007 to inform and discuss the review process with the Wiltshire BAP Partnership, from which around 50 members attended. The Action Plans themselves were reviewed at two rounds of seven workshop sessions – the first in June 2007, and the second in September/October 2007. There were several rounds of email and written consultation between workshops, as well as final consultation in November/December 2007.



Discussion at the WBAP Review General Meeting in March 2007 © WWT

In total 78 members of the Wiltshire BAP Partnership representing 40 different organisations attended the review workshops, and some 101 people from around 50 different organisations or groups provided comments on the draft revised HAPs and SAP. Huge thanks go to all of these individuals and organisations.

The Wiltshire BAP 2008 – taking it forwards (summary)

This document constitutes the culmination of a year's work by the Wiltshire BAP Partnership to review the Wiltshire BAP, 2002.

As shown above, each Habitat and Species Action Plan now has a dedicated working group set up to drive forward its implementation.

The revised BAP will now be entered onto BARS, and partners will be asked to report progress each year. This will be coordinated by the BAP Coordinators and taken forwards through the working groups. Working groups will also be asked to make a yearly update of the particular HAP/SAP that they are working on, so that each Plan remains live and relevant.

The first full progress report in the form of a published document will take place in 2010.

Section Two

The Action Plans



The Action Plans

This section of the Wiltshire BAP contains the Generic Action Plan, 10 Habitat Action Plans (HAPs), 1 Habitat Information Note, and 1 Species Action Plan (SAP):

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Each HAP contains a number of objectives for the conservation of that habitat. Specific species are covered in the last objective under each HAP, and are only listed where their conservation requirements are not met by the targets and actions that have been set for the habitat as a whole. Some Action Plans do not have a species specific objective because action for individual species has not yet been identified for those habitats.

Each Action Plan is split into objectives, targets and actions:

Objectives are broad and overarching, they are not SMART, but are an overall aim or vision, into which SMART targets and actions feed.

Targets are SMART, and as such have a measure. Progress towards each target will be measured annually, and the end date (if not stated) can be taken as being the latest deadline for any actions feeding into it. Each target has a Lead Partner, highlighted in bold who is responsible for reporting progress towards that target.

Actions are also SMART and have a measure and a deadline. They are the ways or mechanisms by which their respective targets are achieved. Each action has a list of partners who will each report progress towards that action. Any technical advice or technical data collection that is required is done by the Lead Partner outlined in bold.

Deadlines are for 31st December of the year specified, unless otherwise stated

Progress towards targets and actions will be discussed at the winter meeting of each Working Group. Data collection will be completed by the end of January each year, and published and entered onto BARS by March. At the winter meeting each HAP or SAP group will also discuss any updates that need to be made to their Action Plan, and these updates will be amalgamated into the BAP by March.

Partners are listed by organisation. A list of the individuals who are able to report on the targets or actions that a particular organisation is listed for can be found at the bottom of each Action Plan.

Any partner acronyms that you are unsure of can be found in Appendix 3.

Wiltshire BAP Generic Action Plan

The preparation of the individual Habitat Action Plans (HAPs) for the revised Wiltshire BAP highlighted a number of common issues or themes which cross-cut many of the habitats in the county, and which are relevant to each of the HAPs. The Wiltshire BAP Steering Group has devised a series of headings which encompass these issues, and have drawn up targets and actions relating to each of them, to form a Generic Action Plan.

1. Landscape Scale Approach – Implementing Nature Map

Nature conservation in Britain has traditionally focused on the protection of special sites, whether statutorily designated (e.g. SSSIs), other nature reserves, or Wildlife Sites. While this has been both necessary and urgent given the rapid loss of wildlife from much of the landscape over the last forty years, this reactive approach is now recognised to be insufficient in preventing the fragmentation of habitats (and subsequent decline in species). Small and isolated habitats are particularly threatened by climate change, and are unlikely to be viable in safeguarding species in the long term.

In recognition that a new approach was required, the Royal Society of Wildlife Trusts (RSWT) launched the Rebuilding Biodiversity Initiative in 2002, which requires a landscape scale approach to nature conservation – linking together areas of priority wildlife habitats into robust and extensive networks. The South West Nature Map was produced by the South West Regional Biodiversity Partnership in 2004, and identifies the best areas to maintain and expand (through restoration and/or recreation) terrestrial wildlife habitats at a landscape scale. These blocks of land are known as Strategic Nature Areas (SNAs). More information about the SW Nature Map can be found on the South West Observatory website – www.swenvo.org.uk.

Activity around climate change adaptation is also included under this heading, as a landscape scale approach is required to allow Wiltshire's wildlife to be able to adapt to climate change, and through the provision of habitat linkages, to be able to move across the landscape to areas of more suitable climate space.

2. The Planning Process

Development can affect all habitats in the county. The Local Development Frameworks (LDFs) produced by Local Planning Authorities (LPAs), provide many opportunities to protect and enhance biodiversity, together with policy and legislation such as the biodiversity duty set out under the Natural Environment and Rural Communities (NERC) Act, 2006.

The design of major developments if done sympathetically can work towards many BAP targets through incorporating measures to enhance biodiversity and contributing to networks of multifunctional green space known as green infrastructure. This is critical to fulfil policies contained within the South West Regional Spatial Strategy (RSS) including the housing allocations for Wiltshire. Bearing this in mind, opportunities arise to further many BAP targets and actions through planning gain, which uses developer contributions for purposes including biodiversity enhancement.

Planning and Policy Statement 9 (PPS9) requires of Local Planning Authorities that "...*Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity ... interests*". The broad aim of this section of the Generic Action Plan is to ensure this is put into practice.

The Planning System is constantly changing, and it is important to maintain a consistent approach to biodiversity conservation throughout these changes. For more information about these changes (including Validation Checklists, One Wiltshire, the NERC Duty, PPS9 and other policy documents) see Appendix 1.

Some definitions

Major Development

The provision of 10 or more dwellings or provision of buildings with a floor space of 1000 square metres or more. This includes mineral working, waste disposal sites, major road infrastructure and other similar projects.

Green Infrastructure (GI)

The following definition is from the Town and Country Planning Association (2004):

“Green Infrastructure is the sub-regional network of protected sites, nature reserves, green spaces and greenway linkages. The linkages include river corridors and floodplains, migration routes and features of the landscape which are of importance as wildlife corridors. Green infrastructure should provide for multi-functional uses, i.e. wildlife, recreational and cultural experience, as well as delivering ecological services such as flood protection, and microclimate control. It should operate at all spatial scales from urban centres through to open countryside.”

3. County Wildlife Sites

County Wildlife Sites (CWS) are areas of land of recognised importance for wildlife, which fall outside the legal protection of the Sites of Special Scientific Interest (SSSI) system. To date, the Wildlife Sites Project (WSP) based at the Wiltshire Wildlife Trust (WWT) has identified around 1500 CWS in Wiltshire, with a total area of approximately 21,000ha, a figure which is comparable to that of Wiltshire's SSSIs. These form a vital network of high quality habitats of county level importance which are outside of statutory protection. Where there are actions common to CWS in general, they have been listed here, rather than repeated under each of the HAPs.

The Wildlife Sites Project aims to identify all of the important sites for wildlife in the county and survey each of them every few years. In order to do this it is important that the Project develops a working relationship with the owners and managers of all Wildlife Sites, providing information about the importance of their sites for wildlife. The Project encourages management that will conserve and enhance the value of sites for wildlife and offers advice and assistance with obtaining grant aid for such management. Through all of these activities, the Project supports the BAP process, by collecting data on the distribution, condition and management of BAP priority habitats and species.

4. Biological Recording

Up-to-date and accessible information is essential to the successful implementation of any BAP, and to monitor the progress towards targets and actions set out in the BAP. In Wiltshire there is an active body of county recorders, other recorders, and voluntary groups such as the Wiltshire Ornithological Society (WOS), Butterfly Conservation and the Wiltshire Bat Group (WBG) who generate and collect valuable data on the distribution and abundance of species within the county, and feed this information into the Wiltshire and Swindon Biological Records Centre (WSBRC). This data and data obtained from other organisations as well as commercial companies can then be used to inform and direct conservation effort within the county. However, to continue utilising this vast data resource, and to be able to monitor the status of Wiltshire's habitats and species, the WSBRC must be adequately resourced.

This section of the Generic Action Plan also includes actions to maintain the Wildlife Information Volunteer (WIV) service that the WSBRC manages. WIVs answer a vast range of queries from the general public on all areas of biodiversity, and are an invaluable source of communication about biodiversity and the BAP to the wider community.

5. Community and Public Involvement

Biodiversity and its conservation is not just the concern of wildlife organisations, and cannot be carried out by conservation organisations alone. It is important that local people are informed about and can enjoy their local environment, while at the same time being involved in conserving it – creating a feeling of ownership and responsibility in their communities.

Volunteers are vital to the work of conservation organisations, and vastly outnumber paid staff in many cases. They have been instrumental in meeting targets and actions in the original Wiltshire BAP, and have played a major part in conserving Wiltshire's Wildlife. For example, in 2007, volunteers taking part in the Wiltshire and Swindon Biological Records Centre's (WSBRC) River Monitors Scheme, identified a pollution incident on the River Nadder and informed the Environment Agency (EA) immediately, allowing the EA to take prompt action.

6. Communications

It is the aim of the Wiltshire BAP Steering Group to raise the profile of the BAP and to make the revised Wiltshire BAP a more inclusive plan of work. To address this, the communications section of the Generic Action Plan has been written in recognition of the need to raise awareness about biodiversity in Wiltshire, and the BAP, among all sectors of society – decision-makers, land owners and managers, businesses, communities and individuals.

7. Resources

The Wiltshire BAP sets out the BAP Partnership's priorities for the conservation of Wiltshire's habitats and species. It also recognises that many of the priorities it has identified are resource dependent. In addition, the coordination of the BAP Process, reporting on progress, profile-raising and the organisation of a cohesive Partnership also require resources, and actions around this are set out under this section.

8. Nature Reserve Acquisition

This section outlines the need to coordinate reserve acquisition plans amongst partners, to ensure maximum benefit for Wiltshire's wildlife overall. As described under Section One of the GAP, it is now recognised that this is best achieved by adopting a landscape scale approach, including the linking of habitat to allow wildlife to travel across a permeable landscape. A strategic approach is increasingly required when taking into account the development pressures outlined above.

Taking the new Generic Action Plan forwards

Because the Generic Action Plan cross-cuts a number of different projects, a number of different groups will be responsible for taking it forwards. These are listed in the "Reporting" column of the Action Plan, and include: the Wiltshire BAP Steering Group (WBAP SG), the Built Environment HAP Group, the County Wildlife Sites Steering Group (CWS SG), and the WSBRC Management Group.

Links with other Plans

Actions and targets within this Plan are linked to:

Wiltshire Local Area Agreement (LAA)

South West Biodiversity Implementation Plan (SW BIP)

More information about these can be found in Appendices 1 and 2

References

Biodiversity by Design: A guide for sustainable communities (2004) Town and Country Planning Association. This document can be downloaded from

http://www.tcpa.org.uk/biodiversitybydesign/pdfs/TCPA_biodiversity_guide_lowres.pdf

Planning and Policy Statement 9 (PPS9) published August 2005 can be downloaded from:

<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/historicenvironment/pps9/>

More information about many of the policy and attitude changes since the original Wiltshire BAP was published in 2002 can be found in Appendix One.

Acronyms are explained in Appendix Three.

Wiltshire BAP Generic Action Plan – Targets and Actions

1. Landscape Scale Approach – Implementing Nature Map

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<p><u>GAPT1:</u> Increased number of landscape scale projects.</p> <p><i>Note: definition of a landscape scale project is habitat restoration/creation based on SNAs, and one of its objectives is to increase landscape permeability</i></p>	<p>1 new project developed by 2010 and one more additional project by 2015 (WWT)</p>	<p><u>GAPA1:</u> Joint working to develop a prioritised list of SNAs for landscape scale habitat restoration projects in accordance with the SW Nature Map (at county level)</p>	List agreed by 2010	NE, WWT RSPB, WCC (County and District Ecologists), AONBs (NWD, CCWWD, Cotswolds), MOD, NT, FC	2010	LAA 2007/8 Environment Block: Section 2.6	WBAP SG
		<p><u>GAPA2:</u> Following prioritisation (under GAPA1), develop and initiate projects</p>	One additional project developed by 2010 and one more additional project by 2015	To be determined by prioritisation process above	2010 and 2015	LAA 2007/8 Environment Block: Section 2.7	WBAP SG
		<p><u>GAPA3:</u> Produce a costing for the implementation of Nature Map in Wiltshire</p>	Report produced	WWT, NE , Biodiversity SW	2008	South West BIP Section 7	WBAP SG
		<p><u>GAPA4:</u> Identify funding sources for the implementation of Nature Map</p>	Funding sources not from the Wildlife Trusts or Natural England identified and report produced	WWT , SWWT, NE, Biodiversity SW	2008	South West BIP Section 7	WBAP SG

2. The Planning Process

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<p><u>GAPT2:</u> No planning permission is granted where it is likely that there will be a net loss of biodiversity (includes all habitats/species in new BAP) NB: All CWS are covered by this.</p> <p><i>Note for this target: Core Strategies expected to be complete by October 2008</i></p>	<p>AMR (Annual Monitoring Report) indicates no net loss of biodiversity (District Ecologists)</p>	<p><u>GAPA5:</u> Liaise with LPA partners to include a policy in LDFs, requiring no net loss and suitable protection including buffer zones, for BAP habitats/species and designated sites.</p>	All LDFs contain suitable policies on adoption	WCC (District Ecologists) , WCC (County Ecologist) NE, LPAs (FP), WWT	Evidence base gathering phase for each LDD, Ongoing	South West BIP Towns and Cities Objective 1	Built Environment HAP Group
		<p><u>GAPA6:</u> Assist LPAs to develop and use local indicators to monitor these policies in the LDFs</p>	Local indicators reported in AMR	WCC (County and District Ecologists) , LPAs (FP and DC), WSBRC, NE	2009		Built Environment HAP Group
		<p><u>GAPA7:</u> Surveys undertaken as part of evidence base gathering for LDFs to include existing CWS, and to be aware of the potential for identifying new CWS. Data passed to WSP as appropriate</p>	Survey specification makes reference to this as a requirement of any contract	WCC (District and County Ecologists) , LPAs (FP), WWT (Wildlife Sites Project)	Evidence base gathering phase for each LDD, Ongoing	LAA 2007/8 Environment Block: Section 2.1	Built Environment HAP Group

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
		<u>GAPA8</u> : Potential effects of development on CWS are assessed during Sustainability Appraisals (SAs)	Reference is made to specific CWS in LDF Sustainability Appraisals	WCC (County and District Ecologists) , LPAs, WWT (Wildlife Sites Project)	During SA of each LDD, ongoing		Built Environment HAP Group
		<u>GAPA9</u> : Develop a consistent approach to ecology within development control teams, including dealing with pre-application enquiries, validation of applications, planning screen and sending out consultations	Mechanisms and training courses implemented so that all routine biodiversity issues are dealt with by local planning authority	WCC (District Ecologists) , LPAs (DC), County Ecologist, WSBRC, BE HAP group	2008	Swindon BAP Development Sites and New Habitats HAP (D9, D12)	Built Environment HAP Group
<u>GAPT3</u> : New major developments deliver biodiversity gain through the provision of new features (such as bat and bird boxes etc.) and where possible integrated green infrastructure (also including improvement of existing green infrastructure) <i>Note for this section: Core Strategies expected to be complete by October 2008</i>	AMR includes local indicator for this target, and percentage target to be defined once local indicator developed (deadline 2011) (District Ecologists)	<u>GAPA10</u> : Partners work with forward planners to develop suitable policies for core strategies and site allocation documents.	All relevant LDDs contain policies for biodiversity gain on adoption	WCC (County and District Ecologists) , NE, LPAs (FP), WWT	2008, Ongoing		Built Environment HAP Group
		<u>GAPA11</u> : Assist LPAs to develop and use local indicator to monitor biodiversity gain	Local indicators reported in AMR	WCC (County and District Ecologists) , LPAs (FP and DC) WSBRC, NE	2011		Built Environment HAP Group
		<u>GAPA12</u> : Work with LPAs to influence the inclusion of biodiversity in all design statements for major developments	Core strategy to include appropriate policy on adoption	WCC (County and District Ecologists) , NE, WWT	2009		Built Environment HAP Group
		<u>GAPA13</u> : Identify opportunities to work with other infrastructure groups (e.g. Rights of Way, Sustrans) to promote and develop a Green Infrastructure Plan for the county	Working group established	WCC (County and District Ecologists) , Swindon GI Sub-regional Strategy Group (includes large areas of Wiltshire)	2010		Built Environment HAP Group
<u>GAPT4</u> : New developments contribute to biodiversity gain via planning gain <i>Note for this section: Core Strategies expected to be complete by October 2008</i>	Contribution levels for biodiversity are set in SPD/policy to use planning gain for biodiversity objectives (deadline 2008) (Natural England)	<u>GAPA14</u> : Cost BAP actions that are suitable for planning gain funding to arrive at a formula for planning gain contributions per development (including GI and SNAs)	Formula devised	NE , LPAs (FP)	2008		Built Environment HAP Group
		<u>GAPA15</u> : LPAs work with partners to identify SNAs that are relevant to the LDFs and appropriate mechanisms for	Core strategies and Site Allocation Documents include policies for delivering	LPAs, WCC (County and District Ecologists) , NE	2008 and subsequent	WBAP Generic Action Plan, Section 1: Landscape	Built Environment HAP Group

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
		delivering SNA objectives	habitat creation in SNAs			Scale Approach	
<u>GAPT5:</u> LAs to develop SPD/pre-application guidance to address how relevant aspects of the BAP will be implemented through the LDF	SPD/pre-application guidance in place for "One Wiltshire" in 2009 (WCC - District Ecologists)	<u>GAPA16:</u> Gather support to produce a document akin to ALGE model for SPD from forward planners at the Development Plans Group	SPD/pre-application guidance adopted (in use)	WCC (County and District Ecologists) , LPAs (FP)	2009		Built Environment HAP Group

3. County Wildlife Sites

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<u>GAPT6:</u> Improved condition of County Wildlife Sites (CWS)	Government National Indicator 197 target is achieved (Wildlife Sites Project Steering Group)	<u>GAPA17:</u> Survey and assess the condition and management of a sample of CWS where access can be secured.	Sample of 200 sites assessed by 2010	WWT (Wildlife Sites Project)	2010 (date in LAA)	LAA 2007/8 Environment Block: Section 2.5	CWS SG
		<u>GAPA18:</u> Develop and adopt condition assessment protocols	Protocols agreed by 2010	WWT (Wildlife Sites Project)	2010		CWS SG
		<u>GAPA19:</u> County Wildlife Sites project securely and fully funded at an adequate level	At least two FTE surveyors securely and fully funded by 2012	Wildlife Sites Project Steering Group	2012	LAA 2007/8 Environment Block: Section 2.5	CWS SG
		<u>GAPA20:</u> Advise landowners or managers on management of Wildlife Sites for biodiversity.	Advice given to managers of all sites surveyed (approx 120 sites surveyed per year)	WWT (Wildlife Sites Project)	Ongoing, annual reporting		CWS SG
		<u>GAPA21:</u> Publicly owned CWS managed for biodiversity.	100% actively managed for biodiversity	WCC (County Ecologist) for LA managed CWS, WWT (Wildlife Sites Project) for others	2015		CWS SG
Note: If CWS not adopted in 2008 as an LA indicator insert appropriate target measure and actions.							
<u>GAPT7:</u> New County Wildlife Sites identified	Potential new CWS an agenda item at each HAP WG, and suggestions relayed to CWS Steering Group (HAP Group leads)	<u>GAPA22:</u> Seek to identify new potential Wildlife Sites and add them to the Wildlife Sites register	Potential new sites are assessed for Wildlife Site status within the year of identification	WWT (Wildlife Sites Project) , and each HAP Working Group	Ongoing, reported annually		Each HAP and SAP Working Group, and CWS SG

4. Biological Recording

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<p><u>GAPT8</u>: Consistently improve the volume, quality and coverage of high quality biological information readily available to aid decision-makers</p>	<p>The WSBRC database to reach 1 million records by March 2011. Baseline: 690,500 (WSBRC)</p>	<p><u>GAPA23</u>: Ensure WSBRC is sustainably funded</p>	<p>Sufficient funds are available to maintain and expand the WSBRC to meet the target</p>	<p>WSBRC Management Group</p>	<p>Ongoing reporting annually</p>		<p>WSBRC Management Group</p>
		<p><u>GAPA24</u>: Ongoing audit of data coverage to determine key gaps</p>	<p>Data needs for BAP identified and report produced annually</p>	<p>BAP Forum, WSBRC Management Group</p>	<p>Ongoing, reported annually</p>	<p>LAA 2007/8 Environment Block: Section 2.1</p>	<p>WSBRC Management Group</p>
		<p><u>GAPA25</u>: Create targeted volunteer recording schemes to help fill gaps identified in GAPA25</p>	<p>Annual review of volunteer recording schemes output</p>	<p>WSBRC, HAP Working Groups</p>	<p>Ongoing, reported annually</p>	<p>LAA 2007/8 Environment Block: Section 2.1</p>	<p>WSBRC Management Group</p>
		<p><u>GAPA26</u>: Identify other actions required to complete coverage</p>	<p>Following annual review above, means of filling remaining gaps determined</p>	<p>WSBRC</p>	<p>Ongoing, reported annually</p>	<p>LAA 2007/8 Environment Block: Section 2.1</p>	<p>WSBRC Management Group</p>
		<p><u>GAPA27</u>: Capture data from surveys undertaken by third parties onto the WSBRC database</p>	<p>Increase proportion of data received electronically to 60%</p>	<p>WSBRC, National Trust</p>	<p>2010</p>	<p>LAA 2007/8 Environment Block: Section 2.1</p>	<p>WSBRC Management Group</p>
		<p><u>GAPA28</u>: Consider how best to capture data from developer surveys as part of developing a consistent approach to ecology in development control teams (GAPA9)</p>	<p>System in place</p>	<p>WSBRC, WCC (County and District Ecologists), LPAs (DC)</p>	<p>2010</p>	<p>LAA 2007/8 Environment Block: Section 2.1</p>	<p>WSBRC Management Group; Built Environment Group</p>
		<p><u>GAPA29</u>: Ensure that all data received is entered onto the WSBRC database within 6 months of receipt</p>	<p>All data received is entered within 6 months of receipt</p>	<p>WSBRC</p>	<p>Deadline: ongoing, reported annually</p>		<p>WSBRC Management Group</p>

5. Community and Public Involvement

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<p><u>GAPT9</u>: Increase awareness of biodiversity so that it is included in Community Area Plans and Community Strategies.</p>	<p>Biodiversity integrated in all Community Strategies (4 in Wiltshire) and Community Plans (20 in Wiltshire) by 2011 (WCC-District Ecologists)</p>	<p><u>GAPA30</u>: Meetings held with community planners to identify timescales of plans and raise awareness of BAP and other biodiversity initiatives</p>	<p>Senior Community Planners are aware of the need to incorporate biodiversity in community plans</p>	<p>WWT (World Changers), WCC (District Ecologists), NE</p>	<p>Dec 2008</p>	<p>LAA 2007/8 Environment Block: Section 2.4; SW BIP Towns and Cities Objective 5</p>	<p>Built Environment Group</p>

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<u>GAPT10:</u> Increase the number of people actively volunteering in biodiversity conservation across the county	Increase from baseline figure (identified in GAPA32) of 15% by 2015 (BE Working Group)	<u>GAPA31:</u> Produce baseline data	Report produced	WWT (new Head of Education) BE Working Group. <i>This is on hold until new person in post</i>	2008		Built Environment Group
		<u>GAPA32:</u> Baseline audit of volunteer training opportunities in the County	Report produced	WWT (new Head of Education) GAP Working Group. <i>This is on hold until new person in post</i>	2008		Built Environment Group
		<u>GAPA33:</u> Develop a strategic programme of training courses, linked to need for records. This should be in parallel with action below.	Programme developed	WWT (new Head of Education) & WSBRC , GAP Working Group. <i>This is on hold until new person in post</i>	2009		Built Environment Group
		<u>GAPA34:</u> Partners to identify opportunities for trained volunteers to utilise skills developed from training courses resulting from GAPA34	Opportunities identified in relation to training programme developed under GAPA34 by 2009. Yearly update thereafter.	WWT (new Head of Education) & WSBRC , GAP Working Group. <i>This is on hold until new person in post</i>	2009		Built Environment Group
		<u>GAPA35:</u> Maintain and support the existing network of voluntary surveyors providing records to the WSBRC	Capacity is maintained within the WSBRC	WSBRC , WWT , GAP Working Group	Ongoing, annual reporting		Built Environment Group
<u>GAPT11:</u> Increase the number of community groups taking action for biodiversity (including young people)	Increase from baseline figure (identified in GAPA37) by 10% by 2015 (GAP working group)	<u>GAPA36:</u> Produce baseline data	Report produced	WWT , BE Working Group, WWT (World Changers)	2008		Built Environment Group
		<u>GAPA37:</u> Identify funding opportunities based on existing map showing areas of social deprivation	Targeted list of opportunities produced	WWT , BE Working Group, NE (Access to Nature Grants)	2008		Built Environment Group
		<u>GAPA38:</u> Funding applications written	Number of funding applications to be determined once list (GAPA38) developed	WWT	2009		Built Environment Group
<u>GAPT12:</u> Provide Wildlife Information Service	At least half time week day provision of Wildlife Information Service (ongoing) (WSBRC)	<u>GAPA39:</u> Recruit, train and retain volunteers to run the service	At least half time week day provision available	WSBRC	Ongoing, yearly reporting		Built Environment Group
		<u>GAPA40:</u> Seek funds for management of the service	Management in place	WWT , WSBRC , WWT , BE Working group	2008		Built Environment Group

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<u>GAPT13</u> : Local Authorities enhance biodiversity on their land holdings (the new "One Wiltshire" recognises the contribution that its own land holdings can make to biodiversity)	Each LA has a strategy for enhancing biodiversity on their land holdings (including allotments) within a policy document by 2015 (WCC - County Ecologist)	<u>GAPA41</u> : Bring this issue to attention of Directors and Council members. Further actions to be developed by "One Wiltshire".	Issue brought to attention of Directors and Council Members. Positive response gained.	WWT, NE, WCC (County Ecologist)	Deadline: 2012		

6. Communication

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<u>GAPT14</u> : Raise profile of Wiltshire BAP	<u>Target measure 1</u> : Agreed Communications Strategy produced (WBAP SG). <u>Target measure 2</u> : Communications Strategy implemented (as and when set out in strategy) (WBAP SG) <u>Target measure 3</u> : 1200 hits on WBAP website by end of 2008 (WBAP Coordinators) <u>Target measure 4</u> : Increase in number of people on WBAP newsletter circulation list by 10% per year for 5 years (WBAP Coordinators)	<u>GAPA42</u> : Agreed Communications Strategy produced	Agreed Communications Strategy published	WBAP SG, BAP Coordinators	March 2009		WBAP SG
		<u>GAPA43</u> : Wiltshire BAP website developed	Wiltshire BAP website completed by end 2008	BAP Coordinators , WBAP SG	2008		WBAP SG
		<u>GAPA44</u> : Awareness raised within the wider community over BAP progress	Quarterly press releases on summary of progress against targets in Wiltshire BAP	BAP Coordinators , All Lead Partners	Ongoing, reporting annually		WBAP SG
		<u>GAPA45</u> : Awareness raising and celebration of biodiversity in specific habitats	20 press releases per year across whole suite of HAPs and SAPs, celebrating specific habitats/species and making mention of the BAP	BAP Coordinators (through attendance at working groups)	Ongoing, reporting annually		WBAP SG, ALL HAP and SAP Groups

7. Resources

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<u>GAPT15</u> : Biodiversity Partnership to secure adequate resources for BAP delivery/ implementation	<u>Target measure 1</u> : Agreed Funding Strategy produced. <u>Target measure 2</u> : Agreed Funding Strategy implemented (as set out in strategy) (WBAP SG)	<u>GAPA46</u> : Agreed Funding Strategy produced	Agreed Funding Strategy published	WBAP SG, BAP Coordinators	March 2009		WBAP SG
		<u>GAPA47</u> : Biodiversity Action Grant (BAG) provides resources for BAP implementation	BAG operational	WWT, WBAP SG, BAP Coordinators	June 2008		WBAP SG
		<u>GAPT48</u> : Biodiversity	To be determined	WBAP SG, BAP	To be		WBAP SG

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
		Partnership to provide advice and facilitation to deliverers to help them access the necessary resources	once GAPA48 complete	Coordinators	determined once GAPA48 complete		
		<u>GAPA49</u> : Partnership to promote the BAP within their organisations as THE mechanism for biodiversity action	<u>Action measure 1</u> : All partners to ensure all biodiversity work streams are reported into the Wiltshire BAP <u>Action measure 2</u> : The relevant tier of management is reminded of their corporate position on LBAPs, and allocate appropriate backing to the process	WBAP SG	Ongoing, reported annually		WBAP SG
<u>GAPT16</u> : Ensure adequate level of resources for coordination of BAP Forum	At least 1 FTE member of staff dedicated to this role (ongoing) (WBAP SG)	<u>GAPA50</u> : Sufficient funding maintained	Sufficient funding maintained	WBAP SG	Ongoing, reported annually		WBAP SG
		<u>GAPA51</u> : Capacity exists for yearly update of BAP	BAP updated annually	BAP Coordinators, WBAP SG	Ongoing, reported annually	LAA 2007/8 Environment Block: s.2.3	WBAP SG

8. Nature Reserve Acquisition

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links	Reporting
<u>GAPT17</u> : Coordinate reserve acquisition policies	No conflicting reserve acquisition ambitions (ongoing) (WBAP SG)	<u>GAPA52</u> : BAP steering group to take forward as regular agenda item	Coordination agreed by BAP steering group by 2008	WBAP SG, National Trust, RSPB	2008		WBAP SG

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Generic Action Plan:

Organisation	Representatives
Biodiversity South West	Naomi Brookes
Cotswolds AONB	Mark Connelly
Cranborne Chase and West Wiltshire Downs AONB	David Blake
Forestry Commission	Ian Briscoe
Ministry of Defence	Julie Swain
National Trust	Simon Ford, Chris Gingell
Natural England	Charles Routh, Tim Quinton
North Wessex Downs AONB	Heather White
RSPB	Patrick Cashman, Tracé Williams
South West Wildlife Trusts	Simon Bremnan
Wiltshire County Council	Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Saunders (District Ecologists)
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman and Sarah Wilkinson, Jacky Thomas (World Changers), Iain Boyd (Corporate), Rob Large (WSP)

Woodland Habitat Action Plan

A Vision for Wiltshire's Woodland over the next 30 years...

Woodland owners are fully involved in the sustainable management of their own woodlands, and the area of woodlands managed sustainably is increased.

The importance of ancient woodlands is understood and celebrated by Wiltshire's inhabitants, and there is no further loss in the area of ancient woodland and the rich flora and fauna that it supports.

Species which have seen dramatic decline in the past 20 years recover and flourish once again in Wiltshire's woodlands.

Background

This Action Plan encompasses all woodland within the county – ancient and recent semi-natural woodland and plantations of both conifer and broad-leaved species. However some parts of the Plan focus on ancient woodlands, since these are generally the richest in wildlife and once destroyed cannot be recreated.

Some definitions...

Ancient Woodland

Ancient Woodland has had a continuous history of cover since at least 1600AD, with clearing having been restricted to underwood or timber production only. Some ancient woods may be 'primary' in the sense that they are on sites that have always been woodland, back to the pre-Neolithic wildwood. However in many cases ancient woods have been cleared in the distant past: for example they may contain the remains of early Medieval, Saxon, Roman or Iron Age remains. As long as there has been no complete clearance of the site since 1600 such woods are still 'ancient' (Goldberg and Kirkby, 2002).

Recent Secondary Woodland

This term covers all woodland which does not have a history of continuous cover from at least 1600 and which has since that time developed "naturally" or has been planted on formerly non-wooded land. Recent secondary woodlands can generally be distinguished by their structure and also usually contain fewer species than ancient woodlands.

Semi-natural woodland

This term covers all woodland stands and types which do not obviously originate from planting but which exist as "ecologically distinct associations of trees, shrubs and herbs determined by edaphic, climatic and biotic influences" (Peterken, 1982).

Replanted Woodland

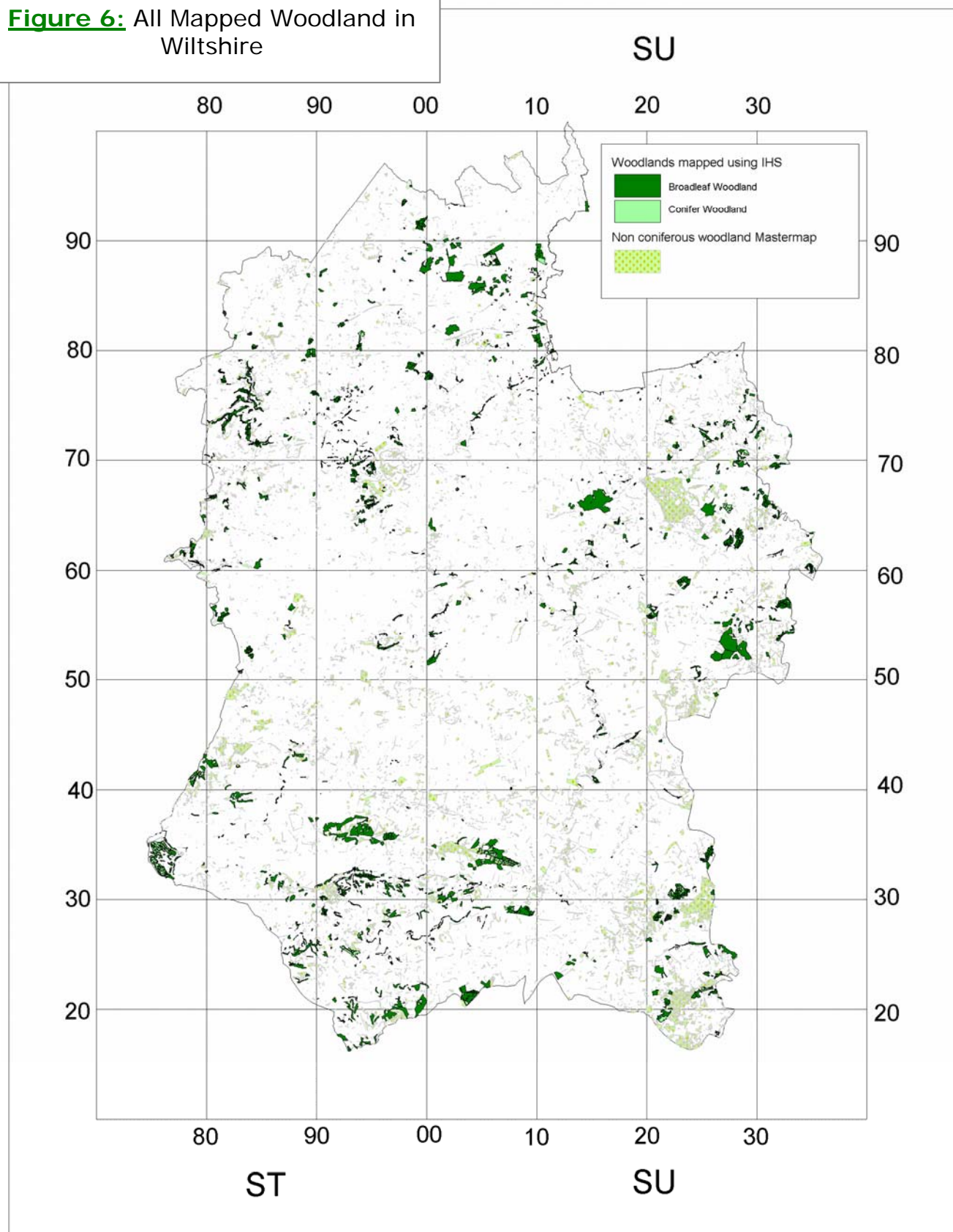
This term covers all obviously replanted woodland of a broadleaved, mixed or coniferous type. This automatically includes plantations of any species not native to Wiltshire, but also to native species planted so densely that the site's semi natural characteristics are suppressed.

Woodland in Wiltshire

Before man's arrival in Wiltshire it is likely that most of the county would have been covered by primary woodland of some type. The woods which now remain and are ancient in origin generally exist on sites relatively less favourable for farming.

The distribution of woodland and woodland types is also closely related to geology. The limestone plateaus and hills in the north west of the county are largely bare of woodland but by contrast, many of the steep sided valleys and coombes have remained wooded and the fertile moist soils support rich woodlands.

Figure 6: All Mapped Woodland in Wiltshire



WSBRC 2008

Figure 6 illustrates the extent of woodland in Wiltshire that has been mapped by the WSBRC. Ancient woodland cannot currently be distinguished. The National Inventory of Woodland and Trees (Forestry Commission, 2002) estimates that the total area of woodland in Wiltshire in blocks of over 2ha amounts to 26,624ha.

A provisional Ancient Woodland Inventory (AWI) for Wiltshire was published in 1987 by the Nature Conservancy Council, and also considered all woodland blocks of over 2ha. The AWI

estimates the extent of ancient woodland in Wiltshire to be 12,714ha - 53% of the woodland in the county or 3.7% of Wiltshire's total area. This indicates that just under half of the total woodland cover is secondary – either plantation or naturally regenerated woodland on formerly non-wooded sites.

Important Woodland Sites in Wiltshire

A total of 1350ha of Wiltshire's woodland is designated as SSSI, including Savernake Forest, Langley Wood and Cranborne Chase described below. Other important sites include Bentley Wood SSSI (which has an exceptional butterfly assemblage), Grovely Wood, Great Wood, Longleat and Stourhead.

Savernake Forest (Forestry Commission)

One of the largest woods in Wiltshire, contains outstanding lichen flora and a wide variety of other plants including species with nationally restricted distributions

- Exceptional diversity of fungi, well over 500 species
- Several beetles, flies and moths with nationally restricted distributions, including the Scarce Brown Streak (*Aplota palpella*), a UK and WBAP moth
- At least 25 butterflies breed on the site including Purple Emperor and White Letter Hairstreak
- The Forest harbours Wood Warblers, Turtle Dove and Woodcock, as well as Tree Pipits and Spotted Flycatcher which breed on the woodland edge.
- Range of mammals including Dormice and bats

Cranborne Chase (part of Cranborne Chase and West Wiltshire Downs AONB)

Straddling the Dorset/Wiltshire border, Cranborne Chase woodland derives from an ancient hunting forest. It provides some of the best examples of extensive coppice woodland in the country and the coppice regime is centuries old.

- 160 species of lichen recorded – 13 of which are rare in England, including *Usnea articulata* (WBAP and UKBAP) a formerly widespread species which is extremely susceptible to sulphur dioxide pollution and now virtually confined to the south west.
- 57 plant species associated with ancient woodland
- Over 80 species of moss and liverwort
- Over 120 species of moth and 30 species of butterfly including Pearl-Bordered Fritillary

Langley Wood National Nature Reserve and SSSI (Natural England)

This is an extensive tract of ancient forest on acid clays in the south of Wiltshire and within the New Forest National Park. There is no continuous history of grazing or coppicing and the site has been modified by man to a lesser degree than most woodland in lowland England. There is a very large range of woodland stand-types which reflects variation in soils and drainage. This has produced an exceptionally rich and varied woodland both structurally and botanically:

- The epiphyte lichen flora is particularly rich and some of the beard lichens are particularly luxuriant
- Wide range of breeding birds including BAP species: Nightingale, Nightjar, Lesser Spotted Woodpecker, Wood Warbler
- One area of young plantation supports a rich community of butterflies including Pearl-bordered Fritillary and Duke of Burgundy, both of which are very rare in the New Forest.



Pictures: Savernake Forest, Tom Cairns/WWT

Species characteristic of Woodland Habitats

As shown by the case studies above, woodlands, and particularly ancient woodlands can contain a rich species diversity of vascular plants, lichens, mosses, liverworts, butterflies, moths, birds and mammals. Woodlands are also important for bats, as they provide shelter and cover and a wide diversity of insect food. Dead trees are often valuable in providing roost sites for bats.

The dramatic decline in many familiar farmland birds has been well documented over recent years, however many woodland species are now also exhibiting similarly worrying trends. For example Lesser Spotted Woodpecker numbers decreased by 81%, Spotted Flycatcher, 71%, Nightingale, 63%, and Woodcock, 74%, between 1980-2005 (Common Birds Census).

The Wiltshire BAP Woodland HAP contains separate actions for Willow Tit and Nightjar, as well as the Dormouse.

Nightjar *Caprimulgus europaeus*

The Nightjar is a summer migrant that has been declining in numbers and range for much of the last century – the decline in range has been about 52% between 1968-92 (UK BAP Nightjar SAP). The species now breeds mainly in southern England, and where found in woodland, Nightjars nest in clearings and areas of clearfell. An increase in forestry clear-fells as a result of major storms and forest management have assisted recent increases, with over 50% of the total population found in this habitat in 1992. Actions have therefore been included in the Wiltshire BAP to provide more of this habitat, in line with the RSPB's work towards meeting targets in the UK BAP.

Willow Tit *Poecile montanus*

Willow Tit numbers decreased by 76% between 1980-2004 (BTO Common Bird Census/Breeding Bird Surveys), and it now has Red List status and is considered one of the fastest declining species in the UK. Action has been included in the Wiltshire BAP to try and understand some of the reasons behind this decline.

Dormouse *Muscardinus avellanarius*

In England the Dormouse has become extinct in up to 7 counties (comprising half of its former range) in the past 100 years. Although Dormice are still widespread in southern counties (Devon to Kent) they are patchily distributed. Population densities everywhere are less than 10 adults per hectare, even in good habitats. Fragmentation of woodland, leaving isolated non-viable populations is one of the main factors causing decline. Short distances, possibly as little as 100m, form absolute barriers to dispersal, unless arboreal routes are available.



© Charlotte Watson

Progress Highlights since 2002

New Woodland Planting

101ha of new woodland were planted in the ancient Royal Hunting Forest of Braydon in north Wiltshire between 2002-2005 by partners such as GWCF, WWT and FC, as part of the Jigsaw Challenge, to expand and link existing semi natural woodland. The Jigsaw Project was introduced by the Forestry Commission in England in recognition of the fact that many of our semi-natural woods are fragments of historically more extensive woodland, and that this fragmentation must be reversed.



Tree planting in the Braydon Forest – Paul Darby/WWT

Dormice

Wiltshire Mammal Group

During this period, the Wiltshire Mammal Group has continued to monitor 80 nest boxes erected in Savernake Forest, with Dormice found on nearly every visit. The Mammal Group also carried out a 20 box study in the south of the county at Oysters Coppice which has yielded a Dormouse nest.

The Mammal Group recently scouted a new site in west Wiltshire by carrying out a Habitat Assessment and Nut Hunt. The group has now set up 52 boxes, built by Mammal Group volunteers, in March 2008 ready for monitoring beginning in May. A further site near Rodbourne has had 100 nest boxes set up in it, which will be adopted by the Wiltshire Mammal Group in 2009. Finally, talks with the Swindon Rangers has identified Stanton Park as a possible receptor for 50 more boxes to become another National Dormouse Monitoring Site of the Wiltshire Mammal Group later in 2008.

20 Mammal Group volunteers have now begun training towards their Dormouse handling licence.

Salisbury Plain

In November 2007, Imber Conservation Group (ICG) and Defence Estates Environmental Support Team (DE EST) carried out a Nut Hunt at Ranscombe Bottom, an area of coppice woodland on the edge of Salisbury Plain. Evidence of Dormice was found, and subsequently a small team made up of representatives from ICG, Aspire Defence and the DE EST put out 50 new 'state of the art' summer residence dormouse boxes at Ranscombe. The boxes will be monitored, and the monitoring work will contribute to the National Dormice Monitoring Programme (NDMP), coordinated by the Peoples Trust for Endangered Species and Natural England. The Bulford Conservation Group, with the assistance of EST, are planning to put up a further 50 Dormouse boxes at Everleigh Ashes over on the East side of the Plain.



Picture: Dormouse box © MOD

Firecrest at Center Parcs

This species is a regular breeder at Longleat, and in 2007 a total of 16 breeding pairs were recorded. It is estimated that there are around 30 pairs of Firecrest in the southwest of England in total, and as approximately 50% of the UK population of Firecrest are found in the southwest of England, it is therefore possible that this site holds over 25% of the total UK breeding population. Center Parcs BAP Target 10 focuses on Firecrest, and numbers have been monitored annually at Longleat since 1994.

