

# Landscape Biodiversity Areas

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A landscape-scale framework for  
conservation in Wiltshire and Swindon

Poppies on Salisbury Plain. Photo: Stephen Davis WWT

Completed in collaboration with the Wiltshire and  
Swindon Biodiversity Action Plan Steering Group

July 2013



# Wiltshire's Landscape Biodiversity Areas 2012

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The review of the Wiltshire and Swindon Biodiversity Action Plans (BAPs) was coordinated by the Wiltshire and Swindon BAP Steering Group which is made up of representatives from Wiltshire Wildlife Trust, Wiltshire County Council, Swindon Borough Council, Natural England, Wiltshire & Swindon Local Nature Partnership, Royal Society for the Protection of Birds (RSPB), Wiltshire and Swindon Biological Records Centre, Cotswold Water Part Trust, Longleat Center Parcs and the North Wessex Downs Area of Outstanding Natural Beauty (AONB).

This document was produced by Melanie Wright, Wiltshire and Swindon Biodiversity Action Plan Development Officer, between March and September 2012.

All maps were created using data from the Wiltshire & Swindon Biological Records Centre.

All website links in this document are accessed at the user's own risk and the Wiltshire Wildlife Trust can not take responsibility for the content of external sites.

**This document has been made available to communicate the outcomes of a six month review of the Wiltshire and Swindon Biodiversity Action Plans. This document supports information available on the new Wiltshire and Swindon Local Nature Partnership (Link2Nature) website which should be consulted for further details [www.link2nature.org.uk](http://www.link2nature.org.uk)**

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## Executive Summary

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This addition to the Wiltshire and Swindon Biodiversity Action Plans is designed to aid the process of identifying priorities and opportunities for the landscape scale conservation of priority habitats and their associated species. It provides a framework within which to coordinate conservation efforts and create viable, interconnected, landscape scale units of these priority habitats. Additionally, it should highlight where priority habitats are not receiving the focus which they require and can hopefully guide future efforts in such areas.

This document has been developed to build on the Wiltshire and Swindon Biodiversity Action Plans (BAPs) published in 2008 and 2010. This document is not designed to supersede the previous BAPs but instead enhances the evidence base upon which we make decisions relating to the future direction of conservation within Wiltshire and Swindon. These BAPs should still be referred to for more specific guidance on habitats and species, while this document is designed to set the information presented in the previous versions of the BAP within a landscape context. It draws together a raft of work which has been undertaken to identify opportunities and priorities for landscape scale conservation within Wiltshire and Swindon and these documents should be consulted for more detailed information on specific areas than can be included here. It is hoped that the new Landscape Biodiversity Areas identified in this document will provide a framework within which future conservation planning can occur such as the identification of potential Nature Improvement Areas (NIAs). These will help inform groups and individuals from the strategic to the local level, including the Local Nature Partnership, Local Authorities, Community Area Boards, Wildlife NGOs and also local community and wildlife groups.

A number of Biodiversity Action Plans have been compiled by other organisations which cover specific areas of Wiltshire and Swindon and these will outline in more detail the conservation issues within each of these areas: the Cotswold Water Park BAP, the New Forest BAP, the Center Parcs BAP for their Longleat site and the Wessex Water BAP, the first BAP to be produced by a commercial business. It is important that this addition to the Wiltshire and Swindon BAPs is considered in conjunction with a number of other documents which provide the policy framework and evidence base for nature conservation in Wiltshire and Swindon:

- The Swindon Biodiversity Action Plan 2010
- Wiltshire Green Infrastructure Strategy (in development)
- Swindon Green Infrastructure Strategy
- Wiltshire Intelligence Network
- Wiltshire Biodiversity Action Plan 2008
- Wiltshire and Swindon Core Strategies

# 1. Introduction and Background

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“Biodiversity is the variety of all life on Earth. This includes all species of animals and plants, and the natural systems that support them. Biodiversity matters because it supports the vital benefits we get from the natural environment. It contributes to our economy, our health and wellbeing, and it enriches our lives” (Biodiversity 2020 Delivery Plan, Defra, 2012).

## 1.1 Biodiversity in Wiltshire and Swindon

Wiltshire is a large, predominantly rural, inland county covering approximately 3255km<sup>2</sup>. The county has a rich and varied geology and topography, supporting a wide range of habitats and species. The terms “Chalk and Cheese” have often been used to describe the two main geological and landscape forms into which much of the county falls.

“Chalk” denotes the areas of rolling high chalk plain and chalk escarpments in the south and east of the county which include the Marlborough Downs, Salisbury Plain and the West Wiltshire Downs. It also refers to the area of the Cotswolds limestone plateau in the northwest. The chalk areas constitute more than half of Wiltshire’s total surface area and dominate the southern, eastern and central parts of the county. Salisbury Plain, which divides the county from north to south, supports the largest known expanses of unimproved calcareous grassland in northwest Europe at 12,933ha, which represents 41% of the British total of this important habitat. Nearly 20, 000ha of the Salisbury Plain is designated as a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) for its rare plant and animal communities which include lowland juniper scrub on chalk and populations of the marsh fritillary butterfly. It is also designated a Special Protection Areas (SPA) for its populations of stone curlew, hen harrier, common quail and Hobby. Chalk streams cut through this landscape - the Salisbury Avon and its tributaries in the south and the tributaries of the Thames in the Marlborough Downs to the east. The Salisbury Avon is a Special Area of Conservation, designated for its wide variety of fish, invertebrates and plant communities.

“Cheese” refers to the vales and floodplains of the Bristol Avon and the River Thames and its tributaries in the north. These are primarily pasture lands on soils of clay, gravel and river alluvium which support neutral grassland, fens and both wet and dry woodlands. The Avon 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. Historically these areas have been the focus for Wiltshire’s dairy farming industry, although sharp declines have occurred in this industry over the past few decades. In the far north of the county lies part of the Cotswold Water Park, an area of former gravel quarries which have mostly now been restored creating a patchwork of over 100 lakes, supporting many rare and endangered species and habitats. Between these two extremes are areas of greensand which support grasslands and woodlands typical of more acid soils. A small area of the New Forest lies within the far southeast of the county. The area is characterized by a mosaic of deciduous and planted conifer woodlands; small, damp acidic pastures and, in the boggy areas, fens and mires.

Swindon Borough is a separate unitary authority to the north east of Wiltshire. The Borough is split between the chalk escarpment in the south and the flat land of the Thames valley to the north. Central to the Borough is the town of Swindon, a rapidly expanding town built on the low limestone ridge which runs across the northeast corner of the county. The fast pace of expansion has created intense pressure on land

at the urban fringe, whilst areas of green space have been preserved within the urban area and these act as important corridors and refuges for wildlife.

## 1.2 Why is biodiversity important?

The term 'biodiversity' was brought to 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 natural environment was in rapid decline, 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 \(CBD\)](#). 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 was the UK government's national response to its commitments under the CBD.

## 1.3 Biodiversity Action Plans

Wiltshire has produced two Biodiversity Action Plans (BAPs), the first in 2002 and a revision of this in 2008, [Wiltshire BAP 2008](#). The aim of these BAPs was to act as a tool to prioritise and define actions for the conservation of priority habitats and species in Wiltshire and to direct the activities of statutory, private and third sector organisations in delivering actions to conserve and enhance biodiversity. They were designed to combine these actions into one coherent plan of action which could be delivered through a partnership of organisations working together.

Although these BAPs have been very successful in building a strong, cross-organisational partnership, their focus has always been on priority habitats and species and they were not designed to take a more strategic view of how best to achieve a county-wide, healthy ecological network of these habitats.

## 1.4 Setting Wiltshire's biodiversity conservation in a UK context

It is now known that the UK has failed in its ambitions to halt the rate of biodiversity loss by 2010 and in 2011 it was revealed that over 40% of priority habitats and 30% of priority species were still declining<sup>1</sup>. As a result, UK conservation has undergone immense changes over the past few years which will impact the way in which we plan, finance and implement conservation actions in the future. It is important to understand the policy context within which the new landscape framework for conservation in Wiltshire and Swindon sits so that it can be best used going forward:

- The [UK National Ecosystem Assessment \(NEA\)](#) was published in June 2011 and it provides a comprehensive account of how the natural world, including its biodiversity, provides us with services that are critical to our wellbeing and economic prosperity. The NEA highlighted that our natural environment is consistently undervalued in decision making and that around 30% of the services which we get from the UK's ecosystems are in decline.
- Published in 2011, [The Natural Choice](#) was the Government's first Natural Environment White Paper in 20 years and was published in response to the [Lawton Review – Making space for nature](#) which concluded that nature in England is highly fragmented and unlikely to respond well to future challenges such as climate change and population growth. The White Paper outlines the Government's vision for the

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<sup>1</sup> National Ecosystem Assessment, 2011

natural environment over the next 50 years and tries to address the issues raised in the Lawton Review. It sees a shift in focus from piecemeal conservation actions towards a more integrated, landscape scale approach in which nature is properly valued. It outlines four ambitions: protecting and enhancing our natural environment, growing a green economy, reconnecting people and nature, and international and EU leadership. Mechanisms for achieving these ambitions include the identification of [Nature Improvement Areas \(NIAs\)](#) and through the establishment of [Local Nature Partnerships \(LNPs\)](#). LNPs are partnerships of local stakeholders from across the sectors whose role it is to help their local area to manage the natural environment as a system and to embed its value in local decisions for the benefit of nature, people and the economy.