Changes since 2002

Planning and Policy Statement 9 (PPS9) now requires local planning authorities to have regard to areas of ancient woodland when granting planning permission.

Extract from PPS9: *"Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. Local planning authorities should identify any areas of ancient woodland in their areas that do not have statutory protection (e.g. as a SSSI). They should not grant planning permission for any development that would result in its loss of deterioration unless the need for, and benefits of, the development in that location outweigh the loss of the woodland habitat. Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Planning authorities should encourage the conservation of such trees as part of development proposals."*

In 2007 Defra published "A Strategy for England's Trees, Woods and Forests" (the ETWF Strategy). The Strategy embraces a number of new policy directions such as climate change as well as policy updates in environmental and social issues across Government. It was strongly influenced by regional aspirations for the local delivery of benefits from trees, woods and forests. It can be downloaded from the Defra website – www.defra.gov.uk.

Links with existing Plans

South West Biodiversity Implementation Plan

Section 10: Woodlands and Forestry

Other sections of the Wiltshire BAP

Rivers Streams and Associated Habitats HAP: wet woodland covered under this HAP

Bats SAP: As outlined above, woodland habitats are also important for bats, actions for which are covered under the Bats SAP.

Hedgerows Action Plan: hedgerows are important as linkages for maintaining dormice metapopulations

Cotswold Water Park BAP

Woodland Habitat Action Plan

New Forest BAP

The New Forest National Park is in the process of producing a Management Plan and BAP for the New Forest. These are likely to establish generic actions building on detailed actions from the Hampshire BAP (relevant HAPs in the Hampshire BAP are those for Ancient Semi-Natural Woodland and Hedgerows)

Center Parcs BAP

Target 17: Broadleaved woodland

Taking the Wiltshire BAP Woodland HAP Forwards

It was decided that as the Woodland, Wood-pasture and Hedgerows Habitat Action Plan working groups contained representatives from the same organisations, they should be taken forwards together. Therefore a combined working group has been set up to progress all three Action Plans. Ian Briscoe of the Forestry Commission will lead on the Woodland and Wood-pasture Plans, and Roger Griffin from Natural England will lead on Hedgerows.

References:

The Common Birds Census (CBS) was developed in 1964, and was the first survey to identify dramatic declines in many species, particularly amongst Farmland Birds. The CBS has now been replaced by the Breeding Birds Survey (BBS) developed in joint partnership in 1994 by BTO, JNCC and RSPB. More information from the BTO website: www.bto.org.

Confederation of Forest Industries (ConFor) website: www.confor.org.uk

Bowsher, P. (1987) *Wiltshire Inventory of Ancient Woodland (Provisional)* Nature Conservancy Council

Goldberg, E. and Kirby, K. (2002) *Ancient Woodland: Guidance Material for Local Authorities*. Natural England Publication number AWG1.

Smith, S. and Gilbert J. (2002) *National Inventory of Woodland and Trees, England: County Report for Wiltshire*. Forestry Commission. Download from: www.forestry.gov.uk/inventory

The UK BAP Species Action Plans for Dormouse and Nightjar can be viewed on the UK BAP website: www.ukbap.org.uk. They were originally published in: *Biodiversity: The UK Steering Group Report - Volume II: Action Plans* (December 1995, Tranche 1, Vol 2, p86 (Dormouse) and p.53 (Nightjar))

Wiltshire BAP Woodland Action Plan – Targets and Actions

Objective WO1: Prevent the loss of ancient woodland						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
WT1: Maintain existing extent of ancient woodland	No ancient woodland reported as lost (ongoing) (FC)	<u>WA1:</u> Woodland Working Group to determine best way to take forward the revision of the AWI	Recommendations produced	Woodland Working Group , WSBRC, and Natural England	2008	
		<u>WA2:</u> Complete the AWI	Resources obtained by end of 2009. Database completed by 2012	NE , WWT, AONBs (CCWWD, NWD, Cotswolds), WCC (County Ecologist), FC, New Forest NPA	2009 and 2012	Similar work possible in New Forest District through New Forest BAP
		<u>WA3:</u> Encourage woodland management projects in the AONBs in order that new approaches can be trialled and act as models to be used across the wider landscape of the county	New woodland management projects are an agenda item at each Woodland Working Group meeting	Woodland WG , AONBs (CCWWD, NWD, Cotswolds)	Ongoing, annual reporting	
		<u>WA4:</u> Use appropriate legal measures to protect ancient woodlands from incremental threats (e.g. prolonged low level felling, pigs being kept in coppice etc.) <i>Note: the threshold for EIA is lower in the AONBs, and therefore EIAs can be used to gain greater compliance</i>	Mechanisms evaluated by group, and legal measures adopted wherever necessary	Woodland WG , LA Arboricultural officers, FC, WWT, AONBs (CCWWD, NWD, Cotswolds), New Forest NPA	Ongoing, annual reporting	New Forest BAP

Objective WO2: Increase the area of woodland managed sustainably						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
WT2: Increase the area of woodland managed sustainably	Maintain area of woodland covered in a management scheme at 2007 baseline (NE and FC) <i>Note for third parties: not all sustainably managed woodland will be in a management scheme but we can only measure what is in a scheme</i>	<u>WA5:</u> Promote the involvement of woodland owners in sustainable woodland management	Initiate 10 new contacts with woodland owners per year	GWCF, Forestry Commission , WWT, New Forest NPA	Ongoing, annual reporting	New Forest BAP; Swindon BAP Woodland HAP (W8, W9)
		<u>WA6:</u> Organise a seminar for woodland owners, woodland contractors and land agents	3 seminars over a 5 year rolling basis	WWT (LFW), FC , NE (RG), FWAG, New Forest NPA	2012 and every 5 years thereafter	New Forest BAP
		<u>WA7:</u> Promote the use of agri-environment and FC schemes to achieve management for biodiversity	Area of woodland under AE or FC scheme is maintained at 2007 baseline	NE, FC , Cotswolds AONB	Ongoing, annual reporting	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
	2007 AE baseline is 306.99ha	<u>WA8:</u> Raise awareness of deer management practices in the county	At least 1 deer management event per year	FC, DI, Natural England, GWCF, Cotswolds AONB, Woodland WG	Ongoing, annual reporting	Swindon BAP Woodland HAP (W11)
		<u>WA9:</u> Ensure any developing wood fuel projects maximise biodiversity benefits	All wood fuel projects have positive benefit for biodiversity. Include biodiversity objectives	RSPB, FC , AONBs (CCWWD – Cranborne Chase Woodfair, NWD), NE, New Forest NPA	Ongoing, annual reporting	
		<u>WA10:</u> Encourage the use of locally produced wood products <i>Note: see CONFOR website for info</i>	Produce a design guide incorporating existing (including FWAG) suppliers list, and promote entries into existing list of suppliers from Wiltshire	WWT, AONBs (CCWWD and Cranborne Chase Woodfair, NWD, Cotswolds), National Trust, Natural England, FWAG	Deadline: 2009 (design guide production) then annual report on updating	SW BIP Woodlands and Forestry Objective 4; Swindon BAP Woodland HAP (W17)
<u>WT3:</u> SSSIs in favourable or recovering condition	95% of SSSI in favourable or recovering condition by 2010, and maintained at that level thereafter (NE) <i>Note: currently 59% of 3335ha. Note this also includes wood-pasture and parkland</i>	<u>WA11:</u> Target SSSI woodlands to get into either ES or EWGS to implement the remedies required for favourable condition	Increase in the proportion of SSSI woodlands in an appropriate scheme	NE, FC	2010 and maintained each year thereafter	

Objective WO3: Maintain and where possible, increase, the population size and extent of Wiltshire BAP species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>WT4:</u> To understand the reasons for the decline in the Willow Tit	Robust understanding of the decline achieved (RSPB)	<u>WA12:</u> Implement research programme	Research programme completed by 2010	RSPB, WOS	2010	New Forest BAP and Management Plan draft policies; SW BIP Woodlands and Forestry Objectives 2&3
<u>WT5:</u> Nightjar - maintain breeding range	Maintain at presence in 270 tetrads (RSPB)	<u>WA13:</u> Promote the management of woodlands for Nightjar	One new area of clearfell of at least 1ha per year	RSPB, WOS, Forest Enterprise	Ongoing, annual reporting	SW BIP Woodlands and Forestry, Objectives 2&3

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>WT6:</u> Dormouse - Establish population distribution	Report produced by 2012 (Wiltshire Mammal Group)	<u>WA14:</u> Update Dormouse records by 2008	Database of Dormouse records update by 2008	Wiltshire Mammal Group , Woodland Working Group, WSBRC	2008	WBAP Hedgerows HAP
		<u>WA15:</u> Prioritise survey effort to areas with old Dormice records	Set up boxes or tubes in 75% of areas identified as having dormice (pre-2000) by 2010 and 100% by 2012	Wiltshire Mammal Group , Woodland Working Group, WWT (Land Management and LfW)	2010 and 2012	
		<u>WA16:</u> Set up new Dormouse monitoring sites	Set up 10 monitoring sites by 2010	Wiltshire Mammal Group , WWT (LfW)	2010	
<u>WT7:</u> Dormouse - maintain and enhance population	Maintain populations at known sites (Savernake; Hens Wood; Blackmoor Copse)	<u>WA17:</u> Landowner advice provision	Mammal Group to provide advice to each landowner every year	Wiltshire Mammal Group , FC, WWT, private woodland owners (at specific sites - Hens Wood)	Ongoing, annual reporting	
		<u>WA18:</u> provide nesting boxes in sites identified as positive under action WA16 above	Nesting boxes at all positive sites	Wiltshire Mammal Group	2010	

Individual contacts for each organisation listed in the “Partners” column and involved in delivering the Woodland Habitat Action Plan:

Organisation	Representatives
Cotswolds AONB	Mark Connelly
Cranborne Chase and West Wiltshire Downs AONB	David Blake
Deer Initiative	Jamie Cordery
Farming and Wildlife Advisory Group	Louise Stratton
Forestry Commission	Ian Briscoe
Forest Enterprise	Chris Sorensen
Great Western Community Forest	Jonathan Wilshaw
National Trust	Chris Gingell
Natural England	Roger Griffin
New Forest National Park Authority	Ian Barker
North Wessex Downs AONB	Heather White
RSPB	Nick Adams
Wiltshire County Council	Fiona Elphick (County Ecologist)
Wiltshire Mammal Group	Mark Satinet, Sarah Wood
Wiltshire Ornithological Society	
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Paul Darby and Rob Nicholls (Landscapes for Wildlife Project), Land Management

Wood-pasture, Parkland and Ancient Trees Habitat Action Plan

A Vision for Wiltshire's Wood-pasture, Parkland and Ancient Trees over the next 30 years...

The full extent and quality of Wiltshire's wood-pasture and parkland resource is understood, through work drawing on existing research. As a result, targeted restoration of wood-pasture and parkland has taken place wherever possible.

The inhabitants of Wiltshire understand the importance of, and are engaged in the conservation of, the county's ancient and veteran tree resource, with an active Tree Warden scheme in place. The veteran trees of the future are identified and protected.

Background

Lowland wood-pastures and parkland are the products of historic land management systems, and represent a vegetation structure rather than a particular plant community. Typically this structure consists of large, open-grown or high forest trees (often pollards) at various densities, in a matrix of grazed grassland, heathland and/or woodland florae.

Some definitions...

Wood-pasture

Wood-pastures are areas of wooded land which have been used for the dual purpose of growing trees and grazing deer and livestock (Harding and Rose, 1986). Historic wood-pastures e.g. Savernake Forest which are no longer subject to grazing by livestock are included under this Plan.

Parkland

Historic deer parks, and planned landscapes where there may only be a few ancient trees surrounded by improved grassland, are also included in this Plan.

Veteran and Ancient Trees

The presence of large old trees is the key characteristic and the main reason for these habitat types being of special nature conservation interest. The associated wood-decay invertebrate and epiphyte communities are uniquely species-rich, and a high percentage of rare and threatened dead wood species are now associated with ancient and veteran trees.

Veteran trees are defined by Read (2000) as "trees that are of interest biologically, culturally or aesthetically because of their age, size or condition." Strictly speaking a veteran tree is any tree which has passed its mature stage, whilst an ancient tree is any tree which is truly old – typically over 500 years.

There are no reliable estimates for the extent of the overall wood-pasture and parkland resource in the UK. The figure of 10-20,000ha "currently in a working condition" is the most widely used and current best estimate (UKBAP Lowland Wood-pasture and Parkland Action Plan), and the habitat is most common in southern England. Outgrown wood pasture occurs in northern and central Europe, but the number and continuity of veteran trees with their associated saproxylic fauna and epiphytic flora are more abundant in Britain than elsewhere.

Wood-pasture, Parkland and Ancient Trees in Wiltshire

The WSBRC does not currently have a habitat layer on its GIS database for wood-pasture and parkland. However, an initial list of sites amounting to just under 4200ha, was produced as a result of an action in the 2002 Wiltshire BAP and a site-point map created, shown in figure 7.

The English Heritage *Register of Parks and Gardens of Special Historic Interest* lists 38 historic parks and gardens in Wiltshire amounting to 8460ha. However, the Register does not include wooded commons and forests, except where these coincide with historic parks. The new national Wood-pasture And Parkland Information System (WAPIS) which is currently under development, lists around 40 wood-pasture and parkland sites in Wiltshire, amounting to just under 3200ha - differing widely from the English Heritage data. The documentary record for medieval parks is incomplete, but Rackham (1990) suggests that around 70 may have existed in Wiltshire, amounting to around 5800ha, and Watts (WAHNS 1996) has identified 90 known and probable deer parks within the county. A survey of medieval deer parks in the Cranborne Chase and West Wiltshire Downs AONB (2006) showed there being 19 parks in the Wiltshire part of the AONB, some of which are "multiple parks" where early medieval enparkment is partly obscured by later parks. Therefore it may be that the area of relict wood-pasture in the county is significantly greater in area than that within currently designated parks.

Discrepancies between these various databases and incomplete knowledge clearly show that further information is required to increase our understanding about both the historic extent of wood pasture and parkland in Wiltshire, and its current extent and condition. Actions have been included in the revised WBAP Action Plan to look at how to complete Wiltshire's wood pasture and parkland database, and to research the potential for the restoration of areas which have declined.

A great deal of work has been done to map ancient trees in different parts of the county. However, this information is currently not held in a central accessible location, and actions have been included in the Wood-pasture, Parkland and Ancient Trees HAP to collate this wealth of information into one accessible database.

Species associated with this habitat

Relict areas of wood-pasture with old broad-leaved trees contain a structural variant not found in the other, more common types of managed woodland such as coppices and high forest. They are of ecological importance for the following reasons (after Harding and Rose, 1986):

- The species of tree present, although influenced by centuries of management often represent survivals of the genetic stock from the primeval forest, and ancient trees are often still present.
- The epiphytic flora (including lichens, mosses and liverworts) in areas not affected seriously by atmospheric pollution is often very rich
- Dead, dying and over-mature trees often contain populations of local or rare saproxylic organisms, including fungi, lichens, invertebrates, mosses and birds. These are species that are dependent for part of their life cycle on living, dying or dead wood. 40% of woodland wildlife is dependent on this aspect of the forest ecosystem.

Stag Beetle *Lucanus cervus*

This large and conspicuous beetle is rare in some European countries, but is still widespread in some parts of southern England, and occurs fairly frequently in the Severn valley and coastal areas of the south-west. Outside these areas the records are sparse and often old, indicating some contraction of the beetle's range. The Stag Beetle can be found in broadleaved woodland, parks, other pasture woodland and gardens. The larvae live in the decaying wood of deciduous trees, often in roots and stumps, and take at least three and a half years to become fully grown.



Stag Beetle: Charlotte Watson

Communities of epiphytes and saproxylic invertebrates are often regarded as relic populations of similar communities present in the primeval forest, and whose survival has been possible only through the continuity of such habitat. Many of these species have poor dispersal mechanisms, indicating that wood pasture was once much more widespread than today, and that they might lack the mobility required to find new habitat in the face of habitat changes and climate change.

Parklands and wood pastures are also of interest for bats and birds.

Progress Highlights since 2002

Baseline data

In order to gain a better picture of the wood pasture and parkland resource in Wiltshire, English Nature (now Natural England) commissioned the WSBRC to carry out a desk study to collate existing data about this habitat in the county. This was carried out in 2003 and a map (figure 7) and report produced. The next step for the Wiltshire BAP 2008 is to determine how to move forward with the recommendations from this report.

Workshops

The Wood-pasture, Parkland and Ancient Trees HAP 2002 contained targets for dissemination of information about this habitat through events and seminars, which were vastly exceeded. Various organisations held events focused on wood-pasture, parkland and ancient trees between 2002-2005, including:

- English Nature (now Natural England) sponsored the 2002 Salisbury Festival, the theme of which was "Trees". This involved hosting a conference entitled "In Praise of Trees"
- The Forestry Commission held one of 10 regional events to update woodland managers on PAWS (Plantations on Ancient Woodland Sites) restoration practices in Bentley Wood in 2004
- Woodland Butterflies Workshop in the Braydon Forest hosted by EN (now NE)
- "Ancient Trees, our Living Heritage" one of several talks on the importance of ancient trees by Ted Green, one of the founder of members the Ancient Tree Forum, held at Savernake Forest in 2005 by the Forestry Commission

Links with existing Plans

UK BAP

Lowland Wood-pasture and Parkland Habitat Action Plan

Stag Beetle, *Lucanus cervus*, Species Action Plan

South West Biodiversity Implementation Plan

Section 10: Woodlands and Forestry

Other sections of the Wiltshire BAP

Bats SAP: As outlined above, wood-pasture and veteran/ancient trees are also important for bats, actions for which are covered under the Bats SAP.

New Forest BAP

The New Forest National Park is in the process of producing a Management Plan and BAP for the New Forest. These are likely to establish generic actions building on detailed actions from the Hampshire BAP (which includes a Wood-pasture and Parkland HAP and SAPs for Bats, Stag Beetle and Woodland Lichens)

Cotswold Water Park BAP

Woodland Habitat Action Plan

Center Parcs BAP

Target 16: Lowland Wood-pasture and Parkland – target to maintain at least the present value and secure for the future by keeping up the existing inventories of veteran trees and those earmarked as "veterans for the future".

British Waterways BAP

Chapter on Woodlands and Scrub

Taking the Wiltshire BAP Wood-pasture, Parkland and Ancient Trees HAP forwards

It was decided that as the Woodland, Wood-pasture and Hedgerows Habitat Action Plan working groups contained representatives from the same organisations, they should be taken forwards together. Therefore a combined working group has been set up to progress all three Action Plans. Ian Briscoe of the Forestry Commission will lead on the Woodland and Wood-pasture Plans, and Roger Griffin from Natural England will lead on Hedgerows.

References:

English Heritage (2008) *The Register of Parks and Gardens of Historic Interest*.

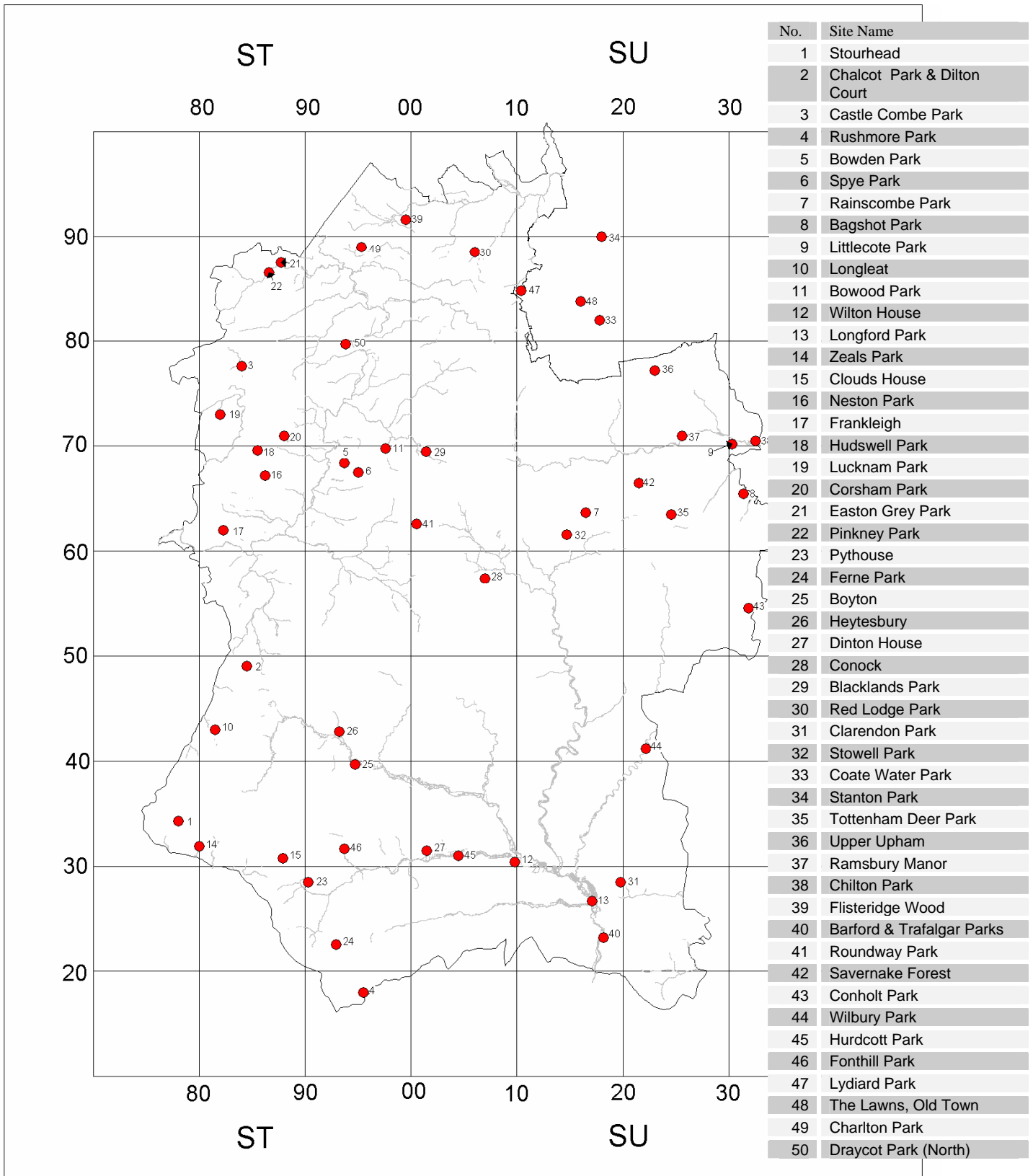
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Rackham, O. (1990) *Trees and Woodland in the British Landscape*. J.M. dent and Sons, Ltd. London.

Read, H. (2000) *Veteran Trees: A guide to good management*. English Nature

Watts, K (1996) *Wiltshire Deer Parks*. Wiltshire Archaeological Magazine Volume 89, p.98

Figure 7: Parkland Sites in Wiltshire identified by WSBRC Study 2003



WSBRC 2008

Wiltshire BAP Wood-pasture, Parkland and Ancient Trees Action Plan – Targets and Actions

Objective WPO1: maintain the extent and enhance the quality of the existing resource

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
WPT1: Maintain existing extent of wood-pasture and parkland sites and seek opportunities for restoration	<u>Measure 1:</u> Priorities and plan of action agreed by Working Group (2008) <u>Measure 2:</u> No known losses reported by Working Group (ongoing) (Wood-pasture Working Group)	WPA1: Build on results from WSBRC 2003 report into the extent of this resource in Wiltshire	Wood-pasture working group to evaluate the recommendations made by the report and agree priorities for further action	Wood-pasture Working Group	2008	
		WPA2: Research project about the historic extent of wood pasture and parkland sites and an assessment of restoration potential	Project completed	WWT, WSBRC, County Archaeologists, New Forest NPA	2012	New Forest BAP; Center Parcs BAP (Target 16)
		WPA3: Promote the use of agri-environment schemes to achieve management for biodiversity	<u>Measure 1:</u> Area of wood-pasture and parkland under AE schemes is maintained at 2007 baseline <u>Measure 2:</u> Targeting statements maintain priority	NE, Wood-pasture Working Group	Ongoing, Reporting Annually	SW BAP Wood-pasture and Parkland HAP Objective 1

Objective WP02: maintain and enhance the veteran and ancient tree resource in the County

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
WPT2: Maintain, protect and manage known veteran and ancient trees	Target measure: 6000 trees protected through in-field AE scheme options by 2010 (5000 current baseline) (NE) <i>Note: Target can be widened once Tree Warden Scheme set up.</i>	WPA4: Review and collate existing ancient tree data to give an informed estimate of the Wiltshire resource.	Database complete	Wood-pasture Working Group, New Forest NPA	2010	New Forest NPA producing Veteran Tree Strategy; Center Parcs BAP Target 16
		WPA5: Improve local monitoring of veteran and ancient, and potential veteran and ancient trees	A Parish Tree Warden Scheme is set up	Wood-pasture Working Group, WCC (Countryside Manager), AONBs (CCWWD, NWD)	2009	Swindon BAP Veteran Trees and Parkland HAP (P1)
		WPA6: Promote appropriate management agreement visits outside woodland and wood pasture	50 trees a year included in appropriate management agreements	NE, WWT (Lfw), WCC (Countryside Manager)	Ongoing, Reporting Annually	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		<u>WPA7</u> : Protect potentially endangered and most valuable veteran and ancient trees with TPOs	TPOs used where veteran and ancient trees identified	LA Arboriculturists and Development Control officers , New Forest NPA	Ongoing, Reporting Annually	Swindon BAP Veteran Trees and Parkland HAP (P8)
		<u>WPA8</u> : Educate professionals outside nature conservation (including arboricultural) about the value of veteran and ancient tree preservation.	1 training day/seminar per year – organised collectively	Wood-pasture Working Group , WCC (Countryside Manager), LA Arboriculturists, CCWWD AONB, New Forest NPA	2008 and ongoing	
		<u>WPA9</u> : Celebration of veteran and ancient trees amongst general public	One event per year	Wood-pasture Working Group ; National Trust, CCWWD AONB	Ongoing, Reporting Annually	
		<u>WPA10</u> : Identify the next generation of trees that will become the next veterans (provide the ecological services of veteran trees)	6000 in field trees included in AE schemes (5000 current baseline), and Tree Warden scheme in place	NE, new Unitary Authority , Wood-pasture Working Group, National Trust, Cotswolds AONB	2010	Center Parcs BAP Target 16; Swindon BAP Veteran Trees and Parkland HAP (P12)
		<u>WPA11</u> : Where veteran and ancient trees are threatened though construction, planning permissions should ensure they are protected in accordance with BS5837:2005, Trees in Relation to Construction.	Ecological consultees request that Construction Method Statements or planning conditions refer to BS 5837:2005 in their responses to relevant planning applications	Development Control Planners, WCC (County and District Ecologists) , Landscape and Arboricultural Officers, New Forest NPA	Ongoing, Reporting Annually	

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Wood-pasture, Parkland and Ancient Trees Habitat Action Plan:

Organisation	Representatives
Cotswolds AONB	Mark Connelly
Cranborne Chase and West Wiltshire Downs AONB	David Blake
Forestry Commission	Ian Briscoe
Forest Enterprise	Chris Sorensen
National Trust	Simon Ford
Natural England	Roger Griffin
New Forest National Park Authority	Ian Barker, Bryan Wilson (Senior Tree Officer)
North Wessex Downs AONB	Heather White
Wiltshire county Council	Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Sanders (District Ecologists)
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Paul Darby and Rob Nicholls (Landscapes for Wildlife)

Ancient and/or Species Rich Hedgerows Habitat Action Plan

A Vision for Wiltshire's Ancient and Species Rich Hedgerows over the next 30 years...

A greatly expanded interconnected network of hedges, made up of a large proportion of ancient and/or species rich hedgerows, many of which have been restored.

The importance of hedgerows is recognised by local communities, both for their value to wildlife and their contribution to the historic landscape.

Background

Hedgerows are important not only for biodiversity, but also for farming, landscape, cultural and archaeological reasons. Hedgerows act as wildlife corridors for many species, allowing dispersal and movement across the landscape between other habitats.

When lines of trees or shrubs forming a hedgerow are associated with features such as banks, ditches, trees or verges, these features are considered to form part of the hedgerow.

There has been a dramatic reduction in the total UK hedgerow resource since 1945, and it is estimated that between 1984 and 1990, 23% of English hedges were lost. However the Countryside Survey of 2000 estimates that hedgerow loss has now been halted. This is partly as a result of the Hedgerow Regulations (1997), which make it illegal to remove "important hedgerows" without permission.

The current total UK hedgerow length has been estimated at around 450,000km, calculated on a net rate of loss due to removal and neglect of about 5%. Only rough estimates exist of how much of this figure is made up of ancient and/or species-rich hedgerow, but figures suggest around 42% (UK BAP Hedgerows HAP). Ancient and/or species rich hedgerows are concentrated in southern England, especially in the south-west.

Some definitions...

Ancient Hedgerows

Ancient hedgerows, which tend to be those that support the greatest diversity of plants and animals, may be defined as those which were in existence before the Enclosure Acts, passed mainly between 1720 and 1840 in Britain and from the mid seventeenth century in Ireland (UK BAP Hedgerows HAP).

Species-rich Hedgerows

Species-rich hedgerows may be taken as those which contain 5 or more native woody species on average in a 30m length (UK BAP). Hedges which contain fewer woody species but a rich basal flora of herbaceous plants should also be included but practical criteria for identifying them have yet to be agreed. Many of the thin straight hawthorn hedges which characterise later parliamentary enclosures, as well as most hedges which consist mainly of beech, privet or yew or non-native trees, are excluded. Recently planted species-rich hedges are included.

Hedgerows adjacent to roads, green lanes, tracks and wooded ground tend to be particularly species-rich.

"Important Hedgerows"

The Hedgerow Regulations (1997) make it illegal to remove "important hedgerows" without permission. "Important hedgerows" are defined as having existed for 30 years or more and satisfying at least one of the criteria listed under the Regulations. These criteria include specifications relating to wildlife and the landscape as well as historic features such as the hedgerow marking parish boundaries or being part of an archaeological site. With respect to wildlife and the landscape, the

hedgerow might be protected by the Regulations for example if there are records from it of species listed under the Wildlife and Countryside Act (1981). It might also be protected for example if it contains at least 7 woody species, or has fewer woody species but has other features associated with it, such as at least one standard tree every 50m, or at least 6 woody species and including one of Black Poplar, Large or Small-leaved Lime or Wild Service Tree. View the Regulations online to see the full list – www.opsi.gov.uk.

Under the Regulations, land managers are required to submit a hedgerow removal notice to their local planning authority (LPA). The LPA then has a period of 42 days in which to determine whether a hedgerow is deemed “important” under the regulations, and therefore whether or not it may be removed.

Hedgerows in Wiltshire

The length of hedgerows in Wiltshire (including Swindon) has been estimated by Grose (1957) as being 33,600km. This was calculated on a sample of approximately 9km of hedges per km² in a desk based study of OS maps.

Progress Highlights since 2002

Survey work in Wroughton, Bishops Cannings and Pewsey Vale

Although a county wide hedgerow survey has not been possible, some of the county’s hedgerows have now undergone detailed survey, and the data is held by the WSBRC.

Pewsey Vale Quiet Lanes Project

In Pewsey Vale the 2003 “Quiet Lanes” project was launched by Wiltshire County Council and Kennet District Council in conjunction with the local community. This was part of a national initiative, and aimed to protect the character and tranquillity of designated countryside lanes, including the hedgerows, verges and wildlife. As part of the project 418 local hedgerows were surveyed.

The Wroughton Hedgerow Project

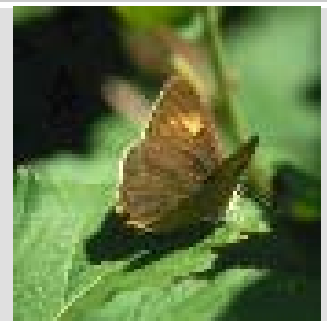
A large proportion of hedgerows in Wroughton have now been surveyed and mapped thanks to the Wroughton Hedgerow Project set up in 2003. Graham O’Mahoney a WWT volunteer coordinated the scheme, which involved a network of voluntary surveyors who assessed the age, structure and species composition of the hedgerows and looked for the presence of associated features.

Species associated with this habitat

Hedgerows are important habitats in their own right, with ancient hedgerows usually being the most biologically diverse. The UK BAP Steering Group (1992) estimates that they can contain over 600 plant species (including some endemic species such as Whitebeam), 1500 insects, 65 birds and 20 mammals (including bats and Dormice). Hedgerows can act as an essential refuge for many woodland and farmland plants and animals, and as important links between different habitats.

Brown Hairstreak *Thecla betulae*

There are two fairly stable, widespread populations of Brown Hairstreak butterflies in Wiltshire. These are in the Braydon Forest area in the north, and straddling the Wilts/Hants border in the Tidworth/Cholderton area in the South. Brown Hairstreaks typically breed over large areas of countryside, mainly on farm hedges or Blackthorn within or near woodland. Vast numbers of eggs have been destroyed in the past by intensive hedgerow flailing, but improvements can be made with more appropriate hedgerow management. The brown hairstreak has been added to the UK BAP Priority List due to marked decline in the UK.



Brown Hairstreak (male): © Chris Tracey

Links with existing Plans

UK BAP

Ancient and/or Species Rich Hedgerows Action Plan

Species Action Plans for Stag Beetle, Barbastelle, Bechsteins, Pipistrelle, Greater and Lesser Horseshoe bats and Dormouse

South West BAP

Habitat Action Plan for Hedgerows

Other sections of the Wiltshire BAP

Farmland Habitats HAP: Hedgerows are an essential refuge for many farmland bird species, including Grey Partridge and Turtle Dove - actions for which are covered under the Farmland Habitats Action Plan

Woodland HAP: Hedgerows are an essential refuge, and provide habitat linkages for species of woodland bird including Spotted Flycatcher and Nightingale. Hedgerows are also important for Dormice metapopulations, and actions for Dormice are covered under the Woodland HAP.

Bats SAP: hedgerows are important for bats, actions for which are covered under the Bats SAP.

Swindon BAP

Section 3: Farmland Habitats, 3.2 - Hedgerows

Cotswold Water Park BAP

Boundary Features HAP

Black Poplar SAP

Bats Group Species Action Plan

British Waterways BAP

Chapter on Hedgerows

Taking the Wiltshire BAP Wood-pasture, Parkland and Ancient Trees HAP forwards

It was decided that as the Woodland, Wood-pasture and Hedgerows Habitat Action Plan working groups contained representatives from the same organisations, they should be taken forwards together. Therefore a combined working group has been set up to progress all three Action Plans. Ian Briscoe of the Forestry Commission will lead on the Woodland and Wood-pasture Plans, and Roger Griffin from Natural England will lead on Hedgerows.

References:

Grose, D. (1957) *The Flora of Wiltshire*. Wiltshire Archaeological and Natural History Society, Devizes.

Haynes-Young R.H. et al (2000) *Accounting for nature: assessing habitats in the UK countryside*. DETR, London. This is the report produced from the Countryside Survey, 2000. It can be downloaded from: www.countrysidesurvey.org.uk. The Countryside Survey takes place every 7 years, with the latest Survey having taken place in 2007. The latest report is due in 2008.

The Hedgerow Regulations, 1997 – The Department of the Environment. The full text of the Hedgerow Regulations can be viewed on the Office of Public Sector Information website – www.opsi.gov.uk.

The UK BAP Habitat Action Plan for Ancient and/or Species Rich Hedgerows can be viewed on the UK BAP website: www.ukbap.org.uk. It was originally published in: *Biodiversity: The UK Steering Group Report - Volume II: Action Plans (December 1995, Tranche 1, Vol 2, p243)*

Wiltshire BAP Ancient and/or Species Rich Hedgerows Action Plan – Targets and Actions

Objective HO1: Protect, maintain and expand the length of this habitat						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
HT1: Amount of hedgerow restored or new hedgerow planted, outweighs that removed through hedgerow removal notices	Amount of hedgerow restored or new hedgerow planted is greater than that removed through hedgerow removal notices (LA Arboricultural Officers)	HA1: Ensure hedgerows are considered in review of WSBRC planning screen procedures and that LA Arboricultural Officers are aware of the support available from District Ecologists and WSBRC	LA arboricultural officers liaise with District Ecologists and WSBRC when need arises	WCC (District Ecologists), District Arboricultural Officers , WSBRC	2010	Hedgerow Regulations, 1997
Objective HO2: Enhance the quality of the current network of hedgerows						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
HT2: Restore degraded hedgerows (includes reinstatement of historic hedgerows) <i>Note: Historic Landscape Characterisation can be used as a tool to prioritise hedgerows</i>	18km hedgerow restored per year through HLS and small grants (NE) <i>Note: specify that hedge-line should not be scraped or sprayed with herbicide and appropriate species should be specified</i>	HA2: HLS includes an average of 15km per year of hedgerow restoration HA3: Encourage landowners to restore degraded hedges through small grants.	15km of hedgerow restoration included in HLS each year 3km per annum restored by landowners (not including that which is in stewardship)	NE WCC (Countryside Manager) and WWT (Lfw)	Ongoing, reporting annually Ongoing, reporting annually	SW BAP Hedgerows HAP Objective 2; Swindon BAP (HG6); CWP BAP (BOU-02) SW BAP Hedgerows HAP Objective 2; CWP BAP (BOU-03)
HT3: At least maintain length of hedge trimmed biennially (or less) under ES (<i>baseline measure is 3900km in 2007</i>)	At least maintain length of hedge trimmed biennially (or less) under ES (baseline measure is 3900km in 2007) (NE)	HA4: Maintain an overview of the amount of hedge length in ES management	The length of hedgerow in ES management is known	NE , Woodland Working Group	Ongoing, reporting annually	

Individual contacts for each organisation listed in the “Partners” column and involved in delivering the Hedgerows Habitat Action Plan:

Organisation	Representatives
District Councils	Arboricultural Officers
Natural England	Roger Griffin
Wiltshire County Council	Steve Russell, Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Sanders (District Ecologists)
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Paul Darby and Rob Nicholls (Landscapes for Wildlife Project)

Traditional Orchards Habitat Action Plan

The Wiltshire BAP 2002 did not contain a Habitat Action Plan for Traditional Orchards. Traditional Orchards as a habitat were added to the revised UK BAP Priority Habitats and Species List 2007, and as a result of this, when reviewing the Wiltshire BAP it was decided that a HAP for Traditional Orchards should be included in the Wiltshire BAP 2008. A small group of interested parties was set up to formulate the HAP, and because little is known about this habitat in the county, the Action Plan that the group have drawn-up is based mainly around fact finding and is not as in depth as some of the other HAPs in the revised Wiltshire BAP.

Traditional orchards are structurally and ecologically similar to wood-pasture and parkland, with open-grown trees set in herbaceous vegetation, but are generally distinguished from these wood-pasture complexes by:

- The species composition of the trees, primarily being in the family Rosaceae
- Denser tree arrangement
- The small scale of individual habitat patches
- The wider dispersion and greater frequency of occurrence of habitat patches in the countryside
- Management of the component trees being through activities such as grafting and pruning as opposed to timber production through pollarding or felling



Pictures: Apple tree and Mistletoe © Rob Large, Stag Beetle © Beverley Heath

The table below shows the main ways in which traditional orchards differ from most modern commercial orchards which are intensively managed.

Traditional Orchards	Intensive Orchards
Low intensity No chemical input Grazing of the orchard floor or cutting for hay Larger, older trees (e.g. Perry Pears 150 years old) and spacing of between 3-20m Vigorous rootstocks Dead wood provides home for saproxylic species Can have long history of continuity on same site	High intensity Input of chemicals Frequent mowing of the orchard floor Planting of short-lived, high density dwarf or bush fruit trees, which are regularly replaced Dwarfing rootstocks Dead wood removed

Traditional orchards can occur on a wide range of soil types and slope types, but are generally found in lowland areas. England has the bulk of the resource, and OS Master Map[®] polygons have been used to estimate the total English orchard resource at 47,000ha, of which 28,000ha is classed as traditional orchard (Lush et al, 2005).

Historical data shows that over the whole of England, the area of orchard has declined by 57% since 1950. There have been much greater declines in traditional orchard area than in orchard area as a whole, for example loss of traditional orchard in Devon between 1946-2003 is thought to have been at nearly 90%.

Statutory protection of traditional orchards is very limited. There are few orchards in SSSIs or protected by TPOs. However, positive incentives under agri-environment scheme options are available in England, Wales and Northern Ireland, and it is estimated that around 3000ha of traditional orchards are under agreement within these schemes.

Orchards in Wiltshire

OS Master Map[®] derived estimates suggest that there are around 487 orchards amounting to 134 hectares in Wiltshire (see figure 8). However, ground-truthing has not yet been carried out, so it is not possible to determine the reliability of this data, or distinguish between which of these are traditional and which are non-traditional orchards. Use of aerial photographs and ground-truthing for the national OS Master Map[®] figures for the number and distribution of orchards, has however proved OS Master Map[®] to be quite reliable, Robertson (2006). Targets have been included in the new Wiltshire BAP HAP for Orchards to ground-truth the available OS Master Map[®] data, and to produce an estimate of the extent of this which is traditional orchard.

Sites in Wiltshire

Clattinger Orchard

An orchard at Clattinger Farm, owned by Wiltshire Wildlife Trust is to be renovated. There are about 15 trees on the site which have steadily become overgrown and unmanaged. These trees are to be identified and then over a period of years carefully pruned and tended by a member of the Trust staff to bring them back into full vigour, and also to manage the area for wildlife. There is also going to be a new orchard planted nearby which will consist of only traditional Wiltshire varieties. This will be used by the Trust as part of their community engagement as well as for the conservation of fruit varieties and to attract traditional orchard wildlife.

Reeves Orchard, Bratton

This land was owned by the Reeves Family who ran an ironworks and foundry in the village. In 1936 a mixed orchard of 146 trees was planted in rows running east to west. There are 11 different varieties of apples and several varieties of damson trees. The orchard was gifted to the village in 1988, and lay dormant and heavily overgrown for some years prior to the Parish Council's decision to institute a Conservation Management Plan in 1998. It is now managed by the council under Countryside Stewardship. Work parties are held to carry out necessary maintenance and pruning sessions have been organised with staff from Lackham College. The orchard is part of the annual Bratton Fete with a scavenger hunt amongst the apple trees.

Apple Days

There are several traditional Apple Days held in Wiltshire each year, including at Lacock and Lackham College.

Species

Orchards are hotspots for biodiversity in the countryside, supporting a wide range of wildlife including many BAP species. The wildlife of orchard sites depends on the mosaic of habitats they encompass, including fruit trees, scrub, hedgerows, hedgerow trees, non-fruit trees within the orchard, the orchard floor habitats, fallen dead wood and associated features such as ponds and streams. This richness is illustrated by the results of an intensive study of a set of 3 orchards in the Wyre Forest SSSI in 2004, the first of its kind in the UK. The orchards only cover a total area of 5.4 ha, yet a grand total of 1,868 species of wild plants and animals were recorded from the orchards, including vascular plants, bryophytes, fungi, lichens, mammals and invertebrates (Winnall and Smart, 2005).

Vascular plants

The semi-parasitic plant, mistletoe, is particularly associated with traditional orchards. At some sites orchard floor vegetation includes species-rich grassland, the diversity being influenced by factors such as grazing intensity and density of shading by fruit trees. Lowland Meadow priority BAP habitat (MG5 and MG8) occurs, and is of SSSI quality in places. The flora can include Green-winged Orchid (*Anacamptis morio*) and Adder's Tongue Fern (*Ophioglossum vulgatum*). Ancient woodland indicators can also be present.

Lichens

Surveys of 6 orchards in 2004 by English Nature (Lush et al, 2005) recorded 131 species of epiphytic lichen, including 16 Nationally Rare or Nationally Scarce species. *Telioschistes chrysophthalmus*, a priority BAP lichen species now thought to be extinct in the UK, once typically occurred on orchard trees in south-west England.

Fungi

English Nature's 2004 Orchards Survey listed 175 species of fungi, about half of which were found associated with dead and living wood, and most of the remainder with the orchard floor grassland. These orchards were found to be particularly good habitats for Waxcap fungi, a threatened assemblage of fungi dependant on unimproved grassland.

Invertebrates

Orchard trees support many invertebrates, including canopy species such as the Nationally Scarce hoverfly, *Eupeodes nitens*, which is usually associated with ancient woodland. Orchard floor grasslands also support invertebrates of interest, including the Nationally Scarce Grass-feeding Bug *Amblytus brevicollis*.