- As a signatory to the Convention on Biological Diversity, and in light of the failure to meet targets on halting biodiversity loss by 2010, the Government is committed to new targets for biodiversity, termed 'Aichi targets', which are set out in the [Biodiversity 2020: A strategy for England's wildlife and ecosystem services](#). Published in August 2011, the England Biodiversity Strategy (EBS) builds on the Natural Environment White Paper and sets out a strategic direction for biodiversity policy for the next decade. It outlines an ambitious mission for biodiversity by 2020 and identifies actions across four themes which will be needed to achieve them: a more integrated large-scale approach to conservation; putting people at the heart of biodiversity policy; reducing environmental pressures; and improving our knowledge.

*"To halt overall biodiversity loss, support healthy well functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people"*  
(Biodiversity 2020 – A strategy for England's wildlife and ecosystem services, 2012).

- A set of [Biodiversity Indicators](#) have been developed to assess progress in the delivery of the England Biodiversity Strategy. These indicators are outcome-focused, with an emphasis on indicators showing the status of components of biodiversity including monitoring of trends in the extent and status of priority habitats and species.
- [The National Planning Policy Framework](#) was published in March 2012 and looks to provide a strategic framework to enable sustainable development within the UK. It has taken on board recommendations from the Natural Environment White paper and recognises the role of the LNPs, AONBs, statutory and non-statutory organisations in protecting and enhancing our natural environment. The challenge for us in Wiltshire is to ensure that practice is consistent with the planning policy aspirations and that the interests of the natural environment are taken into account during decision making at the highest level.

The new landscape addition to the Wiltshire and Swindon Biodiversity Action Plans outlines how we aim to meet the objectives set out within the documents above to deliver more integrated, landscape-scale conservation across the county.



## 1.5 Building on the Wiltshire and Swindon Biodiversity Action Plans

It is now widely recognised that piecemeal conservation actions directed in isolated, well protected areas is not enough to prevent the further loss of biodiversity. Conservation must be coordinated at a strategic, **landscape-scale** level if these priority habitats and species are to withstand the mounting pressures from population growth and climate change.

In line with this, the vision for conservation in Wiltshire is to look for the best opportunities for establishing conservation initiatives at the level of landscapes and ecosystems, promote opportunities to reconnect fragmented habitats and strengthen our green infrastructure. To help achieve these, the existing Biodiversity Action Plans for Wiltshire and Swindon have been supplemented with this new landscape-scale conservation framework. The purpose of this document is to identify Landscape Biodiversity Areas across Wiltshire and Swindon within which we can:

- Identify the most important priorities for conservation based on our knowledge of what priority habitats and species are present and what work is being done to conserve and enhance them.
- Highlight the best opportunities for implementing landscape scale conservation actions which will provide the greatest biodiversity gains.
- Gain an understanding of the work that is already being undertaken by groups and organisations within these Landscape Biodiversity Areas towards conserving and enhancing our priority habitats and species. This information can be used to guide the development of partnerships within the area to achieve the greatest benefits for biodiversity and prevent the duplication of effort.
- They also provide a framework within which to monitor and report on conservation actions to determine the contribution these make towards halting further biodiversity loss.

The Landscape Biodiversity Areas have been designed to provide a framework for action. In particular it is hoped it will help to guide and inform anyone who wishes to create, restore, protect, maintain or manage habitat which is of conservation interest, whether this be community groups enhancing a country park, conservation trusts acquiring new landholdings, developers mitigating impacts of development, or landowners wanting to contribute to nature conservation

## 1.6 Priority Habitats and Species

As part of the UK's commitments to protect biodiversity under the Rio Convention (1992) a number of habitats have been identified as being of particular importance for conservation, and Biodiversity Action Plans (BAPs) have been drawn up to identify how these habitats can be protected, conserved and enhanced.

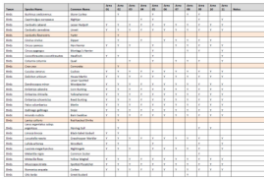
The [Wiltshire Biodiversity Action Plan 2008](#) and Swindon BAP 2010 describe in detail the priority habitats and species that occur in Wiltshire and Swindon and these documents should be referred to for specific targets and actions for individual habitats and species. This landscape conservation framework looks at the distribution and status of these habitats within the county and seeks to make recommendations on priorities for conservation to ensure that these habitats are embedded within a cohesive, resilient ecological network.

The main habitats occurring in Wiltshire and Swindon have been grouped under broad headings in the previous BAPs and Habitat Action Plans (HAPs) have been written for each of these. These HAPs include overarching objectives for their conservation and specific targets and actions required to help achieve this. The Habitat Action Plan titles and the UK BAP priority habitats that they cover are outlined below; descriptions for each of these priority habitats can be found on the [UK BAP website](#):

**Table 1.1: Wiltshire and Swindon Habitat Action Plan (HAP) titles and the UK BAP priority habitats they cover**

Wiltshire Habitat Action Plan titles (2008)	Swindon HAP titles (2010)	UK BAP priority habitats covered
Woodland	<a href="#">Woodland</a>	Lowland mixed deciduous woodland Lowland beech and yew woodland Wet woodlands
Wood-pasture, Parkland and Ancient Trees		Lowland wood pasture and parkland
Ancient and Species rich Hedgerows		Hedgerows
Rivers, Streams and Associated Habitats	<a href="#">Rivers and Streams</a> <a href="#">Wetlands</a>	Rivers Reedbeds Coastal and floodplain grazing marsh Lowland fen Purple moor- grass and rush pastures
Standing Open Water	<a href="#">Standing Open Water</a>	Eutrophic standing open water Oligotrophic lakes Mesotrophic lakes Ponds Reedbeds
Farmland Habitats	<a href="#">Farmland Habitats</a>	Arable field margins Hedgerows
Calcareous Grassland		Lowland calcareous grassland
Unimproved Neutral Grassland		Lowland meadows
Built Environment	<a href="#">Urban Habitats</a>	Open mosaic habitats on previously developed land
Orchards	<a href="#">Orchards</a>	Traditional orchards
Heathland Information note		Lowland heathland

The Bat SAPs presented in the previous BAPs include several priority species of bats for which Species Action Plans are available via the [JNCC website](#).



Details of priority species associated to each of the Habitat Action Plans can be found in Section 3 of the Wiltshire BAP 2008. A table detailing which of the Landscape Biodiversity Areas each of the Wiltshire and Swindon BAP species is present in can be accessed by clicking on the table to the left. Highlighted within this table are species for which no records have been received by the Wiltshire and Swindon Biological

records Centre post 2000. This may be due to the genuine loss of species or a lack of survey data and further investigation is required to determine which of these scenarios is true. For the most up to date advice on UKBAP priority species classifications and descriptions see the species section on the [UK BAP website](#).

## 1.7 Useful links:

There are several useful links and publications which can be consulted for additional information relating to priority habitats in Wiltshire and Swindon. These include:

- The [Wiltshire and Swindon Wildlife Sites Handbook](#) – This outlines clearly and concisely the broad habitats found in Wiltshire and Swindon and outlines the features of interest within a county context, the losses and threats that these habitats face at the local level, details the UK BAP priority habitats grouped within each broad habitat type, guidance for identifying the different habitats and a list of indicator species for each habitat type, including those which are notable in the county.
- [Habitat Management on the Web](#) – A search engine designed for people who want to find out how best to manage habitats in the UK for biodiversity and conservation.
- The Wildlife Trusts has produced a [Habitat explorer](#) and a [Species explorer](#) which introduce many of the main habitats and species of conservation concern in the UK; including details of the threats facing them, their current status and distribution, and the actions being taken to conserve them.

## 2. Designing the Landscape Biodiversity Areas

### 2.1 Delimiting the Landscape Biodiversity Areas

This landscape conservation framework is designed to help target and identify the best opportunities for landscape-scale conservation within Wiltshire and Swindon. This section outlines the technical decisions that underpin the identification and delimiting of the **Landscape Biodiversity Areas**, which form the basis of the new landscape conservation framework for Wiltshire and Swindon.

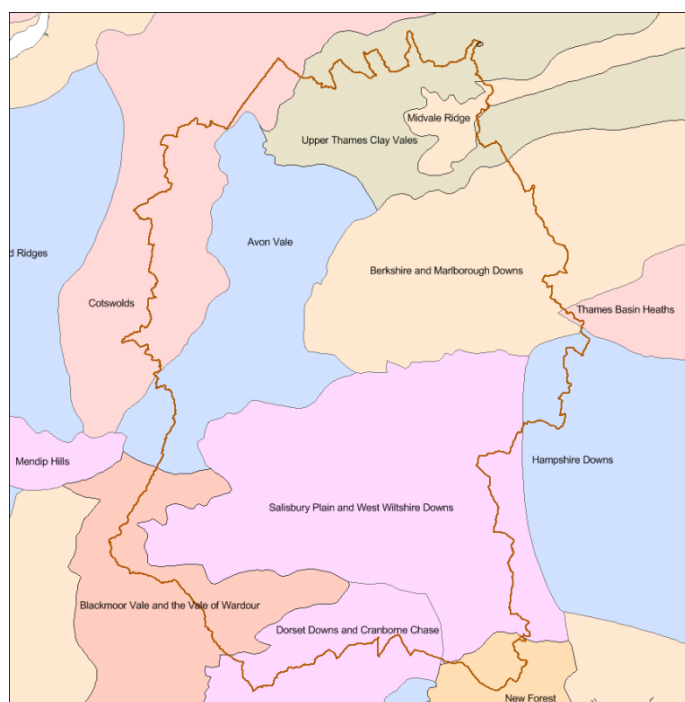


Figure 2.1 Natural England National Character Areas in Wiltshire. © Crown copyright and database right 2012 Map based on OS map information, copyright licence no. 100005798.