Birds

A wide variety of birds have been recorded in traditional orchards, including 14 Red List birds, 8 of which are priority BAP species (Report to UK BAP Steering Group). One UK BAP species, the Wryneck, now more or less absent from England, was historically strongly associated with orchards. The declining Red List birds, Tree Sparrow and Lesser Spotted Woodpecker are recorded as breeding in orchards, and are among the species able to occupy nest cavities in orchard trees.

Mammals

Small mammals such as Dormice may be found in traditional orchards, and a variety of bat species forage over traditional orchards, including Greater Horseshoes, Pipistrelles and Noctules.

Saproxylic Species

Saproxylic species are those which are dependent on wood-decay habitats, and are particularly diverse in traditional orchards. A compilation of survey data on saproxylic invertebrates for example, shows that around some 390 species are characteristic of traditional orchards (Robertson, 2006).

The results of the orchard surveys by English Nature (Lush et al, 2005), together with other information on the ecological relationship of orchards to other habitats, suggest that traditional orchards are a significant part of a spatial series or network of habitats at a landscape scale that are able sustain scarce lichens, invertebrates and other species that require continuity of habitat through time.

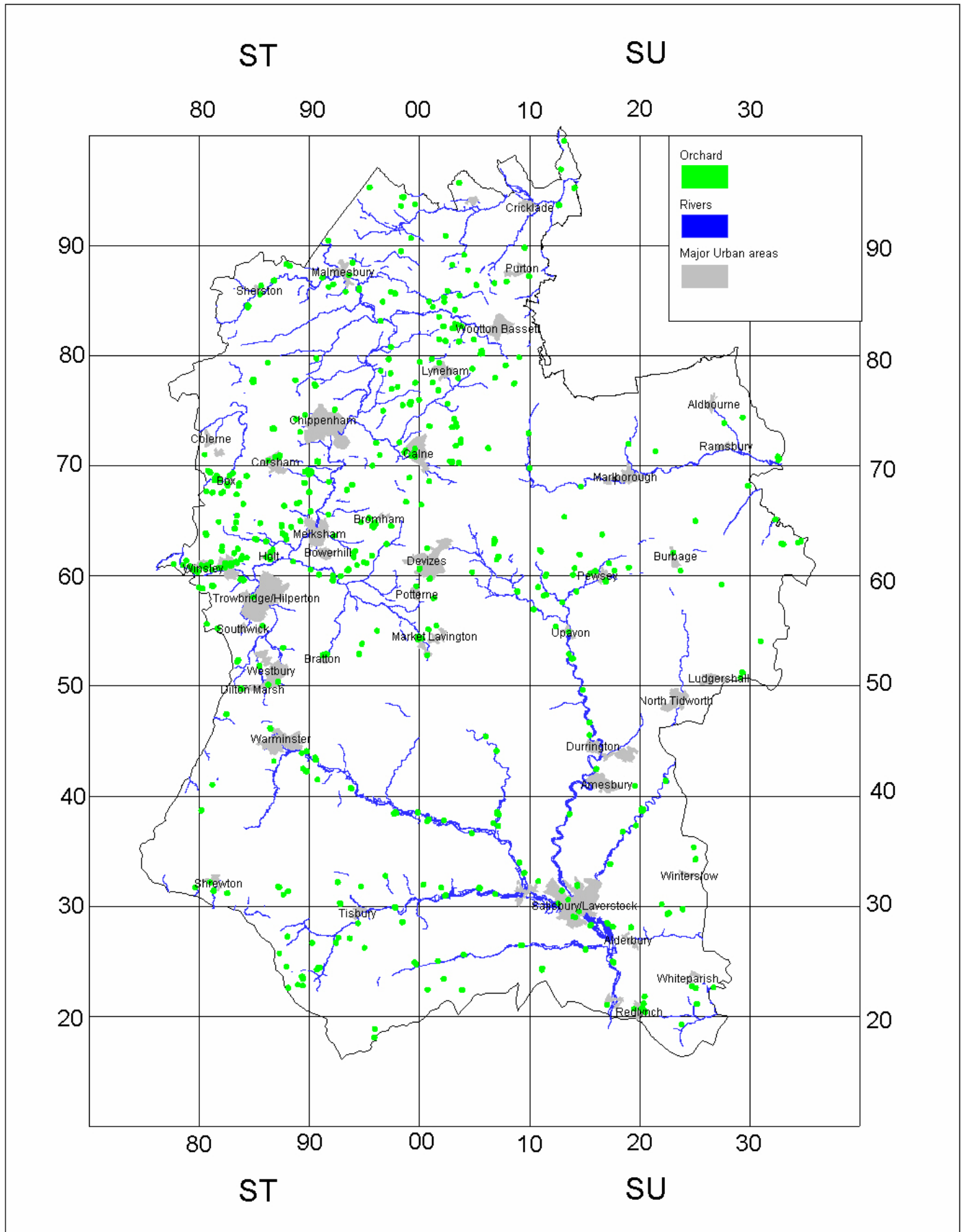
Fruit Cultivars

A feature of the biodiversity of traditional orchards is the great variety of fruit cultivars that they contain – there are upwards of 2000 varieties surviving in Britain, and probably more than 10,000 in Europe as a whole. This agricultural biodiversity is not an explicit part of the current UK BAP; however the UK Government is a signatory to the Global Strategy for Plant Conservation, 2001. The destruction of many traditional orchards in recent years means that many varieties are under threat of extinction.

The Common Ground website provides some information about traditional Wiltshire varieties, compiled from Morgan and Richards (2002):

- Burn's Seedling is thought to be a variety raised by the Head Gardener at Tottenham Park near Marlborough in the 19th century
- Celt raised in 1843 by David Harris of Melksham
- Chorister Boy found in a garden in Wiltshire and introduced by Keynes, Williams and Co. of Salisbury, recorded in 1890
- Corsley Pippin
- Dredge's Fame introduced by nurseryman, William Dredge from Wishford
- Roundway Magnum Bonum raised by Mr Joy, gardener at Roundway Park, near Devizes, first documented 1864
- Bedwyn Beauty raised by Mr Stone of Great Bedwyn near Marlborough in 1890
- Mary Barnett raised by Mary Jane Barnett, Steeple Ashton, in 1920

Figure 8: Orchards in Wiltshire (note: site size scaled up for clarity)



Taking the new Orchards Habitat Action Plan forwards...

A working group has been set up to take forwards the targets and actions under the Orchards HAP. Michael New and Neil Pullen from Wiltshire Wildlife Trust will lead the group. First steps include setting up a volunteer-led orchards project.

Links with other Plans

UK BAP

Habitat Action Plan for Orchards not yet published

Habitat Action Plan for Wood-pasture and Parkland

Species Action Plan for Stag Beetle

South West Biodiversity Action Plan

Habitat Action Plan for Parkland, Wood-pasture and Veteran Trees

Other Action Plans in the Wiltshire BAP

Habitat Action Plans for Wood-pasture, Parkland and Ancient Trees, Hedgerows

Species Action Plan for Bats

References

Dr Heather Robertson (2006) Traditional Orchards Proposal to UK BAP Steering Group. Available from Library section of the UK BAP Website – www.ukbap.org.uk. Direct link: <http://www.ukbap.org.uk/library/BRIG/SHRW/Consultation/PriorityHabitatsReviewConsultationReportAnnexes.pdf>

Lush et al (2005), English Nature Research Report "The extent, distribution, biodiversity and management of traditional orchards in England – Volume II: Case Studies". Available from Library section of the UK BAP Website – www.ukbap.org.uk.

Morgan, J. and Richards, A. (2002) The New Book of Apples, Ebury Press

English Nature Report no. 707, Winnall, R. A. & Smart, M. J. eds. (2005) Wyre Forest orchard survey. Wyre Forest Study Group report commissioned by English Nature.

Further information

Natural England Technical Information Note TIN012 – Traditional Orchards

Natural England Technical Information Note TIN020 – Traditional Orchards and Wildlife

Natural England Technical Information Note TIN021 – Traditional Orchards Glossary

Download these from www.naturalengland.org.uk

Sustain have been working on a national orchard project with Leader+ to conserve and bring into sustainable management, traditional orchards in six Leader+ funded areas: Herefordshire Rivers, Somerset Level and Moors, Teignbridge, North West Devon, Mid Kent and Cumbria Fells and Dales. More information about the project is available from the Sustain website:

<http://www.sustainweb.org/page.php?id=122>

The National Orchard Forum: <http://www.nat-orchard-forum.org.uk/>

The People's Trust for Endangered Species (PTES) has embarked on an ambitious project over two years, supported by Natural England, to conduct a survey of orchards in Gloucestershire, Herefordshire, Worcestershire, Cambridgeshire, Essex, Kent, Devon, Somerset and Cumbria. So far the project has developed a digital map of over 13000 orchards in these counties, and has involved 200 volunteers in surveying 4500 of these orchards. PTES have now secured funding to extend this survey to produce a traditional orchards inventory for England as a whole. PTES website: <http://ptes.org/index.php?cat=95>

The UK National Fruit Collection: Defra support the maintenance and development of the UK National Fruit Collection, which is a valuable genetic conservation resource, through a research commission held jointly by Imperial College at Wye and the Brogdale Horticultural Trust. More information from the website: <http://www.nfc.u-net.com/>

The Common Ground website provides lots of information about conserving orchards, and how to set up a community orchard. Go to <http://www.england-in-particular.info/orchards/o-index.html> for more information.

Wiltshire BAP Traditional Orchards Habitat Action Plan

Objective TOO1: To obtain a reliable estimate of the extent and quality of the traditional orchard resource in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
TO1: Survey 3 sample grid squares	3 grid squares surveyed by March 2009 (4 including Swindon target) (Traditional Orchards Working Group)	TOA1: Recruit volunteer orchard survey coordinator	Volunteer recruited	WWT, WSBRC, PTES, NE	July 08	
		TOA2: Aerial photo interpretation to estimate area of traditional orchards in sample squares	Interim sample map produced	WWT, WSBRC, PTES, NE	November 08	
		TOA3: Ground truth the sample squares	Ground truthing complete for all orchards identified	WWT, WSBRC, PTES, NE	March 09	

Objective TOO2: Raise the profile of traditional orchards

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
TO2: Raise the profile of traditional orchards in order to improve our knowledge, and involve the public in their conservation	At least 20 records of or from orchards submitted by the general public by 2008	TOA4: 3 events	3 events spread over the year	WWT (including World Changers), WSBRC, NE, Butterfly Conservation	November 08	
		TOA5: At least 3 additional media items	3 items	WWT, WSBRC	November 08	
		TOA6: Encourage records from County Recorders and other specialists	3 Articles in relevant specialist publications	WWT, WSBRC	November 08	
		TOA7: Investigate how much community based orchard activity is already going on	Number of existing community orchard groups is known	WWT, WWT (World Changers)	March 09	

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Traditional Orchards Habitat Action Plan

Organisation	Representatives
Butterfly Conservation	Marc Taylor
Natural England	Chris Wedge
PTES	Anita Burrough
WSBRC	Purgle Linham, Volunteer Orchards Surveyor
Wiltshire Wildlife Trust	Neil Pullen, Michael New, Sarah Wilkinson, Bill Jenman, Volunteer Orchards Surveyor, Jackie Thomas (World Changers)

Farmland Habitats Habitat Action Plan

A Vision for Wiltshire's Farmland Habitats over the next 30 years...

An abundance of the common-place, so that Wiltshire's residents can once again live amongst fields full of insects, farmland birds and mammals, with a wealth of previously common arable plants such as the Cornflower.

An increase in the populations of now rare arable plants and farmland birds and butterflies, climate space permitting

Wiltshire to be nationally recognised for its importance in terms of arable biodiversity, and for its human inhabitants to revel in and celebrate its uniqueness, and be involved in its management and conservation.



Pictures: Corn Chamomile © Rob Large, Brown Hare © Darin Smith

Background

Over 70% of England's land surface is farmed (Defra, 2006), However, the influence of agriculture on biodiversity exceeds the farmed land itself, as the majority of semi-natural habitats are linked to the agricultural landscape. Biodiversity on farmland has come under intense pressure, most notably since 1945, largely due to rapid changes in agricultural practice.

Arable Farmland is the most abundant habitat in Wiltshire, and represents about 50% of the county's area. Arable farming has been practiced on the chalk soils of south, central and eastern Wiltshire for over 3000 years, and the landscape is characterised by its open, large fields with relatively few trees.

Wiltshire contains some of the most biologically diverse arable land in Britain, and is particularly important for rare arable plants and farmland birds. South Wiltshire is in Plantlife's list of the 15 richest vice-counties for arable plants in Britain (Byfield and Still, 2007).

A decision was taken to change the name of this HAP from Arable Farmland as it was called in the 2002 Wiltshire BAP, to Farmland Habitats, in order to encompass mixed farming, arable plants and farmland birds. A long discussion was had about whether to have a separate HAP for Farmland Birds, but it was decided that the group could be covered sufficiently by renaming the Arable HAP.

Important Sites in Wiltshire: Arable Plant Hotspots

Plantlife have devised a methodology to identify a number of Important Arable Plant Areas (IAPAs) in the UK. The majority of IAPAs of national and European importance lie in southern and eastern England. To date 33 Arable Plant Hotspots or Important Arable Plant Areas (IAPAs) have been identified in Wiltshire, illustrating its importance for rare arable plant biodiversity.

Fields around Whiteparish in south-east Wiltshire have been identified as an IAPA of European importance and are actually recorded as a UK Important Plant Area (IPA) due to the diversity of the arable flora. The area has no formal protection, but is of exceptional importance for its rich flora, in part reflecting the mixed chalky and sandy soils at the boundary of the heathlands of the Hampshire basin and the elevated Wiltshire downs to the north. Notable species include Pheasant's-eye, Narrow-fruited Cornsalad and Shepherd's-needle.

Species

The extensive area of arable farmland in Wiltshire means that many species will utilise arable land in conjunction with other habitats or features that are part of the landscape, such as hedgerows, water bodies, woodland and grassland.

There are many species that depend on farmland habitats, and although no quantitative data exists, it has been suggested that around 700 species of invertebrates and some 70 species of birds are dependent upon this habitat, along with 150 species of flowering plants.

Rare Arable Plants

Over 150 members of the British flora are characteristic of the arable environment, sharing the same ecological niche as the crop plants among which they grow. Many arable species show a surprisingly high fidelity to particular sites, with populations of rarer species being recorded from particular fields for decades or even centuries. An association has been demonstrated between the numbers of rare arable plant species present on a site, and the length of time for which arable farming has been practiced (Wilson, 1990). Arable flora is the most threatened group of plants in Britain today; 54 species are considered rare or threatened, while 7 species are extinct in the arable setting (Byfield and Still, 2007).

Arable Plants Project

In recognition of the dramatic decline nationally in arable plant populations, Plantlife has run the "Arable Plants Project" in partnership with FWAG. The project targets farms which historically have had rich assemblages of arable species, encouraging the owners to choose the appropriate options when entering into new agri-environment schemes. Find out more about the project at its website: www.arableplants.org.uk.

Farmland Birds

The UK farmland bird indicator used by Defra, includes 19 species. Data collected since 1970 is from the Common Birds Census (CBC) and the BTO/JNCC/RSPB Breeding Birds Survey (BBS). The indicator shows that there was a significant decline in farmland birds in the late 1970s and throughout the 1980s. However the rate of decline appears to have slowed and the indicator has fluctuated at around 55% of the baseline since the late 1990s. The long-term decline has been most marked in farmland specialist species, the indicator for these species being only 35% of the baseline, and some species such as Grey Partridge, Turtle Dove and Starling have continued to decline. Over the same period, populations of generalist farmland species have increased (Defra, 2006), e.g. Reed Buntings have shown an increase of 13% above the baseline, although numbers of Yellow Wagtail are at their lowest level since the baseline year. The government's Public Service Agreement (PSA) target is to reverse the long term decline in the number of farmland birds in England by 2020, as measured annually.

Decline in specific Farmland Bird Species

Decline in some farmland bird species illustrated by the BBS between 1970 and 1999:

- Tree Sparrow: 95%
- Corn Bunting: 88%
- Turtle Dove: 71%
- Grey Partridge: 79%
- Lapwing – 51%



Lapwing © Charlotte Watson

Butterflies on Farmland

In 2006 Defra added "Butterflies on Farmland" to its list of Arable Biodiversity indicators. The abundance of butterflies on farmland sites has fallen by nearly a fifth over the last 16 years, with specialist species as a group (which includes species such as Adonis Blue and Marsh Fritillary) declining to a low point of 29% in 2001 (Defra 2006). Since 2001 there has been a modest recovery in specialist species, but recent trends are uncertain. Some species however, such as Chalkhill Blue and Silver-washed Fritillary appear to be doing well. In 2006 both of these species produced their highest index since monitoring began in 1976, and both have now been removed from the UK BAP Priority Species List. Butterflies are increasingly being recognised as valuable environmental indicators, both for their rapid and sensitive responses to subtle habitat or climatic changes and as representatives for the diversity and responses of other wildlife.

Extensive research has shown that the declines that have been exhibited over the past 50 years in many farmland species have largely been caused by changes in agriculture, primarily driven by changes in government policy. Increased efficiency has resulted in the grubbing up of hedgerows to create larger fields, ploughing closer to field margins to increase the cropped areas, and drainage to dry out damper areas – all to increase

production. There have also been changes in cropping practices including a shift from spring to autumn cultivation, which has reduced the amount of over-wintered stubble, an important foraging habitat for farmland birds. Many farms have become specialised, resulting in a loss of habitat diversity, which many species, particularly birds and mammals such as Brown Hare, need to survive. The widespread use of broad-spectrum herbicides has meant that the overall abundance and diversity of farmland flora and fauna has been greatly reduced. One of the major factors that resulted in the slowing in decline of farmland birds at the end of the 1980s was the introduction of set-aside. However, set-aside land is now likely to be lost on a large scale, as a result of the EU's decision to remove the requirement on farmers for compulsory set-aside areas and high grain prices.

Actions have also been included in the revised Farmland Action Plan for the Brown Hare, *Lepus europaeus*, and the Harvest Mouse, *Micromys minutus*. The harvest mouse has always been more prevalent in southern counties in England, but there is little known about its natural history, present status and range in the UK. It has been added to the new UK BAP Priority Species List. The Wiltshire Mammal Group is working to find out more about its distribution in Wiltshire, and actions have been included for this in the revised Farmland Action Plan.

Progress Highlights since 2002

Tree Sparrow

One of the targets in the Wiltshire BAP 2002, was to achieve an increase in the number of Tree Sparrows to 210 breeding pairs. In one year alone, 2002-2003, numbers of this once-common farmland bird rose to 280 pairs. The target to increase the winter Tree Sparrow flock to 600 has also been vastly exceeded, with at least double this number of birds now overwintering in Wiltshire. These results have been achieved through the RSPB Wessex Farmland Bird Project (part funded by Wessex Water) between 2003-2006, and through work carried out by WOS, and through FWAG's Wiltshire Farmland Biodiversity Project, in conjunction with WOS. The aim of all of this work was to stabilise the existing tree sparrow population in Wiltshire, expand it into historical corridors, and meet national and county BAP targets for Tree Sparrow recovery.

The results were achieved through a combination of survey work, direct intervention (e.g. setting up feeding stations) and the provision of advice to farmers on creation of suitable habitat sites to support Tree Sparrows, funded through agri-environment schemes. More information about the RSPB's project can be found at: <http://www.rspb.org.uk/ourwork/farming/working/projects/wessex/treesparrows.asp>.

Butterflies and arable field margins at Porton Down

At Dstl Porton Down, a three year study of butterfly populations using newly established arable field margins has shown a rapid and sustained utilisation of these margins, not only by 'farmland' butterflies, but also by less common species including UK BAP species.

An initial survey of 111 arable field boundaries carried out in 2005, prior to margins being sown, recorded a total of 211 butterflies of 14 different species. Species were all common farmland butterflies except Dark Green Fritillary. This species occurs in very high numbers on the Porton Down SSSI and its great mobility allows it to explore adjacent areas, such as the Porton Down farm. In fact, 102 of the 211 butterflies recorded in 2005 were of this species. Only one BAP species was recorded, the Small Heath.



Arable field margins at Porton Down
© Stuart Corbett/Dstl

Field margins were sown in 2005/06 and comprised mixtures to benefit butterflies, small mammals and other invertebrates, wild birds and game birds.

In 2006, during the first year of margin establishment, 202 margins were surveyed. A very dramatic increase in butterfly populations led to 6980 butterflies of 26 species being recorded. Exceptional weather during June and July, when the survey was undertaken, enabled the value of margins to be fully expressed. Of the 2 BAP species recorded in 2006 the Small Heath was present on every margin and a singleton Small Blue was seen.

The survey was repeated in 2007 during less advantageous summer weather. A total of 144 margins were examined in May, June, July and August and 1415 butterflies of 24 species were recorded. The development of populations on margins had progressed with, despite the weather, species such as Marbled White increasing in number. Excitingly other BAP species – Dingy Skippers and Marsh Fritillaries – were recorded in June. The presence of the Marsh Fritillaries on an arable margin was totally unexpected and led to the discovery of a new population at Porton Down.

This exercise has shown what can be achieved for farmland butterflies, including some BAP species. Further developments will include the establishment of larval foodplants in margins and, most importantly, the dissemination of this success to other landowners in the vicinity to increase the establishment of favourable habitat within the farmed landscape.

Pheasant's-eye on the Salisbury Plain Training Estate (SPTE)

The Ministry of Defence (MoD) has significantly increased the numbers of the "Pheasant's-eye" flower on the Salisbury Plain Training Estate – one of the last refuges for this rare native plant. Pheasant's-Eye plants produce very few seeds, and their numbers have dramatically declined due to intensive agricultural practices. It has only been recorded in the wild on 18 sites since 1987.

Environmental management, military disturbance and a lack of pesticides and herbicides have all contributed to its growth on Salisbury Plain. Every year, Defence Estates Ecologists monitor the plants' health and dispersal, and take action to encourage it to germinate. Because wild Pheasant's-eye is so rare, it is important that management on Salisbury Plain occurs which will help to increase their numbers. Since this specific management has been introduced more plants have appeared each year along with other arable plants such as Common Poppy and Common Fumitory.



Pheasant's-eye © Stephen Davis

Taking the new Farmland Habitats Habitat Action Plan forwards...

A working group has been set up, maintaining continuity from the original Working Group (led by Tim Frayling) which was very successful in implementing the original Farmland Action Plan. The group will be chaired by Simon Smart from Black Sheep Countryside Management, and meet twice a year.

Links with other Plans

UK BAP

Habitat Action Plans for Cereal Field Margins

Species Action Plans for Stone Curlew, Skylark, Linnet, Corn Bunting, Grey Partridge, Turtle Dove, Tree Sparrow and Brown Hare

South West Biodiversity Action Plan

Habitat Action Plan for Arable Farmland

South West Biodiversity Implementation Plan

Section 8: Farming and Food

Other Action Plans in the Wiltshire BAP

Built Environment HAP – includes actions for building nesting birds – some farmland birds have suffered decline due to conversion of old farm buildings and barns, which they would have used to nest in

Standing Open Water and Rivers and Streams HAPs – reedbeds which are covered under these HAPs are also important habitat for harvest mice – actions for which are under the Farmland HAP

Swindon BAP

Section 3: Farmland Habitats – 3.1: Arable Farmland

Cotswold Water Park BAP

Habitat Action Plan for Farmed Land

Center Parcs BAP

Target 12: Brown Hare – sustain current range of activity

British Waterways BAP

Chapter on Field Margins

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Byfield, A.J. & Wilson, P. J. (2005). *Important Arable Plant Areas: identifying priority sites for arable plant conservation in the United Kingdom*. Plantlife International, Salisbury, UK.

Defra (2006) *Working with the grain of nature - taking it forward: Volume II Measuring progress on the England Biodiversity Strategy: 2006 assessment*. Download from: <http://www.defra.gov.uk/wildlife-countryside/biodiversity/biostrat/indicators/index.htm>

Defra (on behalf of the UK Biodiversity Partnership) (2007) *Biodiversity Indicators in your Pocket*. Download from: <http://www.jncc.gov.uk/pdf/2010-BIYP2007.pdf>

Wilson (1990) *The ecology and conservation of rare arable weed species and communities*. PhD Thesis, Southampton

Information about trends in farmland (and other) birds on a European scale can be found on the European Bird Census Council's website: <http://www.ebcc.info/pecbm.html>

The United Kingdom Butterfly Monitoring Scheme Annual Report 2006 can be downloaded from: http://www.ukbms.org/docs/reports/2006/UKBMS%20Annual%20Report%202006_Final_web_version.pdf

Wiltshire BAP Farmland Habitats Habitat Action Plan

Objective FHO1: Wiltshire is nationally recognised as being very important for arable biodiversity - abundance of the common place

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>FHT1</u> : Maintaining and enhancing populations of relatively 'common' farmland species	Available data indicates positive trends (Farmland Habitats Working Group)	<u>FHA1</u> : monitor available data for all farmland species and react within the BAP to adverse changes	Data reviewed annually	Farmland Habitats Working Group , WSBRC	Ongoing, reporting annually	
<u>FHT2</u> : Support South West Farmland Bird Project to deliver arable biodiversity (including plants) within the wider countryside	Project officer engaged as part of national pilot project (Natural England)	<u>FHA2</u> : Pilot effective delivery of ES for arable biodiversity in the wider countryside	Project officer in place	Natural England , RSPB, GWCT, AONBs (NWD, CCWWD, Cotswolds), Plantlife, MOD, National Trust	2008	
		<u>FHA3</u> : Lobby for simple changes to target ELS management to help arable biodiversity, including promotion of in field options	Include in all appropriate consultations	WWT , GWCT, RSPB, Plantlife, National Trust	2009	

Objective FHO2: Protect and enhance Wiltshire's farmland bird populations

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>FHT3</u> : Ensure that at least 10% of arable land is in in-field options under an agri environment scheme by 2012 (<i>baseline: 7.05%</i>) <u>FHT4</u> : Achieve an area of an average of 1ha (1%) of land providing wild bird seed mix per km ² (<i>baseline: 0.25%</i>) <u>FHT5</u> : Achieve an area of an average of 5ha (5%) of land providing invertebrate bird food per km ² <u>FHT6</u> : NE to redefine overwintering stubbles as weedy stubble in AE schemes <u>FHT7</u> : Maintain existing	Amount of arable land in relevant AE scheme options (FHT3 - 10%, FHT4 - 1ha per km ² , FHT5 - 5ha per km ² , FHT6 - redefined by NE, FHT7 - maintain at 4.35ha per km ²) (NE)	<u>FHA4</u> : To find and secure funding for a dedicated full time advisor to lead on delivery of the Farmland HAP	A dedicated full time advisor in post	FWAG, WWT, NE , RSPB, Black Sheep Countryside Management, Plantlife, AONBs (CCWWD, NWD, Cotswolds)	2008	
		<u>FHA5</u> : To maintain data on current populations of farmland birds to allow appropriate targeting of AE options and other resources.	A regular (5 year) BBS survey on SPTA, North Wessex Downs, West Wilts and Cranborne Chase AONB	RSPB, BTO, WSBRC and WOS through Bird Conservation Targeting Project, NE , AONBs (CCWWD, NWD), MOD	One initial survey by 2011, and then at 5 yearly intervals	
		<u>FHA6</u> : Promote the use of agri-environment schemes to provide suitable habitat for farmland birds in target areas.	Provision of advice at 100% of farm visits	FWAG, WWT (LFW project, CWS), NE , RSPB, Black Sheep Countryside Management, MOD National Trust, Cotswolds AONB	Ongoing, annual reporting	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
level (4.35ha per km, 4.35%) of land providing overwintering stubble per km ²		FHA7: NE to improve the definition and targeting of overwintering stubbles to increase weed seed availability	ELS/HLS revised	NE	2009 ready for ELS review	
FHT8: Stone Curlew - Increase the range and number of Stone Curlew in Wiltshire	3 year rolling average of 90 pairs of breeding Stone Curlew in Wiltshire in at least 12 10km squares (2007 baseline is 85 pairs in 12 10km squares) (RSPB/WOS)	FHA8: Continue to support Stone Curlew conservation work in Wiltshire	Maintain dedicated team of 2 taking a lead on delivery of stone curlew targets.	RSPB , Natural England, MOD	Ongoing, reporting annually	
		FHA9: Seek to secure existing breeding habitat currently under set-aside into agri-environment schemes	Maintenance of current number of pairs breeding on set-aside regardless of whether set-aside remains	RSPB , Natural England, MOD	Ongoing, reporting annually	
FHT9: Stone Curlew - Support through conservation effort an increase in breeding productivity	Annual breeding productivity of 0.7 young per pair achieved (RSPB/WOS)	FHA10: Promote provision of good foraging and good nesting habitat in close proximity	Ensure 20ha of foraging habitat within 1km of 50% of nest sites	NE, RSPB	Ongoing, reporting annually	
		FHA11: Continue to spread best practice among appropriate advisory staff - FWAG, ADAS, NE, WWT, and farmers and landowners in stone-curlew conservation	1 training event per year	RSPB, NE	One per year, ongoing reporting annually	
		FHA12: Encourage people wishing to see Stone Curlew to use existing facilities without disturbing birds and promote sensitive managed access at existing and new RSPB reserve network in Wiltshire.	Provide opportunities for escorted groups to view stone-curlews at RSPB Reserves in Wiltshire	RSPB	Ongoing, reporting annually	
FHT10: Stone Curlew - Achieve and maintain above 50% the proportion of Stone Curlew breeding on semi-natural grassland	Maintain above 50% (RSPB)	FHA13: Promote the complete nesting environment to landowners and farmers	Maintain above 50% the proportion of stone curlew breeding on semi natural grassland	RSPB , Natural England, MOD	Ongoing, reporting annually	
FHT11: Farmland Birds: - Increase the breeding population and re-establish historical range of Tree Sparrows - Maintain the breeding population and	Corn Bunting: Maintain population at 4510-6050 summer pairs, and winter individuals at 6320-8480. Maintain range at presence in 295 tetrads;	FHA14: Specific measures in ELS/HLS for birds listed (breeding, wintering)	Measure 1: Full time dedicated advisor in post (FHA2). Measure 2: Specific actions/measures within AE agreements within farmland bird hotspots	NE, RSPB, DE, AONBs (CCWWD, NWD, Cotswolds), WOS, GWCT, FWAG	Ongoing, reporting annually	SW BAP Arable Farmland HAP Objective 6

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
maintain the range of Corn Bunting, Yellow Wagtail, Turtle Dove and Grey Partridge in Wiltshire	<p><u>Tree Sparrow</u> - Achieve a breeding population of 400 pairs by 2010 and maintain thereafter. Baseline c. 300 summer breeding pairs, 400 winter individuals. Re-establish historical range - current range 76 tetrads;</p> <p><u>Yellow Wagtail</u> – Maintain range at presence in 127 tetrads. Baseline population is 300-500 summer pairs</p> <p><u>Grey Partridge</u> - maintain population of c.2500 summer pairs and maintain range at presence in 361 tetrads</p> <p><u>Turtle Dove</u> – Maintain existing range at presence in 142 tetrads (ongoing)</p> <p>(WOS)</p>	<p>FHA15 (Tree Sparrow): Continue with targeted recovery initiatives (nest box/feeding stations) and their monitoring within key areas. Expand effort at strategic county borders where appropriate.</p>	All existing wooden nest boxes replaced with woodcrete	AONBs (CCWWD, NWD), WOS , NE, GWCT, FWAG, National Trust	2012	Built Environment HAP - Building Nesting Birds target; Swindon BAP Arable Farmland Action Plan; CWP BAP – FLO1
		<p>FHA16: Ensure that important farmland bird sites currently in Classic Schemes are assessed and entered into a suitable new scheme where appropriate.</p>	All sites which retain farmland bird interest are entered into a suitable new scheme	NE , RSPB, AONBs (CCWWD, NWD, Cotswolds), GWCT	2014, ongoing with annual reporting until then	
FHT8 : Wet Grassland Specialists - increase the breeding population of Redshank, Snipe and Curlew, and maintain the range of Lapwing	Achieve a breeding population of 5 pairs of Redshank by 2012, 5 pairs of Snipe by 2015, 40 pairs of Curlew by 2015, and maintain range of Lapwing at presence in 444 tetrads (WOS)	<p>FHA17: Ensure the maintenance, restoration and creation of suitable habitat to support breeding wet grassland specialists</p>	A designated lead officer in every area to coordinate work and capitalise on opportunities	NE , EA, WWT, GWCT, FWAG	2008	
		<p>FHA18: Specific measures in HLS/ELS for species listed (breeding, wintering)</p>	Specific actions/measures within AE agreements within lowland wet grassland bird hotspots	NE , RSPB, DE, AONBs (NWD, CCWWD), WOS , WWT, GWCT, FWAG	Ongoing, reporting annually	
FHT9 : Great Bustard - Manage existing habitat for use of GBs	GBs using network of plots throughout autumn/winter and females nesting in spring/summer (ongoing) (GBG)	<p>FHA19: Maintain spring preparation of plots wherever possible, to ensure that they are attractive sites for Great Bustards all year round</p>	Spring preparation wherever possible (so Autumn/Winter preparation is delayed)	GBG	Ongoing, reported annually	
FHT10 : Great Bustard- create 5 new habitat plots for use of GBs	GBs using network of plots throughout autumn/winter and	<p>FHA20: Create additional fallow plots in key areas to be managed for Great Bustards</p>	5 new plots created in the area around the 10 plots currently used by	GBG	2010 and 2013	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
(avoid confusion with stone curlew plots)	females nesting in spring/summer (ongoing) (GBG)		Great Bustards by 2010 and expand by 2013			

Objective FHO3: Protect and enhance Wiltshire's important arable plant populations

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<p>FHT11: Protect and maintain all known important arable plant populations in Wiltshire. <i>Note: Refer to Wilson (2003) for published list. A longer Wiltshire Important Arable Plant Population (IAPA) list is available from Plantlife but is unpublished.</i></p>	<p>No loss of known populations (ongoing) (Plantlife)</p>	<p>FHA21: Visit and resurvey all sites identified in Wilson (2003) and provide management advice by year 2010</p>	All sites visited, and management advice provided	Black Sheep Countryside Management, Plantlife , FWAG, WWT (Wildlife Sites Project), WBS, NE, RSPB, MOD	2010	Wilson (2003)
		<p>FHA22: Specific measures in HLS/ELS for rare arable plants</p>	<p>Measure 1: One full time dedicated advisor (see FHA2). Measure 2: Specific actions/measures within AE agreements within known IAPAs and potential hotspots</p>	<p>NE, Plantlife, MOD, AONBs (NWD, CCWWD, Cotswolds), GWCT, FWAG, RSPB</p>	Ongoing, reported annually	
		<p>FHA23: Ensure that arable plant sites currently in Classic Schemes are assessed and entered into a suitable new scheme where appropriate.</p>	All sites which retain arable plant interest are entered into a suitable new scheme	<p>NE, Plantlife, AONBs (CCWWD, NWD), GWCT, FWAG</p>	2014, ongoing reporting annually until then	
		<p>FHA24: Ensure that inappropriate arable reversion to grassland is avoided on sites where the arable wildlife interest is high (for plants, this means an IAPA of county importance or above)</p>	No inappropriate reversion schemes are grant aided	<p>Natural England, AONBs (NWD, CCWWD, Cotswolds) AONB, Plantlife</p>	Ongoing, reporting annually	
		<p>FHA25: Complete Arable Strategy for NWD AONB and expand to other AONBs</p>	All AONBs have an Arable Strategy	<p>AONBs (NWD, CCWWD, Cotswolds), NE, Plantlife, FWAG, GWCT, RSPB</p>	2012	
<p>FHT12: Increase area of land supporting important arable plant populations</p>	All existing known sites and potential hotspots are targeted for appropriate	<p>FHA26: Expand the area of cultivated, low-input field margins at existing sites and potential hotspots</p>	Double the area by 2010 (<i>Note - baseline: 179.17ha (0.14%)</i>)	<p>NE, Plantlife, FWAG, RSPB</p>	2010	Byfield and Wilson (2005)

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<i>Note: baseline - 0.29% and "important" as defined in Plantlife IAPA document</i>	management under AE schemes (NE and Plantlife)	<u>FHA27</u> : Promote a change in perception and profile of wild plants as important and essential food sources for seed eating farmland birds rather than as weeds	At least 1 training day, Arable Plant website, Farm Wildlife website, 3 articles in the farming press per year, report published	Farmland Habitats Working Group	Ongoing, reporting annually	

Objective FHO4: Maintain and where possible, increase, the population size and extent of Wiltshire BAP species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>FHT13</u> : Brown Hares - establish population size and distribution	Report on existing population size and distribution produced by 2008 (GWCT)	<u>FHA28</u> : Devise a strategy to estimate Hare population and distribution	Strategy completed by 2008 (measures could include WWT magazine, adding to BBS survey as an additional species, conservation groups on the Plain)	Farmland Habitats Working Group , WSBRC, Wiltshire Mammal Group, WWT (LFW Project)	2008	Center Parcs BAP Target 12; SW BAP Arable Farmland HAP Objective 6
<u>FHT14</u> : Harvest Mice - Establish population distribution	Report produced by 2012 (Wiltshire Mammal Group)	<u>FHA29</u> : Presence/absence programme set up	Programme of surveying introduced by 2008	Farmland Habitats Working Group, WSBRC, Wiltshire Mammal Group	2008	WBAP SOW and Rivers and Streams HAPs (reedbeds)
		<u>FHA30</u> : Sites surveyed	15 sites surveyed for presence/absence by 2010	Farmland Habitats Working Group, WSBRC, Wiltshire Mammal Group	2010	
		<u>FHA31</u> : Population surveys carried out on sites established as positive in programme above in FHA30 and FHA31	Positive sites surveyed by 2012	Farmland Habitats Working Group, WSBRC, Wiltshire Mammal Group	2012	
<u>FHT15</u> : Butterflies - determine how best to encourage links from existing areas supporting BAP species to new areas	Working Group determine plan of action (Farmland HAP Working Group)	<u>FHA32</u> : Farmland HAP Working Group determine a plan of action and make recommendations for preliminary research	Plan of action devised	Farmland Habitats Working Group , Dstl Porton Down	2008	

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Farmland Habitats Action Plan

Organisation	Representatives
Black Sheep Countryside Management	Simon Smart
Cotswolds AONB	Mark Connelly
Cranborne Chase and West Wiltshire Downs AONB	David Blake

Organisation	Representatives
Environment Agency	Julian Wardlaw, Alison Futter, Daryl Buck
FWAG	Louise Stratton
Game Conservancy Trust	Peter Thompson
Great Bustard Group	Al Dawes
Ministry of Defence	Julie Swain
National Trust	Chris Gingell, Kim Portnell, Jane Hancock, Rebecca Charley
Natural England	Roger Griffin, James Phillips
North Wessex Downs AONB	Heather White
Plantlife	Kate Still
RSPB	Kevin Rylands (South West), Nick Adams, Phil Sheldrake, Patrick Cashman, Tracé Williams
Wiltshire Mammal Group	Mark Satinet, Sarah Wood
Wiltshire Ornithological Society	Matt Prior, Christine Johnson
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Paul Darby and Rob Nicholls (Landscapes for Wildlife Project), Rob Large (County Wildlife Sites)

Calcareous Grassland Habitat Action Plan

A Vision for Wiltshire's Calcareous Grassland over the next 30 years...

Wiltshire's iconic chalk downland exists as great swathes of habitat, linked together across the landscape, and is of excellent quality - supporting a great diversity of species.

A Wiltshire whose inhabitants are proud to live in a county with half of the UK calcareous grassland resource, and who understand its cultural heritage

Background

Lowland calcareous grassland has suffered a sharp decline in extent in the UK over the last 50 years. There are no comprehensive figures, but a sample of chalk sites in England surveyed between 1966 and 1980 showed a 20% loss in that period and an assessment of chalk grassland in Dorset found that over 50% had been lost between the mid-1950s and the early 1990s (UK BAP Lowland Calcareous Grassland HAP).

Current estimates put the amount of lowland calcareous grassland remaining in the United Kingdom at around 33,000 to 41,000 ha. The bulk of the resource is found on chalk (25,000 to 32,000 ha), with major concentrations in Wiltshire, Dorset and the South Downs.

Lowland Calcareous Grassland: definition

Lowland calcareous grasslands have developed on shallow lime-rich soils, generally overlying limestone rocks, including chalk. The thin, well-drained nutrient-poor soils support a characteristic variety of herbs and grasses.

These grasslands are now largely restricted to distinct topographic features such as escarpments, dry valley slopes or ancient earthworks, strongly influenced by the underlying limestone geology. There are a few remaining large areas on flat ground, and some small remnants occur along road verges and in woodland glades.

Calcareous grasslands are typically managed as components of pastoral or mixed farming systems, supporting sheep, cattle or occasionally horses. A few are cut for hay.

The definition of calcareous grasslands covers a range of plant communities in which lime-loving plants are characteristic. In the UK BAP HAP for Lowland Calcareous Grassland, lowland types are defined as the first nine calcareous grassland National Vegetation Classification communities, CG1 to CG9.

Wiltshire has between 18,000 and 24,000ha of calcareous grassland, which equates to approximately 50% of the total UK calcareous grassland resource. The Salisbury Plain Training Area (SPTA) has approximately 12,000ha of chalk grassland. This alone, represents 41% of the chalk grassland in North West Europe.

Despite the large extent of calcareous grassland remaining in Wiltshire, there have still been significant losses historically, mainly due to ploughing and agricultural intensification. Unusually for this habitat nationally, there are a number of extensive areas of calcareous grassland remaining on flat ground in Wiltshire, as on Salisbury Plain and at Porton Down, where the grasslands have survived due to military occupation which has limited agricultural intensification.

The two main vegetation communities associated with unimproved calcareous grasslands in Wiltshire are **CG3 Upright Brome communities** which are associated with longer swards, and **CG2 Sheep's Fescue – Meadow Oat-grass communities** which are characteristic of tightly grazed swards. CG2 is one of the richest grassland types in the UK, with up to 50 plant species per square metre, many of them rare and restricted in their distribution.

Important Sites in Wiltshire

“Dry grasslands and scrublands on limestone” (including Chalk) and “Juniper on heaths or calcareous grasslands” are listed in the EU Habitats Directive as habitats of importance. Three sites in Wiltshire; Pewsey Downs, Prescombe Down and Salisbury Plain (including Parsonage Down and Porton Down SSSIs) are designated as Special Areas of Conservation (SACs) for these habitats and the species of community importance which they support.

There are 62 SSSIs in the county which contain areas of calcareous grassland. It is estimated that over 18,000ha are protected in this way, with a further 1600ha recognised as County Wildlife Sites.

Salisbury Plain

Salisbury Plain is designated a Special Protection Area (SPA) for its breeding Stone Curlews, and also as a SAC for its rare plant communities. The area of the SAC is 21,438ha. It is the largest remaining area of chalk grassland in North West Europe. Much of the area is used for military training, which has prevented the conversion of the ancient grassland to arable farming that has been so prevalent elsewhere in England. Rare plants include Tuberous Thistle (*Cirsium tuberosum*) and Meadow Clary (*Salvia pratensis*). There are also important stands of Juniper, *Juniperus communis*, and this site is the best remaining example in the UK of lowland Juniper scrub on chalk. The site also supports the largest UK population of the nationally scarce Burnt Orchid (*Orchis ustulata*), together with significant populations of Green-winged Orchid (*Orchis morio*) and Frog Orchid (*Coeloglossum viride*), both uncommon orchids associated with calcareous grassland. Salisbury Plain also contains a cluster of large sub-populations of Marsh Fritillary (*Euphydryas aurinia*).

Porton Down

1519ha of the 2750ha Porton Down site have been designated as SSSI. A rich chalk downland flora and a good variation in habitats combine to enable a very large and diverse population of butterflies to exist here. 44 species (which equates to 78% of the British list) have been recorded, making the site the best for butterflies in the UK.

Porton Down also contains 20% of the Juniper population in the south of England. An invertebrate fauna of 20 species specific to juniper occurs in southern England, and 15 of these species have been found at Porton Down, which is more than on any other single site.

Pewsey Downs

This site is situated on the southern edge of the Marlborough Downs on the Wiltshire chalk and the SAC covers nearly 154ha. The site contains a large population of the nationally scarce Burnt Orchid (*Orchis ustulata*) and the uncommon Green-winged Orchid (*Orchis morio*). Autumn Lady's Tresses (*Spiranthes spiralis*) and Frog Orchid (*Coeloglossum viride*) are also present. Pewsey Downs also has very significant populations of hundreds of thousands of Early Gentian (*Gentianella anglica*) growing on high quality grassland.