[Rebuilding Biodiversity in the South West](#) methodology, a science based framework for identifying viable target areas for priority habitats and creation of a robust ecological network.

Landscape Biodiversity Areas represent natural, landscape-scale areas within the county which share similar geological and ecological character and within which the best opportunities for landscape scale conservation working can be identified. The Landscape Biodiversity Areas have been identified taking into account [National Character Areas](#) and the underlying geology, ecology, and community areas of the county. The [Wiltshire Landscape Character Assessment \(WCLA\)](#) has been used to help identify and group areas and the boundaries of WCLA areas used as the basis of the Landscape Biodiversity Areas.

The focus within these Landscape Biodiversity Areas will be to try and protect and enhance areas of priority habitat and identify where opportunities exist for reconnecting habitats to create a more cohesive ecological network. The foundation of this will be done via [Strategic Nature Areas \(SNAs\)](#) which have been identified as part of the [South West Nature Map](#) using the

### 2.2 Strategic Nature Areas

Strategic Nature Areas have been identified via an extensive data gathering exercise and refined using local knowledge. They are not designed to be solid areas of any one given habitat, but to contain a mix of habitat patches alongside other vegetation and productive land uses, with either the priority habitat occurring as a binding matrix in which other land uses are embedded or as numerous patches in a diverse mosaic, in keeping with the landscape character of the area. Targets for both the main and additional habitats within each SNA have been calculated and are included alongside the SNA information in each Landscape Biodiversity Area profile. These targets are there to provide quantitative targets for habitat creation and restoration upon which progress can be measured.

Within Wiltshire and Swindon, roughly 85% of our currently recorded priority habitats fall within the limits of the Strategic Nature Areas. Strategic Nature Areas are not a statutory designation; they simply represent the best opportunities for making a positive contribution towards conserving biodiversity. The Wiltshire and Swindon Landscape Biodiversity Areas represent a map of the biodiversity opportunities within the county and no constraints or obligations are placed on land within them, other than those which already have a statutory or local designation such as SSSIs or Local Nature Reserves. Collectively SNAs represent the best opportunities for building a healthy, resilient ecological network of priority habitats within Wiltshire. They are designed to focus and coordinate conservation efforts to attain the best outcomes for biodiversity with the limited resources available to organisations to do so.

In this landscape addition to the Wiltshire and Swindon BAPs there are no long lists of targets and actions which are difficult to record against. Instead it highlights priorities and opportunities for conservation within each of the Landscape Biodiversity Areas and identifies projects and organisations which are active there. It is designed as a framework from which future projects and collaborations can be coordinated.

Once projects are in place then it is hoped that each project can develop its own SMART (Specific, Measurable, Achievable, Realistic and Time-constrained) targets that can be reported on within [BARS](#) (Biodiversity Action Reporting System) which allows the progress of projects to be monitored and communicated to the wider environmental community.

## 2.3 Work outside of SNAs

Although SNAs have been identified in this plan as the priority focus areas for conservation work, this does not mean that the habitats outside of these do not also require work to protect and enhance their biodiversity. Guidance for areas outside of SNAs includes maintaining the extent and quality of priority habitats. This includes ensuring that at least 50% of [Sites of Special Scientific Interest \(SSSI\)](#) are in 'Favourable Condition' and 95% are in 'Favourable' or 'Recovering Condition' by 2020, in line with the targets set out in the England Biodiversity Strategy. Working outside of SNAs will help to protect local areas of wildlife, strengthen Wiltshire's Green Infrastructure and provide stepping stone habitats between larger blocks of semi-natural habitats covered by the SNAs. However, working outside of SNAs will not provide conservation benefits on the same scale as those delivered through a focus on areas within the SNAs.

Wildlife Sites are a means of conserving priority habitats within and between the Strategic Nature Areas. Wildlife Site is a term used in Wiltshire and Swindon for an area of land of substantive biodiversity importance, recognised at a local level. Importance is mainly due to the presence of priority habitat but may also relate to the potential of the site to increase habitat connectivity or to buffer priority sites from external impacts. This is a non-statutory designation applied to all sites known to meet the criteria for Wildlife Site status. It places no management or access obligations on the site but certain operations deemed detrimental to the condition of the site may be constrained via statutory means which apply to all land. Advice is available to landowners on how best to manage these sites and they are surveyed on rotation to assess the quality of the site and see that it continues to meet the criteria for which it was designated. At present there are more than 1,500 recognised Wildlife Sites in Wiltshire and Swindon covering approximately 22,000ha of land, roughly 6% of the total land area of Wiltshire and Swindon<sup>2</sup>

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<sup>2</sup> Wildlife sites handbook 2012

## 2.4 Exiting landscape-scale conservation initiatives

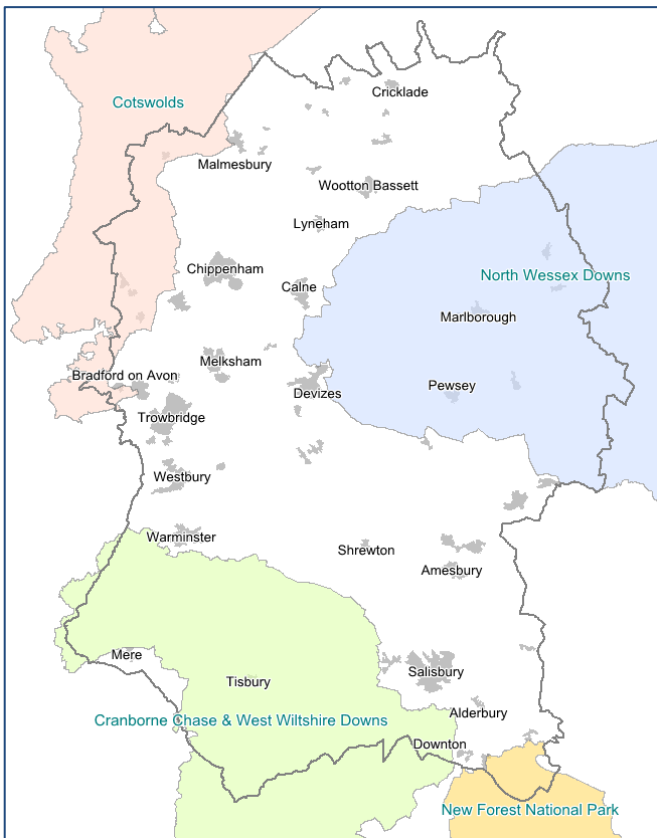


Figure 2.2 Map illustrating the coverage of the New Forest National Park and the three AONBs in Wiltshire and Swindon. © Crown copyright and database right 2012 Map based on OS map information, copyright licence no. 100005798.

The new Landscape Biodiversity Areas should work alongside existing landscape-scale conservation initiatives within the county which include the RSPB's Futurescapes project, the Environment Agency's work relating to the Water Framework Directive, the Wildlife Trust's Living Landscapes Initiative, the Marlborough Downs Nature Improvement Area (NIA) and the three Areas of Outstanding Beauty (AONBs) which collectively cover roughly 44% of the county (Figure 2.2). Each of the AONBs has their own management plan and these should be referred to for specific guidance on work planned within each of these areas. Additionally, a small section of the far southeast corner of the county is included within the New Forest National Park.

The government has recently published their [criteria for identifying Nature Improvement Areas \(NIAs\)](#). They are to be large, based around core areas of existing wildlife areas (NNRs, SSSIs, SNAs), and include corridors, buffers, restoration areas, and other land uses. These criteria aligns closely with the process employed for identifying the landscape Biodiversity Areas and it is therefore

hoped that this landscape framework can help partnerships such as the newly established [Local Nature Partnerships](#) in identifying future NIAs.

## 3. Landscape Biodiversity Area Profiles

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Area profiles have been compiled for each of the Landscape Biodiversity Areas identified within the new landscape framework for Wiltshire and Swindon. Each profile follows the same format which covers key aspects of the Area and of the biodiversity therein:

### 3.1 Area Profile

- **Landscape Biodiversity Area Map** – This presents the Landscape Biodiversity Area along with the main urban areas, currently recorded priority habitats and the Strategic Nature Areas present within it. SNAs are labelled with their unique SNA number as identified in the South West Nature Map.
- **National Character Areas** – National Character Areas divide England into 159 natural areas each defined by a unique combination of landscape, biodiversity, geodiversity and economic and cultural activity<sup>3</sup>. Eleven of these NCAs overlap with Wiltshire and Swindon and can be used in defining the character of these areas.
- **Landscape Character Types** – The physical and cultural influences of Wiltshire have created a diversity of landscapes and these variations and differences are represented by sixteen *Landscape Character Types*. Each of the generic landscape types has a distinct and relatively homogenous character with similar physical and cultural attributes, including geology, landform, land cover, biodiversity and historical evolution<sup>4</sup>
- **Landscape Character Areas** – The landscape character types have then been further sub-divided into component *Landscape Character Areas*. These are discrete geographic areas that possess the common characteristics described for the landscape type. Each character area has a distinct and recognisable local identity<sup>4</sup>
- **AONBs** – This section highlights any Areas of Outstanding Natural Beauty which overlap with the Landscape Biodiversity Area. AONBs are areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes. Three of these overlap with Wiltshire; [Cotswolds AONB](#), [North Wessex Downs AONB](#) and [Cranborne Chase and West Wiltshire Downs AONB](#).
- **SNAs** – This identifies Strategic Nature Areas which occur within the particular Landscape Biodiversity Area. Details of the main priority habitat for which they have been classified are noted here, along with other habitats present and quantitative targets for creating viable landscape scale areas of priority habitat.
- **Geology** – Each section gives a brief overview of the underlying geology within the Area. More detailed descriptions of the geology of Wiltshire and Swindon are available via [Natural England's website](#) or via the [Wiltshire Geology Group](#).
- **Community Area Boards** - Wiltshire Council has defined 20 Community Areas within Wiltshire, with 18 Community Area Boards established to administer them. The Area Boards are a formal part of local government that will help find solutions to local issues, including those relating to the environment. [The Wiltshire Intelligence Network](#) has a useful [maps section](#) which shows: environmental designations and agri-environment scheme agreements by Community Areas.