Prescombe Down

Prescombe Down also holds very significant populations of hundreds of thousands of Early Gentian (*Gentianella anglica*) in high quality chalk grassland that has been sympathetically managed for many years. It is also an important site for Marsh Fritillary. The SAC covers 76ha.



Early Gentian © Sharon Pilkington

Species

As well as having a rich plant diversity, calcareous grassland also exhibits a diverse invertebrate fauna, and includes scarce species such as Adonis Blue (*Lysandra bellargus*), and Silver-spotted Skipper (*Hesperia comma*), the Duke of Burgundy Fritillary (*Hamaeris lucina*) and the Wartbiter Cricket (*Decticus verrucivorus*). This habitat also provides feeding or breeding habitat for a number of scarce or declining birds, including Stone Curlew (*Burhinus oedichnemus*) and Skylark (*Alauda arvensis*).

Juniper *Juniperus communis*

It is suggested that there was a 60% decline in the range of Juniper up to 1960, and data since 1960 also shows decline, but there is no comprehensive information available (UK BAP SAP for Juniper). Many Junipers are more than 100 years old and produce little viable seed, which in addition to problems caused by overgrazing can mean that few young plants survive (Plantlife Juniper Species Dossier). Targets have been included in the revised Wiltshire BAP Calcareous Grassland HAP to maintain or increase the range of Juniper in the county, from its baseline of presence in 46 1km grid squares.

Early Gentian *Gentianella anglica*

Early Gentian is thought to be endemic to the UK - it favours open grassy places and light, warm soils, usually on chalk, but occasionally calcareous sandy soils. Loss of habitat due to intensive farming or quarrying is a principle cause of decline – the other is encroachment of scrub and trees through loss of grazing. It is protected under Schedule 8 of the Wildlife and Countryside Act, 1981, and also Annex II(b) and IV(b) of the European Habitats Directive, 1992. A national research project is currently underway to clarify the taxonomic status of Early Gentian. Targets have been included in the revised Wiltshire BAP Calcareous Grassland HAP to sustain or increase the range of Early Gentian in the county, from its baseline of presence in 32 1km grid squares.

Progress Highlights since 2002

In general, progress towards the original Calcareous Grassland HAP was good, with most targets or actions either progressed or completed. These include:

- The target to recreate 200ha of calcareous grassland of wildlife value in the South Wessex Downs was exceeded through the National Trust's grassland restoration scheme at Stonehenge, where 225ha were recreated
- An aerial photograph interpretation exercise was carried out by the WSBRC and converted into a National Biodiversity Network (NBN) dataset, meeting the action requiring a baseline audit of the calcareous grassland resource in the county
- The RSPB has been working with landowners to recreate 42ha of chalk grassland at the Normanton Down reserve within the Stonehenge World Heritage Site
- The RSPB acquired Manor Farm, a 731acre site near Stonehenge, which provides an important link between the calcareous grassland sites of Salisbury Plain and Porton Down
- Wiltshire Interactive Grazing Initiative (WIGI) and Grazing Animal Programme (GAP): In 2002 a two year pilot Local Grazing Scheme was set up in Wiltshire to implement appropriate grazing management on conservation sites, and promote community awareness of, and involvement in, conservation grazing. An analysis of WIGI in 2004 led to the formation of the Wiltshire GAP.
- The RSPB's Wiltshire Chalk Grassland Project has helped towards vastly exceeding the UK BAP's target of re-establishing 1000ha of calcareous grassland by 2010. Over 8400ha has now been restored nationwide.

The Stone Curlew – a UK and Wiltshire BAP Priority Species

The Wessex Stone Curlew Recovery Project is part of 'Action for Birds in England', a conservation partnership between Natural England and the RSPB. The role of the Project is to survey and monitor the population throughout the breeding season, and to work with farmers and landowners to establish safe and suitable breeding habitat.

Over the last century the Stone Curlew population and range in the UK decreased by 85% leaving just two core areas; the Brecklands of East Anglia and the Chalk Downlands of Wessex centred around Salisbury Plain. Since its inception in 1985 the Wessex Project has been successful in increasing numbers from about 30 breeding pairs to 121 in 2007. Eighty-five of these pairs were found in Wiltshire, which currently accounts for 25% of the UK population of 348 Pairs. This success is due to the cooperation and goodwill of farmers and landowners across the region, and the support of Natural England through its Stewardship Schemes that fund habitat creation and management.

Changes since 2002

Wiltshire Wildlife Trust has been successful in securing funding for a new Living Landscapes project, called "New Life on the Chalk". The project will focus on rebuilding biodiversity throughout Wiltshire's chalk grassland and will run alongside the existing Landscapes for Wildlife Rebuilding Biodiversity in North Wiltshire team presently within the Trust. The Steering Group for the project includes representatives from Wiltshire Wildlife Trust, the Grasslands Trust, Natural England, the RSPB and Cranborne Chase and West Wiltshire Downs AONB,

The project will primarily focus on delivery on the ground and establishing the all-important relationships with farmers and landowners. It will include offering landowners a new service to help deliver site management and ongoing maintenance. The project will aim to provide cattle grazing and seed harvesting, promote stewardship schemes, offer support to landowners and provide a focus for chalk grassland whilst filling in gaps in the countryside.

Taking the new Calcareous Grassland Habitat Action Plan forwards...

It was decided that a Calcareous Grassland Working Group would be set up to take this Action Plan forwards. Robert Lloyd from Natural England will continue to lead, and the group will meet twice a year. In spring/summer the meeting will be held around a site visit, at which views and successes etc. can be exchanged. In winter an office based meeting will be held, which will be more focussed on the Plan, and on reporting progress.

Links with other Plans

UK BAP

Habitat Action Plan for Lowland Calcareous Grassland

Species Action Plans for Stone Curlew, Skylark, Juniper, Early Gentian, Marsh Fritillary, Silver-spotted Skipper, and Adonis Blue

South West Biodiversity Action Plan

Habitat Action Plan for Calcareous Grassland

Species Actions Plans for Early Gentian and Marsh Fritillary

Other Action Plans in the Wiltshire BAP

Farmland HAP – also contains targets and actions for Stone Curlew

Swindon BAP

Section 5: Grassland Habitats, 5.3 - Downland

References

UK BAP Species Action Plan for Early Gentian - Originally published in: Biodiversity: The UK Steering Group Report - Volume II: Action Plans (December 1995, Tranche 1, Vol 2, p185). Download from www.ukbap.org.uk

UK BAP Habitat Action Plan for Lowland Calcareous Grassland - Originally published in: UK Biodiversity Group Tranche 2 Action Plans - Volume II: Terrestrial and freshwater habitats (December 1998, Tranche 2, Vol II, p57). Download from www.ukbap.org.uk.

UK BAP Species Action Plan for Juniper - Originally published in: UK Biodiversity Group Tranche 2 Action Plans - Volume III: Plants and fungi (February 1999, Tranche 2, Vol III, p325). Download from www.ukbap.org.uk.

Plantlife Species Briefing Sheet for Early Gentian. Download from: http://www.plantlife.org.uk/uk/assets/saving-species/Gentianella_briefing_sheet.pdf

Plantlife Species Dossier for Juniper. Download from: <http://www.plantlife.org.uk/uk/plantlife-saving-species-under-our-care-juniperus-communis.htm>

SAC Designations for Salisbury Plain, Pewsey Downs and Prescombe Down are available from the JNCC website: <http://www.jncc.gov.uk/page-1458>

Wiltshire BAP Calcareous Grassland Habitats Habitat Action Plan

Objective CGO1: Protect the existing resource						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
CGT1: Maintain current extent of calcareous grassland resource	<u>Measure 1:</u> No loss due to agricultural improvement (ongoing)	<u>CGA1:</u> Improve and update the baseline data to ensure all BAP quality habitat is mapped and available to partners.	Amalgamation of reversion data with data already held by BRC	WWT (Wildlife Sites Project) , Landscapes for Wildlife, FWAG, NE, AONBs (CCWWD, NWD, Cotswolds), WCC (County Ecologist)	2008	Swindon BAP Downlands HAP (CG1)
	<u>Measure 2:</u> No denotification of CWS and SSSI due to neglect (ongoing)		Map produced by Oct 2008			
	(NE and WWT – Wildlife Sites Project)	<u>CGA2:</u> Revisit old sites mapped as calcareous grassland and confirm that they are still in existence	Old sites confirmed on map above (in CGA1)	WWT (Wildlife Sites Project)	2013	
		<u>CGA3:</u> Ensure all mapped BAP quality habitat outside a higher designation is designated as CWS	All sites become CWS within 12 months of being identified	WWT (Wildlife Sites Project)	2013	
		<u>CGA4:</u> All CWS monitored (retains the interest identified in previous survey)	At least once every 6 years	WWT (Wildlife Sites Project)	2013	
		<u>CGA5:</u> Secure appropriate management to maintain habitat	2700ha (AE baseline) plus that currently owned by organisations tasked to manage sympathetically (avoid double counting) NE – 436ha	WWT (Wildlife Sites Project, New Life on the Chalk Project), NE , AONBs (CCWWD, NWD), MOD, FC, RSPB, National Trust	Ongoing, reporting annually (on total amount)	Swindon BAP Downlands HAP (CG2)
		<u>CGA6:</u> Promote the use of agri-environment schemes to secure appropriate management (events also to encompass other objectives below)	4 events per year	NE , WWT (Landscapes for Wildlife), AONBs (CCWWD, NWD, Cotswolds)	Ongoing, reporting annually	
		<u>CGA7:</u> Maintain at least the current level of BAP quality chalk grassland managed outside of agri environment schemes	All organisations tasked to manage land sympathetically undertake a condition assessment at least once every 5 years and report to WSBRC	WSBRC , National Trust, FC, WWT (Biodiversity Action and Reserves), NE , RSPB	Every 5 years, first one in 2010	
		<u>CGA8:</u> Training (workshops) – guidance on general calcareous grassland management, not specifically schemes	4 events held per year (2 events Natural England, 1 WWT (New Life on the Chalk))	NE , WWT (Reserves), AONBs (CCWWD, NWD, Cotswolds), FWAG	Ongoing, reporting annually	

Objective CGO2: Restore degraded areas and continue improvement of re-created areas

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
CGT2: Land taken into management with the aim of restoring calcareous grassland (adjacent to or linking existing sites)	50 ha plus 10ha (AONBs), restored under HLS every 5 years (adjacent to or linking existing sites) (NE, AONBs)	CGA9: Ensure that sufficient potential sites are targeted for restoration.	Draw up list of target areas, starting 2008	NE, AONBs (CCWWD, NWD, Cotswolds)	2008, then every 5 years	
		CGA10: Provide ongoing practical mechanisms to aid management, e.g. GAP	Ensure that there is always a project in place	WWT, Calcareous Grassland Working Group, Dstl Porton Down	Ongoing, reporting annually	
		CGA11: Undertake a trial to ensure methodologies for grassland reversion are the best achievable	Trial initiated with eventual aim of production of a management guide	Dstl Porton Down, Calcareous Grassland Working Group	Trial initiated by 2009	
		CGA12: Maximise the use of locally available seed - see related action below	By 2017 all sites being restored use locally available herb seed, or green hay	NE, AONBs (CCWWD, NWD), WWT (Landscapes for Wildlife, Reserves), NT	2017 and then ongoing, reporting annually	
CGT3: SSSIs in favourable or recovering condition	95% of SSSI in favourable or recovering condition by 2010, and maintained at that level thereafter (Natural England) <i>Note: 2007 baseline is 93% of 23216ha</i>	CGA13: Individual solution is devised for each remaining problematic site	List of solutions for each specific site not currently in favourable or recovering condition.	Natural England	2009 and then maintain, reporting annually	
CGT4: Achieve and maintain positive ecological management of calcareous grassland in CWS	BAP quality calcareous grassland in positive conservation management on 50% of CWS (WWT, Wildlife Sites Project)	CGA14: Create a funding mechanism to deliver management on CWS not covered by existing schemes	A new funding scheme for CWS	WWT (Wildlife Sites Project), WWT, WCC (County and District Ecologists), NE	2010	
		CGA15: Identify areas for restoration in pilot area (New Life on the Chalk) and then expand to rest of county. Note: can utilize Historic Landscape Characterisation to identify former chalk grassland sites.	A map showing all suitable priority areas within pilot area. <i>Note: this is on a layering basis - both an opportunity and a technical map</i>	WSBRC, WWT (Land Management)	2008	

Objective CGO3: Expand the area of this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<p><u>CGT5:</u> Recreate 500ha of calcareous grassland from arable or improved grassland</p> <p><i>Note: Taking care to avoid losses of arable habitat that is valuable to biodiversity (e.g. as noted in the North Wessex Downs Arable Strategy)</i></p>	500ha over 3 years (measured on a rolling basis) (NE)	<u>CGA16:</u> Area under management agreement increased	500ha over 3 years on a rolling basis.	NE , AONBs (CCWWD, NWD, Cotswolds), WWT (New Life on the Chalk), RSPB	Ongoing, 3 yearly reporting starting from 2010	
		<u>CGA17:</u> Maximise the use of locally available seed - see related action above	By 2017 all sites being restored use locally available herb seed, or green hay	NE, AONBs (CCWWD, NWD) , WWT (Landscapes for Wildlife, Reserves), NT, RSPB	2017 and then ongoing, reporting annually	

Objective CGO4: Maintain and where possible, increase, the population size and extent of UK BAP Priority species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<p><u>CGT6:</u> Maintain current range of Early Gentian</p> <p><i>Note: Although an existing and new BAP species, the taxonomic status of Early Gentian is questionable. A research project is underway to clarify this (contact Plantlife). In the meantime this species is on the Waiting List for the Vascular Plant Red List</i></p>	Sustain or increase known populations, so present in at least 32 1km squares (Plantlife)	<u>CGA18:</u> Optimise habitat management across known populations	Populations stable or increasing in at least 32 1km squares <i>(Note: status can only be determined via monitoring over a number of years)</i>	MOD, NE, Plantlife, WWT (Land Management) , WSBRC, National Trust (e.g. at Clay Hill Warminster)	2015	SW BAP Early Gentian SAP Objective 1
		<u>CGA19:</u> Suitable habitat restored or extended, where appropriate, at sites with small and/or rapidly declining populations	Three projects implemented to restore or expand suitable habitat	MOD (through general habitat expansion), NE, Plantlife, WWT (Land Management)	2015	SW BAP Early Gentian SAP Objective 2
		<u>CGA20:</u> Monitor a sample of known populations at least once every six years	WSBRC database shows all sites monitored over a six year period (report produced by NE)	NE , County Recorder, Plantlife, WSBRC, Wiltshire Botanical Society	2015	
<u>CGT7:</u> Maintain current range of Juniper	Sustain or increase known populations in at least 46 1km squares. (Plantlife)	<u>CGA21:</u> Improve management techniques to promote natural regeneration through a controlled, replicated, monitored experiment.	Seedlings present after 3 years plus evidence of diverse age structure. Report produced and circulated on experimental trials	MOD, NE, Plantlife , WWT, County Recorder	2015	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		<u>CGA22</u> : Optimise natural regeneration in vulnerable populations and where this is failing - consolidate through planting.	Seedlings present after 3 years plus evidence of diverse age structure.	WCC (Countryside Team), MOD, NE , Plantlife, WWT, National Trust	2020	
		<u>CGA23</u> : Monitor known populations at least once every six years. Use Site Condition Monitoring to gather data on age, sex and regeneration.	WSBRC database shows all sites monitored over a six year period (report produced by NE)	NE , Plantlife, WSBRC, Wiltshire Botanical Society, MOD, County Recorder	2015	
<u>CGT8</u> : Stone Curlew: management of calcareous grassland for nesting Stone Curlews	Management of calcareous grassland to support at least 60% of breeding Stone Curlew in Wiltshire. (60% pairs nested on semi-natural habitat in 2007) (RSPB)	<u>CGA24</u> : Continue to promote arable reversion along with Stone Curlew nesting habitat creation, with appropriate grazing regime to provide foraging areas	RSPB to provide land management advice for chalk grassland for Stone Curlews to all relevant landowners and farmers	RSPB , Natural England	Ongoing, reporting annually	

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Calcareous Grassland Habitat Action Plan

Organisation	Representatives
Cotswolds AONB	Mark Connelly
Cranborne Chase and West Wiltshire Downs AONB	David Blake
County Recorder	Sharon Pilkington
FWAG	Louise Stratton
Forestry Commission	Ian Briscoe
Ministry of Defence	Julie Swain
National Trust	Chris Gingell
Natural England	Rob Lloyd
North Wessex Downs AONB	Heather White
Plantlife	Tim Wilkins
RSPB	Phil Sheldrake, Patrick Cashman, Tracé Williams
Wiltshire Botanical Society	Sharon Pilkington
Wiltshire County Council	Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Lee (District Ecologists)
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Head of Land Management, Paul Darby and Rob Nicholls (Landscapes for Wildlife), Catherine Hosie (Project Manager for New Life on the Chalk and Landscapes for Wildlife Projects), Rob Large (Wildlife Sites Project)
Woodland Trust	Jaime Needler

Unimproved Neutral Grassland Habitat Action Plan

A Vision for Wiltshire's Neutral Grassland over the next 30 years...

Neutral Meadows exist in large swathes of habitat, linked together by a matrix of hedges, ditches and streams, along which a wealth of wildlife can move.

Overgrazing and undergrazing do not go unmanaged and degraded areas are restored

The people of Wiltshire can enjoy flower-filled meadows that are alive with the sound of insects and birds, and are involved in their management

Clattinger Farm © David Hall



Background

Lowland unimproved neutral grassland is the single most threatened type of grassland habitat in the UK, and has suffered the greatest loss in the last 70 years, almost entirely due to changing agricultural practice. It is estimated that by 1984 in lowland England and Wales, semi-natural grassland had declined by 97% over the previous 50 years to approximately 0.2million ha. Losses have continued during the 1980s and 1990s, and have been recorded at 2 -10% per annum in some parts of England (UK BAP Lowland Meadow HAP). There is now less than 15,000ha of species-rich neutral grassland surviving today in England and Wales, and recent Defra (2006) figures indicate that there may be less than 8,500ha remaining in England.

Unimproved Neutral Grassland: definition

In terms of National Vegetation Classification plant communities, neutral grassland primarily embraces each type of *Cynosurus cristatus* - *Centaurea nigra* (MG5) grassland, *Alopecurus pratensis* - *Sanguisorba officinalis* (MG4) floodplain meadow and *Cynosurus cristatus* - *Caltha palustris* flood-pasture (MG8).

Whilst both MG4 and MG5 grasslands are nationally rare habitats, the MG4 community is particularly rare, both in the UK and in Europe as a whole, and it is listed in Annex 1 of the EU Habitats Directive. In the UK MG4 grassland is now highly localized, fragmented and in small stands, and only about 5000-10000ha remains in total. Unimproved seasonally-flooded grasslands have a lesser distribution but there are still quite a few large stands. *Alopecurus-Sanguisorba* flood meadow has a total cover of about 1500ha.

This Plan is not restricted to grasslands cut for hay, but also takes into account unimproved neutral pastures where livestock grazing is the main land use. On many farms in different parts of the UK, use of particular fields for grazing pasture and hay cropping changes over time, but the characteristic plant community may persist with subtle changes in floristic composition.

In non-agricultural settings, neutral grasslands are less frequent but additional examples may be found in recreational sites, churchyards, roadside verges and a variety of other localities.

Neutral Grassland in Wiltshire

Wiltshire is second only to Oxfordshire for the area of MG4 grassland that it possesses. The known neutral grassland which is under designation as a Site of Special Scientific Interest (SSSI), or is a County Wildlife Site (CWS), in the county amounts to just over 500ha, of which c.150ha is MG4 grassland, and 350ha is MG5. This represents 10% and 8% respectively of the remaining UK resource of these two key neutral grassland communities.

The drier MG5 neutral grassland has quite a fragmented distribution in the county and frequently occurs in mosaics with limestone grassland communities (in the Cotswolds area) or with chalk grassland communities (Marlborough and South Wessex Downs). Unimproved neutral grassland also occurs in transitional situations throughout the county in proximity to wetland, woodland and semi-urban habitats. Some good, although small, areas of unimproved neutral grassland also occur on some road verges.

In Wiltshire, 19 known sites of unimproved neutral grassland (MG4 and MG5), covering an area of nearly 63ha, have been destroyed since 1990, and a further 62 sites covering nearly 74ha have been degraded in the same period (WSBRC, 2000). A variety of activities are to blame, but the overwhelming cause was agricultural improvement.

Important Sites in Wiltshire

Neutral Meadows in North Wiltshire

Locally, the Cotswold Water Park area contains 25 species-rich unimproved neutral grassland of which 6 are designated Sites of Special Scientific Interest (SSSIs). These include Pike Corner (15.24ha), Elmlea Meadows (7.18ha), Whelford Meadow (1.99ha), Wildmoorway Meadow (13.14ha), Upper Waterhay Meadow (2.85ha) and Long Meadow. The North Meadow (45.67ha) and Clattinger Farm (59.55ha) Special Area of Conservation (SAC) also lies within the Cotswold Water Park. Both are also SSSIs.

North Meadow NNR (managed by Natural England) and Clattinger Farm Nature Reserve (managed by Wiltshire Wildlife Trust) represent an exceptional survival of the traditional pattern of lowland hay meadow management and so exhibit a high degree of conservation of structure and function.

North Meadow and Clattinger Farm also contain a very high proportion (>90%) of the surviving UK population of Fritillary, *Fritillaria meleagris*, a species highly characteristic of damp lowland meadows in Europe and now rare throughout its range (North Meadow and Clattinger SAC designation).

North meadow is a Lammas meadow. Lammas land is an area of common land, which dates back to medieval times. Over 250 species of higher plant occur, together with 14 species of dragonfly and damselfly. The site is also important for the nationally rare Downy-fruited Sedge. The meadows are cut for hay no earlier than 1st July each year.



Snakeshead Fritillaries
© Tony Coultiss

Species

Unimproved neutral grasslands are floristically rich, particularly when actively managed as hay meadows. Whilst the very rare MG4 community is not as floristically diverse as the drier MG5 community, it is characterised by the presence of a number of rare and uncommon species, such as Snake's-head Fritillary, Adders Tongue Fern, and Downy-fruited Sedge, which have the major part of their UK population in Wiltshire. The floristic richness of hay meadows is associated with a similarly rich invertebrate fauna. They are also important habitats for Skylark and a number of other farmland birds, as well as mammals such as the Brown Hare.

Brown Hare *Lepus europaeus*

The Brown Hare is widespread in Britain, but appears to have undergone a substantial decline in numbers since the early 1960s, with population estimates now varying between 817,500 and 1,250,000. Information from shooting estates suggests that hare numbers have remained stable for the past ten years, although other evidence of this is unclear. Similar patterns of population change appear to have occurred throughout much of Europe (UK BAP Species Action Plan for Brown Hare). A target has been set under both the Wiltshire BAP Farmland and Neutral Grassland HAPs for Brown Hare.



Brown Hare © Charlotte Watson

Marsh Fritillary *Eurodryas aurinia*

The Marsh Fritillary butterfly is declining in almost every European country, and the UK is now believed to be one of the major European strongholds for the species, but even here it has declined substantially over the last 150 years. In Britain, its range has reduced by over 62%, and it has recently disappeared from most of eastern England and eastern Scotland. It is still quite widespread in parts of south-west England and Wales, but colonies are estimated to be disappearing at a rate of well over 10% per decade.

The Marsh Fritillary breeds in two main habitats, damp neutral or acid grasslands and dry chalk and limestone grasslands. Colonies are often small and prone to extinction, so extensive networks of habitat patches which permit re-colonisation are essential to their long term survival.



Marsh Fritillary © Charlotte Watson

There has been a significant decline in plant diversity on neutral grassland between 1990-1998 of around 10% (Defra, 2007).

Progress Highlights since 2002

Landscapes for Wildlife Project in North Wiltshire

In 2006, the Wiltshire Wildlife Trust's Landscapes for Wildlife Project successfully secured funding for 5 years. The project is funded by Tubney Charitable Trust, North Wiltshire District Council, the Hills Group and other Charitable Trusts.

The aim of the project is to expand and link together scattered areas of wildlife-rich habitat in the ancient royal hunting Forest of Braydon in North Wiltshire. Neutral meadows and broadleaved woodland are the main focus for the project, and it also looks at hedgerow and pond restoration. Covering nearly 8000 hectares of land, the project is taking a targeted approach to restoring and recreating habitats. Using the Rebuilding Biodiversity methodology developed by the South West Wildlife Trusts, Strategic Nature Areas (SNAs) have been identified within the project boundary, within which effort is focused. The project also targets work towards 9 key BAP species found in the project area: Marsh Fritillary, Brown Hare, Water Vole, Great Crested Newt, Spotted Flycatcher, Skylark, Reed Bunting, Song Thrush and Bullfinch.

The project provides advice to farmers and landowners on grant schemes such as Environmental Stewardship and the English Woodland Grant Scheme, and also runs its own capital grants scheme. The Project Officers hold volunteer tasks in the project area and source local wildflower seed for meadow recreation and restoration.

Sutton Lane Meadows

In 2003 English Nature (now Natural England) brought the first successful prosecution for third-party damage to a SSSI (under the new provisions of the Wildlife and Countryside Act 1981 as substituted by the Countryside and Rights of Way Act 2000) – for damage caused at Sutton Lane Meadows in Wiltshire. The Court also made a Restoration Order, another legal precedent, under the new provisions, to make the offender restore the site to its former condition.

Sutton Lane Meadows SSSI is situated in North Wiltshire, and covers an area of approximately 3.44 hectares. The SSSI covers a botanically diverse area of unimproved neutral grassland, and comprises two extremely herb-rich meadows that are cut for hay in late summer and then grazed in Autumn. There are important populations of Southern Marsh Orchids, and approximately 500 Green-winged Orchids.

Sutton Lane Meadows has now been purchased and taken into conservation management by the National Trust. The acquisition was part-funded by a grant from English Nature.



Landscapes for Wildlife Grassland Restoration demo day © Bill Jenman/WWT

Taking the new Unimproved Neutral Grasslands Habitat Action Plan forwards...

It was decided that a Neutral Grassland Working Group would be set up to take this Action Plan forwards. Isobel Whitwam from Natural England will lead, and the group will meet twice a year.

Links with other Plans

UK BAP

Habitat Action Plan for Lowland Meadows

Habitat Action Plan for Coastal and Floodplain Grazing Marsh – periodically flooded grasslands in North Wiltshire are classified as Coastal and Floodplain Grazing Marsh on Nature Map

Species Action Plans for Skylark, Marsh Fritillary, Brown Hare, Water Vole, Great Crested Newt, Spotted Fly Catcher, Reed Bunting, Bullfinch and Song Thrush

South West Biodiversity Action Plan

Species Actions Plan for Marsh Fritillary

Other Action Plans in the Wiltshire BAP

Farmland HAP – contains same target and action for Brown Hare

Swindon BAP

Section 5: Grassland Habitats, 5.2 – Neutral Meadows

Cotswold Water Park BAP

Habitat Action Plan for Neutral Grassland

Center Parcs BAP

Target 20: Neutral Grassland

Target 12: Brown Hare – sustain current range of activity

References

Defra (2006) England Rural Development Programme Final Report: South West Region

View at: <http://www.defra.gov.uk/erdp/docs/swchapter/section12/landscape.htm>

Defra on behalf of the UK Biodiversity Partnership (2007) Biodiversity Indicators in your Pocket

The UK BAP Habitat Action Plan for Lowland Meadows was originally published in: UK Biodiversity Group Tranche 2 Action Plans - Volume II: Terrestrial and freshwater habitats (December 1998, Tranche 2, Vol II, p39). View it online at www.ukbap.org.uk.

The UK BAP Species Action Plans for Brown Hare and Marsh Fritillary were originally published in: Biodiversity: The UK Steering Group Report - Volume II: Action Plans (December 1995, Tranche 1, Vol 2, p136 (Marsh Fritillary) and p.83 (Brown Hare)).

WSBRC (2000) Data on the loss of Wildlife Sites since 1990

Wiltshire BAP Unimproved Neutral Grassland Habitat Action Plan

Objective NGO1: Protect the existing resource

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
NG1: Maintain current extent of neutral grassland resource	<u>Measure 1:</u> No loss due to agricultural improvement, development or afforestation (ongoing)	<u>NGA1:</u> Improve and update the baseline data to ensure all BAP quality habitat is mapped and available to partners	Amalgamation of reversion data with data already held by BRC. Map produced by Oct 2008	WWT (Wildlife Sites Project) , WWT (LFW), FWAG, NE, AONBs (CCWWD, NWD, Cotswolds), CWP	October 2008	CWP BAP (LNG-02)
		<u>NGA2:</u> Revisit old sites mapped as neutral grassland and confirm that they are still in existence	Old sites confirmed on map above (NGA1)	WWT (Wildlife Sites Project)	2013	
	(NE/WWT (Wildlife Sites Project))	<u>NGA3:</u> Ensure all mapped BAP quality habitat outside a higher designation is designated as CWS	All sites become CWS within 12 months of being identified	WWT (Wildlife Sites Project)	2013	
		<u>NGA4:</u> Secure appropriate management to maintain habitat	1000ha is under AE agreement and/or currently owned by organisations tasked to manage sympathetically (avoid double counting)	WWT (Wildlife Sites Project), NE , WWT (Land Management, Farming Enterprise, LfW), AONBs (CCWWD, NWD), FC, RSPB, Woodland Trust, NT	Ongoing, reporting annually	CWP BAP (LNG-05)
		<u>NGA5:</u> Promote the use of agri-environment schemes to secure appropriate management	2 events per year	NE , WWT (LFW), AONBs (CCWWD, NWD, Cotswolds)	Ongoing, reporting annually	
		<u>NGA6:</u> Maintain at least the current level of BAP quality neutral grassland managed outside of agri- environment schemes	All organisations tasked to manage land sympathetically undertake a condition assessment at least once every 5 years and report to WSBRC	WSBRC , National Trust, FC, WWT (Biodiversity, Land Management), NE, RSPB, WCC (Countryside Team)	First report 2010, then every 5 years	
		<u>NGA7:</u> Training and guidance provided on general neutral grassland management	1 event and 1 article per year	NE , WWT (Reserves, Farming Enterprise), FWAG	Ongoing, reporting annually	

Objective NGO2: Restore degraded areas and continue improvement of re-created areas

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
NGT2: Restore 30ha of neutral grassland from semi-improved or neglected grassland	30 ha over three years on a rolling programme, taken into management with the	<u>NGA8:</u> Ensure that sufficient potential sites are targeted for restoration	30ha target is met every 3 years	NE, AONBs (CCWWD, NWD, Cotswolds) , WWT (LFW)	2010 and then every 3 years	CWP BAP (LNG-04)

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
which no longer meet the priority habitat definition	aim of restoring neutral grassland (adjacent to or linking existing sites) (NE)	<u>NGA9</u> : Promote the use of agri-environment schemes to achieve management for biodiversity	1 event per year	NE , WWT	Ongoing, Reporting annually	
		<u>NGA10</u> : Provide ongoing practical mechanisms to aid management, e.g. Landscapes for Wildlife	There is always a project in place in Wiltshire that is restoring degraded areas and improving re-created areas of neutral grassland	WWT , Neutral Grassland Working Group	Ongoing, Reporting annually	
		<u>NGA11</u> : Maximise the use of locally available seed	By 2017 all sites being restored use locally available herb seed	NE , WWT, NT	2017, Reporting annually	
		<u>NGA12</u> : Increase seed harvesting capacity	At least one more seed harvesting operation working on neutral grassland. <i>Note: in addition to and working in cooperation with Landscapes for Wildlife</i>	NE , WWT	2010	Swindon BAP Neutral Meadows HAP (NG20)
<u>NGT3</u> : SSSIs in favourable or recovering condition	95% of SSSIs in favourable or recovering condition by 2010, and maintained at that level thereafter. (Natural England) <i>Note: Currently 78% of 756ha.</i>	<u>NGA13</u> : Individual solution is devised for each remaining problematic site	List of solutions for each specific site not currently in favourable or recovering condition.	Natural England	2010 and maintain as necessary, reporting annually	Swindon BAP Neutral Meadows HAP (NG15); CWP BAP (LNG-01)

Objective NGO3: Maintain and where possible, increase, the population size and extent of Wiltshire BAP species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>NGT4</u> : Brown Hares - establish population size and distribution	Report on existing population size and distribution produced by 2008 (GWCT)	<u>NGA14</u> : Devise a strategy to estimate Hare population and distribution	Strategy completed by 2008 (measures could include WWT magazine, adding to BBS survey as an additional species, conservation groups on the Plain)	Farmland and Neutral Meadows Working Groups , WSBRC, Wiltshire Mammal Group; WWT (LFW Project)	2008	WBAP Farmland HAP, FHT13 (target shared between HAPs); Center Parcs BAP Target 12; SW BAP Arable Farmland HAP

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
						Objective 6; Swindon BAP Neutral Meadows HAP (NG4)

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Unimproved Neutral Grassland Habitat Action Plan

Organisation	Representatives
Cotswolds AONB	Mark Connelly
Cranborne Chase and West Wiltshire Downs AONB	David Blake
Cotswold Water Park	Gareth Harris
FWAG	Louise Stratton
Forestry Commission	Ian Briscoe
Game and Wildlife Conservancy Trust	Peter Thompson
National Trust	Chris Gingell
Natural England	Isobel Whitwam
North Wessex Downs AONB	Heather White
RSPB	Phil Sheldrake
Wiltshire County Council	Countryside Team
Wiltshire Mammal Group	Mark Satinet
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Head of Land Management, Paul Darby and Rob Nicholls (Landscapes for Wildlife), Rob Large (County Wildlife Sites), Farming Enterprise
Woodland Trust	Jaime Needler

Rivers, Streams and Associated Habitats

A Vision for Wiltshire's Rivers and Streams over the next 30 years...

All flowing water bodies are allowed to behave naturally, as part of an important network that connects many different habitats for a wide range of wildlife.

The unique nature of chalk streams is recognised by all users, and together with other flowing water bodies in Wiltshire, these are allowed to flourish as wildlife-rich habitats, unhampered by invasive species.

To ensure that Wiltshire's rivers are managed in such a way as to achieve the Water Framework Directive's goal of good ecological status, support biodiversity and maintain their cultural heritage.

River keepers and other users are engaged in conservation issues; rivers and their associated floodplains are managed in a sustainable manner.

Rivers are brought into the townscape, becoming a part of the town and of peoples' lives, and communities are encouraged to take part in their conservation, promoting a sense of ownership.

To ensure that action takes account of changes that may occur as a result of climate change



Background

Rivers and streams are flowing water courses and in their natural state they are dynamic systems, continually modifying their forms. In many cases their ability to function naturally and create new habitat has been reduced as a result of historical management, flood protection schemes and impoundments, sometimes over many centuries. Most of Wiltshire's rivers especially the chalk streams have been managed for a variety of reasons over many centuries. They are intensively used to convey flood waters and discharges, to provide water for public, agricultural and industrial use, and are a popular recreational resource.

Rivers and their associated habitats provide important wildlife corridors, linking fragments of semi natural habitat in intensively farmed or built up areas and facilitating the movement of species.

Given the value of these systems to us and the complexity of issues affecting them, coordinated action is vital to ensure that their wildlife value is conserved and enhanced.



Water Vole— Arvicola terrestris
Charlotte Watson

*Pictures: River Wylye upstream (WWT); Otter (Darin Smith);
River volunteers (Martin Gilchrist)*

Important habitats associated with rivers and streams in Wiltshire include:

- Fen and swamp communities
- Lowland wet grassland (floodplain grazing marsh including water meadows and a network of ditches)
- Carr woodlands
- Open water bodies which are directly linked to the water course such as hatchery ponds and watercress beds, as well as natural backwaters
- Bankside reedbed fringes

In Wiltshire there are nationally important examples of chalk streams and winterbournes, lowland clay rivers and limestone rivers rich in calcium carbonate with tufa depositing springs.

Specific Sites in Wiltshire

Special Areas of Conservation

The Salisbury Avon and its headwater rivers are an internationally important Special Area of Conservation (SAC), for their floating *Ranunculus* (water crowfoot) communities and populations of Salmon, Bullhead, Brook and Sea Lamprey and Desmoulin's Whorl Snail.

Areas of swamp habitat alongside the River Kennet at Chilton Foliat are also designated as SACs for their populations of Desmoulin's Whorl Snail.

Sites of Special Scientific Interest

Much of the Salisbury Avon and River Kennet are designated as Sites of Special Scientific Interest (SSSI) in recognition of the habitats and species they support. In addition there are a number of adjacent SSSIs which support associated habitats including Porton Meadows and Jones' Mill.

All main rivers are also County Wildlife Sites, regardless of their statutory designations.



Picture: Water Crowfoot (Jenny Wheeldon)

Species

Water Voles can still be found in good numbers along the majority of rivers and streams in Wiltshire, and Otters are beginning to recolonise the area. The native White-clawed Crayfish still survives on the By Brook and in the Upper Bristol Avon, but it is thought to be virtually extinct in the Salisbury Avon, which is at least in part due to the presence of non-native crayfish.

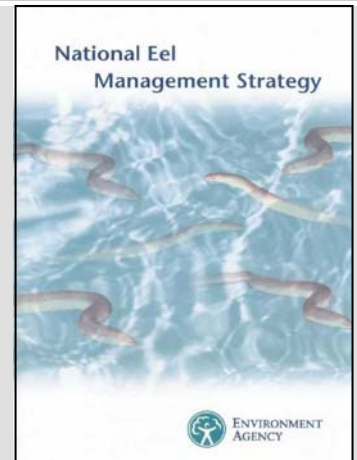
One site on the Salisbury Avon has one of the few remaining wild populations of Summer Snowflake – *Leucojum aestivum*, which favours wooded swamps.

Water Vole *Arvicola terrestris*

The Water Vole has suffered one of the most catastrophic declines of any British mammal this century, and its widespread survival is now seriously threatened. Reasons for its decline include loss and fragmentation of habitat and the introduction and spread of one of its greatest predators - the American Mink. From 6th April 2008 the Water Vole received increased protection under the Wildlife and Countryside Act 1981 (Variation of Schedule 5) Order 2008. The Water Vole is now fully covered by the provisions of section 9 of the Act, and this increased protection adds prohibitions against intentional killing, taking or injury, possession or sale. Previously only the habitat of the Water Vole was protected.

European Eel *Anguilla anguilla*

The European Eel is common around Britain, and Eels are present in most rivers, streams and lakes that are accessible from the sea. However, their numbers have declined since the 1970s, and factors such as changes in the Gulf Stream, pollution, barriers to freshwater migration and overfishing have been cited as possible causes. In 1998 the International Council for the Exploration of the Seas (ICES) advised the European Commission that the European Eel stock was outside safe biological limits, stocks were at a historical low, and that the current fishery was not sustainable. The Eel fishery is the most valuable commercial inland fishery in England and Wales, and the Environment Agency is responsible for its management. In 2001 the EA published a National Eel Management Strategy to address these concerns. There are actions in the revised Wiltshire BAP Rivers and Streams Action Plan to translate the National Management Strategy into local priorities.



White Clawed Crayfish *Austropotamobius pallipes*

The white clawed crayfish is the only species of freshwater crayfish which is native to the UK. It is widespread in clean calcareous rivers and lakes in England but many populations have been lost since the 1970s. One of the main factors causing decline has been crayfish plague, a disease carried by some north American crayfish, including the Signal Crayfish – *Pacifastacus leniusculus*. A related factor has been direct competition for food and habitat from non-native crayfish – three non-native crayfish species are now breeding in the wild in the UK.

Progress Highlights since 2002

- Creation of floodplain wet grassland vastly exceeded the original target of 20ha
- Continuation of Water Vole Conservation Projects and the Wessex Chalk Streams Project
- Water Voles now protected from mink at 10 key sites
- The restoration of 1.2km of the River Ray in Swindon is now complete



Water Vole Burrow © Darin Smith

The Wiltshire River Monitoring Scheme

The Wiltshire River Monitoring Scheme was set up in 1992 at a time of growing concern about falling water-levels, particularly on the wildlife-rich chalk streams of the River Avon and its tributaries and on the River Kennet. Since its inception the Scheme has resulted in more than 900 fish records and over 2,500 invertebrate records coming to the WSBRC. A revised methodology was adopted in 2007, with increased emphasis on the recording of key invertebrate groups, bringing the Scheme in line with the National Riverfly Partnership, of which the Wiltshire Scheme is now a part. This change in emphasis reflects the growing body of evidence on the importance of certain invertebrate assemblages as key indicators of changes in water quality. By entering their sampling data into a simple Excel spreadsheet, River Monitors can tell at a glance if a certain threshold has been exceeded and an alert is then triggered.

Two river monitors demonstrated the effectiveness of the revised River Monitoring Scheme when they alerted the Environment Agency to a potential pollution incident on the River Nadder at Burcombe near Wilton in 2007. The river monitors on the Nadder recorded an almost total loss of Gammarus (freshwater shrimp) and the Environment Agency was alerted immediately.

Changes since 2002

- Initiation of the STREAM and Living Rivers Projects
- As part of the Living River project, the creation of a catchment wide stakeholder forum which will lead to the development of a non-native invasive plant strategy for the Avon

- New Environmental Stewardship Schemes and Catchment Sensitive Farming have the potential to improve river and water quality and reduce diffuse pollution
- Water Framework Directive

New Projects on the Salisbury Avon

STrategic **RE**storation **And** **M**anagement of the River Avon (STREAM) is a £1 million (funded by the European Commission's Life Nature programme) 4 year conservation project which aims to address two key issues:

- The need for a strategic approach to large-scale river restoration
- The need to integrate the management of the river and valley.

For more information see the STREAM website: <http://www.streamlife.org.uk>

The Living River project aims to increase awareness and appreciation of the River Avon and its tributaries. It focuses on how the special wildlife of the river has developed alongside the history of the area. Working with local communities from the rivers' headwaters in the Wiltshire Downs to the sea at Christchurch, the project will involve people who live and work in the River Avon catchment in the conservation of its natural heritage.

The project will run for four years from 2006-2010 and will deliver the following programmes:

- Biodiversity restoration - at sites the public can access and enjoy
- Access and Interpretation - enhancing access to and information about the river with the local communities that live there
- Education and training - providing education events and resources and offering training opportunities to help people understand their relationship with the river system and take responsibility for it

The Living River project is supported by the Heritage Lottery Fund, Natural England, Salisbury District Council, Salisbury International Arts Festival, Hampshire and Isle of Wight Wildlife Trust, Wiltshire Wildlife Trust, Hampshire County Council, Wessex Water and Environment Agency.

For more information go to: <http://www.livingriver.org.uk>

River Avon Non-native Invasive Plants Strategy

The Living Rivers and Wessex Chalk Streams Project are working together to deliver a non-native invasive plant strategy for the River Avon. The presence of non-native invasive plants has been identified as a significant threat to the characteristic species and habitats of the river, and their impact and management is of major concern due to dominant behaviour and difficulties in control once established. Three major invasive species are now established within the river valley

- Japanese Knotweed (*Fallopia japonica*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Himalayan Balsam (*Impatiens glandulifera*)

These can cause a loss in bankside vegetation diversity and undermining of structural stability, increased shading and siltation through bank erosion, and loss of optimum habitat for characteristic species (Desmoulin's Whorl Snail, Water Voles, winged invertebrates) by out-competing native vegetation.

This alteration in habitat structure and composition of biological communities is known to impact directly on salmonid fisheries for which the Avon is a prestigious and lucrative setting. As well as hindering conservation efforts and the viability for angling, the presence of these plant species pose great management and access concerns if left uncontrolled.

Taking the new Rivers Streams and Associated Habitats Action Plan forwards...

A working group has been set up, maintaining continuity from the original Working Group which was very successful in implementing the original Rivers and Streams Action Plan. The group will be chaired by Dianne Matthews from Natural England, and meet twice a year.