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<sup>3</sup> National Character Assessment, 2012

<sup>4</sup> Wiltshire Landscape Character Assessment, 2005

## 3.2 Background

This section gives a brief description of the Landscape Biodiversity Area, including the key ecological and geological features present there. It is not exhaustive and further details can be obtained by reading the relevant Landscape Character Area descriptions for specific areas.

## 3.3 Priority Habitats

This section provides a breakdown of the currently recorded priority habitats present within the Area. Priority habitat data has been extracted from the Wiltshire and Swindon Biological Records Centre's habitat layer which has been constructed using habitat data submitted from a range of sources including development applications, consultant reports, Wildlife Site and reserves monitoring, and surveys of statutory designated wildlife sites, as well as other ad hoc surveying. As there is currently no comprehensive, up-to-date habitat layer for Wiltshire and Swindon some areas of priority habitat may not yet have been recorded, while other areas which have been included in the habitat layer may have since been lost. Values quoted for habitat areas are only as accurate as the data that we have available to us and should be treated as a guide and not an absolute. The priority habitat section is a useful guide to the general abundance of each of the priority habitats and can help in identifying key habitats and areas for conservation within each Landscape Biodiversity Area. Table 10.1 in the Appendix details the hectarage of each broad habitat type in Wiltshire, along with the proportion of these broad habitat types that is designated as priority habitat.

## 3.4 Priorities and Opportunities for Conservation

This section outline priorities and opportunities for the landscape scale conservation of priority habitats within each of the Strategic Nature Areas (SNAs) in that Landscape Biodiversity Area. Priorities and opportunities are detailed under the Strategic Nature Area main priority habitat types present in this Area, with priorities for associated habitats and species listed underneath these. Priorities and opportunities for habitats not included in SNAs, but which offer landscape scale opportunities for conservation, are also included in this section but do not have a corresponding SNA number alongside them.

Not all habitats were covered by the Rebuilding Biodiversity methodology because of either their limited representation across the South West as a whole, because insufficient data was available on their distribution or because they naturally occur in small areas which did not meet the minimum criteria for the Rebuilding Biodiversity landscape methodology. This includes habitats such as hedgerows, bogs and standing open water which can be better recorded on a county-scale and which can represent important opportunities for landscape-scale conservation in their own right and in supporting associated priority habitats and species. In addition to this priorities and opportunities have also been identified for key species groups associated with particular priority habitats.

Along with the Strategic Nature Areas, which represent spatially explicit priorities for conservation effort, these priorities and opportunities give a focus to conservation efforts which each of the Landscape Biodiversity Areas. This section also highlights conservation projects and initiatives which are currently in place to conserve these habitats and species which can be built upon going forward. More detail on these projects is available by clicking on the Conservation Initiatives table at the end of each Area profile.



A range of resources are available to help identify priorities and opportunities including:

- The new 'State of the Environment' report for Wiltshire and Swindon 2012 can be used to help identify priorities for conservation. This report presents a strategic assessment of the environment in Wiltshire and Swindon and forms part of the suite of [Joint Strategic Assessments](#). This report is available via the Wiltshire Intelligence Network which also presents a whole raft of information on the local area.
- Condition assessments for SSSIs within each of the Landscape Biodiversity Areas have been used to assess the condition of priority habitats within each of these Areas. More detail on specific SSSIs can be accessed via the [Natural England SSSI website](#) and in the table [here](#).
- [MAGIC](#), a web-based interactive map service maintained by Defra which can be used to access and visualise a whole range of environmental data including: distribution of agri-environment schemes (ELS, HLS, OELS); Environment Agency's Priority Catchments and Catchment Sensitive Farming target areas; Statutory designated wildlife sites; Woodland Grant Schemes; Habitat and land use data

Priorities and opportunities have been identified by using these resources and through discussions with the BAP Steering Group and wider partners. This section represents a starting point for discussions on identifying priorities and opportunities and it is hoped that the Local Nature Partnership and its Biodiversity Working Group will be instrumental in identifying and refining further priorities.

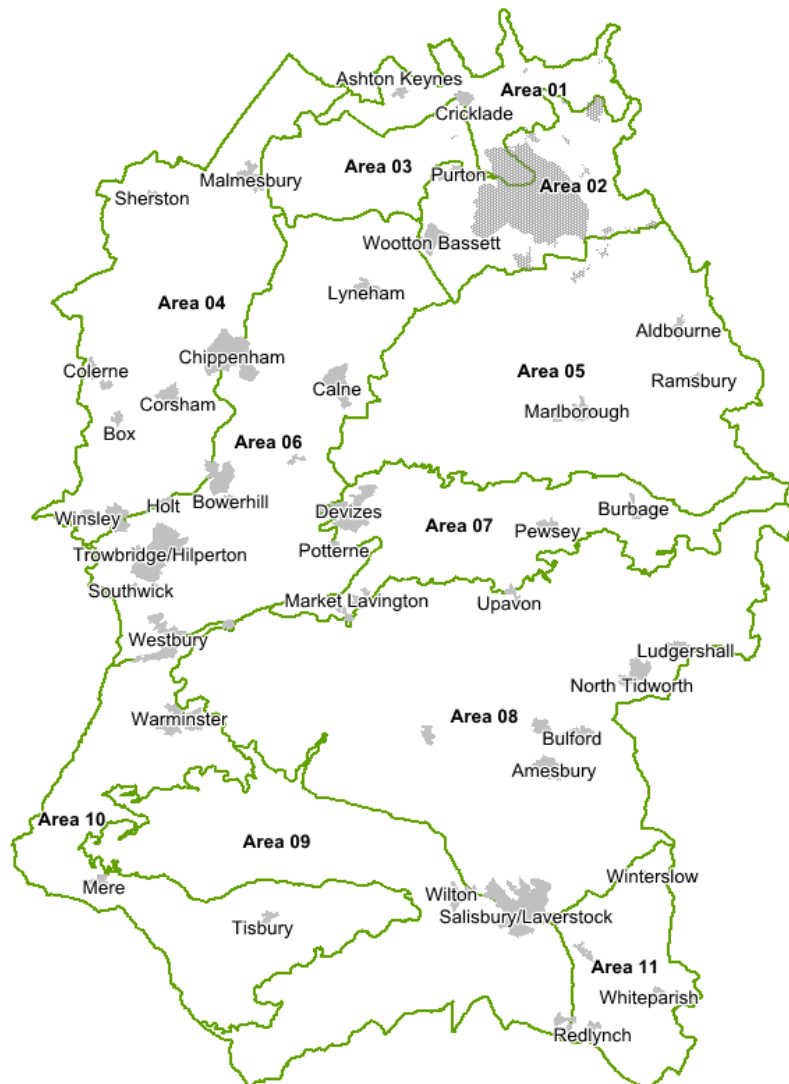
### 3.5 Conservation Initiatives

This section aims to highlight some of the conservation initiatives currently active within each of the Landscape Biodiversity Areas which contribute towards the conservation of priority habitats and species. The list is not exhaustive and has been compiled from information supplied by wildlife organisations working within the county. The aim is to raise awareness of these projects to promote opportunities for partnership working, to give people information on projects which impact their local area, and for sharing knowledge and findings to avoid duplication of effort and to inform related activities. A table can be accessed which outlines some of the conservation initiatives currently active within the county along with a brief project description, the Landscape Biodiversity Areas within which it is active and a link to a project overview submitted by the relevant organisation. External links are available to organisations' websites and further project details when available. These should be consulted for more detailed information on individual projects, along with the areas and species which they cover.

The new version of [BARS](#) allows for spatially explicit projects to be uploaded onto a UK map and details of this project to be made freely available. It is hoped that in time details of the projects listed as active in Wiltshire and Swindon can be added to this system