Links with other Plans

UK BAP

Habitat Action Plans for Chalk Rivers and Wet Woodland, Species Action Plans for Water Vole, Otter, Desmoulin's Whorl Snail and Freshwater White-clawed Crayfish

South West Biodiversity Action Plan

Habitat Action Plans for Rivers and Streams and Reedbeds

Species Action Plans for White-clawed Crayfish and Water Vole

South West Biodiversity Implementation Plan

Section 9: Water and Wetlands

Other Action Plans in the Wiltshire BAP

Standing Open Water HAP (associated habitats)

Woodland HAP (wet woodland)

Farmland Habitats HAP (catchment sensitive farming)

Swindon BAP

Section 4 Water and Wetland Habitats, 4.3: Rivers and Streams, 4.4: Wetlands (Fen, Marsh, Reed & Swamp)

Cotswold Water Park BAP

Habitat Action Plans for Rivers and Streams and Fen, Marsh and Reed Swamps

Species Action Plans for Dragonflies (group), Water Vole, Otter and White-clawed Crayfish and Non Native Invasive Species

British Waterways BAP

Chapters on Canals and River Channels; Feeders and Streams; Reedbeds; Water Voles; Otters; Fish; Molluscs; White-clawed Crayfish; Water Plants; Dragonflies and Damselflies; Water Plants

Blueprint for Water

The Blueprint for Water was launched in 2006 by a coalition of leading environmental organisations and set out 10 steps to sustainable water by 2015. Go to <http://www.blueprintforwater.org.uk/> for more info.

Water Level Management Plans

A Water Level Management Plan (WLMP) is a written statement of the water level management objectives for a given area, and considers the means by which the objectives may be achieved. It considers the water level requirements for a range of activities, including agriculture, flood defence and conservation, and how these can be reconciled and integrated.

More information from the Defra website: <http://www.defra.gov.uk/enviro/fcd/policy/wlmp.htm>

Upper Kennet Landwise Project

This is a collaborative project between Natural England and the Environment Agency to provide funding to FWAG, with the aim of providing independent confidential farm advice to help improve the Wiltshire section of the Kennet and Lambourn catchment.

Kennet Chalkstream Restoration Project

This initiative was launched in order to restore the clarity of the River Kennet, improve its value to wildlife, improve its value as a recreational fishery and take account of current legitimate uses of the river. It recognised that an integrated catchment-wide approach was required.

EA Salmon Action Plans

Salmon Action Plans (SAPs) are the means by which the Environment Agency (EA) aims to meet the objectives of its National Salmon Management Strategy (launched in 1996) at a local level. The programme of SAPs for the 62 principal salmon rivers in England and Wales was completed in April 2004.

EA National Eel Management Plan (see references)

EA Trout and Grayling Strategy

The aim of this strategy is to conserve and improve wild stocks of trout, sea trout, char and grayling, while enhancing the environment for all types of fisheries for these species in England and Wales. It also aims to enhance the social and economic benefits derived from these fisheries. Download from:

<http://www.environment-agency.gov.uk/subjects/fish/569882/584811/>

Water Framework Directive

The Water Framework Directive (WFD) is the most substantial piece of EC water legislation to date and is designed to improve and integrate the way water bodies are managed throughout Europe. The WFD classification scheme for water quality includes five status categories: high, good, moderate, poor and bad. The general objective of the WFD is to achieve 'good status' for all surface waters by 2015. 'Good status' means both 'good ecological status' and 'good chemical status'. More information from:

http://ec.europa.eu/environment/water/water-framework/objectives/index_en.htm.

References

ICES, 1998. *European Eel. Extract of the report of the Advisory Committee on Fishery Management*.
Download from the ICES website:

<http://www.ices.dk/committe/acom/comwork/report/2007/oct/eel-eur.pdf>

National Eel Management Plan http://www.environment-agency.gov.uk/subjects/fish/286019/312590/?version=1&lang=_e

UK BAP White Clawed Crayfish SAP, was originally published in Biodiversity: The UK Steering Group Report - Volume II: Action Plans (December 1995, Tranche 1, Vol 2, p157) and can be viewed on the UK BAP website – www.ukbap.org.uk

Wiltshire BAP Rivers, Streams and Associated Habitats Action Plan

Objective RSO1: Maintain and increase the area and enhance the quality of water courses and their floodplains

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<p><u>RST1</u>: No deleterious impacts on chalk stream ecology in the winterbourne and perennial sections due to abstraction</p>	<p>No permanent (long term) downstream migration of the heads of the perennial sections (EA)</p> <p><i>Note: EA currently have monthly monitoring surveys that are in place to understand how the source of a river migrates spatially over time. The locations are put into a database, which is then developed into a graphical representation called a "Stream Signature". This software works out where the grid reference is in relation to the very top of the catchment. This gives a very clear indication of winterbourne movement over time</i></p>	<p><u>RSA1</u>: Improve access to data about winterbourne flows</p>	<p>The Rivers and Streams Working Group evaluates the results of the winterbourne monitoring, carried out by the Environment Agency, on an annual basis</p>	<p>Rivers and Streams Working Group, EA, WSBRC, WWT, WFA, Wessex Water</p>	<p>2009</p>	<p>South West BIP Water and Wetlands Objective 1; CWP BAP (RS-01)</p>
		<p><u>RSA2</u>: Liaise with (EA) and lobby (NGOs) statutory bodies to agree to the necessary investment to address low flow issues</p> <p><i>Note: awaiting review of consents and water company business plans for AMP5</i></p>	<p>By 2012 investment is not a significant limiting factor in addressing low flow issues</p>	<p>ARK, WWT, EA, NE, WFA, Wessex Water, Thames Water</p>	<p>2012</p>	<p>Blueprint for Water; Statutory Water Resources Plans (Water Undertaker)</p>
		<p><u>RSA3</u>: Complete and implement identified water company actions under the Habitats Directive review of consents</p>	<p>AMP5 delivered</p>	<p>Wessex Water, Thames Water, NE, EA</p>	<p>2016</p>	<p>Water Company Business Plans (2010-2015)</p>
		<p><u>RSA4</u>: LDFs acknowledge that water supply is a constraint, when allocating land for housing/development</p>	<p>No major developments take place on floodplains and in areas of sensitive hydrology</p>	<p>WCC (County Ecologist), LPAs (Forward Planning Team Leaders), EA, WWT, NE, Thames Water, Wessex Water</p>	<p>As each document is published</p>	
		<p><u>RSA5</u>: Encourage wise use of water by the public</p>	<p>10% reduction in per capita mains water use</p>	<p>WWT, EA, Wessex Water, Thames Water, NE (Living River Project)</p>	<p>Deadline: 2015</p>	<p>Blueprint for Water; South West BIP Water and Wetlands Objective 1; Swindon BAP SOW (SOW17), Urban Ponds (U6) & Rivers and streams (RaS7) HAPs</p>
<p><u>RST2</u>: Increase the length of active channel with the full range of characteristic natural features</p>	<p>50km by 2015 (Rivers and Streams Working Group)</p>	<p><u>RSA6</u>: Restore natural river features through carrying out the Programme of Measures, and meeting the objectives of other statutory drivers</p>	<p>Good ecological status and favourable conservation status achieved (as defined in PoM)</p>	<p>WWT, EA, NE, WFA, ARK, Wessex Water, Thames Water, STREAM, NT</p>	<p>By 2015 or as specified in the PoM, with full completion by 2027</p>	<p>EA River Kennet Restoration Strategy published 12/07; WFD River Basin Management</p>

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
						Plan; CWP BAP (RS-04)
		<u>RSA7</u> : Enabling and directing further work through non statutory agencies and partnerships	Initiate 10 projects over 5 years	WWT (WCSP), EA Fisheries Enhancement projects, WFA, Living Rivers, WWT , ARK	2012 and every 5 years after that	River Kennet Restoration Strategy; River Kennet WLMP; River Kennet at Axford: Project Plan
RST3 : Protect and restore the natural ecological and hydrological functioning of floodplains.	At least one example of floodplain restoration on each major catchment to achieve ecological and hydrological linkage to their river by 2015 (WWT)	<u>RSA8</u> : Identify opportunities for restoration including production of an opportunity map by end of 2008	Produce an opportunity map	Rivers and Streams Working Group ; WWT, WSBRC, EA, NE, WFA, ARK	2008	WBAP SOW HAP; Blueprint for Water; River Kennet Restoration Strategy
		<u>RSA9</u> : Water Level Management Pans for SACs/SPAs deliver hydrological continuity of existing and degraded habitat	Restoration of all degraded habitat in SACs/SPAs underway by 2010	NE , EA	2010	River Kennet WLMP; Chilton Foliat WLMP; Avon tributaries WLMP
		<u>RSA10</u> : Riparian management to be considered in appropriate site management plans for all LA managed public open spaces	Considered in all Plans by 2011	WCC (Site Managers) , input of County Ecologist to be determined after "One Wiltshire" established	2011	
		<u>RSA11</u> : Where appropriate remove poplar plantations and replace with semi-natural habitat	Plan of action developed by 2010 and implemented by 2015	FC, NE, Rivers and Streams Working Group	2010 (plan) 2015 (implementation)	WBAP Woodland HAP; River Kennet at Axford Project Plan
		<u>RSA12</u> : Complete the mapping of the existing area of wet woodland so that the database is up to date (including ground truthed data)	Up to date map produced	WSBRC, FC, NE, Rivers and Streams Working Group	2008	
		<u>RSA13</u> : Double the area of wet woodland	Extent of wet woodland determined by RSA13 is doubled.	FC, NE, Rivers and Streams Working Group	2015	CWP BAP (WD-04)
		<u>RSA14</u> : Map existing area of reedbed, swamp and marsh	Map produced	WSBRC, FC, NE, Rivers and Streams Working Group	2009	CWP BAP (FMR-01)

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		<u>RSA15</u> : Quadruple the area of reedbed, swamp and marsh	Extent of reedbed, swamp and marsh determined by RSA15 is quadrupled	FC, NE, Rivers and Streams Working Group	2015	SW BIP Reedbeds HAP Objectives 4&5; CWP BAP (FMR-03)
		<u>RSA16</u> : Map the existing area and review opportunities by 2009 for recreation/restoration of floodplain grazing marsh suitable for breeding waders and/or wintering wildfowl	Map produced and opportunities identified	Rivers and Streams Working Group , WSBRC	2009	
		<u>RSA17</u> : Map the existing area and review opportunities by 2009 for recreation/restoration of botanically rich wet meadow	Map produced and opportunities identified	Rivers and Streams Working Group , WSBRC	2009	CWP BAP (FL-03)
<u>RST4</u> : SSSIs and SAC features in favourable or recovering condition	95% of SSSIs and SAC features in favourable or recovering condition by 2010, (NE)	<u>RSA18</u> : Address reasons for unfavourable condition of SSSIs	All remedies identified on a site by site basis are agreed and implemented sufficient to achieve favourable condition.	NE , EA, WWT (WCSP)	Agreement and Programme of Remedies 2010, completion of remedies by 2020	River Kennet Restoration Strategy
		<u>RSA19</u> : Determine progress against the River Avon SAC Conservation Strategy	Re-assess the Action Tables arising from the River Avon SAC Conservation Strategy in order to measure progress and adjust priorities	NE , WFA, STREAM	2010	
		<u>RSA20</u> : Ensure sufficient funding to carry out necessary remedies for RSA19 and arising from RSA20	Funding is not a limiting factor in achieving the necessary outcome of RSA19 and necessary outcome arising from RSA20.	EA , WWT, NE, Thames Water, Wessex Water, WFA, Salisbury DC (only LA that owns river SSSI), ARK	2012	
<u>RST5</u> : Non SSSI Rivers - Achieve at least good ecological status (as defined for the Water	All waterbodies to achieve at least good ecological status (or their potential) by 2015 (EA)	<u>RSA21</u> : Appropriate work to be carried out according to WFD Programme of Measures	Work under the Programme of Measures to be carried out by 2015	EA , WWT, NE, Wessex Water, Thames Water, ARK, NT	2015	Blueprint for Water; WFD River Basin Management Plan

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
Framework Directive) <i>Note: this target is for all rivers, not just chalk (Bristol Avon, Sem)</i>		<u>RSA22</u> : Address diffuse pollution to ensure all rivers achieve Good Ecological Status (GES as defined by WFD). <i>Note: Some water bodies will achieve Good Ecological Potential (GEP) rather than GES as they will be designated as heavily modified water bodies</i>	Ensure continued support for catchment sensitive farming projects	EA, NE, Wessex Water, Thames Water	Ongoing, reported annually	WBAP Farmland Habitats HAP - catchment sensitive farming; River Kennet Landwise Project; Kennet Chalkstream Restoration Project; WFD; CWP BAP (RS03)
		<u>RSA23</u> : Water company point source discharges to be upgraded where appropriate	All appropriate point source discharges upgraded (AMPs)	EA, NE, Wessex Water, Thames Water	Ongoing, reported annually	
		<u>RSA24</u> : Target swan grazing/overgrazing	Agree a Swan Action Plan by 2008 and implement thereafter	NE, WWT, WFA	2009 and then ongoing	
		<u>RSA25</u> : Work to achieve a consensus on best practice for stocking rates of wildfowl on waterbodies	Consensus achieved and best practice guidelines produced, so that stocking rates are within the capacity of the waterbody	BASC, EA Catchment Sensitive Farming Project, NE	2009	
		<u>RSA26</u> : Maintain and support the River Monitors within the WSBRC	Support in place and river monitor numbers maintained at 35	WSBRC , Rivers and Streams Working Group, WWT, ARK	Ongoing, reported annually	
<u>RST6</u> : Reduce current area affected by invasive alien plant species	100% of known sites under active control by 2020 (WWT)	<u>RSA27</u> : Systematic collection and collation of existing and new data on invasive plant species	Robust distribution map developed by 2012, and updated annually thereafter	WSBRC , WWT (WSCP), EA, WFA, Living Rivers	2012 and then ongoing	CWP Invasive Species Action Plan
		<u>RSA28</u> : Ensure known populations under active control where necessary	100% of currently known sites under active control by 2020.	WWT , WFA, BTCV, EA, NT, NE (Living Rivers)	2020	
		<u>RSA29</u> : Ensure all relevant projects and development control conditions include invasive species control where required	Appropriate measures included in all relevant <i>Construction</i> Method Statements and Management Plans	LA's (Development Control), WCC (District and County Ecologists)	2009	
		<u>RSA30</u> : All habitat management projects and Site Management Plans include invasive species control	Invasive species control included in all relevant Site Management Plans and habitat	WCC (Countryside Team)	Ongoing, reported annually	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
			management projects			
		<u>RSA31</u> : Work with garden centres to control spread of invasive species	<u>Measure 1</u> : By 2012, no garden centres are stocking invasives and all have a leaflet on control of invasives in-store <u>Measure 2</u> : Work with garden centres to address issues surrounding imports of new species	Rivers and Streams Working Group	2012	
<p>RST7: Non native animal species are prevented from having an adverse impact on native habitats and species.</p> <p><i>Note: actions for Mink focus on Water Voles, but removal will also help wetland birds, Bullhead, Lamprey etc. Water Vole Project simply provides the mechanism.</i></p>	<p>Non-native species distribution is reviewed by the group on an annual basis, and plan of action drawn up when required (Rivers and Streams Working Group)</p>	<u>RSA32</u> : Systematic collection and collation of existing and new data on invasive animal species	Robust distribution map developed by 2012, and updated annually thereafter	WSBRC , WWT (WCSP), EA, WFA	2012 and ongoing	
		<u>RSA33</u> : Establish mink control on all Water Vole Local Key Area's by 2010	Mink control established on all LKAs by 2010	WWT , EA, NE, WFA	2010	WBAP Standing Open Water HAP
		<u>RSA34</u> : Extend Mink control to all sites occupied by Water Voles and out from all LKA's to a river and catchment basis (note including standing open water bodies within the catchment) to establish a cordon sanitaire with a defendable front line to prevent Mink re-colonising.	Mink control established on all 3 catchments at the recommended 2km interval by 2015. A defended 'front line' is maintained to allow for reduced trapping in the Mink free zone and prevent Mink re-colonisation.	WWT , EA, NE, WFA, CWP BAP Team	2015	WBAP Standing Open Water HAP
		<u>RSA35</u> : Continue surveillance of Signal Crayfish distribution and assess the efficiency of trapping on Signal Crayfish biomass	Spread and density of Signal Crayfish populations monitored and reported annually	EA fisheries projects, WFA	Ongoing, reported annually	

Objective RSO2: Maintain and where possible, increase, the population size and extent of Wiltshire BAP species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>RST8</u> : Restore the historic distribution of spawning Salmon on	Increase from c. 50% of historic distribution to 67% of historic	<u>RSA36</u> : Collate anecdotal information on where salmon spawn	Produce a reliable distribution map of actual and potential spawning sites	Wessex Salmon and Rivers Trust, WFA, WSBRC, EA	2010	EA Salmon Action Plans

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
the Hampshire Avon catchment <i>Note: climate change will place constraints on their potential future distribution.</i>	distribution by 2015 (baseline will rely on RSA37 being determined) (EA)	<u>RSA37</u> : Protection and enhancing of known spawning areas	Spawning areas are maintained and brought into good condition. The percentage to be targeted will be determined once RSA37 is complete.	Wessex Salmon and Rivers Trust, WFA, EA , WWT, NE, Avon Salmon Group	To be determined once RSA37 is completed	EA Salmon Action Plans; South West BIP Objective 2
		<u>RSA38</u> : Make management of flood control devices Salmon-friendly	Water Level Management Plans and Hatch operating protocols include management for Salmon	WFA, EA	Ongoing, reported annually	Water Level Management Plans
		<i>Note: Action will be included here at the first yearly update on removal of obstruction to migratory fish, once reference can be made to the Marine Bill</i>				
<u>RST9</u> : Increase the distribution and numbers of Eels in Wiltshire	Report produced outlining local priorities and mechanisms through which numbers and distribution can be increased	<u>RSA39</u> : Translate the Environment Agency's National Eel Plan into area priorities	Report and action plan produced	EA , WFA (Avon Catchment), ARK	2010	Environment Agency's National Eel Plan; CWP BAP (OT-04)
		<u>RSA40</u> : Carry out a feasibility project to reintroduce elvers into the River Kennet	Feasibility study completed	EA (DJ/AF) , ARK	2010	Environment Agency's National Eel Plan
<u>RST10</u> : A self sustaining wild population of Brown Trout throughout all catchments without inappropriate stocking.	Self sustaining populations in all catchments (EA)	<u>RSA41</u> : Collate anecdotal information on where Trout spawn	Produce a reliable distribution map of actual and potential spawning sites	Wild Trout Trust, ARK, WWT (WCSP), WFA, WSBRC, EA , AONBs (NWD, CCWWD)	2010	EA Trout and Grayling Strategy
		<u>RSA42</u> : Protection and enhancing of known spawning areas	Spawning areas are maintained and brought into good condition (percentage to be determined once RSA42 has been completed)	Wild Trout Trust , ARK, WFA, WWT (WCSP), EA, AONBs (North Wessex Downs, CCWWD) NE	To be determined once RSA42 is completed	EA Trout and Grayling Strategy
		<u>RSA43</u> : Non fertile fish to make up a higher proportion of the number of stocked Brown Trout to ensure wild and adaptable genetic makeup	Fishing clubs are stocking triploid (non-fertile) Brown Trout	EA , WFA, WWT (WCSP)	Ongoing, reported annually	EA Trout and Grayling Strategy
<u>RST11</u> : Grayling - a self sustaining wild population of Grayling	Self sustaining populations in all catchments (EA)	<u>RSA44</u> : Collate anecdotal information on where Grayling spawn	Produce a reliable distribution map of actual and potential spawning sites	ARK, WWT (WCSP), WFA, WSBRC, EA , AONBs (NWD, CCWWD)	2010	EA Trout and Grayling Strategy

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
throughout all catchments without inappropriate stocking. Reference EA Trout and Grayling Strategy		<u>RSA45</u> : Protection and enhancing of known spawning areas	Spawning areas are maintained and brought into good condition (percentage to be determined once RSA45 has been completed)	ARK, WFA, WWT (WCSP), EA, AONBs (North Wessex Downs, CCWWD) NE	To be determined once RSA45 is completed	EA Trout and Grayling Strategy
		<u>RSA46</u> : Non fertile fish to make up a higher proportion of the number of stocked grayling to ensure wild and adaptable genetic makeup	Fishing clubs are stocking non-fertile grayling	EA, WFA, WWT (WCSP)	Ongoing, reported annually	EA Trout and Grayling Strategy
<u>RST12</u> : Restore Otters to all catchments in the county by 2010	Evidence of Otters throughout each catchment (EA)	<u>RSA47</u> : Influence developments and road schemes to ensure that potential impacts on otters are mitigated	Mitigation measures in place, otter populations continue to recover	EA, NE, WWT, WCC (County Ecologist)	Ongoing, reported annually	UK BAP Otters SAP
		<u>RSA48</u> : Provision of advice to still water fishery managers	All fisheries managers contacted with advice where required and appropriate measures in place to protect otters and interests of fishery	EA, NE, WWT, WFA	Ongoing, reported annually	UK BAP Otters SAP
		<u>RSA49</u> : Continue to collect and carry out post mortem on road kill Otters. Report results of analysis	Otters collected and post mortems carried out. Reports produced.	EA, Cardiff University	Ongoing, reported annually	UK BAP Otters SAP
<u>RST13</u> : To ensure no net loss of Water Vole distribution from Wiltshire rivers and streams	No net loss from 1990's baseline data (46 positive sites out of 66 surveyed, or 6 new sites) by 2015 (WWT)	<u>RSA50</u> : Maintain up to date information on Water Vole distribution with graphic representation through GIS mapping and data collation with WSBRC.	All survey data transferred to WSBRC and entered onto suitable database(s). Review by addition or removal of LKA's as they improve/expand or degrade/shrink.	WWT, EA, NE, WFA, CWPS, WSBRC	Ongoing, reported annually	UK BAP, SW BAP and CWP BAP Water Vole SAPs; SW BIP Water and Wetlands Objective 3; Swindon BAP (WL7); WBAP SOW HAP SOWT39
		<u>RSA51</u> : Establish a rolling programme of survey/monitoring of Water Vole Local Key Areas (LKA's).	Each area is re-visited at least every five years.	WWT, EA, NE, WFA, CWPS	Programme established 2008, 5 yearly reporting thereafter	UK BAP, SW BAP and CWP BAP Water Vole SAPs; WBAP SOW HAP SOWA40
		<u>RSA52</u> : Maintain and increase the number of voluntary Water Vole surveyors	Number maintained at 60 and increased to 100 by 2010	WWT	2010	UK BAP, SW BAP and CWP BAP Water Vole SAPs

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		<u>RSA53</u> : Strive to safeguard all existing Water Vole colonies through best practice management of river banks.	No loss of Water Vole colonies as a result of habitat loss.	WWT , EA, NE, WFA, CWPS	Ongoing, reported annually	UK BAP, SW BAP and CWP BAP Water Vole SAPs; WBAP SOWA41&42
<u>RST14</u> : Extend distribution in line with national and regional targets by 2020	Water Vole distribution extended by 2020 (WWT)	<u>RSA54</u> : All opportunities taken to enhance habitat to allow for natural expansion of water voles through agri-environment grant schemes, by influencing developers through the planning process, and all river restoration schemes	Guidelines drawn up in ES targeting statements to ensure every opportunity is taken to increase suitable Water Vole habitat by 2010	WWT , EA, NE, WFA	2010	River Kennet Restoration Strategy; UK BAP, SW BAP and CWP BAP Water Vole SAPs
		<u>RSA55</u> : Strive to ensure all river bank managers and restoration works utilise best practice management and extend suitable Water Vole habitat where possible.	All works requiring EA consent and/or planning permission to have met best practice guidance wherever possible	WWT , EA, NE, WFA	Ongoing, reported annually	UK BAP, SW BAP and CWP BAP Water Vole SAPs; WBAP SOWA41&42
		<u>RSA56</u> : Restore and enhance rivers and streams and associated habitats adjacent to Local Key Areas	20 ha of habitat adjacent to LKAs restored by 2015	WWT , EA, NE, WFA	2015	UK BAP, SW BAP and CWP BAP Water Vole SAPs
<u>RST15</u> : Retain a minimum of two separate populations of White-clawed Crayfish in Wiltshire	Wiltshire has at least two healthy, unthreatened populations of native crayfish (EA)	<u>RSA57</u> : Establish the current distribution and status of White-clawed Crayfish in Wiltshire	Collation of existing data, targeted survey work to confirm still present at key sites	EA , WSBRC, WWT	2010, and then ongoing	UK BAP, SW BAP, CWP BAP White-clawed Crayfish SAPs
		<u>RSA58</u> : Protect existing populations wherever possible	<u>Measure 1</u> : Raise awareness of the threats to crayfish to anglers and landowners (info given to all angling clubs) <u>Measure 2</u> : Ensure any riparian works take crayfish into account <u>Measure 3</u> : Work with planners to ensure that crayfish taken into account	EA , WWT, NE, WCC (County Ecologist)	Ongoing, reported annually	UK BAP White-clawed Crayfish SAP; SW BAP White-clawed Crayfish SAP Objective 1; CWP BAP White-clawed Crayfish SAP
		<u>RSA59</u> : Consider re-introducing White-clawed Crayfish to suitable areas free from other crayfish species	Potential sites identified for re-introduction by 2010 and populations established by 2015	EA , WWT, NE	2010 and 2015	UK BAP White-clawed Crayfish SAP; SW BAP White-clawed Crayfish SAP

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
						Objective 2; CWP BAP White-clawed Crayfish SAP
RST16: Obtain comprehensive baseline data on all dragonfly species with emphasis on key species	Produce Wiltshire Dragonfly Atlas and Best Practice Guidelines for key species by 2012 (County Recorder)	RSA60: Survey Scarce Chaser <i>Note: Other actions leading up to target completion are contained within WBAP SOW HAP</i>	Identify and survey priority areas by 2010	BW, County Recorder	2010	CWP Dragonfly (group) SAP; WBAP SOW HAP SOWT11
RST17: Maintain current distribution and ensure viability of current populations of Desmoulin's Whorl Snail	Current distribution and population maintained	RSA61: Monitor populations at designated sites (e.g. Chilton Foliat)	Populations monitored at all currently known sites	NE, EA	Ongoing, reported annually	Chilton Foliat WLMP; UK BAP Desmoulin's Whorl Snail SAP

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Rivers, Streams and Associated Habitats Action Plan

Organisation	Representatives
Action for the River Kennet	Charlotte Hitchmough
Avon Salmon Group	D-J Gent
British Waterways	Viv Philips, Oda Dijksterhuis
BTCV	Ian Ross
Cotswold Water Park BAP Team	Gareth Harris, Jill Bewley
Cotswold Water Park Society	Gareth Harris
County Recorders	Steve Covey
Cranborne Chase and West Wiltshire Downs AONB	David Blake
Environment Agency	D-J Gent, Alison Futter (upper River Kennet catchment), Melissa Clarkson
Forestry Commission	Ian Briscoe
Living River project	Martin Gilchrist, Sarah Yarrow
STREAM	Jenny Wheeldon
Thames Water	Andy Tomczynski
Wessex Water	Fiona Bowles, Ruth Barden
Wessex Salmon and Rivers Trust	John Levell
Wild Trout Trust	Allan Frake
Wiltshire and Swindon Biological Records Centre	Purgle Linham
Wiltshire County Council	Fiona Elphick (County Ecologist)
Wiltshire Fisheries Association	Tony Wells
Wiltshire Ornithological Society	Christine Johnson (Chair)
Wiltshire Wildlife Trust	Bill Jenman, Martin de Retuerto (Wessex Chalk Streams Project), Water for Wildlife Project

Standing Open Water Habitat Action Plan

A Vision for Wiltshire's Standing Open Water over the next 30 years...

Our ponds, lakes and canals are thriving ecosystems, alive with the sounds of birds such as Reed Warblers and Reed Bunting, the air is buzzing with damselflies and dragonflies, and the "plop" of a Water Vole is not such a distant memory.

Our ponds, lakes and canals are free from litter and pollution, being of the highest water quality, enabling the proliferation of a varied and rich aquatic plant assemblage, one of the richest in the country, supporting a diverse ecosystem of insects, fish, birds and mammals.

The margins and adjacent land are appropriately managed, buffering the margins from adjacent land uses and enabling the integration of local communities with wetland environments, promoting their understanding and a sense of pride and ownership.



Standing Water © Sarah Wood

Background

Standing open water may be classified according to nutrient status, and can be eutrophic (nutrient rich), mesotrophic (intermediate) or oligotrophic (nutrient poor). Current estimates suggest that around 80% of English standing open waters are eutrophic (UK BAP Eutrophic Standing Waters HAP). Lakes which deposit calcium carbonate are called marl lakes – in general these are open waters with at least 100mg/l of CaCO₃.

The total area of standing inland water in Britain is estimated at 3344km² (only 675km² of this is in England) (UK BAP Eutrophic Standing Waters HAP), making up around 400,000 separate standing water bodies. Pond Conservation estimates that around 95% of these bodies are ponds of less than 2ha, and many of these are badly affected by pollution. It is thought that over a million ponds were lost in the UK over the last century, although it has also been estimated that around 2000 ponds are excavated annually in the British lowlands alone (Williams et al, 2008). Ponds are a new priority habitat under the UK BAP Priority Habitat and Species Review 2007, and a UKBAP Habitat Action Plan is currently being prepared by the UK Pond HAP joint lead partners: Pond Conservation and the Environment Agency.

Standing Open Water in Wiltshire

Open water is a scarce habitat in Wiltshire, and apart from in the Cotswold Water Park, its conservation importance has not been fully assessed. The WSBRC records around 600ha of open water identified as SSSI or CWS in the county. However, this does not include the Wilts and Berks Canal, or the 97 CWS and 47 SSSIs that contain some open water element in them, or the vast number of farm, garden and village ponds that exist in Wiltshire. It is clear however, that in line with national trends, the number of ponds in the county has declined over the last century. For example, a survey of the Salisbury area in 1994 estimated that over the last 100 years, 43% of ponds had been lost.

Standing Open Water

Standing Open Water covered by this Plan includes:

- Natural features, such as ox-bow lakes, woodland ponds, and temporary pools in hollows
- Man-made features such as gravel pits, ornamental lakes, canals, farm ponds, dew ponds, garden ponds and ditches. Large man-made lakes occur at Braydon, Bowood, Fonthill, Corsham, Stourhead, Longleat and in the Cotswold Water Park
- Temporary (ephemeral) and permanent ponds and pools created in tank tracks, which are an important feature on Salisbury Plain
- Canals – the Kennet and Avon Canal covers the width of the county, and is 65km in total length. The Wiltshire and Berkshire Canal is now being restored, and is also included in this Action Plan

Important Sites in Wiltshire

Cotswold Water Park

In the Cotswold Water Park, mineral extraction and restoration have created a huge patchwork of lakes (147 in 2007, totalling over 1000ha) that make the area unique. The average water body size in the Cotswold Water Park is approximately 7ha. Ponds are poorly represented in the Water Park, considering the total area of standing open water, but those which are present are known to support large and widespread populations of dragonflies and Great Crested Newts. At least 50% of the lakes in the CWP are oligotrophic, and are important for their populations of rare or scarce aquatic macrophytes of European importance. Around 13 lakes have been identified as being marl lakes (10 of which have been designated as SSSIs), which are very biodiverse and support nationally rare plant communities.

Swillbrook Lakes and Lower Moor Farm

Swillbrook Lakes, a Wiltshire Wildlife Trust nature reserve (Lakes 46 and 48 of the Cotswold Water Park), is an excellent example of a wildlife haven created by human activity. Used for gravel extraction in the 1960s, the lakes now host 13 species of dragonflies, as well as a huge range of breeding and overwintering water birds.

The lakes at Lower Moor farm were also created through gravel extraction – the largest is Mallard Lakes, the only SSSI lake in Wiltshire (excluding Swindon Borough which contains the Coate Water SSSI) – designated because of its three rare stonewort species. Mallard Lake also supports a nationally important population of Great Crested Grebe, and Water Voles and Otters inhabit the Flagham Brook.



Swillbrook Lakes © David Hall

Important Stonewort Areas

Plantlife have identified 118 sites in Britain as being “Important Stonewort Areas”, either of national or European importance. This list includes the New Forest and Cotswold Water Park, both of which are of European importance.

With their inability to survive in dense vegetation and their demand for clear unpolluted waters, the seasonal pools and flooded trackways found in the heathland of the New Forest, are particularly important for a range of local and rare ephemeral stonewort species. While not greatly susceptible to pollution, such small habitats are highly vulnerable to natural succession if traditional land practices cease.

Gravel pits at the Cotswold Water Park are particularly important for rare species such the Lesser Bearded Stonewort (a UK BAP species). The bare substrates of newly created clay, sand and gravel pits, combined with their typically unpolluted nature means that these habitats are often rich in stoneworts.

Longleat

There was no open water at Longleat before the Center Parcs Village was constructed, and wetland habitats were restricted to small fragments in rides. Longleat now has a system of 28 lakes, four of which are of high biodiversity interest. A detailed Ecological Monitoring Report is produced for the site on an annual basis, and progress is measured against national Center Parc BAP targets. At Longleat annual dragonfly and damselfly monitoring is carried out to produce a population assessment index, and special habitat features such as bare areas for Black-tailed Skimmers are maintained.

Species

The standing open water habitat in the CWP supports internationally and nationally important numbers of wintering waterbirds, Water Voles, 20 species of breeding damselfly and dragonfly, stonewort populations of European importance and remnant populations of the native White-clawed Crayfish. In addition 13 species of bat have been recorded roosting and foraging.

Ponds are an important freshwater habitat and can be extremely species-rich, supporting populations of at least two-thirds of Britain’s freshwater plant and animal species (Williams et al, 1999)

The two canals in Wiltshire are known to be important for Water Voles, dragonflies and amphibians, as well as providing foraging habitat and linear commuting routes for bats.

Seasonal water bodies on Salisbury Plain, particularly flooded tank tracks, are known to be important for invertebrates and amphibians, such as the Fairy Shrimp *Charocephalus diaphanous*, and Smooth Newt, *Triturus vulgaris*. Military vehicles operating on the Plain create a complex system of temporary pools, and the Fairy Shrimp eggs are transported between them on the tracks of armoured vehicles. The eggs can survive in a dormant state for up to 15 years.



Flooded tank tracks on Salisbury Plain – Fairy Shrimp habitat © MOD

Actions are included in the revised Standing Open Water HAP for Water Voles, dragonflies and Palmate Newts.

Downy Emerald *Cordulia aenea*

This species shows a preference for still water habitats, predominantly ponds and sometimes canals. Breeding colonies are usually found in or near woodland, and well established ponds appear to be preferred. There are small populations of downy emerald at Lower Moor Farm and Swillbrook Lakes, and a strong colony at Stourhead. The Downy Emerald is uncommon in Wiltshire as a whole, and is nationally scarce.

A Dragonfly Atlas for Wiltshire

In Wiltshire as a whole, 32 species of dragonfly and damselfly have now been recorded, and there are actions in the revised Wiltshire BAP SOW HAP, to complete the Dragonfly Atlas for the county. A Dragonfly Atlas project has now also been launched for the Cotswold Water Park, and this 5-year project represents first time that the CWP's dragonfly fauna will be systematically studied in depth.

Palmate Newt *Triturus helveticus*

The Palmate Newt is the smallest amphibian in the UK – it is widespread and common in Scotland and Wales, but only has a patchy distribution in England. Actions have been included in the revised Wiltshire BAP SOW HAP to gain a more accurate picture of its distribution across the county. Action has also been included to encourage volunteers to become involved in the National Amphibian and Reptile Recording Scheme (NARRS) led by the Herpetological Conservation Trust (HCT) in partnership with the Amphibian and Reptile Group (ARG UK). Through volunteer-based surveys this scheme aims to monitor the conservation status of all UK amphibian and reptile species, as it is feared that even the UK's more common amphibian and reptiles may be in decline.

Progress Highlights since 2002

- Between 2002-2005 at least 40 ponds were surveyed by partners for Great Crested Newts, against a target of 10 ponds per year over this period
- Against the target to create or restore at least 5 water bodies per district, at least 50 water bodies were created or restored between 2002-2005 by partners including FWAG, the National Trust, Cotswold Water Park Society, Great Western Community Forest and Wiltshire Wildlife Trust.

Some progress has been made in carrying out a desk study of all standing open water in the county, but this is still not complete, and is a priority in taking the revised SOW Action Plan forwards. The WSBRC is also currently setting up some pond survey resources for the general public, the information from which will go onto a ponds GIS layer and help towards estimating the county resource.

The distribution of all standing open water in the Cotswold Water Park is now known, and is mapped on GIS. This provides an established framework for use of GIS in combination with aerial photographs.

The Cotswold Water Park BAP

The Cotswold Water Park Society have now successfully reviewed the Cotswold Water Park BAP, and the new document is available from www.waterpark.org. The Society's vision for the biodiversity of the Cotswold Water Park in 2050 is that it should be a premier site for nature conservation where the requirements of industry, leisure, people and wildlife are successfully integrated.

Fairy Shrimp on Salisbury Plain

In 2007 the MOD and volunteers carried out a survey to gain more information on the extent of the Fairy Shrimp (*Chirocephalus diaphanous*) on Salisbury Plain, in an attempt to protect this vulnerable species by establishing its distribution and identifying areas of suitable habitat. The Fairy Shrimp is listed under Schedule 5 of the Wildlife and Countryside Act (1981) and is also listed as a feature under the Salisbury Plain SSSI designation. Previous records of the species were predominantly from the west of the Salisbury Plain, but this new survey has shown that the Fairy Shrimp is quite widely distributed, across the whole of the Plain.



Taking the new Standing Open Water Habitat Action Plan forwards...

A major barrier to the progress of this Action Plan in the 2002 BAP was that the HAP did not have a dedicated working group. A working group has now been set up to take forwards the targets and actions under the Standing Open Water HAP. The group will be chaired by Gareth Harris from the Cotswold Water Park Society, and meet twice a year.

Links with other Plans

UK BAP

Habitat Action Plans for Eutrophic Standing Waters and Mesotrophic Standing Waters

Species Action Plans for Great Crested Newt, Bittern, Reed Bunting, Southern Damselfly, Otter, Water Vole, White-clawed Crayfish, Bearded Stonewort and Lesser Bearded Stonewort

South West Biodiversity Action Plan

Habitat Action Plans for Standing Open Water and Reedbeds

Species Action Plans for White-clawed crayfish, Great Crested Newt, Water Vole and Southern Damselfly

South West Biodiversity Implementation Plan

Section 9: Water and Wetlands

Other Action Plans in the Wiltshire BAP

Rivers and Streams HAP – targets for invasive species, Water Voles and dragonflies directly relate

Bats SAP – standing open water is often an important habitat for bat foraging

Swindon BAP

Section 4: Water and Wetlands, 4.1 - Standing Open Water, 5.2 – Neutral Meadows

Cotswold Water Park BAP

Habitat Action Plans for Standing Open Water and Canals. Habitat Statement for Ponds.

Species Action Plans for Breeding Water Birds, Great Crested Newt, Dragonfly (group), Stoneworts (group),

Water Vole, Non-native Invasive Species

Species Statements for Reed Bunting, Otter, White-clawed Crayfish, Wintering Waterbirds

Center Parcs BAP

Target 19 – Water Bodies and their Margins

British Waterways BAP

Chapters on Canal and River Channels; Waterway Banks; Reservoirs, Lakes and Ponds; Reedbeds; Water Voles; Amphibians; Fish; Water Plants; Dragonflies and Damselflies

References

The UK BAP Habitat Action Plan for Eutrophic Lakes was originally published in UK Biodiversity Group Tranche 2 Action Plans – Volume II: Terrestrial and freshwater habitats (December 1998, Tranche 2, Vol II, p.31). The Plan can also be viewed on the UK BAP website – www.ukbap.org.uk. A UK Lakes HAP Joint Steering Group has been set up to take forwards the UK HAPs for Mesotrophic and Eutrophic Lakes. Their website is at www.lakeshap.org.uk.

Find out more about the National Amphibian and Reptile Recording Scheme at: www.narrs.org.uk

Find out more about UK pond conservation at the Pond Conservation Trust's website: www.pondconservation.org.uk

A survey of selected ponds in the Salisbury area (1994) unpublished, Wiltshire Wildlife Trust.

Stuart, N.F (2004) Important Stonewort Areas. An assessment of the best areas for stoneworts in the UK (summary). Plantlife International, Salisbury, UK.

Williams, P.J. et al (1999) The Pond Book: A Guide to the Management and Creation of Ponds. Ponds Conservation Trust, Oxford

Williams, P., Whitfield, M. and Biggs, J. (2008) How can we make new ponds biodiverse? A case study monitored over 7 years. Hydrobiologia 597: 137-148. This report can also be downloaded from the Pond Conservation Trust's website.