## 4. Landscape Biodiversity Areas

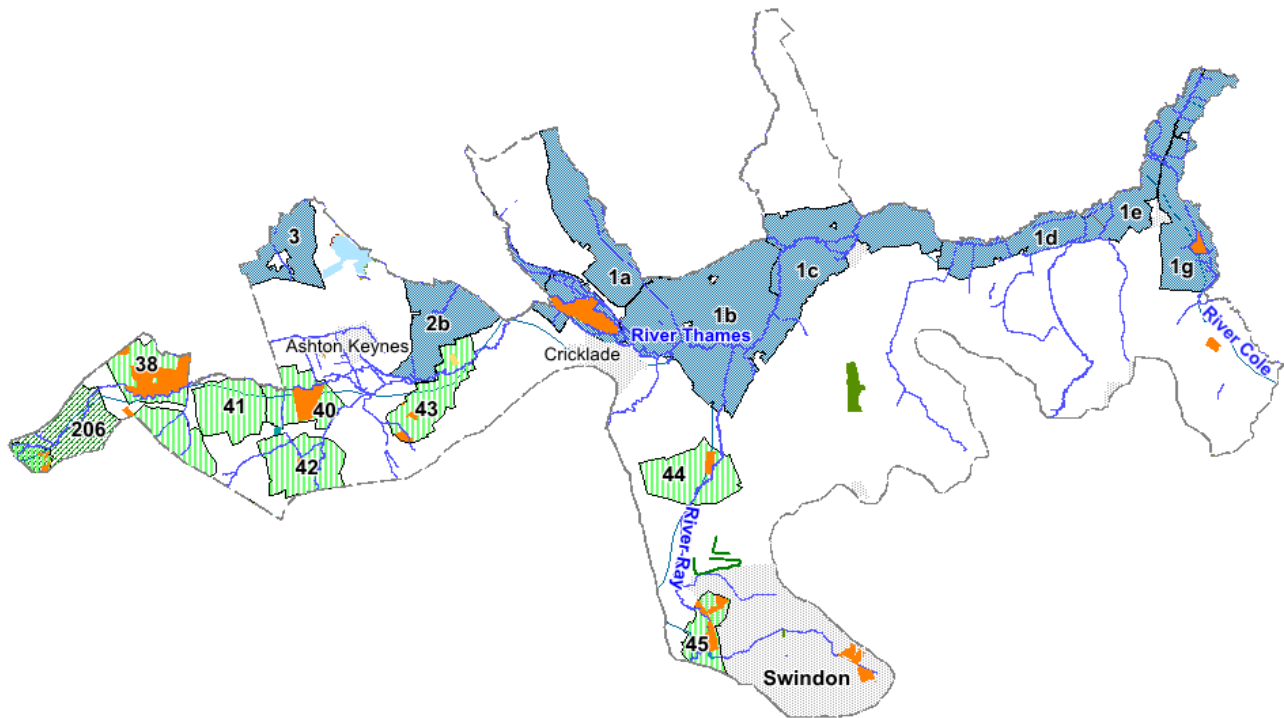
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**There are 11 Landscape Biodiversity Areas identified across Wiltshire and Swindon:**

- 1) Wiltshire Upper Thames Clay Vale
- 2) Swindon Ridge and Clay Lowlands
- 3) Braydon Forest
- 4) Cotswolds Limestone Lowlands
- 5) Marlborough Downs and Savernake Forest
- 6) Bristol Avon Vale
- 7) Vale of Pewsey
- 8) Salisbury Plain
- 9) West Wiltshire and Cranborne Chase Downs
- 10) Warminster and the Vale of Wardour
- 11) Tytherley and Langley Woods

# Area 01 –Wiltshire Upper Thames Clay Vale



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Figure 4.1 The Wiltshire Upper Thames Clay Vale Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

## 4.1.1 Area Profile

**National Character Areas** – [Upper Thames Clay Vales \(108\)](#)

**Landscaper Character Types** – Open Clay Vale (12)

**Landscape Character Areas** – Thames Open Clay Vale (12A)

**AONBs** – None

**Strategic Nature Areas** – There are 17 SNAs and the Rivers Thames and Ray. See [here](#) for SNA targets for Area 01

**Related BAPs** - [Cotswolds Water Park BAP](#)

**Geology** – The northern half of the Area is dominated by River Alluvia & River Terrace Gravels laid down by the river Thames and its tributaries. During the 20<sup>th</sup> century there was extensive quarrying of sand, gravel and some clay in this area. These pits flooded and the lime rich waters have formed the marl lakes of the Cotswold Water Park. Oxford Clays cover the slightly higher marginal areas in the southern section towards Swindon where it then meets the limestone ridge comprised of ancient corals upon which the town sits.

**Community Area Boards** – Royal Wootton Bassett & Cricklade Area Board, Malmesbury Area Board and Swindon Borough covering the eastern half.

## 4.1.2 Background

Wiltshire Upper Thames Clay Vale is a low lying area centred on the River Thames and its floodplain. It is a largely rural landscape, predominantly level, with lines of willow and other wetland trees. The agricultural use of the area combines arable and wet pasture, with open water ditches as well as hedgerows defining boundaries. A major feature of the area is the large extent of standing open water, with over a hundred lakes, resulting from gravel extraction undertaken since the 1940s. These pits have subsequently been flooded and some have been designated for leisure use. These water bodies with their varied vegetation are of national significance because of the lime rich waters which have flooded them, creating the scarce marl lakes of the Cotswold Water Park SSSI. The series of lakes that form the SSSI include a range of plant communities including those of open water (including those associated with marl waters), reed beds and surrounding grassland habitats. The area supports a wide range of notable species including wintering bittern and breeding birds such as pochard and gadwall; as well as water vole, otter, freshwater white clawed crayfish, and the lesser bearded stonewort *Characurta*, all of which have specific targets outlined in Cotswold Water Park BAP.

There are also a considerable number of unimproved lowland hay meadows, and floodplain meadows, of high ecological interest within the Area. Clattinger Farm SAC is one of the only lowland farms in Britain known to have never received agricultural chemicals. North Meadow near Cricklade is an exceptional example of lowland hay meadow and has been designated as a SAC and National Nature Reserves in recognition of its traditional management, habitat structure and species diversity. It has the largest UK population of Snake's head fritillary *Fritillaria meleagris*, a species highly characteristic of damp lowland meadows in Europe and now rare throughout its range. Drainage and agricultural improvement of its floodplain habitats, as well as more recently gravel extraction, has seen dramatic declines in this species within the UK. Other important hay meadows within the Area include Pike Corner SSSI, Sutton Lane Meadows SSSI, Upper Waterhay Meadow SSSI, Haydon Meadow SSSI, Acres Farm Meadow SSSI and Cricklade SSSI<sup>5</sup>.

## 4.1.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland meadows	206.66
Rivers	82.96
Mesotrophic lakes/Ponds	35.05
Lowland mixed deciduous woodland	25.76
Lowland calcareous grassland	3.22
Lowland fens	2.8
Wet woodland	1.51
Purple moor-grass and rush pastures	1.43
Coastal and floodplain grazing marsh	0.56
Total	359.95

<sup>5</sup> Wiltshire Landscape Character Assessment, 2005

## 4.1.4 Priorities and opportunities for conservation

1. **Neutral Grassland**
  - Lowland meadows
2. **Coastal and floodplain grazing marsh**
  - Mesotrophic Lakes
3. **Rivers**
  - Rivers and streams
4. **Woodland**
  - Ancient and semi-natural mixed deciduous woodland

### 1. Neutral Grassland – SNAs: 38, 39, 40, 41, 42, 43, 44, 45

#### Lowland Meadows

Lowland meadows are floristically rich and provide an important habitat for ground nesting birds such as skylarks and a rich diversity of invertebrate fauna. Of the 900ha of neutral grassland identified in this Area, 200ha has been designated as lowland and floodplain meadows of high ecological interest. While much of this receives statutory or non-statutory protection as SAC, SSSIs and County Wildlife Sites, there is a need to buffer existing habitat areas against the effects of climate change, agricultural improvement and the residual effects of previous gravel extraction. Priorities in relation to this habitat include:

- Targeted surveys of neutral grassland areas to identify whether they meet priority lowland meadow habitat status.
- Protect and secure favourable management of known lowland neutral meadows through agri-environment schemes
- Restore degraded meadows by reinstating appropriate grazing and hay-cutting regimes, and where necessary, application of green hay or seeds of local provenance.
- Identify clusters of lowland meadow sites and target action on areas within and between cluster sites to act as stepping stones.
- Enlarge and connect existing neutral sites through habitat creation and enhancement.
- Consider floodplain meadows as flood storage areas adjacent to rivers and remove barriers that reduce flood capacity
- Consider inclusion of lowland hay meadows in mineral site restoration plans

#### Existing conservation initiatives and projects

- The **Floodplain Meadows Partnership** has been monitoring plants, soils and water of key floodplain meadows for a number of years, including those at Clattinger Farm SAC, developing our understanding of how these rare plant assemblages change in response to wider environmental factors.

## 2. Coastal and Floodplain Grazing Marsh – SNAs: 1a, 1b, 1c, 1e, 1g, 2b, 3

### Mesotrophic Lakes

The lakes of the Cotswolds Water Park SSSI support a range of plant and animal communities including those of open water (including those associated with marl waters), reed beds and surrounding grassland habitats. However, only around 10% of the roughly 300ha of standing open water within this Area has been designated as priority habitat. Smaller and more recent lakes, or those receiving excessive nutrient input, may have less species diversity than the established marl lakes and these should receive on-going monitoring to determine their status as priority habitats. Recent Natural England assessments of the lakes within the Cotswolds Water Park SSSI have found them to be in unfavourable declining condition due to issues including poor water quality - indicating eutrophication and high sediment loads, presence of invasive plant and animal species, and loss of high quality plant species. Priorities in relation to this habitat include:

- Maintain water quality of water bodies by reducing sources of eutrophication such as agricultural run-off or contamination from sewage.
- Buffer lakes with appropriate planting and reed beds to reduce run-off causing turbidity and decreased water quality.
- Ensure the on-going monitoring of lakes to determine their status as priority habitats.
- Design of new water bodies within mineral restoration plans should seek to create lakes with shallow sloping banks, indented shorelines, reed beds and shallow wetlands which provide habitat for wintering and breeding birds and support adjacent wet woodland and wet grazing meadows.
- Ensure that a landscape scale perspective is taken to restoration projects within the CWP to ensure that projects complement the surrounding natural environment and that measures are taken to allow the benefits of these projects to be filtered throughout the CWP.

### Existing conservation initiatives and projects

- The [Cotswolds Water Park BAP 2007 – 2016](#) integrates with the Landscape Scale Framework for Wiltshire and Swindon but addresses many issues at a very local level. The CWP BAP should be consulted for details of further initiatives. A priority within the CWP BAP is to take steps to maintain the quality of water bodies within the Park. The condition of some of the important marl lakes has declined due to eutrophication from boat traffic and run-off from fields. Reducing agricultural runoff and ensuring there is no contamination from sewage are important to maintaining the diversity of these lakes. The Environment Agency and Natural England are currently working together with farmers to encourage the inclusion of Entry Level options under the Environmental Stewardship scheme where there are diffuse pollution problems.