Wiltshire BAP Standing Open Water Habitat Action Plan

Objective SOW01: Protect and maintain the area, and enhance the quality of this habitat						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>SOWT1:</u> To have baseline data on the number and distribution of standing open water bodies in Wiltshire	Baseline database established (WSBRC)	<u>SOWA1:</u> Create a database of SOW sites in Wiltshire	Baseline inventory produced from OS basemaps and aerial photographs by end of first year (2008)	WSBRC	2008	SW BIP SOW HP Objective 1; CWP BAP (SOW-01 and SOW-02)
<u>SOWT2:</u> Restoration and management of ponds identified as being of low ecological quality	4 ponds per year (WWT)	<u>SOWA2:</u> Identify priority sites of low ecological value for restoration	Initial list of sites produced by 2010 (to include reactively identified sites), to be reviewed every two years	SOW Working Group, WSBRC, CWP BAP Team, BW, FWAG, WWT, Community Groups to be specified once list developed	2010, and review every 2 years after that	
		<u>SOWA3:</u> Using those sites identified above in SOWA2, restore suitable ponds	3 ponds restored per year	WWT, CWP BAP Team, BW, FWAG, Community Groups to be specified once list above developed	Ongoing, reporting annually	Swindon BAP SOW HAP (SOW20)
		<u>SOWA4:</u> Promote pond restoration under AE schemes	1 pond restored under AE every year	NE	Ongoing, reporting annually	SW BIP SOW HAP Objective 2
<u>SOWT3:</u> Management of ponds of existing good ecological quality	4 ponds managed per year (WWT)	<u>SOWA5:</u> Identify priority sites for maintenance, of good ecological value	Initial list of sites produced by 2010 (to include reactively identified sites), to be reviewed every two years	SOW Working Group, WSBRC, CWP BAP Team, BW, FWAG, Community Groups once list developed	2010, and review every 2 years	
		<u>SOWA6:</u> Using those sites identified, take suitable ponds into management	3 ponds managed per year	SOW Working Group, WSBRC, WWT (Wildlife Sites Project), CWP BAP Team, BW, FWAG, Community Groups once list developed	Ongoing, reporting annually	SW BIP SOW HAP Objective 2
		<u>SOWA7:</u> Promote pond management under AE schemes	1 new pond managed under AE every year	NE	Ongoing, reporting annually	SW BIP SOW HAP Objective 2
		<u>SOWA8:</u> Promote the creation and management of wildlife friendly garden ponds	Advice on pond creation and management included under actions under BET1 (BEA2)	WWT, Built Environment Working Group, WSBRC, NE, BTCV	2012	WBAP BE HAP BEA2; SW BIP SOW HAP Objective 2; Swindon BAP

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
						(SOW4)
<u>SOWT4:</u> Wilts and Berks Canal - achieve net biodiversity gain (through measuring no net loss) over Wiltshire section	EIAs and Conservation Management Plan show net biodiversity gain for Wiltshire part of the Canal (WBCT)	<u>SOWA9:</u> Wilts and Berks Canal - development of a Wilts and Berks Canal BAP including investigation of funding options and provision of technical advice and support	BAP developed by 2015	WBCT , EA, WWT (BAP Coordinators), WCC (District Ecologists)	2015	
		<u>SOWA10:</u> The restoration programme achieves a net biodiversity gain	EIAs and Conservation Management Plan from restoration programme identify a net biodiversity gain over a 10 year basis	WBCT , WCC (District and County Ecologists), NE, WWT	Ongoing, reporting annually on progress	
		<u>SOWA11:</u> Wilts and Berks Canal - follow up monitoring on parts already restored - identify priority species and establish monitoring programme	Monitoring programme developed for all parts of the canal that are restored	WBCT , WBCT BAP Steering Group (identified above)	Monitoring programme established by 2010	
		<u>SOWA12:</u> Develop a maintenance programme that enhances biodiversity	Maintenance programme devised	WBCT , WBCT BAP Steering Group	Maintenance programme established by 2010	
<u>SOWT5:</u> Reduce current area affected by alien plant species	100% of known sites under active control by 2020	<u>SOWA13:</u> Systematic collection and collation of existing and new data on invasive plant species	Robust distribution map by 2012, and updated annually thereafter	WSBRC , EA, WWT (Wildlife Sites Project), CWP BAP Team	2012 and ongoing	Whole target correlates with RST6 from the Rivers and Streams HAP; CWP Invasive Species Action Plan
		<u>SOWA14:</u> Ensure known populations under active control	100% of currently known sites of over 1ha under active control by 2020. Note: site over 1ha not invasive plant area being over 1ha	WWT , site owners identified above, EA, CWP BAP Team	2020	
		<u>SOWA15:</u> Ensure appropriate measures are included for invasive species in all relevant development control decisions	Appropriate measures included in all relevant Construction Methods Statements and Management Plans	LAs (Development Control teams), WCC (County and District Ecologists)	Deadline: 2009	
		<u>SOWA16:</u> Work with garden centres to control spread of invasive species	<u>Measure 1:</u> By 2012, no garden centres are stocking invasives and	SOW Working Group	2012	Swindon BAP Urban Ponds HAP (UP13 and UP14)

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
			all have a leaflet on control of invasives in-store. <u>Measure 2:</u> 1 workshop <u>Measure 3:</u> Work with garden centres to address issues surrounding imports of new species			
<u>SOWT6:</u> Discourage the spread of invasive animals	Non-native species distribution is reviewed by the group on an annual basis, and plan of action drawn up when required (SOW Working Group)	<u>SOWA17:</u> Establish distribution and extent of Zander in Wiltshire	Distribution map produced	EA (Fisheries Team) , BW	2009	
		<u>SOWA18:</u> Zander -support angling clubs to ensure good practice (including catches being reported), is included in rules and procedures (awareness raised when day tickets, membership given out).	Good practice is included in all angling club rules and procedures	EA (Fisheries Team) , BW , Angling Clubs (identified as a result of action), WBCT , CWP BAP Team, National Trust	Ongoing, reported annually	Swindon BAP SOW HAP (SOW10)
		<u>SOWA19:</u> Signal and other non native crayfish - support angling clubs to ensure good practice, is included in rules and procedures (awareness raised when day tickets, membership given out).	Good practice is included in all angling club rules and procedures	EA (Fisheries Team) , BW, Angling Clubs identified as a result of action, WBCT, CWP BAP Team	Ongoing, reported annually	
		<u>SOWA20:</u> Canada Geese - encourage egg dipping at breeding sites	5 new egg dipping operations are reported every year	SOW Working Group	Ongoing, reported annually	
		<u>SOWA21:</u> Canada Geese - partnership to support CWP Canada Geese culling of moulting flocks	Partnership provides supportive media coverage if and as necessary	CWP BAP Team, SOW Working Group	Ongoing, reported annually	
		<u>SOWA22:</u> Non native herptiles (to include Red-eared Terrapin and Bullfrog) - monitor the status of, and promote reporting by County Recorder to facilitate future action	County Recorder asks all herptile recorders to submit records to the WSBRC	County Recorder	2013	
		<u>SOWA23:</u> Non native herptiles (to include Red-eared terrapin and Bullfrog) - monitor the status of, and promote reporting by GCN licence holders to facilitate future action	NE asks all GCN licence holders to submit records to the WSBRC.	NE , GCN licence holders (via NE)	2008	
		<u>SOWA24:</u> Establish Mink control on all SOW Water Vole Local Key	Mink control established on all LKAs	WWT , BW, W&BCT	2010	WBAP R&S HAP – directly relates

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		Area's by 2010	by 2010 (2on KandA)			to RST7; Swindon BAP review - 1 LKA is on the W&B Canal in Swindon
		<u>SOWA25</u> : Extend Mink control out from canal LKAs	Extend Mink control out from LKAs at 2km intervals (or if obstructions as near to 2km as possible) by 2015	WWT, BW	2015	WBAP R&S HAP – directly relates to RST7; British Waterways BAP

Objective SOWO2: Expand the area of this habitat

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>SOWT7</u> : In addition to the CWP, create 1 wetland mosaic over 1ha	One area for development of a wetland mosaic identified by 2010 (WWT)	<u>SOWA26</u> : Prioritise sites for wetland mosaic development, including research into historic sites	Shortlist produced by 2010	EA, WWT , WWC (County Ecologist)	2010	CWP BAP SOW HAP: Objective 2 - Area Expansion; SW BIP Water and Wetlands Objective 4
		<u>SOWA27</u> : Identify funding	Funding for creation achieved	EA, WWT	2015	
<u>SOWT9</u> : In addition to CWP, suitable former mineral sites on floodplains are restored to wetland habitat (including reedbed, fen and marsh habitat as appropriate)	At least one site agreed as an approved after-use in the next 10 years with detailed restoration plans (WCC - District and County Ecologists)	<u>SOWA28</u> : Wetland complex promoted by LA ecologists and mineral planners as a restoration option	Wetland complex agreed	WCC (County and District Ecologists, and Mineral Planners)	2017	CWP BAP SOW HAP: Objective 2; WBAP R&S HAP RST3

Objective SOWO3: Maintain and where possible, increase, the population size and extent of Wiltshire BAP species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>SOWT10</u> Macrophytes: Establish baseline data for aquatic macrophytes	Baseline data obtained by 2015 (WSBRC)	<u>SOWA29</u> : Undertake aquatic macrophyte surveys at 5 waterbodies per year (throughout duration of BAP)	5 waterbodies surveyed per year	WWT (Wildlife Sites Project, Water for Wildlife Project, WCSP), WSBRC (River Monitors)	Ongoing, reporting annually	CWP BAP (STO-01)

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		<u>SOWA30</u> : Obtain funding for survey where required	Funding obtained	SOW Working Group , WSBRC, WWT (Wildlife Sites Project), NE	2009	
<u>SOWT11</u> (Dragonflies): Obtain comprehensive baseline data on all species with emphasis on key species.	Produce Wiltshire Dragonfly Atlas and Best Practice Guidelines for key species by 2012 (County Recorder)	<u>SOWT31</u> : Produce Dragonfly Atlas for Wiltshire	Atlas produced	County Recorder , WSBRC	2012	WBAP R&S HAP direct link RST16
		<u>SOWT32</u> : Re-survey all historic and present sites for Downy Emerald by 2009	Data collated and captured by WSBRC	County Recorder , WSBRC, CWP BAP Team	2009	
		<u>SOWT33</u> : Establish monitoring programme for Downy Emerald at all county sites	Monitoring programme in place by 2010	County Recorder , WSBRC	2010	
		<u>SOWT34</u> : Develop best practice management for Downy Emerald and implement at all known sites in the county by 2012	Best Management Practice developed by 2008 and implemented by 2012	County Recorder , CWP BAP Team ; Site Managers as identified by Best Practice document	First stage: 2008, Second stage: 2012	
<u>SOWT12</u> (Palmate Newts): Obtain an up-to-date record of Palmate Newt distribution	County Recorder devises a proactive survey programme (County Recorder)	<u>SOWA35</u> : Proactive survey programme developed	Proactive survey programme devised by 2009 and implemented by 2010	County Recorder , WSBRC	Programme devised: 2009, and implemented: 2010	
<u>SOWT13</u> : Promote involvement in the National Amphibian and Reptile Recording Scheme and the Wiltshire Amphibian and Reptile Group	10 volunteers per year undertake NARRS surveys in Wiltshire (County Recorder)	<u>SOWA37</u> : Ten 1km sites are surveyed per year for NARRS	10 volunteers recruited per year to undertake NARRS surveys	WARG, County Recorder	10 volunteers by 2010, and then 10 per year ongoing, reported annually	
<u>SOWT14</u> (Water Voles): Ensure no net loss of water vole distribution from standing open water (in terms of number of standing water bodies occupied)	No net loss from 1990's baseline data	<u>SOWA38</u> : New WWT Water for Wildlife Project Officer to determine 1990s SOW baseline	1990s baseline determined	WWT (Water for Wildlife Project)	2008	
		<u>SOWA39</u> : Maintain up to date information on water vole distribution with graphic representation through GIS mapping and data collation with W&SBRC	All survey data transferred to W&SBRC and entered onto suitable database(s). Review by addition or removal of LKA's as they improve/expand or degrade/shrink.	WWT (Water for Wildlife Project) , CWP BAP Team, WSBRC	Ongoing, reporting annually	WBAP R&S HAP: RSA50; SW BIP Water and Wetlands Objective 3; UK BAP, SW BAP and CWP BAP Water Vole SAPs
		<u>SOWA40</u> : Establish a rolling programme of survey/monitoring	Each area is re-visited at least every five	WWT , CWP BAP Team	Ongoing, reported	WBAP R&S HAP: RSA51; CWP

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		of water vole Local Key Areas (LKA's).	years.		every 5 years	(WV-01)
		<u>SOWA41</u> : Ensure all existing water vole colonies are safeguarded through best practice management of banks	No loss of Water Vole colonies as a result of habitat loss	WWT (Water for Wildlife Project) , WBCT, BW	Ongoing, reporting annually	WBAP R&S HAP: RSA54; UK BAP, SW BAP and CWP BAP Water Vole SAPs
<u>SOWT15</u> (Water Voles): Extend distribution	Water vole distribution extended by 2015	<u>SOWA42</u> : Ensure all lake managers and restoration works utilise best practice management and extend suitable Water Vole habitat, particularly offline habitats such as reedbeds and ponds	All management works use best practice management	WWT , EA, NE, WCC (County Ecologist)	Ongoing, reporting annually	WBAP R&S HAP: RSA55; UK BAP, SW BAP and CWP BAP Water Vole SAPs
		<u>SOWA42</u> : Manage/restore 40km of linear marginal features, including canal banks, of standing open water, n.b. includes ditches and drains where appropriate	40km by 2015	WWT (Water for Wildlife Project) , BW (management), WBCT	2015	UK BAP; SW BAP and CWP BAP Water Vole SAPs
		<u>SOWA43</u> : All opportunities taken to enhance habitat to allow for natural expansion of water voles through agri-environment grant schemes and all river restoration schemes.	Guidelines drawn up in ES targeting statements to ensure every opportunity is taken to increase suitable Water Vole habitat by 2010.	NE	2010	WBAP R&S HAP; UK BAP, SW BAP and CWP BAP Water Vole SAPs

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Neutral Grassland Habitat Action Plan

Organisation	Representatives
BTCV	Ian Ross
British Waterways	Oda Dijksterhuis, Viv Philips
Cotswold Water Park BAP Team	Gareth Harris
County Recorders	Steve Covey (Dragonflies), Gemma Harding (Herptiles)
Environment Agency	Fisheries Team, Daryl Buck
FWAG	Louise Stratton
National Trust	Chris Gingell, Simon Ford
Natural England	Dianne Matthews, Tim Quinton
Wiltshire County Council	Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Sanders (District Ecologists)
Wilts and Berks Canal Trust	Jenny Stratton
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Sarah Wilkinson, Head of Education, Rob Nicholls and Paul Darby (Landscapes for Wildlife), Rob Large (County Wildlife Sites), Martin de Retuerto (Wessex Chalk Streams Project), Water for Wildlife Officer

Lowland Heathland Information Note

Lowland heathland is characterised by the presence of plants such as Heather (*Calluna vulgaris*), Gorse (*Ulex* spp.) and Cross-leaved Heath (*Erica tetralix*) and is generally found below 300m in altitude. Lowland heathland is a priority for nature conservation because it is a rare and threatened habitat. In England only one sixth of the heathland present in 1800 now remains. The UK has around 58,000ha of lowland heathland of which around 55% is found in England. The UK has an important proportion (around 20%) of the international total of this habitat.

Lowland Heathland is a priority habitat in the South West BAP, as the South West contains around 25% of the UK total.

Heathland is important for bird species such as Nightjar, Woodlark and Dartford Warbler.

The joint English Nature/RSPB Lowland Heathland Inventory identifies that there is around 32ha of heathland in Wiltshire, split down as is shown in the table below.

Site	Grid reference	Heathland type	Area of heathland at site (ha)	Date surveyed
Great Yews SSSI	SU120231	CH	0.4	1986
Landford Bog SSSI	SU259185	WH	2.0	1995
Landford Heath SSSI	SU265178	WH	4.0	1994
Porton Down SSSI	SU240365	CH	1.4	1991
Savernake Forest SSSI	SU215665	CH, WH, DH	1.5	1988
Aucome Bottom	SU835425	Unknown	0.2	Unknown
Dinton Wood	SU004302	CH	0.1	1995
Great Ridge	ST950360	CH	1.0	1983
Hamptworth Common	SU247184	WH	7.7	1995
Hamptworth Park	SU232197	DH, WH	2.3	1995
Hamptworth Picnic Area	SU234175	DH	0.3	1995
Hursley Common, West Woods	SU150662	DH	4.0	1986
Loosehanger, East Woods	SU210187	WH	0.4	1995
Nomansland	SU256182	WH	0.2	1995
Pound Bottom	SU219176	DH, WH	0.2	1995
Quar Hill	SU222180	WH	4.9	1995
Windyeats Farm	SU213180	DH	0.9	1995

Key: DH = Dry Heath, WH = Wet Heath, CH = Chalk Heath

The Wiltshire BAP Review Working Group discussed the inclusion of a Habitat Action Plan for Heathland in the Wiltshire BAP, as did the Calcareous and Neutral Grassland HAP working groups. The Wiltshire BAP coordinators have also discussed the situation with the New Forest National Park Authority. It was decided that the need for a Heathland HAP in the Wiltshire BAP would be properly evaluated over the next year, and an Action Plan could be devised at the first yearly update if required. Reference should be made to the soon-to-be-published New Forest BAP and the Center Parcs BAP (in which heathland as a habitat is given special priority), in the meantime.

References:

Joint English Nature/RSPB Lowland Heathland Inventory for Wiltshire (draft). Available to view at the WSBRC.

Built Environment Habitat Action Plan

A Vision for Wiltshire's Built Environment over the next 30 years...

All of Wiltshire's residents have access to high quality green space, and their gardens and school grounds are species-rich, having been designed with wildlife in mind.

Overall, Wiltshire's residents recognise the wildlife value of the built environment in which they live, work and play, and are actively involved in conserving it.

Background

This Action Plan was named "Urban Environment" in the Wiltshire BAP 2002. It was decided that the name should be changed to "Built Environment" in order to encompass all man-made structures that aren't necessarily only found in an urban setting.

Built Environment

Man-made structures and associated land whose primary function is commercial/industrial, residential or formal recreation. It includes formal parks, village greens, allotments, churchyards and gardens. It also includes land associated with transport corridors, and previously developed land.

The built environment often plays host to a wide range of habitat types as is shown by its definition above, while at the same time being home to large concentrations of people. Although only about 10% of England is urbanised, some 90% of the population lives in urban areas (Defra, 2002), and thus most contact between people and nature is likely to be with urban species in urban habitats. This provides the unique opportunity to raise awareness among individuals and communities about the natural environment that surrounds their everyday lives.

Green spaces have the added importance of having a social, recreational and aesthetic value for those living and working in the built environment, and the provision of green space as part of the work-place has been shown to reduce stress and the number of sick days taken by employees.

The Built Environment in Wiltshire

Wiltshire is a predominantly rural county, with a population of around 433,000, nearly half of whom live in towns or villages with fewer than 5000 people (Wiltshire County Council website).

Importance of different parts of the built environment

Buildings

Buildings including their walls, roofs, eaves, holes and other nooks and crannies provide a range of microhabitats, as well as space to live and nest for a wide range of plants, birds, invertebrates and mammals –from lichens, ferns and flowering plants on buildings and walls, insects sheltering in wood or brickwork, to bats which use buildings to roost and nest in.

The Built Environment HAP contains action for building nesting birds including Barn Owls, House Sparrows, Swallows, Starlings, House Martins and Swifts. House Martins and Swifts are almost completely dependent on buildings for their nest sites. It is believed that changes taking place in breeding grounds are responsible for the decline in bird species such as the Swallow. Suitable nesting sites are now often in short supply due to farm buildings being converted and modernised, and in addition much modern housing is constructed in such a manner as to exclude birds from potential nesting areas.

Importance of different parts of the built environment (continued...)

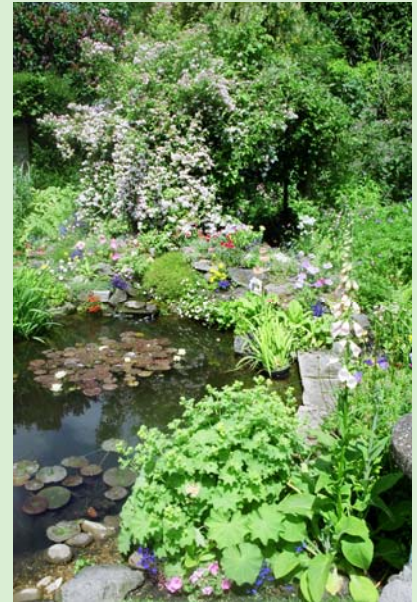
The potential offered by green roofs is increasingly being recognised, with benefits not only for biodiversity. Installation of a green roof can lead to extended roof life, attenuation of storm water runoff, reduced heating and air-conditioning costs, noise amelioration, absorption of air pollutants and improved air quality. It is also thought that the thermal benefits provided by green roofs on business premises can reduce staff absences as a result of reduced fluctuation of daily mean temperature. Species that might benefit from green roofs include bats, birds including the Black Redstart, beetles, flies, bees, wasps and spiders.

Gardens and Allotments

There are now more than 15 million gardens in the UK and around 250,000 allotments, which illustrates that their importance as a wildlife habitat cannot be underestimated. Each garden or allotment on its own might be small, but together they form a patchwork or mosaic of interconnected habitats, allowing species to disperse and move around along wildlife corridors.

Gardens and allotments are of importance to a wide variety of species through provision of food, water, shelter and nesting sites. Where gardens contain features like ponds, they can support locally important populations of amphibians for example. Surveys conducted by BTO Garden BirdWatch participants in 2003 found that Common Frogs were present in up to 93% of suburban gardens and Common Toads were present in 55% of rural gardens. They can also provide shelter, food and nesting sites for many species of bird.

The Built Environment HAP contains several targets for encouraging and promoting gardening with wildlife in mind.



Wildlife Gardening © Tom Cairns/WWT

Churchyards and Cemeteries

Churchyards and cemeteries can provide potential havens for biodiversity, as unlike surrounding farmland they have generally not been sprayed with chemical fertilisers and pesticides, and are relatively undisturbed by people. A wide range of habitats may be present – from gravestones, to church walls, to trees, shrubs and grassland, and as such can support a wide range of species from lichens, mosses and flowering plants to bats and insects. The seed banks in some Wiltshire churchyards are more than 1000 years old and offer a rich biodiversity potential given favourable conditions.

The Wiltshire Living Churchyard and Cemetery Scheme was set up in the 1980s in order to promote these important wildlife refuges, and now more than 40 churchyards belong to the project.

Previously Developed Land

An action has been included in the Built Environment HAP for Previously Developed Land (PDL), in line with the UK BAP, which now includes “Open Mosaic Habitats on Previously Developed Land” as a UK Priority Habitat. PDL can support exceptionally important invertebrate communities including rare species of Hymenoptera and Coleoptera. They are particularly important for species requiring bare substrate, sandy burrowing or nesting sites, and nesting habitat. PDL is also of functional importance in that it provides areas of early/pioneer habitat and general refugia within otherwise impoverished landscape areas. As a habitat, PDL is at substantial risk and subject to destruction and serious degradation from factors such as urban development, landfill, unsuitable reclamation, eutrophication, lack of appropriate management and natural succession.

Road Verges

Under a scheme begun in 1970 some fifty road verges throughout the county are designated as Protected Road Verges because of their special habitat, species or geological interest. Special maintenance is carried out by Mouchel, the County Council’s highway consultants, and usually involves more than the one metre wide cut given to all other road verges. Volunteers carry out the monitoring of the special interest on these sites. The verges are visited regularly to check that the management is carried out as agreed, and, most importantly, report on the plants or animals for which the verge was designated. For example one verge near Slaughterford is protected for its Glow Worms, and another beside the A303 for its population of the Adonis Blue butterfly.

Important Sites

Local Nature Reserves (LNRs) are for both people and wildlife. They are living green spaces in towns, cities, villages and the countryside which are important to people, and support a rich and vibrant variety of wildlife. All LNRs are owned or controlled by local authorities. Wiltshire currently has nine LNRs, including Drews Pond Wood in Devizes, Smallbrook Meadows in Warminster and Conygre Mead in Malmesbury.

Drews Pond

This Local Nature Reserve and County Wildlife Site is a 7.5 acre area of woodland, meadows and burial ground situated in Devizes and owned by Kennet District Council. It has been managed by a local volunteer group since 1990 who have worked to improve access, carry out essential conservation work and return the wood to traditional management including rotational coppicing. A loose circuit of paths have been blended into the woodland and opened to the public to enjoy and learn about the area.

Smallbrook Meadows

This LNR is owned by West Wiltshire District Council and managed by Wiltshire Wildlife Trust. It is located on the outskirts of Warminster and consists of a number of disused water meadows lying between the Rivers Were and Wylde. The reserve provides a wide range of habitats with suitable conditions for many species of birds, mammals and invertebrates. Snipe and Water Rail are seen regularly, and the reserve is also home to Water Voles.

Conygre Mead

Conygre Mead LNR in Malmesbury is owned and managed by Malmesbury River Valleys Trust (MRVT). The Reserve consists of mainly open grassland with mature willows, associated with a restored pond and some woodland. A tall mixed species hedge forms the northern boundary. The rare sawfly *Macrophya albipuncta* occurs here and Water Voles have been seen. Birds include Bullfinch and Garden Warbler. Grass Snake and Slow Worm have been recorded. More information from the MRVT website: <http://www.watervole.net/mrvt/pages/conygremead.htm>



Species characteristic of the Built Environment

As has been illustrated above there is a great heterogeneity about the habitats making up the built environment. The buildings, other built structures and green infrastructure between them can provide a mosaic of different habitat types with space for many species of plants, birds, invertebrates and mammals to inhabit.

Starling *Sturnus vulgaris*

The British breeding population of Starling is approximately 8.5 million birds. A report by BTO for Defra has shown that farmland supports 30% of the British breeding population, and urban/suburban habitats and rural gardens support around 57% of the breeding population. Long term monitoring by the British Trust for Ornithology shows that Starling numbers have fallen by 60% since the mid 1970s. Due to this decline in numbers the Starling has now been red listed as a bird of high conservation concern, and added to the UK Priority Species List.

West European Hedgehog *Erinaceus europaeus*

Like the starling, the Hedgehog has also recently been added to the UK Priority Species List, due to a population decline of 20% nationally between 2001 and 2005, and up to 50% in some places (Mammals Trust UK Mammals on Roads Survey). Preliminary analysis suggests that increasing urbanisation and "tidier" gardens are key in the decline of this species (Burnham and MacDonald, 2007).



Progress Highlights since 2002

Tower Mustard rediscovered at Chittoe Heath Protected Road Verge

Tower Mustard, a nationally rare and protected plant is found at only 35 sites in the UK, one of which is in Wiltshire, where it was first recorded in 1650. It was last recorded at its Wiltshire site in the 1990s, until in 2006 on a visit by members of the Protected Road Verge (PRV) Project; a single plant was spotted standing tall amongst the surrounding vegetation. The surprising thing about this species is that it actually thrives on disturbance, so it was decided that to give the plant as much chance as possible, the vegetation around the plant should be cut short and the earth scarified to increase the chance of the seeds germinating and the plant spreading. The necessary management is being carried out by Mouchel (WCC highway maintenance consultants and members of the PRV Project).

Barton Farm Country Park, Bradford on Avon

Barton Farm Country Park is a 36 acre countryside facility bounded by the River Avon and the Kennet and Avon Canal. Since the first Wiltshire BAP was published Wiltshire County Council have appointed a new senior ranger to carry out sympathetic management of the county's green spaces. His work has included installation of new interpretation boards at Barton Farm Country Park, and setting up a conservation group at the park to involve the local community in carrying out habitat enhancement, and in making decisions about the Park's future management. These actions have gone towards meeting many of the targets set out under the Urban HAP in the Wiltshire BAP 2002.

Wildlife Counts Project

Wildlife Counts was a three year (2003-2006) Heritage Lottery funded Project carried out by the Wiltshire and Swindon Biological Records Centre (WSBRC), looking at how to involve the public in the monitoring of their local wildlife. The Project asked the public to record specific biodiversity indicators through the distribution of postcards, and provided training and support in appropriate methods for monitoring and species identification to encourage regular and ongoing surveying. The Project engaged over 100 new volunteers and contributed over 3000 new records to the WSBRC. Over 20 volunteers have continued to regularly contribute their sightings, meaning that many new areas of the county now have good information about flora and fauna, where previously there was none.

Green Gardens Campaign and Green Gardening at Priory Vale

In 2002 developers at Priory Vale in Swindon contracted Wiltshire Wildlife Trust to provide information and advice to homeowners on how to live more sustainably, which included promotion of wildlife friendly gardening. Welcome packs were produced for new residents including information on where to recycle, how to make their homes more energy efficient, and how to attract wildlife into their gardens. A wildlife garden was also created at one of the showhomes. New interpretation boards were produced for the adjoining 16 acre Clifford (Haydon) Meadow Site of Special Scientific Interest (SSSI), and leaflets were created explaining the importance of agricultural management on the SSSI. This work is ongoing, and the Wildlife Trust continues to work with the developers at Priory Vale to hold annual events.



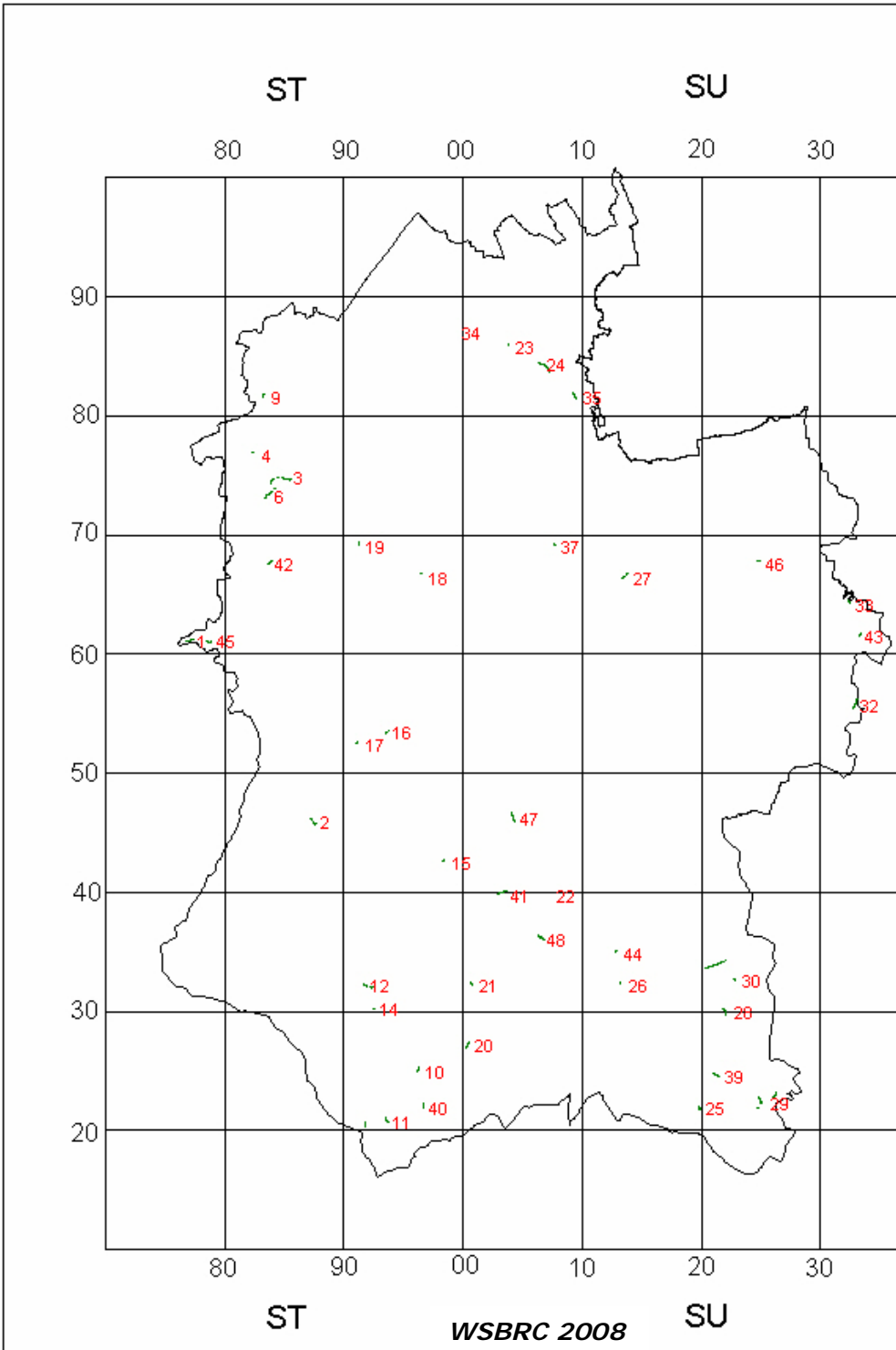
Clifford Meadow SSSI: An annual orchid count is now carried out here. © Ruth Baker/WWT

Taking the Wiltshire BAP Built Environment HAP Forwards

A Built Environment Working Group has been set up, and will meet three times a year. The group will discuss all of the objectives of the Built Environment HAP bar BEO2 (Road Verges) which will be dealt with by the Road Verges Group at their quarterly meetings.

The Built Environment Working Group will also discuss the Planning and Communities sections (2 and 5) under the Generic Action Plan.

Protected Road Verges in Wiltshire 2008



Key Name of Protected Road Verge

- 1 Midford Valley Woods Verge
- 2 Warminster Verge
- 3 Ford - Giddeahall Verge
- 4 Nettleton Verge
- 5 Slaughterford Verge
Coombs Wood, Slaughterford
- 6 Verge
- 7 East of Ford Verge
- 8 Giddeahall Verge
- 9 Littleton Drew Verge
- 10 Ansty Down Road Verge
- 11 Ferne Hollow Road Verge
- 12 Fonthill Terraces Verge
- 13 Fonthill Verge 1
- 14 Fonthill Verge 2
- 15 Chitterne Road Verge
- 16 Edington Verge
- 17 Bratton Verge
- 18 Chittoe Heath Verge
- 19 Notton (near Lacock) Verge
- 20 Fovant Down Verge
- 21 Dinton Verge
- 22 Berwick St. James Road Verge
- 23 Wood Lane/Webbs Wood Verge
- 24 Ballards Ash Road Verge
- 25 Redlynch Verge
- 26 Stratford-sub-Castle Verge
- 27 Lockeridge Verge
- 28 Farley Verge
Whiteparish Common and
Cowsfield Wood Verges (3
parcels)
- 29 Winterslow Road Verge
- 30 Thorny Down Road Verge
- 31 Conholt Verge
- 32 Shalbourne Verge
- 34 Braydon Verge
- 35 Chaddington Lane Verge
- 36 Common Hill, Ford Verge
- 37 Beckhampton Verge
Win Green, South of Ludwell
- 38 Verge
- 39 Pepperbox Hill Verge
- 40 Pincombe Down Road Verge
- 41 Yarnbury Castle Verge
- 42 Wadswick Common Verge
- 43 South of Ham Verge
- 44 Little Durnford Verge
- 45 Winsley Hill Verge
Great Bedwyn Junction east of
Marlborough Verge
- 46 South of Tilshead Verge
Little Langford and Great Wishford
Verge



Figure 9: Map illustrating the locations and names of Wiltshire's Protected Road Verges. Picture (left) Road Verge at Beckhampton © Jane Cole

Links with existing Plans

South West Biodiversity Implementation Plan

Section 11: Towns, Cities and Development

Other sections of the Wiltshire BAP

Standing Open Water HAP: action is included under the SOW HAP for promotion and management of wildlife friendly garden ponds.

Bats SAP: As outlined above, the built environment provides important roosting and nesting habitat for bats, actions for which are covered under the Bats SAP

Swindon BAP

Section 6: Urban Habitats – 6.1 Built-up Areas and Gardens

Cotswold Water Park BAP

Built Structures Habitat Action Plan

Center Parcs BAP

Target 23: Buildings and Hard Development – maintain usage by hibernating invertebrates, birds and other fauna

British Waterways BAP

Chapters on Built Structures and Towpath Verges

References:

BTO Research Report no. 290 for Defra (2002) *Investigation of the Causes of the Decline of House Sparrow and Starling in Great Britain*. Download from: <http://www.defra.gov.uk/wildlife-countryside/resprog/findings/sparrow/index.htm>

BTO Statistics on the occurrence of common toads and frogs in garden ponds as recorded in the Big Garden Birdwatch can be downloaded from: <http://www.bto.org/gbw/herps/species%20accounts/commonfrog.htm>

Burnham, D. & MacDonald, D. (2007) *The State of Britain's Mammals*. Mammals Trust UK .Download from: <http://www.wildcru.org/files/SOBM%202007.pdf>

Davies, C., MacFarlane, R., McGloin, C. & Roe, M (2006) *Green Infrastructure Planning Guide*. This document was produced by Northumberland and Newcastle Universities and the North East Community Forests to assist planners in developing GI Plans at the local level. It can be downloaded from: <http://www.greeninfrastructure.eu/>

Department for Transport, Local Government and the Regions (2002) *Green Spaces, Better Places*. A useful report on the importance of parks and gardens in an urban setting. Download from: <http://www.communities.gov.uk/publications/communities/greenspacesbetter3>

Wiltshire County Council and Swindon Borough Council: Wiltshire and Swindon Minerals and Waste Development Framework. More information from the Wiltshire County Council website <http://www.wiltshire.gov.uk/environment-and-planning/planning-home/planning-minerals-and-waste-development-framework.htm> and download from: www.wiltshire.gov.uk/min-wst-evidence-chp3.pdf

UK BAP HAP for Open Mosaic Habitats on Previously Developed Land

More information can be found on the UK BAP website: www.ukbap.org.uk.

Green Roofs – further information

English Nature publication - Green Roofs: their existing status and potential for conserving biodiversity in urban areas. Available from the Natural England website: www.naturalengland.org.uk
Living Roofs - an independent UK resource for more information on green roofs– www.livingroofs.org

The South West Regional Spatial Strategy (RSS)

More information and download from the South West Regional Assembly website - http://www.southwest-ra.gov.uk/nqcontent.cfm?a_id=538

Wiltshire BAP Built Environment Habitat Action Plan – Targets and Actions

Objective BEO1: Local people are engaged in conserving the wildlife in the built environment						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
BET1: More people are encouraging wildlife in their garden	Year on year increase in number of enquiries about wildlife gardening to wildlife information volunteers from 2007 baseline (WSBRC)	BEA1: Determine baseline for 2007 of number of enquiries about wildlife gardening to Wildlife Information Volunteers	Baseline established	WSBRC	March 2008	
		BEA2: Run wildlife gardening training courses, produce press releases and publications	20 training courses, 25 press releases, 250 downloads of Wiltshire guidance notes from WWT and BAP websites	WWT, NE	2012	Swindon BAP Urban Areas HAP (BG8, BG15, BG16)
BET2: All schools have biodiversity integrated into their management plans	100% of schools by 2015 (WWT)	BEA3: Identify funding for two full-time school grounds officers	School grounds officers in post	WWT on hold until new Head of Education in post	2010	
		BEA4: School Grounds Officers work with schools to ensure biodiversity integrated into their management plans	All schools have biodiversity integrated into their management plans	WWT on hold until new Head of Education in post	2015	
		BEA5: Work with partners to develop materials for schools on managing their grounds for biodiversity	Materials are developed	WWT, NE, WCC (Premises Team: Schools) on hold until new Head of Education in post	2010	
		BEA6: Develop and provide training for school grounds maintenance contractors on managing areas for biodiversity	Training course developed and carried out annually	WWT (new Head of Education) on hold until new Head of Education in post	Training course developed by 2010	
BET3: Increase in number of LNRs in urban areas	NE target measures (1ha per head of population) for the development of new LNRs are met (Natural England)	BEA7: Determine the number of CWS that would meet LNR criteria but have not yet been designated and encourage LPAs to designate more LNRs	Review complete, and LPAs actively seeking to designate more LNRs	Natural England, WCC (County and District Ecologists), WWT (Wildlife Sites Project)	Ongoing, reporting annually	SW BIP Water and Wetlands Objective 5, Towns and Cities Objectives 2&3; SW BAP Urban Areas HAP Objective 3
Objective BEO2: Maintain and enhance the biodiversity value of transport corridors						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
BET4: Maintain the ecological value of all	No loss of existing PRVs (WSBRC)	BEA8: Complete the revision of PRV criteria by 2007	Revised criteria in use	WSBRC, WCC (County Ecologist),	December 2007	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
road verges that meet the selection criteria for PRV status				Mouchel		
		<u>BEA9:</u> Suitable management to be put in place for all PRVs	80% of PRVs in good condition (as defined by PRV report)	Mouchel, WCC (County Ecologist)	2012	
		<u>BEA10:</u> Recruit and train a volunteer monitor for each PRV	Ensure each PRV has a trained monitor	WCC (County Ecologist), WSBRC	2012	
		<u>BEA11:</u> Seek funding for periodic professional survey to facilitate adaptive management of all PRVs (surveying to assess effectiveness of management prescriptions and alter management accordingly)	Funding achieved	WCC (County Ecologist)	Ongoing, reporting annually	
		<u>BEA12:</u> Determine the number of CWS that would meet PRV criteria but have not yet been designated	5 road verge sites considered for PRV status per year	WCC (County Ecologist), Mouchel, WSBRC	Ongoing, reporting annually	

Note: no targets for rail or canals have been identified at present under this section, although canals are considered under the WBAF Standing Open Water HAP

Objective BEO3: Maintain and where possible, increase, the population size and extent of Wiltshire BAP species associated with this habitat in Wiltshire

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
<u>BET5:</u> Due regard is taken of the biodiversity interest of previously developed land	Site Allocation documents identify areas of derelict land, their biodiversity interest and associated mitigation. (District Ecologists)	<u>BEA13:</u> In developing site allocation plans information on the biodiversity interest on previously developed land is obtained through the evidence base data collection This might include survey for associated BAP species (e.g. Black Redstarts) and priority habitats (e.g. open mosaic habitats)	All allocations which include previously developed land have a suitable evidence base	LPA's (Forward Planning), WCC (County and District Ecologists), NE	Ongoing	
		<u>BEA14:</u> Validation systems to recognise the potential value of previously development land	The ecological importance of previously developed land is recognised in development control procedures	LPA's (Forward Planning), WCC (County and District Ecologists), NE	2009	
<u>BET6:</u> Raise awareness of the decline in birds that nest in buildings and potential ameliorating activities e.g. Barn Owls, Swifts,	All planning departments aware of issues by 2008, and 100 members of public reached each year (WCC - District)	<u>BEA15:</u> Interpretation materials produced for use at events and for circulation	Suite of materials produced for use at events below	WWT, NE, WCC (County and District Ecologists), WSBRC	2009	RSPB - advice on building nesting birds http://www.rspb.org.uk/advice/helpingbirds/roofs

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
Swallows, Starling, House and Tree Sparrows, and House Martins	Ecologists and WWT)					/index.asp
		<u>BEA16</u> : All relevant public events held incorporate information on the decline in species inhabiting the built environment	Relevant events identified by BE group, and interpretation taken to those events	WWT, NE, WCC (County and District Ecologists), WSBRC, Built Environment Working Group	Annually once action above complete	
		<u>BEA17</u> : Guidance document produced for planners and developers as part of the proposed SPD/pre-application guidance documents	Document produced and distributed	County and District Ecologists	2008	

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Built Environment Habitat Action Plan:

Organisation	Representatives
Mouchel	Jane Cole
Natural England	Tim Quinton, Charles Routh
Wiltshire County Council	Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Sanders (District Ecologists), Premises Team
WSBRC	Purgle Linham
Wiltshire Wildlife Trust	Bill Jenman, Biodiversity Action Team, new Head of Education, Wildlife Sites Project Steering Group, Water for Wildlife Project

Bats Species Action Plan

A Vision for the Status of Bats in Wiltshire over the next 30 years...

Wiltshire is a stronghold for bats - existing roosts, hibernation sites and key flight lines are protected. More potential hibernation and roost sites are created.

Bats are welcomed by the public as a vital part of Wiltshire's biodiversity, and a greater awareness of bats among all of Wiltshire's residents is achieved.

Background

The Bats SAP in the Wiltshire BAP 2002 only covered six species of bat. However, a decision was made by the Bats Working Group that as part of the review of this SAP, the Action Plan should now cover all bats found in Wiltshire, which currently amounts to 15 species. These are listed in the table below. If other species are found in the county in future, then they, along with the others in the list below will be covered by the targets and actions which comprise this Action Plan.



All bats and their roosts are protected under Schedule 2 of the Habitats Regulations (1994) and Schedule 5 of the Wildlife and Countryside Act (1981) (as amended).

Bat species found in Wiltshire

This table was compiled using information from Greenaway and Hutson (1990), Dillon (1998), the UK BAP, Swindon BAP, the Wiltshire BAP 2002, and the WSBRC database.

Species	English name	National status	Wiltshire status	Habitats
<i>Barbastella barbastellus</i>	Barbastelle	Approximately 5000 individuals. Long term trends unknown. One of its population centres is in south west England.	53 records in 3 main clusters – Savernake, the Bentley Wood area, and near Westbury. Restricted distribution, although potentially expanding into the north of the county, where there has now been one isolated record.	Mainly woodland, uses old buildings and trees as summer roosts, and underground sites and hollow trees for hibernation
<i>Myotis bechsteinii</i>	Bechstein's	Very rare in the UK, around 1500 individuals. Restricted to southern England	Mainly clustered just east of Trowbridge, and also found further in the south. Very restricted to the west of the county from the centre down. 49 records in total. Recent maternity roost found in the north.	Associated with ancient woodland and hedgerows. Most individuals roost in trees, although some records are from underground locations
<i>Rhinolophus ferrumequinum</i>	Greater horseshoe	South west has 70% of UK population. Significant decline throughout the past century. 35 recognised maternity roosts and 369 hibernation sites. Population estimates of 4000-6000 individuals nationally	Main clusters are in the west of the county, in the Box Mines and Bradford on Avon areas. Also found in the Chilmark area. 272 records in total, which reflects the long-term monitoring of known populations of this species.	Mosaic of habitats required. Need grazed pasture and good quality riparian habitat.

Species	English name	National status	Wiltshire status	Habitats
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	It was recently discovered that there are two distinct species of Pipistrelle. Research underway into distribution. <i>P. pipistrellus</i> has now been removed from the UK BAP Priority Species List. Estimated UK population of both species is 2 million individuals in total. Thought to have undergone decline of approximately 70% between 1978-1993	Records are widespread, strongly associated with rivers. Only 68 records of <i>P. pygmaeus</i> but unable to differentiate between <i>P. pipistrellus</i> and <i>P. pygmaeus</i> in pre-2000 records – all are listed as <i>P. pipistrellus</i> . 597 records of <i>P. pipistrellus</i> in total. Wiltshire has some very important sites including Lacock Abbey with >1000 <i>P. pipistrellus</i> .	Pipistrelles are nomadic and require a large number of suitable roosts to maintain each colony. They roost mainly in buildings but also use trees. They require a mosaic of habitats and often forage in suburban gardens, but are also associated with hedgerows, scrub, trees and woodlands. Wetlands and rivers also important.
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle			
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe	14,000 individuals, decline in recent decades. Breeding colonies only present in Wales and south west England	Most records are distributed within about 8 miles of the A420, One of the biggest roosts is at Nettleton in the north of the county, and there is another roost north of Lyneham. Also found in the Chilmark area. 313 records in total in Wiltshire.	Lesser Horseshoes tend to feed within ancient woodland, parkland, scrub and pasture. Hedges and riparian habitats are important flight routes. Most summer maternity roosts now use buildings. Most hibernate in caves or other underground sites
<i>Myotis natterei</i>	Natterer's	Relatively common in southern Britain, and scarce in the north	Relatively common and widespread, mostly found in the west around the Box Mines area, and in the south in the Chilmark area. Also found Avebury area, and in Savernake and Winsley.	Roost in old buildings and trees in summer, and caves and mines in winter. Foraging habitat includes open woodland, parkland, hedgerows and waterside vegetation.
<i>Plecotus auritus</i>	Brown Long-eared	Second most common species in Britain. Common and widespread throughout Great Britain and Ireland.	Widespread across the county – 1014 records in total. Number of records reflects the fact that these commonly roost in houses, so are more frequently reported.	Broadleaved woodlands for foraging. Linear features like hedgerows are important for linking roosts to foraging sites. Buildings important as summer roosts - buildings, caves and trees used in winter
<i>Eptesicus serotinus</i>	Serotine	Declining nationally, but extending range northwards	Relatively common and widespread, strongly associated with rivers. 340 records in total	Roost mainly in buildings, both in summer and winter. Grasslands, particularly unimproved, are principal feeding grounds.
<i>Myotis brandtii</i>	Brandt's	Widespread in England and Wales. Status uncertain but probably more frequent in west and north	Widespread but not common, however this species is likely to be under-recorded. 60 records in total.	Uses woodland and along woodland edge and hedgerows, often near water
<i>Myotis daubentonii</i>	Daubenton's	Seems to be increasing in parts of its range, possibly due to increase in number of artificial water bodies.	Most records are from river corridors and canals where this bat is easily identified – 162 records in total but likely to be under-recorded	This species feeds mainly on insects with aquatic larval stages. Ideal habitat is sheltered water with vegetation on both banks, although other areas of freshwater are also important.

Species	English name	National status	Wiltshire status	Habitats
<i>Myotis mystacinus</i>	Whiskered Bat	Widespread in England and Wales, but nowhere common	141 records in total, mostly found in the west around the Box Mines area, and in the south in the Chilmark area, although likely to be under-recorded.	Prefers more open parks and gardens, but differentiation between Brandt's (which prefers woodland) and Whiskered bats not clear
<i>Nyctalus noctula</i>	Noctule	Widely distributed in England and Wales to southern Scotland	Found in the Box Mines and Chilmark area, along the Nadder. Also found in the north of the county and in centre (e.g. Bulmore Camp on Salisbury Plain). Widespread but not common –108 records in total.	Noctules are known to forage over open areas such as wetlands, often at a considerable distance from their roost.
<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle	Vagrant, in spring and autumn found from Scotland to the Channel Islands but with few mainland records.	One record in the county in 2006 from Beggars Knoll Wood. Also recorded from Lake 74 in the Cotswold Water Park.	Woodland bat, particularly edges including rides and paths, or both deciduous trees and conifers. Also parkland and over water
<i>Nyctalus Leisleri</i>	Leisler's	Leisler's bat is widespread but rare in Europe, and is found throughout the British Isles, with the exception of northern Scotland.	Rare in the county	A woodland bat which also roosts in buildings. These bats hibernate in tree holes, in the cracks and cavities of buildings and occasionally in caves and tunnels.

Important Sites in Wiltshire

Four species of bat (Bechstein's, Barbastelle, Greater Horseshoe and Lesser Horseshoe) are listed on Annex IV of the Habitats Directive, which requires the designation of Special Areas of Conservation (SACs) at key sites for these species. Two SACs have been designated for their bat interest in Wiltshire; Chilmark Quarries and Bath and Bradford on Avon Bats. The revised Wiltshire BAP Bats SAP contains a target for the designation of two more Bat SSSIs, at Savernake Tunnel and Gripwood Quarry.

Chilmark Quarries

The Chilmark Quarries SAC in South Wiltshire contains the Chilmark Quarries SSSI and Fonthill Grottoes SSSI. It is a complex of abandoned mines and subterranean follies regularly used by an important assemblage of bat species as a hibernation site. The extensive system of undisturbed mines, with their constant temperature and humidity, and varied construction of the grottoes, provides suitable conditions for large numbers of wintering bats. The site is considered to be one of the best areas in the UK for Bechstein's, barbastelle, and Greater Horseshoe bats, and supports a significant population of Lesser Horseshoe bats. The surrounding woodland, grassland and open water habitats also provide a valuable roosting, breeding and feeding area for bats.

Bath and Bradford on Avon Bats SAC (comprising Box Mine and Winsley Mines SSSIs within Wiltshire)

This site comprises extensive networks of man-made tunnels which are used by bats for hibernation, mating and as a staging post prior to dispersal. Box Mine and Winsley Mines also include areas of woodland which are used as feeding and commuting habitat by the bats. These disused stone mines are of key importance to Greater Horseshoe bats (holding 15% of the UK Greater Horseshoe bat population in winter), Lesser Horseshoe bats and Bechstein's bat, as well as a mixed assemblage of comprising several other bat species. Such good populations are found here because of a combination of suitable temperature and humidity conditions, good access for bats, lack of pollution and infilling, and freedom from significant disturbance. In order to maintain these conditions, grilles have been installed over the most vulnerable mine entrances.

Progress Highlights since 2002

- At least 250 bat boxes have been erected in the county since 2002 as a result of work by the Wiltshire Bat Group, the Five Rivers Bat Group, and the Cotswold Water Park Bat Initiative
- There are now at least 17 voluntary bat wardens in Wiltshire, against an initial target of 25

The Wiltshire Greater Horseshoe Bat Project

This project now regularly surveys 10 key hibernation sites and is monitoring inter-roost movement with a view to protecting likely commuting routes. Funding has been provided by Wiltshire County Council.

Wiltshire's largest known Bechstein's maternity roost.

One of only five (at the time) known breeding colonies of Bechstein's bat in the UK was found at a wood in West Wiltshire by Ian Davidson-Watts in 2004, following the radio-tracking of a non-breeding female. The colony had 53 bats and may be related to a nearby population of 15-20 adult females located at another wood 2km away. There are still less than 20 known Bechstein's maternity roosts known in the UK.

Wiltshire Barbastelle Maternity Roosts discovered

Increased monitoring of bat populations has led to the discovery of the first Wiltshire maternity roosts for the nationally endangered Barbastelle bat. Wiltshire Bat Group have determined that there appear to be two sub groups of Barbastelle bats in Savernake Forest and the surrounding area, as well as foraging areas and commuting routes. Monitoring culminated in Autumn 2006 with the discovery of a mating cluster of 11 Barbastelle bats in one box, which is extremely significant nationally, as not long ago only one maternity roost and less than 30 hibernation sites were known of in the UK.

Cotswold Water Park Bat Initiative

In 2005 the Cotswold Water Park Society launched the Cotswold Water Park Bat Initiative to promote the study and recording of all bat species in the Cotswold Water Park. The project, which comprises members of both the Wiltshire and Gloucestershire Bat Groups, aims to support bat conservation across the Cotswold Water Park, in conjunction with the Society, and contributing the new grouped Species Action Plan for Bats in the CWP Biodiversity Action Plan. Progress since 2005 has included:

- Transect surveys have been carried out on 29 sites in total and have shown that bat activity in the CWP is extremely high around wetland sites, and comparatively less on farmland
- At the end of 2007, the 13th species of bat had been recorded in the CWP – a Greater Horseshoe, near Fairford
- New Nathusius' Pipistrelle records have been gained from around Lake 74 near Ashton Keynes, and it is thought that this species may now actually be breeding in the area
- The Project has erected over 170 Schwegler woodcrete bat boxes since 2005, and 43% of the boxes showed evidence of usage in 2007

Contact Gareth Harris – gareth.harris@waterpark.org for more information about the Bat Initiative.

Taking the Wiltshire BAP Bats SAP Forwards

A Bats Species Action Plan Working Group has been set up to take the Bats SAP forwards. It will be led by Purgle Linham from the Wiltshire and Swindon Biological Records Centre.

Links with existing Plans

UK BAP

There are currently SAPs in the UK BAP for Pipistrelle, Greater Horseshoe, Barbastelle, Lesser Horseshoe and Bechstein's Bats

South West Biodiversity Action Plan

Species Action Plan for Pipistrelle Bats – download from www.swbiodiversity.org.uk

Other sections of the Wiltshire BAP

As a group bats are unusual in their interaction with people, through their reliance on buildings and their need for a mosaic of habitats to provide them with necessary food and shelter. Therefore links must be made with all of the Habitat Action Plans in the Wiltshire BAP.

Cotswold Water Park BAP

Group SAP for Bats

Center Parcs BAP

Targets 1-7 for Common Pipistrelle, Soprano Pipistrelle, Daubenton's, Brown Long-eared Bat, Noctule, Serotine and Whiskered/Brandts bats

References:

The UK BAP Species Action Plans for Barbastelle, Bechstein's, Pipistrelle, Greater and Lesser Horseshoe can be viewed on the UK BAP website: www.ukbap.org.uk. They were originally published in the UK Biodiversity Group Tranche 2 Action Plans – Volume I (June 1998, Tranche II, vol I, p.35 (Barbastelle), p.39 (Bechstein's), p.89 (Pipistrelle), p.90 (Greater Horseshoe), p.43 (Lesser Horseshoe).

Greenaway, F. & Hutson, A.M. (1990) *A Field Guide to British Bats*. Bruce Coleman Books

Dillon, P. (1997) *Mammals in Wiltshire*. Wiltshire Archaeological and Natural History Society

Swindon Biodiversity Action Plan (2005) Swindon Biodiversity Partnership

Wiltshire Biodiversity Action Plan (2002) Wiltshire Biodiversity Partnership

To view SAC and SSSI citations go to the Natural England website – www.naturalengland.org.uk. The JNCC website also provides more information on SACs – www.jncc.org.uk.

Wiltshire BAP Bats Species Action Plan – Targets and Actions

Objective BO1: Maintain and where possible increase existing bat populations						
Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
BT1: Ensure within the planning system, the protection of existing roosts and associated habitat	Systems are implemented to ensure that planning applications affecting bats and bat roosts are consistently dealt with across development control teams. (WCC - District Ecologists)	BA1: District Ecologists work with planning authorities to agree a system for considering bats consistently across planning applications	Validation checklists in place	WCC (District Ecologists), LPAs (Development Control teams), WSBRC, WWT	2008	
		BA2: To provide advice to planners and developers on mitigation and enhancement for bats in appropriate SPD and/or pre-application guidance	SPD and/or pre-application guidance includes advice for planners and developers	WCC (County and District Ecologists), LPAs (Team Leaders-Development Control & Forward Planning)	2010	
		BA3: Ensure that habitat enhancement for all developments contributes to bat habitat connectivity on a county wide scale.	LA ecologists ensure that enhancement is designed in line with Bat SAP targets, by approving suitable mitigation and enhancement for all developments.	WCC (County and District Ecologists)	Implement by 2008, and continue annually	CWP BAP (BAT-04)
		BA4: Where mitigation within Wiltshire County Council developments (excluding domestic and small commercial), is necessary in order to protect bats and their roosts, the effectiveness of the mitigation is determined by follow up monitoring	Evaluation of effectiveness of mitigation measures is determined through follow up on 10% of WCC developments per year affecting bats	WCC (County Ecologist), LPAs (Development Control Teams)	Implement by 2009, and continue annually	
		BA5: Provide suitable guidance for planners on interpretation of the Habitats Regulations focused on areas of large developments close to the bat SACs (Bath and Bradford on Avon Bats and Chilmark Quarries).	Awareness raised and guidance adopted in specific planning procedures where appropriate	NE, WCC (County and District Ecologists)	2009	
		BA6: Collate existing information on key flight lines and feeding areas within 10km radius of SSSI (components of SAC) boundaries and disseminate as appropriate	Collate existing data and produce report relating to bat SAC sites in Wiltshire to draw out information useful for forward planning and development control	WCC (County Ecologist), WSBRC, NE (Batscapes)	2008 and then one per year	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
BT2: All known nationally and internationally important populations are protected	All known nationally/ internationally important sites are designated for at least SSSI status (NE)	BA7: NE local team to designate Savernake Tunnel and Gripwood Quarry as SSSIs for bat interest	Sites designated	NE	By 2012	
BT3: Increase viability of nationally and internationally important populations in Wiltshire	Measure 1: 2 habitat areas (key flight lines, or feeding areas of importance) identified and targeted by 2016 (Bats SAP Working Group) Measure 2: Bat-specific habitat enhancements made in the 1km zone around at least 4 major bat roost populations (NE)	BA8: Leading on from collation of existing information at BA6, prioritise 2 habitat areas for further action. Seek funding to further knowledge of how Wiltshire habitats are used by bat populations of conservation concern	Funding achieved and project implemented	Bats SAP Working Group, WCC (County Ecologist), WSBRC, NE	2010	
		BA9: For major bat roost populations identify habitat creation/ enhancement/ restoration required to improve habitat connectivity and improve foraging opportunities through agri-environment schemes, prioritising the areas up to 1 km from the roosts	Report produced outlining habitat management and enhancements for bats	NE, Bats SAP Working Group, local bat workers	2011	All WBAP HAPs; CWP BAP (BAT-06)
		BA10: Undertake habitat works identified above	Works implemented	NE, Bats SAP Working Group, local bat workers	2016	All WBAP HAPs

Objective BO2: Increase awareness and understanding of all bat species among all sectors of society

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
BT4: Volunteer capacity is sufficient to undertake roost visits to all relevant Batline or BCT enquiries	A bat worker carries out a roost visit wherever required (number of volunteers is not a limiting factor) (NE)	BA11: Recruit 5 new licensed bat workers to undertake roost visits on behalf of Natural England (Batline or BCT enquiries)	5 new volunteers by 2010	NE	2010	Swindon BAP Bats SAP (B3)
BT5: Raise awareness of bat conservation in Wiltshire	6 workshops undertaken by 2012	BA12: BCT workshops held in Wiltshire for members of the construction industry, developers, architects, tree workers and others, promoting bat awareness and conservation	2 workshops by 2012	Bat SAP WG, NE, WCC (County Ecologist), local bat workers	2012	

Target	Target Measure	Action	Action Measure	Partners	Deadline	Links
		BA13: Undertake 2 workshops for trainee bat workers to gain the Bat Roost Visitor Licence (domestic bat enquiries)	2 workshops by 2012	NE , WCC (County Ecologist), local bat workers	2012	
		BA14: Undertake bat walks aimed at members of the general public to raise awareness about bats	8 bat walks by 2010	Bat SAP working group , WWT, CWP Society, Five Rivers Bat Group	2012	Swindon BAP Bats SAP (B7); CWP BAP (BAT 13)

Individual contacts for each organisation listed in the "Partners" column and involved in delivering the Bats Species Action Plan:

Organisation	Representatives
Cotswold Water Park Society	Gareth Harris
Five Rivers Bat Group	Phil Smith
Natural England	Katie Lloyd, Stephanie Payne
WSBRC	Purgle Linham
Wiltshire County Council	Fiona Elphick (County Ecologist), Louisa Kilgallen and Abigail Sanders (District Ecologists)
Wiltshire Wildlife Trust	Bill Jenman
Wiltshire Greater Horseshoe Bat Project	Fiona Mathews

Section Three

Species

Species in Wiltshire

Wiltshire has a rich diversity of habitats, and this is reflected in the wide variety of species found in the county. 191 of the species on the new UK BAP Priority List are known to be found within Wiltshire, and the county is a stronghold for many of these. For example the population of Marsh Fritillary found on Salisbury plain is of national and European importance. Wiltshire is also of particular importance for several species groups, including farmland birds, calcareous and woodland butterflies, bees and bats.

The need to revise the 2002 Species List

Coverage of species under the Wiltshire BAP 2002 was inconsistent. The BAP contained a list of species, but not all species mentioned in the BAP were on this list, and thus it was unclear which species qualified as a Wiltshire BAP species. In addition the new UK BAP Priority Species List was published in 2007, with the number of Priority Species having increased from 577 to 1149, and 123 species removed. Therefore it was clear that the Wiltshire BAP species list needed to be reviewed with this in mind.

The Wiltshire BAP species list has therefore been revised in order to produce a more comprehensive and clearly defined list of priority species in the county. There is no longer a list of species under each HAP - instead all required information can be found in the Wiltshire BAP species list, including the HAPs that the species are covered under. Where there are not specific actions or targets for a particular species under a HAP, it is thought that the steps that are being taken to conserve the habitat it is found in, will also be sufficient for the conservation of that species. If it becomes apparent over the course of a year that individual actions are required for a specific species, these can be added at the BAP yearly update.

Wiltshire BAP Species:

A species found in Wiltshire, and having either:

- National priority - the species is a priority species under the UK BAP
- Local priority – other species considered as a priority in Wiltshire, including county notables.

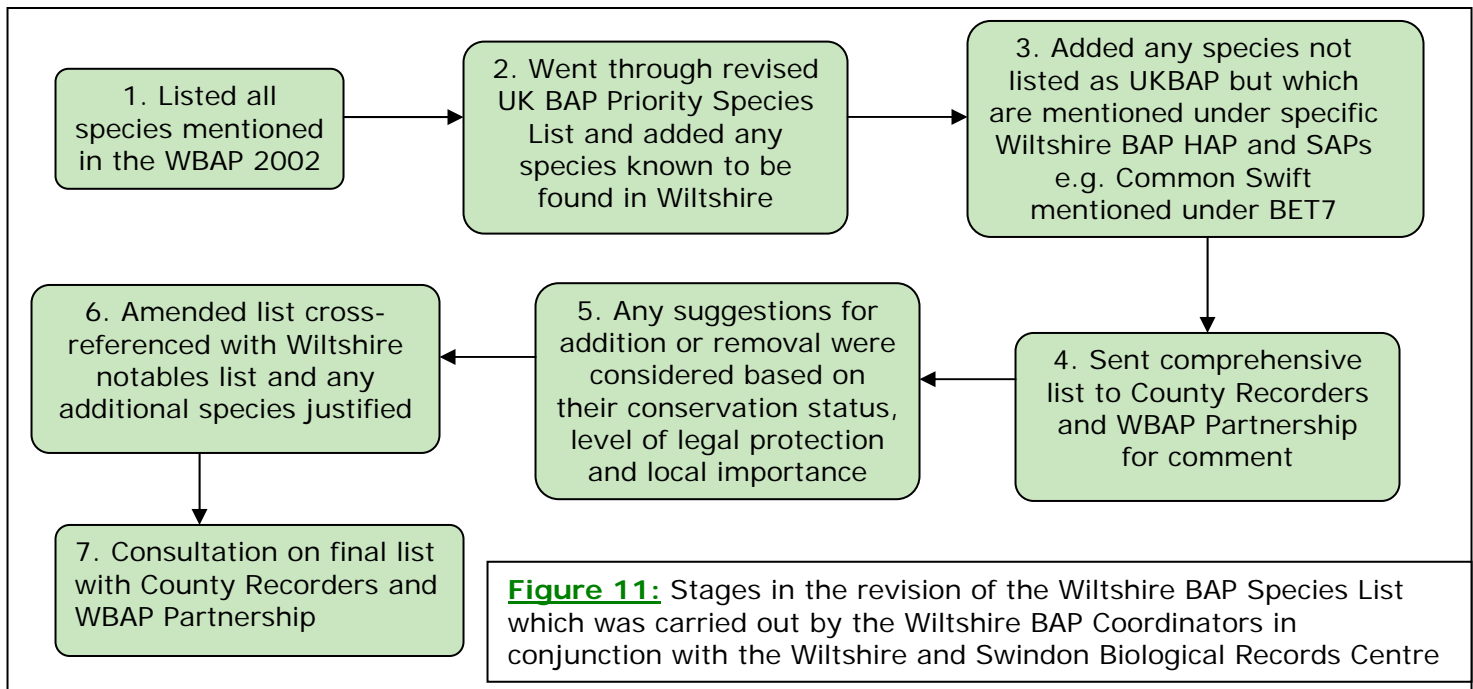
In order to help draw up a meaningful species list for the Wiltshire BAP, the definition shown above was drawn up. In addition the justification for the addition of each species to the list has now been included in the list.

The Revised Species List

Suggested BAP species were justified depending on their conservation status and level of legal protection both locally and nationally. Species were also included depending on their local importance. An example of local importance is the Adonis Blue, which is a highly restricted species breeding on unimproved chalk grassland. It had been removed as a priority species from the revised UK BAP, however, it is found chiefly in only a few counties - one of which is Wiltshire - and it was therefore felt that due to its local importance this species should be included as a Wiltshire BAP species.

178 species which were not present on the 2002 Wiltshire BAP species list have now been added to the list. 51 species have been removed. This brings the total number of species listed as Wiltshire priorities to 260.

All bat species found in Wiltshire have been included in the BAP under the group SAP for bats. Originally the Bats SAP only covered a restricted number of bat species.



Interpretation of the new Wiltshire BAP Species List

Column 4: "Justification": This column provides information about the status and protection that each species receives.

Status and Protection categories

Wildlife and Countryside Act, 1981 (W&CA)

Schedule 1: Birds which are protected by special penalties

- Part 1 ((1)): at all times

Schedule 5: Protection for Wild animals

- Section 9 (S.9)
 - Part 1 ((1)): against intentional killing, injuring, taking
 - Part 2: against possession or control (live or dead animal, part or derivative)
 - Parts 4 (a) and (b): against disturbance of animal occupying such a structure or place
 - Part 5 (a): against selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative)
 - Part 5(b): against advertising for buying or selling such things

Schedule 8: Protection for Wild Plants

- Section 13
 - Part 1(a) against intentional picking, uprooting or destruction
 - Part 2 (a) against selling, offering for sale, possessing or transporting for the purpose of sale, any plant (live or dead, part or derivative)
 - Part 2(b) against advertising for buying or selling

Joint Nature Conservation Committee (JNCC) Status Codes

Category	Designation	Code
Rare & Scarce Species	Nationally Notable	NN

Category	Designation	Code
Rare & Scarce Species	Nationally Notable a	Na
Rare & Scarce Species	Nationally Notable b	Nb
Rare & Scarce Species	Nationally Rare	NR
Rare & Scarce Species	Nationally Scarce	NS
Global Red List	Critically Endangered	CR
Global Red List	Endangered	EN
Global Red List	Vulnerable	VU
Global Red List	Near Threatened	NT
Red Listing based on pre 1994 IUCN guidelines	Rare	Rare
Red Data Category - birds	Bird Population Status: Red	Red List
Red Data Category - birds	Bird Population Status: Amber	Amber List

Other Categories:

UKBAP

Those species listed under the UK BAP Priority List are stated as being UKBAP. Those species which were added at the 2007 update of the national Priority List are stated as being New UKBAP. A full list is available from www.ukbap.org.uk.

County Notable

All species in the list which are UKBAP and/or W&CA are also County Notables (this is not stated explicitly). Where species in the list are not UKBAP or W&CA, but are County Notables, this is stated explicitly.

Rare Plant Register (RPR)

The Rare Plant Register has now been completed for Wiltshire, and contains details of the rarest native species in the county. This includes

- Any plant that is nationally rare, or threatened (i.e. included in the Vascular Plant Red Data list)
- Any plant that is nationally scarce
- Any plant that is rare or scarce in Wiltshire

WBAP

Some species have specific targets and actions under one or more of the Wiltshire BAP (WBAP) HAP and SAPs, and therefore are included on the species list regardless of their status.

Column 5: This column provides quick reference to which species in the list are on the new UK BAP Priority List.

(added) - Was added to the new UK BAP priority list in 2007

(removed) - Was removed from the UK BAP priority list in 2007, but was on the previous UK Priority List, and has been retained in the WBAP.

Column 6: 'WBAP 2002' indicates species, which appeared in the 2002 Wiltshire BAP. For quick reference, those species which are highlighted are new additions to the Wiltshire BAP Species List.

 New Wiltshire BAP species

Column 7: 'Notes': Any other relevant notes. For example on habitat, abundance in Wiltshire, location in Wiltshire and alternative names

Column 8, 9, 10: 'HAP': The Habitat Action Plan under which the species is covered (if not through specific actions for the individual species, through actions made to conserve its habitat).

Wiltshire BAP Species List

Key

 New Wiltshire BAP species

HAPs and SAPs – Habitat and Species Action Plans

	R&S - Rivers and Streams;
	SOW - Standing Open Water;
	Farm - Farmland Habitats;
	Calc - Calcareous Grassland;
	Neut - Neutral Grassland;
	WdInd - Woodland;
	WP - Wood-pasture, Parkland and Ancient Trees;
	Hedg - Hedgerows;
	BE - Built Environment;
	RV - Road Verges;
	Orch - Orchards;
	Heath - Heathland
	Bats – Bats (SAP)

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans			
Mammals	<i>Arvicola terrestris</i>	Water Vole	W&CA (Schedule 5 S.9); UK BAP; action in WBAP R&S and SOW	Y	Y	Water voles themselves are now newly protected under W&CA Schedule 5 (section 9) rather than just water vole habitat as previously	R&S	SOW		
Mammals	<i>Barbastella barbastellus</i>	Barbastelle Bat	W&CA Schedule 5; UK BAP; VU	Y	Y	See Bats SAP explanatory text	Bats			
Mammals	<i>Eptesicus serotinus</i>	Serotine Bat	W&CA Schedule 5	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Erinaceus europaeus</i>	West European Hedgehog	UK BAP	Y	N	Hedgehogs have declined nationally by around 20% 2001-2004	BE			
Mammals	<i>Lepus europaeus</i>	Brown Hare	UK BAP; action in WBAP Farmland HAP	Y	Y	See Neutral Grassland explanatory text	Farm	Calc	Neut	
Mammals	<i>Lutra lutra</i>	European Otter	W&CA Schedule 5; UK BAP; action in WBAP R&S	Y	Y		R&S	SOW		

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans			
Mammals	<i>Micromys minutus</i>	Harvest Mouse	New UK BAP; action in WBAP Farmland HAP	Y (added)	N		Farm			
Mammals	<i>Muscardinus avellanarius</i>	Dormouse	W&CA Schedule 5; UK BAP	Y	Y	See Woodland HAP explanatory text	WdInd	WP	Hedg	
Mammals	<i>Mustela putorius</i>	Polecat	New UK BAP	Y (added)	N		WdInd	Farm		
Mammals	<i>Myotis bechsteinii</i>	Bechstein's Bat	W&CA Schedule 5; UK BAP; VU	Y	Y	See Bats SAP explanatory text	Bats			
Mammals	<i>Myotis brandtii</i>	Brandt's Bat	W&CA Schedule 5	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Myotis daubentonii</i>	Daubenton's Bat	W&CA Schedule 5	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Myotis mystacinus</i>	Whiskered Bat	W&CA Schedule 5	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Myotis natterei</i>	Natterer's Bat	W&CA Schedule 5	N	Y	See Bats SAP explanatory text	Bats			
Mammals	<i>Neomys fodiens</i>	Water Shrew	County Notable	N	N		R&S	SOW		
Mammals	<i>Nyctalus leisleri</i>	Leisler's Bat	W&CA Schedule 5; UK BAP;	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Nyctalus noctula</i>	Noctule Bat	W&CA Schedule 5	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle	W&CA Schedule 5	N	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	W&CA Schedule 5	N (removed)	Y	See Bats SAP explanatory text	Bats			
Mammals	<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	W&CA Schedule 5; UK BAP	Y	Y	See Bats SAP explanatory text	Bats			
Mammals	<i>Plecotus auritus</i>	Brown Long-eared Bat	W&CA Schedule 5; UK BAP;	Y (added)	N	See Bats SAP explanatory text	Bats			
Mammals	<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	W&CA Schedule 5; UK BAP;	Y	Y	See Bats SAP explanatory text	Bats			
Mammals	<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	W&CA Schedule 5; UK BAP;	Y	Y	See Bats SAP explanatory text	Bats			
Birds	<i>Acrocephalus palustris</i>	Marsh Warbler	W&CA Schedule 1 (1) (part); UK BAP; Red List	Y	N		R&S			
Birds	<i>Alauda arvensis</i>	Skylark	UK BAP; Red List; action in WBAP Farmland HAP	Y	Y		Farm	Calc	Neut	
Birds	<i>Alcedo atthis</i>	Kingfisher	W&CA Schedule 1,(1) (part); Amber List	N	Y		R&S			
Birds	<i>Anthus trivialis</i>	Tree Pipit	UK BAP Amber List	Y	N	Significant population on DTE SP	Calc	WdInd		
Birds	<i>Apus apus</i>	Common Swift	Action in WBAP BE HAP	N	N		BE			
Birds	<i>Asio flammeus</i>	Short-eared Owl	Amber List	N	N		Calc			
Birds	<i>Asio otus</i>	Long-eared Owl	County Notable	N	N		WdInd			
Birds	<i>Aythya marila</i>	Scaup	W&CA Schedule 1(1) (part); New UK BAP; Amber List	Y (added)	N		SOW	R&S		
Birds	<i>Botaurus stellaris</i>	Bittern	W&CA Schedule 1(1); UK BAP; Red List; New UK BAP	Y	N	Potential habitat creation (reedbed) outside CWP	SOW	R&S		

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans			
Birds	<i>Burhinus oedichnemus</i>	Stone Curlew	W&CA Schedule 1(1) (part); UK BAP; Red List; Action in WBAP Farmland	Y	Y		Farm	Calc		
Birds	<i>Caprimulgus europaeus</i>	Nightjar	UK BAP; Red List; Action in WBAP Woodland HAP	Y	Y	See Woodland HAP explanatory text	WdInd			
Birds	<i>Carduelis cabaret</i>	Lesser Redpoll	New UK BAP; Amber list	Y (added)	N		WdInd			
Birds	<i>Carduelis cannabina</i>	Linnet	UK BAP; Red List	Y	Y		Farm	Hedg	Calc	
Birds	<i>Carduelis flavirostris</i>	Twite	New UK BAP; Red List	Y (added)	N		Farm	Calc		
Birds	<i>Cinclus cinclus</i>	Dipper	County Notable	N	Y		R&S	BE		
Birds	<i>Circus cyaneus</i>	Hen Harrier	W&CA Schedule 1(1) (part); Red List	N	Y		Calc			
Birds	<i>Circus pygargus</i>	Montagu's Harrier	Amber List	N	N	Significant proportion of UK population in Wilts	Calc	Farm		
Birds	<i>Coccothraustes coccothraustes</i>	Hawfinch	New UK BAP; Amber List	Y (added)	N		WdInd	WP	BE	
Birds	<i>Coturnix coturnix</i>	Quail	W&CA Schedule 1(1) (part); Red List	N	Y		Farm	Calc		
Birds	<i>Crex crex</i>	Corncrake	W&CA Schedule 1(1) (part). UK BAP; Red List	Y	N		Farm			
Birds	<i>Cuculus canorus</i>	Cuckoo	New UK BAP; Amber List	Y	N		Calc	WdInd	SOW	
Birds	<i>Delichon urbicum</i>	House Martin	WBAP; WBAP BE HAP	N	N		BE			
Birds	<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	New UK BAP; Red List	Y (added)	N		WdInd	Orch		
Birds	<i>Emberiza cirius</i>	Cirl Bunting	W&CA Schedule 1(1) (part); UK BAP; Red List	Y	N	Require mixed habitat.	Farm	Hedg	Neut	
Birds	<i>Emberiza citrinella</i>	Yellowhammer	New UK BAP; Red List	Y	N	Wiltshire has one of the biggest county populations in UK	Farm	Hedg		
Birds	<i>Emberiza schoeniclus</i>	Reed Bunting	UK BAP; Red List	Y	Y		R&S	SOW	Hedg	
Birds	<i>Emberiza calandra</i>	Corn Bunting	UK BAP; Action in WBAP Farmland HAP; Red List.	Y	Y		Farm	Calc		
Birds	<i>Falco columbarius</i>	Merlin	W&CA Schedule 1(1) (part); Amber List;	N	Y		Calc			
Birds	<i>Gallinago gallinago</i>	Snipe	Amber List; Action in WBAP Farmland HAP	N	Y		Farm	Neut		
Birds	<i>Gavia arctica</i>	Black-throated Diver	New UK BAP; Amber list	Y (added)	N		SOW			
Birds	<i>Hirundo rustica</i>	Barn Swallow	Action in WBAP BE HAP	N	N		BE			
Birds	<i>Jynx torquilla</i>	Wryneck	W&CA Schedule 1(1) (part); UK BAP; Red List	Y	N		WdInd			
Birds	<i>Lanius collurio</i>	Red-backed Shrike	W&CA Schedule 1(1) (part); UK BAP; Red List	Y	N		Farm	BE		
Birds	<i>Larus argentatus argenteus</i>	Herring Gull	New UK BAP; Amber List	Y	N	Declining on coast due to reduction in fish numbers, now breeding in Wiltshire	BE			

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans			
Birds	<i>Limosa limosa</i>	Black-tailed Godwit	W&CA Schedule 1 (1); UK BAP; Red List	Y	N		SOW			
Birds	<i>Locustella luscinioides</i>	Savi's Warbler	New UK BAP; W&CA Schedule 1(1) (part); Red list	Y (added)	N		R&S	SOW		
Birds	<i>Locustella naevia</i>	Grasshopper Warbler	New UK BAP; Red List	Y	N	Largest lowland UK population on DTE SP	Calc			
Birds	<i>Lullula arborea</i>	Woodlark	W&CA Schedule 1 (1) (part); UK BAP	Y	Y		WdInd	WP		
Birds	<i>Luscinia megarhynchos</i>	Nightingale	Amber List	N	Y	Significant proportion of SW regional population in Wiltshire - management of scrub	WdInd			
Birds	<i>Melanitta nigra</i>	Common Scoter	W&CA Schedule 1(1) (part); UK BAP; Red List	Y	N		SOW			
Birds	<i>Motacilla flava</i>	Yellow Wagtail	New UK BAP; Amber List; Action in WBAP Farmland HAP	Y (added)	N		Farm			
Birds	<i>Muscicapa striata</i>	Spotted Flycatcher	UK BAP; Red List	Y	Y		WdInd	Hedg		
Birds	<i>Numenius arquata</i>	Curlew	New UK BAP; Amber List; Action in WBAP Farmland HAP	Y (added)	Y		Farm	Neut		
Birds	<i>Otis tarda</i>	Great Bustard	VU; Locally important; Action in WBAP Farmland HAP	N	N	Former breeder, then vagrant; reintroduction Salisbury plain begun.	Farm	Calc		
Birds	<i>Passer domesticus</i>	House Sparrow	New UK BAP; Red list; Action in WBAP BE HAP	Y (added)	N		BE			
Birds	<i>Perdix perdix</i>	Grey Partridge	UK BAP; Red List; Action in WBAP Farmland HAP	Y	Y		Farm	Hedg	Calc	
Birds	<i>Phalaropus lobatus</i>	Red-necked Phalarope	W&CA Schedule 1(1) (part); UK BAP; Red List	Y	N		SOW			
Birds	<i>Phoenicurus ochruros</i>	Black Redstart	W&CA Schedule 1(1) (part); Amber List; Action in WBAP BE HAP	N	N		BE			
Birds	<i>Phylloscopus sibilatrix</i>	Wood Warbler	New UK BAP; Amber List; Locally important	Y (added)	N		WdInd			
Birds	<i>Poecile montanus</i>	Willow Tit	New UK BAP; Red List; Action in WBAP Woodland HAP	Y (added)	N		WdInd			
Birds	<i>Poecile palustris</i>	Marsh Tit	New UK BAP; Red List	Y	N		WdInd			
Birds	<i>Regulus ignicapilla</i>	Firecrest	Amber List	N	N	Important populations in New Forest and at Longleat	WdInd			
Birds	<i>Pyrrhula pyrrhula</i>	Bullfinch	UK BAP; Red List	Y	Y		Hedg			
Birds	<i>Saxicola rubetra</i>	Whinchat	County Notable	N	N	Significant proportion of SW Regional population in Wilts on DTE SP	Calc			
Birds	<i>Sterna dougallii</i>	Roseate Tern	W&CA Schedule 1(1) (part). UK BAP; Red List	Y	N		SOW			
Birds	<i>Streptopelia turtur</i>	Turtle dove	UK BAP; Red List; Action in WBAP Farmland HAP	Y	Y		Farm	Hedg		
Birds	<i>Sturnus vulgaris</i>	Starling	New UK BAP; Red List; Action in WBAP BE HAP	Y (added)	N	Synonym used in JNCC taxon list <i>Sturnus vulgaris</i> subsp. <i>vulgaris</i>	BE	Farm		

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Birds	<i>Tringa totanus</i>	Redshank	County Notable; Action in WBAP Farmland HAP	N	N		Farm			
Birds	<i>Turdus philomelos</i>	Song thrush	UK BAP; Red List	Y	Y		Farm	BE	WdInd	Hedg
Birds	<i>Turdus torquatus</i>	Ring Ouzel	New UK BAP; Red list	Y (added)	N		Farm	Calc		
Birds	<i>Tyto alba</i>	Barn Owl	W&CA Schedule 1(1) (part); Amber List	N	Y		Farm	BE	Calc	
Birds	<i>Vanellus vanellus</i>	Lapwing	New UK BAP; Amber List	Y (added)	Y		Farm	Neut		
Reptiles	<i>Anguis fragilis</i>	Slow Worm	W&CA Schedule 5, S.9(1) (part); S.9(5); UK BAP	Y	N		WP	BE		
Reptiles	<i>Natrix natrix</i>	Grass Snake	W&CA Schedule 5, S.9(1) (part); S.9(5); UK BAP	Y	N		SOW	R&S		
Reptiles	<i>Vipera berus</i>	Adder	W&CA Schedule 5, S.9(1) (part); S.9(5). UK BAP	Y	N		Heath	BE	Calc	
Amphibians	<i>Bufo bufo</i>	Common Toad	UK BAP	Y	N		SOW			
Amphibians	<i>Triturus cristatus</i>	Great Crested Newt	W&CA Schedule 5; UK BAP	Y	Y		Hedg	SOW		
Amphibians	<i>Triturus helveticus</i>	Palmate Newt	W&CA Schedule 5, S.9(5) (part); Action in WBAP SOW HAP	N	N		SOW			
Fish	<i>Anguilla anguilla</i>	European Eel	New UK BAP	Y (added)	N		R&S			
Fish	<i>Anguis fragilis</i>	River Lamprey	New UK BAP	Y (added)	N		R&S			
Fish	<i>Cottus gobio</i>	Bullhead	County Notable	N	Y		R&S			
Fish	<i>Lampetra planeri</i>	Brook Lamprey	County Notable	N	Y		R&S			
Fish	<i>Petromyzon marinus</i>	Sea Lamprey	New UK BAP	Y (added)	Y		R&S			
Fish	<i>Salmo salar</i>	Atlantic Salmon	New UK BAP	Y (added)	Y		R&S			
Fish	<i>Salmo trutta fario</i>	Brown Trout	New UK BAP	Y (added)	Y		R&S			
Fish	<i>Thymallus thymallus</i>	Grayling	County Notable	N	Y		WdInd			
Bees	<i>Andrena lathyri</i>	Mining Bee	EN; County Notable	N (removed)	Y	Only recorded UK site was in Wilts. Removed from UK BAP as thought no longer present	Calc			
Bees	<i>Bombus humilis</i>	Brown-banded Carder Bee	UK BAP	Y	Y		Calc			
Bees	<i>Bombus sylvarum</i>	Shrill Carder Bee	UK BAP; Nb	Y	Y		Calc			
Bees	<i>Nomada armata</i>	A nomad bee	UK BAP; EN	Y	Y		Calc			
Bees	<i>Nomada ferruginata</i>	A nomad bee	EN	N (removed)	Y	Previously <i>N.xanthosticta</i>	Calc			
Beetles	<i>Agabus brunneus</i>	Brown Diving Beetle	UK BAP; VU	Y	N		SOW	R&S		
Beetles	<i>Anisodactylus nemorivagus</i>	Heath Short-Spur	UK BAP; Na	Y	N		Heath			
Beetles	<i>Cryptocephalus</i>		UK BAP; VU	Y	N		WdInd			

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	<i>sexpunctatus</i>												
Beetles	<i>Donacia bicolora</i>	Two-tone Reed beetle	UK BAP; VU	Y	N		SOW	R&S					
Beetles	<i>Hydroporus rufifrons</i>	Oxbow Diving Beetle	UK BAP; VU	Y	N		SOW	R&S					
Beetles	<i>Lebia cyanocephala</i>		New UK BAP; EN	Y (added)	N		WdInd	Hedg					
Beetles	<i>Lucanus cervus</i>	Stag Beetle	W&CA S.9(5); UK BAP; Nb	Y	Y		WdInd	Heath	WP	Hedg			
Beetles	<i>Malachius aeneus</i>	Scarlet Malachite Beetle	UK BAP; Rare	Y	N		Orch	WP	Calc	Neut			
Butterflies	<i>Apatura iris</i>	Purple Emperor	W&CA Schedule 5 S.9(5); County Notable	N	N	Locally scarce. Important populations in Bentley Wood, Grovely Wood and Savernake Forest. Under-recorded.	WdInd						
Butterflies	<i>Boloria euphrosyne</i>	Pearl-bordered Fritillary	W&CA Schedule 5 S.9(5); UK BAP	Y	Y	Coppiced woodland. Restricted to one reasonable population in Bentley Wood. Small populations in Blackmoor Copse and Hound Wood. Now extinct in North and West Wilts.	WdInd						
Butterflies	<i>Boloria selene</i>	Small Pearl-bordered Fritillary	New UK BAP	Y (added)	Y	Coppiced woodland Restricted to Bentley Wood. The county's most localised and vulnerable butterfly species.	WdInd						
Butterflies	<i>Cupido minimus</i>	Small Blue	W&CA Schedule 5 S.9(5); New UK BAP	Y (added)	N	Kidney Vetch. Morgan's Hill, West Yatton Down. It is probable that many small colonies have been 'lost' in recent years due to habitats becoming unsuitable.	Calc	Neut					
Butterflies	<i>Erynnis tages</i>	Dingy Skipper	New UK BAP	Y (added)	Y	Widespread in Wilts with a few large populations on grassland sites. Has all but disappeared from woodlands where in the 1980s it frequently occurred in rides and clearings.	Calc	WP					
Butterflies	<i>Eurodryas aurinia</i>	Marsh Fritillary	W&CA Schedule 5 S.9(5) (1998 full protection); UK BAP	Y	Y	Wiltshire is a British stronghold. The population on Salisbury Plain is of national and European importance. Populations have thrived in the last few years.	Neut	Calc					
Butterflies	<i>Hamearis lucina</i>	Duke of Burgundy	W&CA Schedule 5 S.9(5); New UK BAP	Y (added)	Y	Rapidly declining and subject to a detailed survey in the county which started in 2006. Indications that a decline of c.70% has occurred since the mid-1980s.	Calc	WdInd					
Butterflies	<i>Hesperia comma</i>	Silver-spotted	W&CA S.5 (9.5 a&b); Rare;	N	Y	Considered well established in	Calc						

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans			
		Skipper	County Notable	(removed)		other counties to which warranted its removal from UKBAP list. Restricted to 3 sites in Wilts: Porton Down (one of the largest populations in England), Dean Hill and Martin Down				
Butterflies	<i>Lasiommata megera</i>	Wall	New UK BAP	Y (added)	Y	Much scarcer now than in the 1980s. Becoming rare inland in southern England although still fairly common in many coastal areas.	Calc			
Butterflies	<i>Limenitis camilla</i>	White Admiral	New UK BAP	Y (added)	Y	Has been virtually absent from Wilts for several years at various times in the past	WdInd			
Butterflies	<i>Lysandra bellargus</i>	Adonis Blue	W&CA Schedule 5 S.9(5); County Notable	N (removed)	Y	One food plant - Horseshoe Vetch. Has done very well in the last few years and naturally spread into small areas of suitable habitat in north Wiltshire. It is now widespread and fairly common on short grassland in the south of the county.	Calc			
Butterflies	<i>Lysandra coridon</i>	Chalkhill Blue	W&CA Schedule 5 S.9(5); County Notable	N	Y	In the recent past it was widespread and abundant in some huge colonies. Had a disastrous season in 2007, several colonies were small and may now be extinct.	Calc			
Butterflies	<i>Plebejus argus</i>	Silver-studded Blue	W&CA Schedule 5 S.9(5); UK BAP	Y	Y	Only known from near Pound Bottom in the extreme SE corner of Wiltshire in the New Forest heathlands.	Heath			
Butterflies	<i>Pyrgus malvae</i>	Grizzled Skipper	New UK BAP	Y (added)	N	A slow general decline has occurred over the last 20 years	Calc	Neut	WdInd	
Butterflies	<i>Satyrium w-album</i>	White Letter Hairstreak	New UK BAP	Y (added)	Y	Widespread throughout the county in small, discrete colonies, often on an isolated elm tree. Still very under-recorded.	WdInd			
Butterflies	<i>Thecla betulae</i>	Brown hairstreak	W&CA Schedule 5 S.9(5); New UK BAP	Y (added)	Y	Two stable populations (Braydon Forest area and Tidworth/Cholderton area). Eggs are destroyed by intensive hedgerow flailing.	Hedg	WdInd		
Butterflies	<i>Tymallus thymallus</i>	Grayling	New UK BAP	Y (added)	N	Now rare and localised. Two known colonies - one on the chalk on Enford Down, ATE, SP(C), where the colony appears to be stable (c.12 at peak) and one on heathland near Pound Bottom.	Heath	Calc		