## 3. Rivers and streams – SNAs: 756, 761, 763, 764, 766, 767 – Thames; 768 - Ray

The Thames and its tributaries are vital in supporting the associated wet pasture, open water ditches, lines of willow and wetland trees which characterise this Area. The river and these associated habitats support a wide range of rare and endangered species including otters, water voles, white clawed crayfish, snake's head

fritillaries and bats. The effects of climate change may substantially increase flood levels and duration of inundation which may pose significant threats to rare plant communities of floodplain meadows and their associated fauna. Point and diffuse sources of pollution are an issue along rivers with run-off from agricultural fields, urban areas and treatment works all factors that negatively influence water quality in this area. In addition to this there are issues with non-native invasive plant and animal species including Himalayan balsam and American signal crayfish. Rising to the south of Swindon and flowing north into Area 01, the River Ray is a key riparian corridor between the Swindon Urban Area and its confluence with the River Thames. Although extensive efforts have been made to open up sections of the river to enhance the riparian habitat it is under increasing development pressure as the urban area expands. Priorities in relation to this habitat include:

- Maintain connectivity of riparian habitat throughout urban areas as essential wildlife corridors
- Buffer the effects of climate change by increasing areas of wet pasture and open water ditches.
- Increase planting of wet woodland along Thames corridor, including Black Poplar, where appropriate
- Support measures to control non-native invasive plant and animal species associated with the river system.
- Increase width of riparian vegetation strips to buffer the effects of siltation and chemical run-off from arable farming practices
- Support actions outlined in the Upper Thames Catchment Management Plan to help achieve Water Framework Directive objectives and attain 'good ecological status' for the Upper Thames.

#### Existing conservation initiatives and projects

- **Upper Thames Catchment Management Plan** - A [Catchment Management Plan](#) is in preparation for the Upper Thames which identifies the actions needed to achieve the objectives of the Water Framework Directive in the Cherwell catchment as soon as possible. It translates the Thames River Basin Management Plan (RBMP), published in December 2009, into actions required on the ground to achieve Good Ecological Status. The Catchment Management Plan outline priorities for the whole catchment relating to non-native invasive species, urban and transport pressures, phosphorus levels in rivers and stream, and the physical modification of river channels.
- **Wiltshire Invasive Plants Project** - The project aims to control invasive plants in the north of Wiltshire, especially along rivers such as the Thames and its tributaries where they can spread rapidly. The main plant targeted is Himalayan balsam, which is controlled by organising volunteer tasks to pull it. The project also tackles other invasive plants, particularly giant hogweed and Japanese knotweed. This is mainly done by raising awareness with landowners, but the project officer and some volunteers are trained to use pesticides.

#### 4. Woodland – SNAs: 206

The main concentrations of ancient woodland in North Wiltshire are associated with the former hunting forest of Braydon to the south of Area 01. Flistridge wood, Oaksey Nursery and Maskelyne's Copse to the west of Upper Minety are mixed deciduous woodlands situated in the far south west corner of Area 01 which form an important link with the Braydon Forest Woodlands to the south and the woodlands located in







the Cotswolds to the east. It is important to maintain the area of woodland, implement appropriate woodland management regimes and and to buffer existing sites from environmental stressors including climate change. Priorities from woodland in this area include:

- Secure favourable management of existing ancient woodland sites, supported where possible by appropriate woodland grant schemes such as the England Woodland Grant Scheme.
- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting, particularly where it would help to link woodlands in a north – south axis.

### Existing conservation projects and initiatives

- **Rebuilding Biodiversity** – the 30 square miles of the Braydon Forest is the focus of the Wiltshire Wildlife Trust’s Rebuilding Biodiversity Living Landscape project. This project aims to promote species and habitat conservation on the Trust’s reserves, as well as to influence and improve the management of land not owned by the Wildlife Trust. The project helps to deliver practical restoration works, for example, re-establishing wildlife meadows, planting trees, creating ponds and hedge planting to establish wildlife corridors which enable wildlife to move between biodiversity rich areas. It is important to continue the momentum of this project and maintain relationships with landowners within the area to promote opportunities for extending the scope of the project and increasing biodiversity gains outside of the reserves.

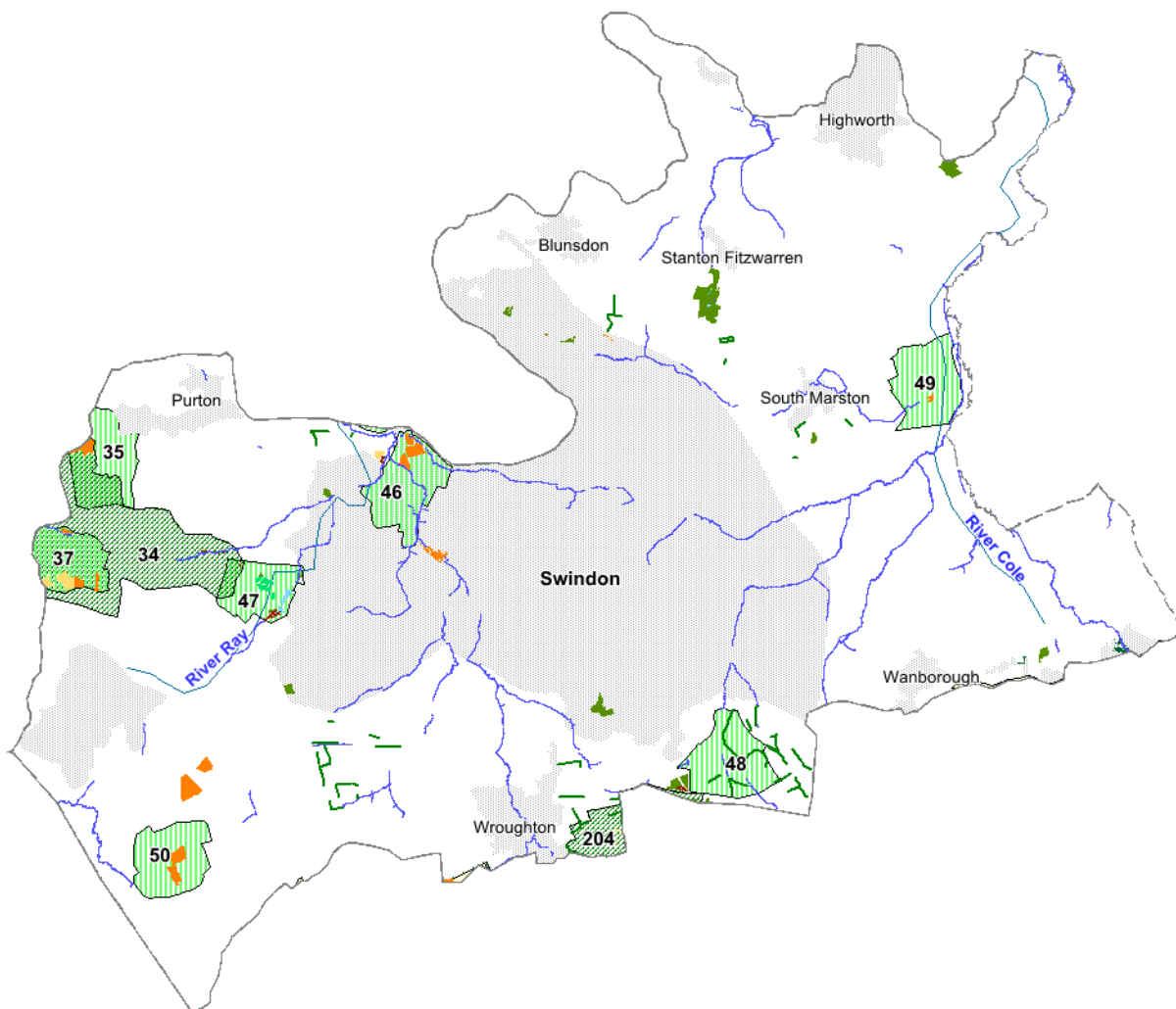
## 4.1.5 Conservation Initiatives

	"Bees for Everyone"	A project to raise public awareness of the importance of bumblebees and the problems that their loss and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.	6, 9, 10	Click folder for project details	
	Meadow research project	Foodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key foodplain meadows for many years. This information is used to develop our understanding of how these meadows communities change in response to wider environmental factors and help guide the management of foodplain meadows elsewhere.	1, North Meadow and Clifters Farm Sites	Click folder for project details	
	Great Western Community Forest	The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grasslands, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details	

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas



## Area 02 - Swindon Ridge and Clay Lowlands



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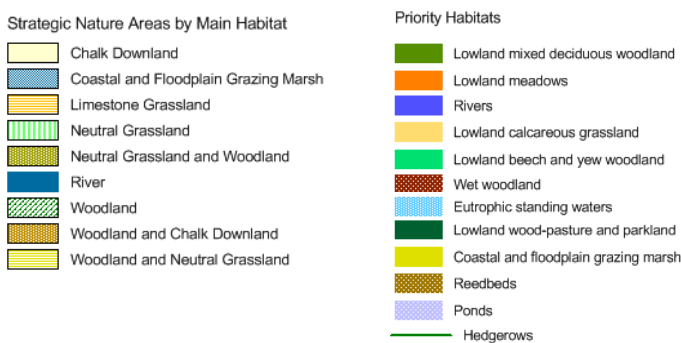


Figure 4: The Swindon Ridge and Clay Lowlands Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.2.1 Area Profile

**National Character Areas** – [Upper Thames Clay Vales \(108\)](#), [Midvale Ridge \(109\)](#)

**Landscape Character Types** – Rolling Clay Lowlands (11), Limestone Ridge (8)

**Landscape Character Areas**– Calne Rolling Clay Lowlands (11A), Swindon -Lyneham Limestone Ridge (8A)

**AONBs** – Directly borders the North Wessex Downs AONB

**Related BAPs** - None

**SNAs** – There are 9 SNAs and the Rivers Ray and Cole. See [here](#) for SNA targets for Area 02

**Geology**—The northern half of the Area has an underlying geology of corallian limestone or ‘coral rag’ which forms part of a limestone ridge that extends northeast into Oxfordshire and further southwest to the Avon Vale. Here it forms a ridge between the rolling clay lowlands of the Avon to the west and those to the east which neighbour the Marlborough Downs. The southern half of the Area is dominated by clays, both Kimmeridge and Gault, whilst the hill on which Swindon Old Town sits is formed by an area of younger Jurassic rock of Purbeck and Portland Stone. [Okus](#) and [Great Quarry](#) are SSSIs located in this Area which have been designated for their earth heritage, particularly their richness of molluscan fossil faunas.

**Community Area Boards** – Area 02 falls almost entirely within the Swindon Borough, with only the western end covered by the Royal Wootton Bassett & Cricklade Area Board.

## 4.2.2 Background

The limestone ridge which comprises the northern half of the Area is a narrow band of Coral Rag limestone which forms a series of hills running diagonally from the northeast corner of Wiltshire at Highworth, through north Swindon and southwest to the surrounding clay vales. This Ridge forms a low band of limestone hills, and is characterised by sandy, free draining soils that support a mix of dry woodlands, sandy pastures and arable fields interspersed with many small settlements. Generally a good network of hedgerows remains, with numerous hedgerow trees and intermittent woodland clumps. The level hills tops fall steeply away to the surrounding clay vales on the southern side and more gently to the east<sup>6</sup>.

The area to the north of Swindon is quite sparsely settled and remains largely rural in feel with mainly arable and pastoral farmland and some significant areas of mixed deciduous woodland. Stanton Park, a County Wildlife Site comprising Great Wood, is an area of ancient semi-natural woodland which includes a pond known to support a rich dragonfly assemblage and which is designated as standing water priority habitat.

Sandwiched between the limestone ridge to the north and the high Marlborough Downs to the south, a narrow band of gently undulating land on underlying clay characterises the south of the Area. Here the land is comparatively level and open with a mix of arable and pasture land between the built up areas of Swindon and the surrounding villages including Wroughton and Chiseldon. Fields are bounded by hedgerows, with a good network of designated priority hedgerow habitats concentrated in the south of the Area. In places however hedgerows have been removed and replaced by fencing and hedgerow trees are sparse.

Swindon town dominates the centre of the Area with its elevated position atop the Portland Stone. The River Ray is an important biodiversity feature of the Town, acting as a wildlife corridor and supporting ecologically important riparian, meadow and woodland habitats along its length. Other significant sites include Restrop Farm and Brockhurst Wood SSSI which encompass a number of habitats including unimproved hay meadows, permanent pasture, mature hedgerows, scrub and ancient woodland with a diverse range of species. Coate Water SSSI on the southern outskirts of Swindon has several large areas of standing open water, originally constructed as reservoirs for the Wilt & Berks canal in the 1820s. Today it is protected as a Country Park with diverse breeding bird populations, wet and dry woodlands, a healthy hedgerow network and areas of neutral grassland. It is an important site for wintering waterfowl, particularly teal, coot, great-crested grebe, Canada goose and mallard, and also supports a wide range of dragonflies and damselflies.

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<sup>6</sup> Wiltshire Landscape Character Assessment, 2005

### 4.2.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland mixed deciduous woodland	54.05
Lowland meadows	51.17
Rivers	27.59
Lowland calcareous grassland	15.19
Lowland beech and yew woodland	5.31
Wet woodland	4.85
Eutrophic standing waters	3.59
Lowland wood-pasture and parkland	3.2
Coastal and floodplain grazing marsh	0.45
Reedbeds	0.27
Ponds	0.06
<b>Total area of Priority Habitats</b>	<b>165.73</b>

### 4.2.4 Priorities and opportunities for conservation

- 1. Rivers**
- 2. Neutral Grassland**
  - Unimproved neutral meadows
- 3. Woodland**
- 4. Hedgerows**
- 5. Built Environment**

#### Rivers – SNAs: 770, 771 – Cole; 772 - Ray

The Rivers Ray and Cole represent important wildlife corridors in Area 02, linking Swindon urban area with the surrounding countryside and supporting associated riparian, meadow and woodland priority habitats along their lengths. The river system is particularly vulnerable to pressures associated with the urban environment and transport systems which can lead to polluted run-off and raised sediment and chemical loads. It is important to maintain the integrity and ecological status of the riparian and adjacent habitats to safeguard these important corridors and their associated wildlife. Priorities for these habitats are:

- Identify sites with suitable conditions for restoration of floodplain meadows (MG4)
- Restore meadows and wet woodland habitats in the floodplains
- Protect, enhance and sensitively manage riparian habitats
- Revert arable land in the floodplain to permanent pasture and plant woodland / buffer strips to intercept runoff
- Improve fish habitats by removing barriers and securing sensitive bankside management<sup>7</sup>

<sup>7</sup> Contact the Environment Agency / Wiltshire Council drainage team before planning or carrying out any works to the channel as a licence may be required

## Neutral Grassland – SNAs 47, 48, 50, 35, 46, 37

### Unimproved neutral grassland

There are extensive areas of neutral grassland identified within the Area, although only 4% of this is designated as unimproved neutral meadow priority habitat. Meadows are generally located along the streams and rivers and act as important buffers and wildlife havens, reducing run-off into the river system and supporting a diverse range of plants and animals. To the west of the Swindon urban area priority neutral meadows are found in close association with the woodland of Lydiard Park and the Braydon Forest area. Priorities for neutral meadows in Area 02 are:

- Promote the use of agri-environment schemes to landowners and managers where they own / manage important neutral meadow sites to achieve favourable management of existing neutral meadows.
- Identify clusters of neutral grassland sites and target action on areas within and between cluster areas to act as stepping stones
- Restore degraded meadows using seed of local provenance
- Enlarge existing neutral sites through habitat creation and enhancement
- Sow species-rich neutral grassland at new sites where ground conditions are suitable

## Woodland – SNAs: 204, 34

Significant areas of ancient and semi-natural mixed deciduous woodland are concentrated around the outskirts of the Swindon urban limits. Great Wood, Clout's Wood and Burderop Woods are all SSSIs, designated for their varied woodland structures, woodland fauna and rich ground flora including Spiked star-of-Bethlehem (*Ornithogalum pyrenaicum*), a species of nationally restricted distribution, Herb-paris (*Paris quadrifolia*) and Broad-leaved helleborine (*Epipactis helleborine*). There are significant areas of woodland to the west of the Area where it forms part of the wider Braydon Forest, a medieval hunting forest now characterised by a mosaic of woodland and neutral grassland sites. Deer grazing pressure has been noted as a significant issue within both Clout's Wood and Burderop Woods SSSIs, leading to a reduction in the level of woodland regeneration. Priorities for woodland in Area 02 are:

- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting
- Introduce appropriate deer control measures as required to monitor and control deer numbers and allow the natural regeneration of woodlands.
- Secure favourable management of existing ancient woodland sites, supported where possible by appropriate woodland grant schemes such as the England Woodland Grant Scheme.
- Restore woodlands through removal of rhododendron and other invasive species, where these are causing a problem

## Existing conservation projects and initiatives

- **The Great Western Community Forest** –Area 02 falls within the target area for the Great Western Community Forest, one of the UK's 12 Community Forests. Collectively, these forests form the largest environmental regeneration initiative in England with the creation of over 10,000 hectares of new woodland and the management of a further 27,000 hectares of existing woodland. Offsetting

and mitigation works in the Swindon Borough have been closely aligned with this project with investment coming from section 106 monies and the Community Infrastructure Levy. Areas of new woodland have been planted close to existing ancient woodland as part of the Great Western Community Forest. This includes sites such as King's Farm Wood which is adjacent to Clout's Wood near Wroughton and Stratton Wood to the north east of Swindon which adjoins Great wood.

## Hedgerows

The land surrounding the built up areas of Swindon and the surrounding villages is generally characterised by a mix of arable and pasture land bounded by hedgerows, with numerous hedgerow trees and intermittent woodland clumps. The low-lying, gently undulating pastures to the south of the Area have a good network of designated priority hedgerow habitats which act as important wildlife corridors, connecting areas of woodland and priority grassland. In places however hedgerows have been removed and replaced by fencing and hedgerow trees are sparse. Priorities for hedgerows in Area 02 are:

- Lay / coppice degraded hedgerows, planting up gaps
- Allow mature standard trees to develop within hedgerows
- Replant species-rich hedgerows where these have been completely lost
- Manage hedgerows regularly to maintain a wide and dense base
- Maintain grassland buffer strips alongside hedgerows in arable fields

## Built environment

Amenity parks and woodland act as stepping stones within the urban limits of the Swindon urban area, providing valuable refuges and food for wildlife. Significant areas of open green space are scattered within the urban area, with larger open areas on the outskirts of the town containing a rich variety of priority habitats including neutral meadows, ancient woodland and open water. Significant areas of development have been proposed for the areas surrounding Coate Water, Wichelstowe and the villages to the east of Swindon including South Marston. It is important to ensure that appropriate environmental considerations are incorporated into the development plans for these sites. Where possible this should include the retention of veteran trees, hedgerows and water courses which act as important habitats and corridors to dispersal. Priorities relating to the built environment include:








- Targeted protection and enhancement of the green infrastructure within and surrounding the urban limits.
- Linking up of strategic GI networks both within the urban limits and to the surrounding landscape.
- 'Greening' of the urban centre through incorporation of green roofs, grass verges, trees, ditches and open green spaces into new urban planning.
- Incorporation of wildlife features into new designs including bat and bird boxes, ponds.