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Crickets	<i>Decticus verrucivorus</i>	Wartbiter	W&CA Schedule 5; UK BAP; VU	Y	Y	Cherhill Down key reintroduction site	Calc				
Crustaceans	<i>Austropotamobius pallipes</i>	White-clawed Crayfish	W&CA Schedule 5 S.9(1) (part) and S.9(5); UK BAP; VU	Y	Y		R&S				
Damselflies	<i>Ceragrion tenellum</i>	Small Red Damselfly	County Notable	N	N		SOW				
Damselflies	<i>Ischnura pumilio</i>	Scarce Blue Tailed Damselfly	County Notable	N	N		SOW				
Dragonflies	<i>Cordulia aenea</i>	Downy Emerald	County Notable; WBAP SOW HAP	N	N		SOW				
Dragonflies	<i>Libellula fulva</i>	Scarce Chaser	Rare; WBAP R&S HAP	N	Y		R&S				
Dragonflies	<i>Orthetrum coerulescens</i>	Keeled Skimmer	County Notable	N	N		SOW				
Flies	<i>Asilus crabroniformis</i>	Hornet Robber Fly	UK BAP; NN	Y	Y		Calc				
Flies	<i>Doros profuges</i>	Phantom Hoverfly	UK BAP. VU	Y	Y	Synonym <i>D. conopseus</i>	WdInd	WP			
Flies	<i>Lipsothrix nervosa</i>	Southern Yellow Splinter (a crane fly)	UK BAP	Y	Y		WdInd	R&S			
Molluscs	<i>Vertigo moulinsiana</i>	Desmoulin's Whorl Snail	UK BAP; Rare	Y	Y		R&S	SOW			
Moths	<i>Adscita statices</i>	Forester	New UK BAP	Y (added)	N		Calc	Neut			
Moths	<i>Agonopterix atomella</i>	Greenweed Flat-body Moth	New UK BAP	Y (added)	N		Neut				
Moths	<i>Agonopterix capreolella</i>	Fuscous Flat-body Moth	New UK BAP	Y (added)	N		Heath				
Moths	<i>Agrotera nemoralis</i>	Beautiful Pearl	UK BAP; EN	Y	N		WdInd				
Moths	<i>Aleucis distinctata</i>	Sloe Carpet	UK BAP	Y	N		Hedg				
Moths	<i>Aplota palpella</i>	Scarce Brown Streak	UK BAP	Y	N		WP				
Moths	<i>Arctia caja</i>	Garden Tiger	New UK BAP	Y (added)	N	Was common in gardens but has suffered dramatic decline	BE	Neut			
Moths	<i>Catocala promissa</i>	Light Crimson Underwing	UK BAP; Rare	Y	Y	Found in SE of county. New Forest fringe	WdInd				
Moths	<i>Coleophora vibicella</i>	Large Gold Case-bearer	New UK BAP	Y (added)	N		Neut				
Moths	<i>Coleophora wockeella</i>	Betony Case-bearer	New UK BAP	Y (added)	N		WdInd				
Moths	<i>Cosmia diffinis</i>	White-spotted Pinion	UK BAP	Y	Y		WdInd	WP			
Moths	<i>Cossus cossus</i>	Goat Moth	New UK BAP	Y (added)	N		WdInd	WP	Farm		
Moths	<i>Cucullia lychnitis</i>	Striped Lychnis	UK BAP	Y	N		Calc	Neut	RV		
Moths	<i>Cyclophora</i>	Dingy Mocha	UK BAP; Rare	Y	N		Heath				

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	<i>pendularia</i>										
Moths	<i>Cyclophora porata</i>	False Mocha	New UK BAP	Y (added)	N		WdInd	Heath			
Moths	<i>Dycycla oo</i>	Heart Moth	UK BAP	Y	N		WP	WdInd			
Moths	<i>Grapholita pallifrontana</i>	Liquorice Piercer	New UK BAP	Y (added)	N		Calc				
Moths	<i>Hemaris tityus</i>	Narrow-bordered Bee Hawk	UK BAP	Y	Y	Food plant is Devils Bit Scabious	Neut	Calc			
Moths	<i>Hydrellia sylvata</i>	Waved Carpet	UK BAP	Y	N	Records in last five years (occurs in coppiced woods)	WdInd				
Moths	<i>Jodia croceago</i>	Orange Upperwing	UK BAP; Rare	Y	Y	Occurs open woodland/ woodland edges	WdInd				
Moths	<i>Minoa murinata</i>	Drab Looper	UK BAP	Y	Y	Associated with areas of recent felling and coppicing	WdInd				
Moths	<i>Noctua orbona</i>	Lunar Yellow Underwing	UK BAP	Y	Y		Calc	Heath			
Moths	<i>Oria musculosa</i>	Brighton Wainscot	UK BAP	Y	Y		Farm	Calc			
Moths	<i>Pareulype berberata</i>	Barberry Carpet	W&CA Schedule 5; UK BAP; EN	Y	Y		Hedg	WdInd			
Moths	<i>Pechipogon strigilata</i>	Common Fan-foot	UK BAP	Y	Y	Synonym is <i>Pechipogon strigilata</i>	WdInd				
Moths	<i>Polia bombycina</i>	Pale Shining Brown	UK BAP	Y	Y		Calc				
Moths	<i>Rheumaptera hastata</i>	Argent and Sable	UK BAP	Y	Y		Calc				
Moths	<i>Scotopteryx bipunctaria</i>	Chalk Carpet	UK BAP	Y	Y		Calc				
Moths	<i>Trichopteryx polycommata</i>	Barred Toothed Stripe	UK BAP	Y	Y		Calc				
Moths	<i>Tyta luctuosa</i>	Four-spotted	UK BAP; VU	Y	N		RV	BE	Farm		
Fungi	<i>Boletus pseudoregius</i>	The Pretender	New UK BAP	Y (added)	N		Hedg				
Fungi	<i>Boletus regius</i>	Royal Bolete	W&CA Schedule 8; New UK BAP	Y (added)	N		WdInd				
Fungi	<i>Cantharellus melanoxeros</i>	Blackening Chanterelle	New UK BAP	Y (added)	N		WdInd				
Fungi	<i>Chlorencoelia versiformis/ Chlorociboria versiformis</i>	Flea's Ear	New UK BAP	Y (added)	N		WdInd				
Fungi	<i>Cotylidia pannosa</i>	Woolly Rosette	New UK BAP	Y (added)	N		WdInd				
Fungi	<i>Hericium coralloides</i>	Coral Tooth	New UK BAP	Y (added)	N		WdInd				
Fungi	<i>Hericium erinaceum</i>	Bearded Tooth	W&CA Schedule 8; UK BAP;	Y	Y	Previously Hedgehog Fungus	WdInd				

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Fungi	<i>Hydnellum conrescens</i>	Zoned Tooth	New UK BAP	Y (added)	N		WdInd			
Fungi	<i>Microglossum olivaceum</i>	Olive Earthtongue	UK BAP	Y	Y		WdInd			
Fungi	<i>Mycena renati</i>	Beautiful Bonnet	New UK BAP	Y (added)	N		WdInd			
Fungi	<i>Poronia punctata</i>	Nail Fungus	UK BAP	Y	Y	Probably rarest fungi in Europe. Found in dung of horses feeding on unimproved pasture	Neut			
Fungi	<i>Psathyrella caput-medusae</i>	Medusa Brittlestem	New UK BAP	Y (added)	N		WdInd			
Fungi	<i>Sarcodontia crocea</i>	Orchard Tooth	New UK BAP	Y (added)	N		WdInd			
Fungi	<i>Sarcosphaera coronaria</i>	Violet Crowncup	New UK BAP	Y (added)	N		WdInd			
Fungi	<i>Stephanospora caroticolor</i>	Carrot False Truffle	New UK BAP	Y (added)	N		WdInd			
Fungi	<i>Tricholoma robustum</i>	Robust Knight	New UK BAP	Y (added)	N		WdInd			
Lichens	<i>Anaptychia ciliaris ssp. ciliaris</i>	A lichen	New UK BAP; VU	Y (added)		Found on 4 ash trees on Copehill Down. Potential to expand population by planting a line of ash adjacent to the existing old trees				
Lichens	<i>Bacidia incompta</i>	A lichen	UK BAP; VU	Y (SAP)	Y	Recorded in 10 10km squares including Savernake Forest	Hedg			
Lichens	<i>Caloplaca herbidella</i>	A lichen	New UK BAP; NR	Y (added)		No records found in 2007 in what was the previous southern England stronghold. Most previously identified trees were now too shaded. Wood-pasture restoration required.	WP			
Lichens	<i>Caloplaca luteoalba</i>	Orange-fruited Elm Lichen	UK BAP; NS; VU; W&CA (Schedule 8)	Y (SAP)		5 Records including Longleat, found mostly on dry bark of mature elms in parkland, old pasture or roadside locations. Not limited to elm trees.	WP			
Lichens	<i>Collema fragrans</i>	A lichen	New UK BAP; NS; EN	Y (added)		Spye Park and Savernake Elm, Ash, Beech and Field Maple bark (mostly veterans)	WdInd			
Lichens	<i>Enterographa sorediata</i>	A lichen	UK BAP; NR; NT	Y (SAP)		Savernake Ancient pasture, woodland and parkland on mature oak	WP			
Lichens	<i>Lecanora quercicola</i>	A lichen	New UK BAP; NS; NT	Y (added)		Broad-leaved mixed woodland	WdInd			
Lichens	<i>Lecanora sublivescens</i>	A lichen	New UK BAP; NS; NT	Y (added)		Also called <i>Lecanactis sublivescens</i> Well lit veteran oaks	WdInd			
Lichens	<i>Megalospora tuberculosa</i>	A lichen	New UK BAP; NS; NT	Y (added)	N	Cranborne Chase	WdInd			

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Lichens	<i>Opegrapha fumosa</i>	A lichen	NS	N	Y		WdInd			
Lichens	<i>Pertusaria velata</i>	A lichen	New UK BAP; NS; VU	Y (added)		Broad-leaved mixed woodland	WdInd			
Lichens	<i>Ramonia chrysophaea</i>	A lichen	New UK BAP; NS; NT	Y (added)		Savernake Broad-leaved mixed woodland	WdInd			
Lichens	<i>Ramonia nigra</i>	A lichen	New UK BAP; NR; CR	Y (added)		This species is new to Wiltshire and the site at Savernake is only the third site recorded outside the New Forest for this apparently rare and endemic species	WdInd			
Lichens	<i>Rinodina isidioides</i>	A lichen	New UK BAP; NS; NT	Y (added)		Possibly Savernake and Langley Wood - broad-leaved mixed woodland	WdInd			
Lichens	<i>Toninia sedifolia</i>	A lichen	New UK BAP	Y (added)			Calc			
Lichens	<i>Usnea articulata</i>	A lichen	New UK BAP; NT	Y (added)	N		WdInd	WP		
Lichens	<i>Usnea florida</i>	A lichen	New UK BAP	Y (added)		12 Sites - broad-leaved mixed woodland	WdInd			
Lichens	<i>Wadeana dendrographa</i>	A lichen	New UK BAP; NS; NT	Y (added)	N		WdInd			
Lichens	<i>Zamenhofia rosea</i>	A lichen	Locally important	N		Savernake				
Mosses	<i>Didymodon glaucus</i>	Glaucous Beard-moss	W&CA Schedule 8; UK BAP; NR; CR	Y	Y	Old synonym <i>Barbula glauca</i>	WdInd			
Mosses	<i>Weissia sterilis</i>		UK BAP; NS; VU	Y	N		Calc			
Spiders	<i>Centromerus serratus</i>	A money spider	New UK BAP	Y (added)	N	Found widely on Porton Down. Found in beech litter.	WdInd			
Spiders	<i>Meioneta mollis</i>	A money spider	New UK BAP	Y (added)	N	One known site - Blackmore Copse. Records from grassland, few from wet woodland.	WdInd	Calc	Neut	
Spiders	<i>Monocephalus castaneipes</i>	A money spider	New UK BAP	Y (added)	N	In the south often found in moss at tree bases.	WdInd	WP		
Spiders	<i>Ozyptila nigrata</i>	A crab spider	New UK BAP	Y (added)	N	Two sites - Rack Hill (N. Wilts) and Porton Down	Calc			
Spiders	<i>Philodromus margaritatus</i>	A crab spider	New UK BAP	Y (added)	N	Precise site unknown Found on tree trunks covered in lichen.	WdInd	WP		
Spiders	<i>Saarioa firma</i>	A money spider	New UK BAP	Y (added)	N	Only one known site - Savernake Forest. Generally found in damp situations often in moss.	WdInd	WP		
Vascular plants	<i>Adonis annua</i>	Pheasant's-eye	New UK BAP; NS; EN	Y (added)	Y		Farm			
Vascular plants	<i>Anthemis arvensis</i>	Corn Chamomile	EN; RPR	N	N		Farm			
Vascular plants	<i>Apera spica-venti</i>	Loose Silky-bent	NT; RPR	N	N		Farm			
Vascular plants	<i>Arabis glabra</i>	Tower Mustard	UK BAP; NS; EN	Y	Y		RV			
Vascular plants	<i>Astragalus danicus</i>	Purple Milk-vetch	New UK BAP; EN; RPR	Y (added)	N	Salisbury Plain	Calc			

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Vascular plants	<i>Blysmus compressus</i>	Flat-sedge	New UK BAP; VU	Y (added)	N	Marshy grassland	R&S	SOW		
Vascular plants	<i>Campanula patula</i>	Spreading Bellflower	New UK BAP; NS; EN; RPR	Y (added)	N	Only at Silkwood Arboretum	WdInd	Hedg		
Vascular plants	<i>Centaurea cyanus</i>	Cornflower	UK BAP	Y	Y		Farm			
Vascular plants	<i>Cephalanthera damasonium</i>		New UK BAP; VU	Y (added)	N		WdInd			
Vascular plants	<i>Chamaemelum nobile</i>	Chamomile	New UK BAP; VU	Y (added)	N		Farm	BE		
Vascular plants	<i>Clinopodium acinos</i>	Basil Thyme	New UK BAP; VU	Y (added)	N		Farm	BE	Calc	
Vascular plants	<i>Coeloglossum viride</i>	Frog Orchid	New UK BAP; VU	Y (added)	N	Designated synonym was <i>Dactylorhiza viridis</i> .	R&S	WdInd	SOW	
Vascular plants	<i>Cuscuta europaea</i>	Great Dodder	NS; RPR	N	N		R&S			
Vascular plants	<i>Dianthus armeria</i>	Deptford Pink	W&CA Schedule 8; UK BAP; NS	Y	N		Farm	RV	Hedg	
Vascular plants	<i>Euphrasia anglica</i>	Glandular Eyebright	New UK BAP; EN; RPR	Y (added)	N	One site in SSSI, not recorded since 1996	Calc			
Vascular plants	<i>Euphrasia pseudokernerii</i>	Chalk Eyebright	New UK BAP; NS; RPR	Y (added)	N	2 SSSI sites, no records since 1986.	Calc			
Vascular plants	<i>Filago vulgaris</i>	Common Cudweed	NT; RPR	N	N	Disturbed sandy ground	Farm			
Vascular plants	<i>Fumaria parviflora</i>	Fine-leaved Fumitory	NS; RPR	N	N		Farm			
Vascular plants	<i>Fumaria purpurea</i>	Purple Ramping-fumitory	UK BAP	Y	N		Hedg	Farm	BE	
Vascular plants	<i>Galeopsis angustifolia</i>	Red Hemp-nettle	UK BAP; NS; CR	Y	Y		Farm			
Vascular plants	<i>Galium pumilum</i>	Slender Bedstraw	New UK BAP; NR; EN; RPR	Y	N	2 SSSI sites on military land	Calc			
Vascular plants	<i>Gentianella anglica</i>	Early Gentian	W&CA Schedule 8; UK BAP; NS	Y	Y		Calc			
Vascular plants	<i>Gnaphalium sylvaticum</i>	Heath Cudweed	EN; RPR	N	N	Woodland rides	WdInd	WP		
Vascular plants	<i>Groenlandia densa</i>	Opposite-leaved Pondweed	VU; RPR	N	N		R&S	SOW		
Vascular plants	<i>Herminium monorchis</i>	Musk Orchid	New UK BAP; NS; RPR	Y (added)	N	2 SSSI sites	Calc			
Vascular plants	<i>Iberis amara</i>	Wild Candytuft	New UK BAP; NS; RPR	Y (added)	N	Bare chalky ground, thriving at Porton Down	Calc			
Vascular plants	<i>Juniperus communis</i>	Juniper	UK BAP	Y	Y		Calc			
Vascular plants	<i>Leucojum aestivum</i>	Summer Snowflake	NS; RPR	N	N	Wet woodland	WdInd			

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans			
Vascular plants	<i>Lycopodiella inundata</i>	Marsh Clubmoss	UK BAP; NS	Y	N		SOW	R&S		
Vascular plants	<i>Melittis melissophyllum</i>		New UK BAP; NS	Y (added)	N		WdInd			
Vascular plants	<i>Mentha pulegium</i>	Pennyroyal	W&CA S.8; UK BAP; NS; EN	Y	N		Farm	SOW		
Vascular plants	<i>Minuartia hybrida</i>	Fine-leaved Sandwort	New UK BAP; NS; RPR	Y (added)	N	Thriving in SPTA	Calc			
Vascular plants	<i>Misopates orontium</i>	Weasel's-snout	VU; RPR	N	Y		Farm	Calc	Heath	
Vascular plants	<i>Monotropa hypopitys</i>	Yellow Bird's-nest	New UK BAP; EN	Y (added)	N		WdInd			
Vascular plants	<i>Myosurus minimus</i>	Mousetail	VU; RPR	N	Y		Farm			
Vascular plants	<i>Neottia nidus-avis</i>	Bird's-nest Orchid	NT; RPR	N	N		WdInd			
Vascular plants	<i>Nepeta cataria</i>	Cat-mint	VU; RPR	N	N		Farm			
Vascular plants	<i>Oenanthe fistulosa</i>		New UK BAP; VU	Y (added)	N		SOW	R&S		
Vascular plants	<i>Ophrys insectifera</i>	Fly Orchid	New UK BAP	Y (added)	N		Calc	WdInd	WP	
Vascular plants	<i>Orchis anthropophora</i>	Man Orchid	New UK BAP; NS; EN	Y (added)	N	Synonym <i>Aceras anthropophorum</i> . Found particularly in old abandoned chalkpits and limestone quarries.	Calc	RV		
Vascular plants	<i>Orchis ustulata</i>	Burnt Orchid	New UK BAP; NS; RPR	Y (added)	N	Old name: <i>Neotinea ustulata</i> . Nearly all in SSSIs	Calc			
Vascular plants	<i>Ornithogalum pyrenaicum</i>	Bath Asparagus	NS; WBAP	N	Y		RV	WdInd		
Vascular plants	<i>Papaver argemone</i>	Prickly Poppy	VU; RPR	N	N		Farm			
Vascular plants	<i>Pilularia globulifera</i>	Pillwort	UK BAP; NS	Y	N		SOW			
Vascular plants	<i>Platanthera bifolia</i>		New UK BAP	Y (added)	N		WdInd	Calc	Neut	Heath
Vascular plants	<i>Potamogeton nodosus</i>	Loddon Pondweed	NR; RPR	N	N		R&S			
Vascular plants	<i>Pulicaria vulgaris</i>		W&CA Schedule 8; New UK BAP; CR, NR	Y (added)	N		R&S	SOW		
Vascular plants	<i>Ranunculus arvensis</i>	Corn Buttercup	New UK BAP; CR	Y (added)	Y		Farm			
Vascular plants	<i>Rosa agrestis</i>	Small-leaved Sweet-briar	NS; RPR	N	N		Calc			
Vascular plants	<i>Scandix pecten-veners</i>	Shepherd's Needle	UK BAP; CR	Y	Y		Farm			
Vascular plants	<i>Scleranthus annuus</i>	Annual Knawel	New UK BAP; EN; RPR	Y (added)	N	No records since 1991	RV	BE		

Group	Species	English Name	Justification	UK BAP	WBAP 2002	Notes	Relevant Habitat Action Plans/Species Action Plans				
Vascular plants	<i>Silene gallica</i>	Small-flowered Catchfly	UK BAP	Y	Y	One record in VC7 at Sandy Lane in 1988.	Farm				
Vascular plants	<i>Silene noctiflora</i>	Night-flowering Catchfly	VU; RPR	N	Y		Farm				
ular	<i>Stachys arvensis</i>	Field Woundwort	NT; RPR	N	N		Farm				
ular	<i>Tephroseris integrifolia</i> subsp. <i>Integrifolia</i>	Field Fleawort	NS; RPR	N	N	Always this subspecies in Wiltshire. All populations in well managed SSSIs	Calc				
Vascular plants	<i>Torilis arvensis</i>	Spreading Hedge-parsley	UK BAP; NS	Y	Y		Farm				
ular	<i>Valerianella dentata</i>	Narrow-fruited Cornsalad	EN; RPR	N	N		Farm				
Vascular plants	<i>Valerianella rimosa</i>	Broad-fruited Corn-salad	UK BAP; EN, NS	Y	Y		Farm				
ular	<i>Viola canina</i>	Heath Dog-violet	NT; RPR	N	N		Heath	WP			
ular	<i>Viola tricolor</i>	Wild Pansy	NT; RPR	N	N		Heath	Farm			

Appendix One

Changes in Policy and Attitude since 2002

Changes in policy and attitudes since 2002

There are many changes in policy and attitudes that have occurred since 2002, which meant that the original Wiltshire BAP had become outdated. These are explained in detail below.

Climate Change

The UK government has now begun to recognise that climate change is a significant threat to the ecological, economic and social future of the UK, and climate change has risen fast up the political agenda in recent years. The 2006 UK Climate Change Programme is the UK's key strategy for tackling climate change, and sets out the policies and measures that the UK is using to reduce its carbon emissions. The government published a draft Climate Change Bill in March 2007, which has now undergone Parliamentary scrutiny. More information and updates on the progress of the Bill can be found on the Defra website: <http://www.defra.gov.uk/environment/climatechange/uk/legislation/index.htm>.

In addition climate change is becoming of greater priority in the planning process, with the draft Regional Spatial Strategy and the draft PPS1 Supplement: Planning and Climate Change (see sections below) both highlighting the importance of this issue.

Although the threats posed by climate change on Wiltshire's habitats and species were recognised in the Wiltshire BAP 2002, the BAP Review Working Group emphasised the importance of including climate change as an interlinking theme in the new BAP throughout the review process. As well as specific references to climate change, and species adaptation throughout the reviewed BAP, there are also many references to how mitigation can be carried out through adopting a landscape scale approach, or through following the South West Nature Map methodology (set out below), as well as the important role of the planning process.

The Landscape Scale Approach

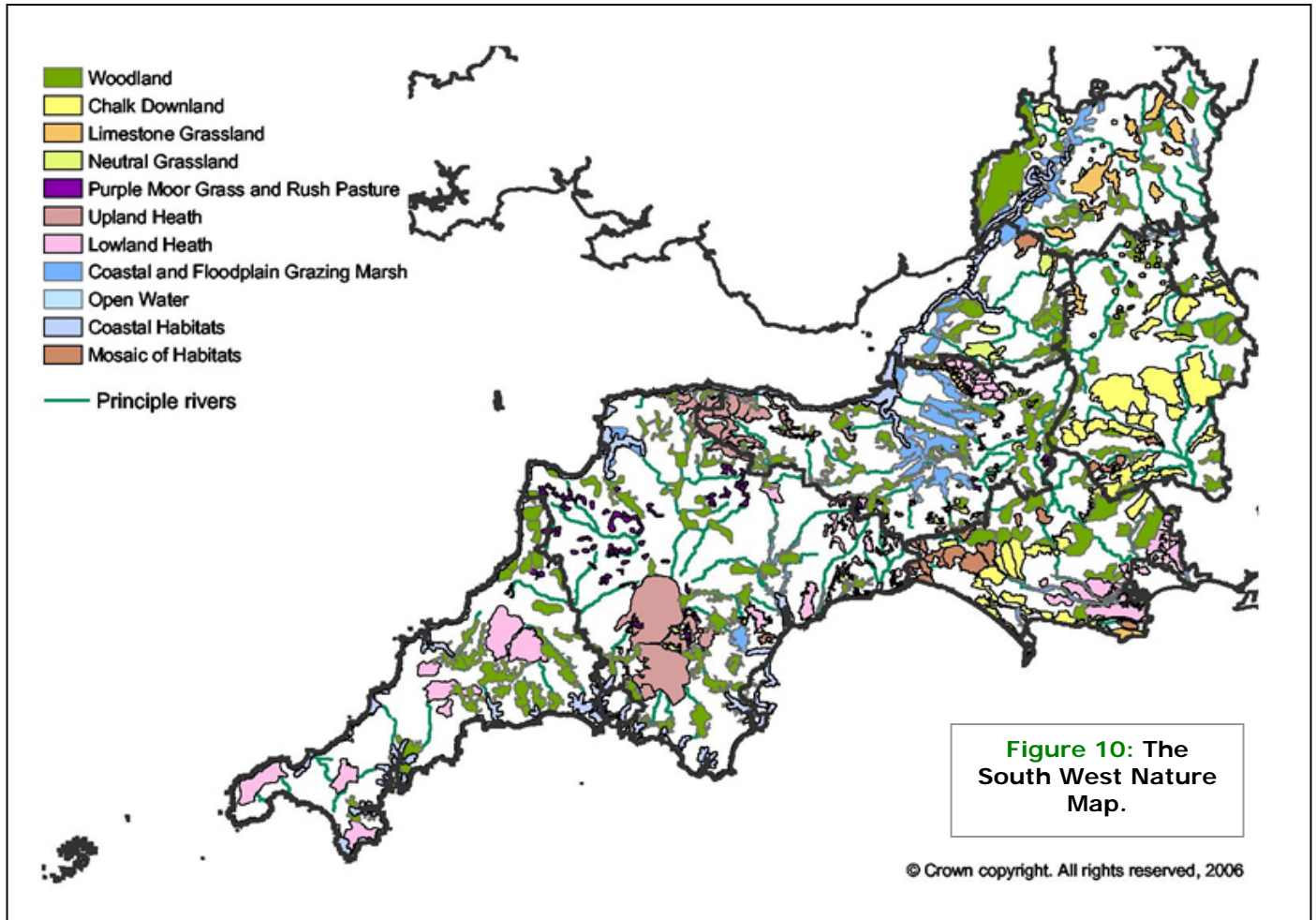
Nature conservation in Britain traditionally has focused on the protection of special sites, whether statutorily designated (e.g. SSSIs), other nature reserves, or Wildlife Sites. While this has been both necessary and urgent given the rapid loss of wildlife from much of the landscape over the last forty years, this reactive approach is now recognised to be insufficient in preventing the fragmentation of habitats (and subsequent decline in species). Small and isolated habitats are particularly threatened by climate change, and are unlikely to be viable in safeguarding species in the long term.

In recognition that a new approach was required, the Royal Society of Wildlife Trusts (RSWT) launched the Rebuilding Biodiversity Initiative in 2002, which requires a landscape scale approach to nature conservation. This has now been developed in the South west by the South West Wildlife Trusts as a joint project to develop ambitious landscape scale projects which aim to create and link together areas of priority wildlife habitats into robust and extensive networks.

In Wiltshire the Landscapes for Wildlife Project and the New Life on the Chalk Project are both looking at landscape scale conservation, focusing on specific BAP species and habitats. Contact Wiltshire Wildlife Trust for more information.

South West Nature Map

The South West Nature Map was produced by the South West Regional Biodiversity Partnership in 2004, and identifies the best areas to maintain and expand (through restoration and/or recreation) terrestrial wildlife habitats at a landscape scale. These blocks of land are known as Strategic Nature Areas (SNAs). The Nature Map was produced using the best available biodiversity data, local expert knowledge and the South West Wildlife Trust's Rebuilding Biodiversity methodology.



The Natural Environment and Rural Communities (NERC) Act, 2006

The NERC Act 2006 which created Natural England, also placed a duty (under section 40) for all public authorities to have due regard to biodiversity in all aspects of their operations. This impacts upon over 900 bodies ranging from parish, district and county councils to Sport England Tate Modern, Local Authorities, NHS Trusts, the police, water companies and waste contractors. Conserving biodiversity is stated in the Act as restoring or enhancing a population of habitat, resulting in many opportunities for biodiversity to benefit. You will notice reference in the revised Wiltshire BAP to this duty, and the BAP partnership has already been working to raise awareness of the duty amongst public bodies by holding a Conference in June 2007. A leaflet and poster which were produced for the Conference are available from the Wiltshire BAP website or in hard copy by contacting the Wiltshire BAP Coordinators.

The Formation of Natural England

Natural England was formed in 2006 by bringing together English Nature, the landscape, access and recreation elements of the Countryside Agency and the environmental land management functions of the Rural Development Service. The NERC Act 2006 sets Natural England a new purpose: *'to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development'*. Visit the Natural England website for more information: www.naturalengland.org.uk.



Agri-environment Schemes

Countryside Stewardship was an agri-environment scheme set up by Defra in the early nineties, to provide funding to farmers and land managers in England in order to deliver effective environmental management on their land. It was replaced by Environmental Stewardship Schemes (Entry Level, Organic Entry Level, and Higher Level) in 2005, which are now run by Natural England. Because Environmental Stewardship, and particularly the Higher Level Scheme, was developed after the UK BAP was published, it has been designed to go much further towards delivering both UK and local BAP targets than Countryside Stewardship. This is achieved mainly through the requirement for applicants to draw up a detailed Farm Environment Plan (FEP), which informs any subsequent environmental management that is carried out. This management should be targeted towards the conservation and enhancement of BAP species and habitats. The Wiltshire BAP 2002 is now out of date in terms of Stewardship, because the new schemes were not yet in place when it was published. You will notice many references to Environmental Stewardship Schemes throughout the revised action plans. For more information visit the Defra website - <http://www.defra.gov.uk/erdp/schemes/es/default.htm>.

One Wiltshire

Wiltshire will soon have one council instead of the five authorities that it has currently. The move to reorganise local government in Wiltshire came about after the Department for Communities and Local Government approved the One Council Submission in 2007. Work has started on the transition towards a new council, which is expected to come into being in 2009. When these changes come into force, alterations will be made to the Wiltshire BAP at the yearly update as required. You will notice some references to the new "One Wiltshire" in some of the revised Action Plans, as the BAP Partnership is keen to ensure that conservation of biodiversity continues to at least the same level under this new authority.

Planning and Policy Statement 9: Biodiversity and Geological Conservation

This document was produced by central government in 2005, and provides essential guidance to planners on biodiversity and geological issues. It places an emphasis on maintaining and enhancing existing biodiversity and seeking opportunities for restoration and habitat creation, through the production of suitable policies in the emerging Local Development Frameworks. The accompanying Government Circular also emphasised the need for ecological surveys prior to submission of planning applications.

Planning and Policy Statement 1 (Supplement): Planning and Climate Change

Currently in draft form, this supplement to PPS1 recognises the important role that spatial planning has in combating the effects of climate change. The Government aim to achieve zero carbon development, and the promotion of renewable energy, is also strengthened through the target of substantial developments producing 10% of their energy from zero carbon/renewable sources of energy.

South West Regional Spatial Strategy (RSS)

Currently in the final stages of consultation, this document sets out how the south west region will develop in the next twenty years. It includes overarching and area specific policies concerning green infrastructure, sustainable development, and protection of the environment, for example. When the RSS is complete, all Local Authorities will have to conform with these policies which will lead to opportunities in implementing Wiltshire BAP targets.

Green Infrastructure (GI)

Whilst scientists have always recognised the value of these strategic networks of multi-functional greenspace, it has recently become a higher priority, with the inclusion of policy GI1 in the Draft Regional Spatial Strategy. This requires that GI should form an integral part of development, with local authorities and partners charged with identifying opportunities for GI, and developing policies together with a delivery plan. It also builds upon the principles of strategic restoration contained within the South West Nature Map.



Figure 11: Green infrastructure is a network of multifunctional greenspace including (clockwise from top left): gardens, parks, school grounds, Sustainable Drainage Systems, churchyards and road verges.

Water Framework Directive (WFD)

The WFD is a European Directive relating to water resources, which in 2003 was transposed into UK Law. The WFD introduces the concept of integrated river basin management, and England and Wales have been split into 11 River Basin Districts, of the South West River Basin District is one, and is of key importance to the Wiltshire BAP. The Directive will decide a Programme of Measures to achieve certain environmental objectives – you will see many references to this Programme of Measures and the WFD as a whole, in the newly revised Rivers, Streams and Associated Habitats Action Plan.

Local Development Frameworks

The Planning System in England and Wales was reformed in 2004 through the Planning and Compulsory Purchase Orders Act 2004. The changes were intended to:

- Simplify the system, hence speeding it up
- Enable local communities to get more involved
- Prioritise 'Sustainable Development' (i.e. maintaining economic growth, protecting the environment and using natural resources sensibly)

To replace the existing Local Plans, a collection of policy documents known as Local Development Frameworks (LDFs) will be brought into force by all local planning authorities in coming years. The creation of policies in the LDFs will bring opportunities for further protection of biodiversity, and provide more detailed delivery mechanisms for BAP objectives and targets.

You will notice that LDFs are frequently referred to in the Built Environment Habitat Action Plan and Generic Action Plan, as well as in some of the other Plans.

Local Area Agreement

The Local Area Agreement is an agreement between Wiltshire and Government on the delivery of partnership arrangements to the benefit of service delivery, overseen by WISB, Wiltshire's strategic Board. Wiltshire's Local Area Agreement was signed in March 2007 as part of the third and last round of a national roll out and sets out delivery plans which will, in part, address issues raised within the Sustainable Community Strategy for Wiltshire.

<http://www.wiltshire.gov.uk/council/wiltshire-strategic-board/local-area-agreement.htm>

A new Local Area Agreement is currently being developed.

Future changes to the planning system

In Spring 2008, it is expected that the new '1-app' planning application form will be released by central government, for compulsory use by all Local Planning Authorities. This will have a question regarding impacts on biodiversity. The 1app will be compulsory from April 2008, though some authorities have already started to use them. Validation checklists can be produced, to gather more information relating to impacts on biodiversity. The BAP process can have a profound influence on the content of these lists, so that biodiversity is correctly accounted for when applications are submitted. You will notice that validation checklists are frequently referred to in the Built Environment Habitat Action Plan.

Appendix Two

Other BAPs

National, Regional and Local BAPs with linkages to the Wiltshire BAP

UK BAP

The first UK BAP was published in 1994, and a series of Action Plans for habitats and species followed between 1995-1999. The first full target review has just taken place, and revised targets have been written for each HAP and SAP. A new UK BAP Priority Habitats and Species List has now also been published, and Working Groups are in the process of devising Action Plans for the new species and habitats that have been added. For more information go to www.ukbap.org.uk.

South West BAP

The South West Biodiversity Partnership prepared 18 Habitat Action Plans and 12 Species Action Plans in 1997. Each plan closely reflects the format used for the UK BAP HAPs and SAPs and lists current status; current factors affecting the species; current action; benefits; UK biodiversity objectives and proposed targets; South West biodiversity objectives and proposed targets and proposed action required to meet objectives with lead agencies.

SW Biodiversity Implementation Plan

The SW BIP provides a co-ordinated approach to biodiversity action in this region, and to implementing the SW BAP. The plan does not replace local activity but helps to set out a framework of policy, priorities and actions to assist in a more joined up approach through collaborative partnership working.

Swindon BAP

The Swindon BAP contains 14 Habitat Action Plans (HAPs) and 1 Species Action Plan (SAP) for bats. The Swindon BAP Steering Group is coordinating a full review of the Action Plans in the Swindon BAP over the next year, and the review is expected to be complete by March 2009. The Steering Group is also looking at formalising the BAP Partnership. The Swindon BAP can be downloaded by the Biodiversity Swindon website – www.biodiversityswindon.org.uk.

Cotswold Water Park BAP 2007-2016

The first Cotswold Water Park BAP was published in 1997. The revised edition was published in 2007, and includes 9 SAPs and 10 HAPs. Unlike many local Biodiversity Action Plans which take a fairly broad approach, the new CWP BAP 2007-2016 takes the format of a detailed work programme for the next 10 years, specifying where and how efforts are required for a range of partner organisations.

New Forest BAP

The New Forest BAP is currently being compiled. It aims wherever possible to be both strategic and spatially based, bringing added value to existing action. Approval of the draft Plan is currently being sought, and it is hoped that the final Plan will be approved and adopted by members in Autumn 2008.

Wessex Water BAP

The 1998 Wessex Water Biodiversity Action Plan (WWBAP) was the first corporate initiative of its kind to be based on the UK Biodiversity Action Plan (UKBAP) and has been acknowledged by the UK government report 'Sustaining the Variety of Life' as a best-practice example of corporate involvement in biodiversity work. The BAP was updated in 2006 and outlines Wessex Water's aims for supporting biodiversity within its operational areas, and outlines how the company's approach to biodiversity has been refined since 1998. The 2006 WWBAP has become more partnership orientated and looks to support biodiversity by advocating sustainable practices.

Center Parcs BAP

Center Parcs have produced a national BAP covering all of their sites, and in 2004 became one of only six companies in the UK to be awarded the Biodiversity Benchmark by the Royal Society of Wildlife Trusts. The overall aim of the BAP and the targets it contains is to maintain and enhance the wildlife value of every Center Parcs village for the benefit of wildlife conservation in the local and national context, as well as ensuring a wealth of wildlife for the benefit of the many guests that stay in each village on a daily basis. The Center Parcs Longleat Forest Ecological Monitoring Study (2006) is the second report that wholly focuses on the national Center Parcs Biodiversity Action Targets.

British Waterways BAP

British Waterways have prepared a BAP to cover all of their waterways which is interpreted locally in terms of maintenance and projects on the ground. The document considers 13 habitats and 14 species or groups of species. British Waterways have now begun to develop BAPs on a waterway by waterway basis.

Appendix Three

Acronyms

Acronym	Full Name
ALGE	Association of Local Government Ecologists
AMR	Annual Monitoring Report (Wiltshire County Council)
AONB	Area of Outstanding Natural Beauty
ARK	Action for the River Kennet
AWI	Ancient Woodland Inventory
ARW	Ancient Replanted Woodland
ASNW	Ancient Semi Natural Woodland
AW	Ancient Woodland
BAG	Biodiversity Action Grant (Wiltshire Biodiversity Partnership proposed Grant Scheme)
BAP	Biodiversity Action Plan
BARS	Biodiversity Action Reporting System
BASC	British Association for Shooting and Conservation
BC	Butterfly Conservation
BE	Built Environment
BIG	Biodiversity Improvement Grant scheme (Wiltshire County Council)
BioSW	Biodiversity South West
BRC	Biological Records Centre
BTCV	British Trust for Conservation Volunteers
BTO	British Trust for Ornithology
BW	British Waterways
cSAC	Candidate Special Area of Conservation
CAF	Charities Aid Foundation
CAP	Common Agricultural Policy
CC	County Council
CCWWD	Cranborne Chase and West Wiltshire Downs AONB
CG	Calcareous Grassland (numbers after CG refer to NVC classification)
CLA	Country Land and Business Association
CPRE	Council for the Protection of Rural England
CRoW	Countryside and Rights of Way
CS	Countryside Stewardship (DEFRA)
CWP	Cotswold Water Park
CWPS	Cotswold Water Park Society
CWS	County Wildlife Site
CWS SG	County Wildlife Sites Steering Group
DC	District Council, e.g. West Wiltshire DC
DC	Development Control, e.g. in Action Plans: LPAs (DC)
DE	Defence Estates (Ministry of Defence)
DE EST	Defence Estates Environmental Support Team
DEFRA	Department of the Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
Dstl	Defence, Science and Technology Laboratory (an agent of the MOD)
EA	Environment Agency
EAF	Environmental Action Fund
EEAC	Energy Efficiency Advice Centre
EFS	English Forestry Strategy
EH	English Heritage
EIA	Environmental Impact Assessment
EST	Environmental Support Team (for Defence Estates)
FC	Forestry Commission
FE	Forest Enterprise
FEP	Farm Environment Plan
FWAG	Farming and Wildlife Advisory Group
FP	Forward Planning

Acronym	Full Name
FTE	Full Time Equivalent
GAP	Grazing Animals Project or Generic Action Plan
GI	Green Infrastructure
GIS	Geographical Information System
GOSW	Government Office of South West of England
GWCF	Great Western Community Forest
GWCT	Game and Wildlife Conservancy Trust
HA	Highways Agency
HAP	Habitat Action Plan
HLF	Heritage Lottery Fund
ICG	Imber Conservation Group
ILMP	Integrated Land Management Plan
JNCC	Joint Nature Conservation Committee
KDC	Kennet District Council
LAA	Local Area Agreement
LAs	Local Authorities
LA21	Local Agenda 21
LBAP	Local Biodiversity Action Plan/ Partnership
LDD	Local Development Document
LDF	Local Development Framework
LEA	Local Education Authority
LEAF	Linking the Environment and Farming
LEAP	Local Environment Agency Plan
LfW	Landscapes for Wildlife
LIFE	a European Funded Conservation Project
LLA	Local Area Agreement
LNR	Local Nature Reserve
LPA	Local Planning Authority
LRCs	Local Records Centres
LSP	Local Strategic Partnership
MG	Mesotrophic Grassland (numbers after MG refer to the NVC classification)
MOD	Ministry of Defence
NA	Natural Area
NBN	National Biodiversity Network
NE	Natural England
NERC	Natural Environment and Rural Communities (refers to NERC Act, 2006)
NFU	National Farmers' Union
NGO	Non-Governmental Organisation
NI	National Indicator
NNR	National Nature Reserve
NPA	National Park Authority (New Forest NPA)
NT	National Trust
NVC	National Vegetation Classification
NWD	North Wessex Downs AONB
NWDC	North Wiltshire District Council
OS	Ordnance Survey
PAWS	Planted Ancient Woodland Sites
PPG	Planning Policy Guidance
PPS	Planning and Policy Statement
PSA	Public Service Agreement

Acronym	Full Name
RSPB	Royal Society for the Protection of Birds
RSS	Regional Spatial Strategy
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SAP	Species Action Plan
SBC	Swindon Borough Council
SDC	Salisbury District Council
SEA	Strategic Environmental Assessment
SLA	Service Level Agreement
SMART	Specific, Measurable, Achievable, Realistic, Time-bound (refers to SMART targets)
SNA	Strategic Nature Area (refers to the South West Nature Map)
SOW	Standing Open Water
SPA	Special Protection Area
SPD	Supplementary Planning Document
SPTA	Salisbury Plain Training Area
SSSI	Site of Special Scientific Interest
STA	Salmon and Trout Association
STREAM	Strategic REstoration And Management of the River Avon
SUDS	Sustainable Urban Drainage System
SWBAP	South West Biodiversity Action Plan
SWBIP	South West Biodiversity Implementation Plan
SWD	South Wessex Downs
SWWT	South West Wildlife Trusts
TPO	Tree Preservation Order
WANHS	Wiltshire Archaeological and Natural History Society
WBAP	Wiltshire BAP
WBAP SG	Wiltshire BAP Steering Group
WBG	Wiltshire Bat Group
WBS	Wiltshire Botanical Society
WCA	Wildlife and Countryside Act
WCC	Wiltshire County Council
WFA	Wiltshire Fisheries Association
WFD	Water Framework Directive
WGS	Woodland Grant Scheme (Forestry Commission)
WIG	Woodland Improvement Grant
WIGI	Wiltshire Interactive Grazing Initiative
WIV	Wildlife Information Volunteer (based at the WSBRC)
WiSB	Wiltshire Strategic Board
WiSBEx	Wiltshire Strategic Board Executive
WLMP	Water Level Management Plan
WOS	Wiltshire Ornithological Society
WS	Wildlife Site
WSP	Wildlife Sites Project
WSBRC	Wiltshire and Swindon Biological Records Centre
WT	Woodland Trust
WTT	Wild Trout Trust
WWDC	West Wiltshire District Council
WWT	Wiltshire Wildlife Trust

Appendix Four

Further Information

Further Information

The Wiltshire BAP can be downloaded from the Biodiversity Wiltshire website:
www.biodiversitywiltshire.org.uk.

Go to the Wiltshire BAP website for all the latest information about the Wiltshire BAP.

If you would like:

- CD or hard copies of the Wiltshire BAP
- More information about the BAP
- To join the Wiltshire BAP Forum or Partnership
- To receive the Wiltshire BAP newsletter
- To Join a HAP or SAP working group
- To get involved with the BAP
- Any other information about the Wiltshire BAP

Please contact Sarah Wilkinson at Wiltshire Wildlife Trust: (01380) 725 670; Elm Tree Court, Long Street, Devizes, Wiltshire, SN10 1NJ; sarahwilk@wiltshirewildlife.org.

Further information

Wiltshire BAP website – www.biodiversitywiltshire.org.uk

UK BAP Website – www.ukbap.org.uk

Biodiversity South West website – www.swbiodiversity.org.uk

Swindon BAP website – www.biodiversityswindon.org.uk

Cotswold Water Park BAP – www.waterpark.org