## Existing conservation projects and initiatives

- **Swindon GI Strategy** – Swindon has a completed GI strategy for the Borough which it is hoped will provide the basis for a coordinated approach to the creation and sustained management of green infrastructure across Swindon and its neighbouring authorities. The GI network is identified within

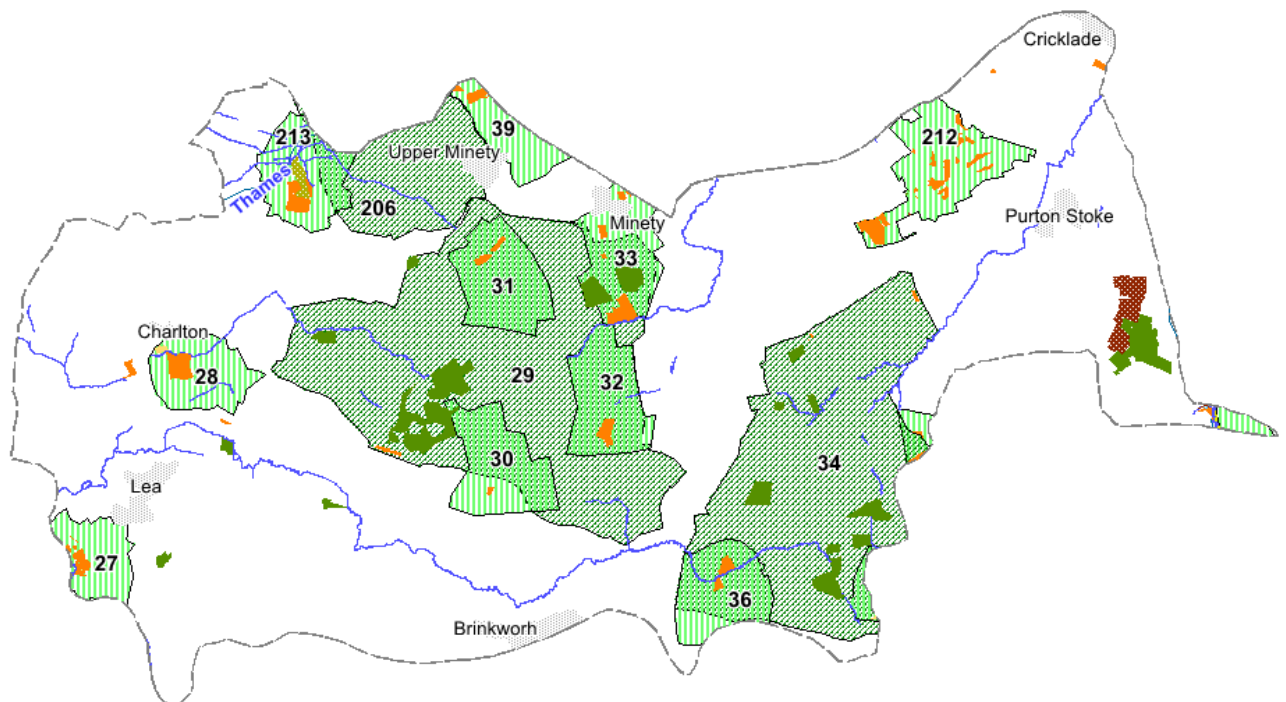
Swindon Core Strategy’s section on ‘Safeguarding our environment for future generations’ which includes policies to deliver a network of green spaces for people and wildlife. Continued work is required to identify opportunities to extend the network and increase connectivity.

## 4.2.5 Conservation Initiatives

	<p>'Bees for Everyone'</p>	<p>A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create suitable bumblebee habitats.</p>	<p>8, 9, 10</p>	<p>Click folder for project details</p> 	<p><a href="#">Bumblebee Conservation Trust website</a></p>
	<p>Meadow research project</p>	<p>Floodplain Meadows Partnership: Based at the Open University has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop an understanding of how these rare plant communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.</p>	<p>1, North Meadow and Clatridge Farm SAC</p>	<p>Click folder for project details</p> 	<p><a href="#">Floodplain Meadows Partnership research site</a></p>
	<p>Great Western Community Forest</p>	<p>The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, heathland, ponds and rivers.</p>	<p>1, 2, 3 &amp; 5</p>	<p>Click folder for project details</p> 	<p>Click icon for GWCF webpage</p> 

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

## Area 03 –Braydon Forest



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Strategic Nature Areas by Main Habitat	Priority Habitats
Chalk Downland	Lowland mixed deciduous woodland
Coastal and Floodplain Grazing Marsh	Lowland meadows
Limestone Grassland	Rivers
Neutral Grassland	Lowland calcareous grassland
Neutral Grassland and Woodland	Wet woodland
River	Eutrophic standing waters
Woodland	Purple moor-grass and rush pastures
Woodland and Chalk Downland	Lowland dry acid grassland
Woodland and Neutral Grassland	Coastal and floodplain grazing marsh

Figure 5: Braydon Forest Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.3.1 Area Profile

**National Character Areas** – [Upper Thames Clay Vales \(108\)](#), small section of [Cotswolds \(107\)](#) at eastern side

**Landscape Character Types** –Rolling Clay Lowland (11)

**Landscape Character Areas** –Minety Rolling Clay Lowland (11B)

**AONBs** – None

**Related BAPs** - None

**SNAs** – There are 13 SNAs and the River Thames. See [here](#) for SNA targets for Area 03

**Geology** – The Area is part of a huge belt of low-lying land which extends across south central England. The dominant geology of Oxford Clay yields abundant fossils and is interspersed by areas of Kellaways Sands and limestone which can form low intermittent hills to the west of the Area.

**Community Area Boards** – Malmesbury Area Board and Royal Wootton Bassett & Cricklade Area Board.

### 4.3.2 Background

The Braydon Forest Landscape Biodiversity Area is a low lying area of land on Clay which lies to the north of the county. It is largely surrounded by other low lying land, including the clay vales of the Thames to north and the Bristol Avon to the south. To the east and west there are small nucleated villages such as Cloatley, Minety and Charlton which has areas of historic parkland, linked by winding roads<sup>1</sup>. The Braydon Forest Landscape Biodiversity Area is more wooded and sparsely settled than the surrounding area which, in part, reflects the strong influence of its historic land use as part of the Royal Hunting Forest of Braydon.

This Area is characterised by 18th century enclosure landscapes of small woods, pastoral fields and a good network of hawthorn/blackthorn hedges with many mature oak hedgerow trees. Substantial blocks of ancient woodland remain in the central part of the area, including woods which have been traditionally managed to maintain a high canopy of mature trees with an understorey, generally hazel, which is coppiced to maintain a varied woodland structure. Sunny glades allow sunlight to penetrate the woodland floor, encouraging the ground flora and associated invertebrate communities. Wet woodlands are indicative of areas of poorly drained soils and wet ground and sizeable patches of this habitat are present to the east of Area 03.

The Area has a significant number of herb rich lowland meadows which are traditionally cut for hay in the mid summer, including the SSSIs of Cloatley Manor Farm Meadow, Stoke Common, Distillery Farm Meadows, Emmett Hill Meadows and Avis Meadows. Areas of lowland meadow generally occur in close proximity to watercourses and alongside areas of woodland priority habitat. Many of these meadows are floristically rich and provide important habitat for ground nesting birds such as skylarks as well as for a diverse invertebrate fauna, including rare species such as the marsh fritillary butterfly.

### 4.3.3 Priority Habitats

Priority Habitats	Area (ha)
<b>Lowland mixed deciduous woodland</b>	203
<b>Lowland meadows</b>	111.14
<b>Wet woodland</b>	33.73
<b>Rivers</b>	19.6
<b>Purple moor-grass and rush pastures</b>	8.78
<b>Lowland calcareous grassland</b>	2.37
<b>Coastal and floodplain grazing marsh</b>	1.58
<b>Eutrophic standing waters</b>	0.15
<b>Lowland dry acid grassland</b>	0.08
<b>Total</b>	<b>380.43</b>

### 4.3.4 Priorities and Opportunities for Conservation

#### 1. Woodland

- Ancient Woodland and woodland mosaic
- Bats
- Lepidoptera
- Hedgerows

#### 2. Neutral Grassland



- Unimproved neutral meadows
- Lepidoptera

## Woodland – SNAs: 29, 34

### Ancient Woodland

Braydon Forest is characterised by its wooded landscape which includes a relatively high concentration of ancient woodland sites, including some particularly valuable SSSIs such as Ravensroost Wood. While the cover of woodland is well understood and remains fairly stable, many of the woods are undermanaged and are vulnerable to deer browsing pressure. Although this Area has been the focus of the Wildlife Trust's Braydon Forest Living Landscape project, continued work with landowners is needed to ensure that those areas outside of reserves and statutory wildlife sites design are managed to enhance their biodiversity potential and increase connectivity across the wider environment. Priorities for this habitat are:

- Increase the area of ancient woodland sites under favourable management
- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting, and integrate them into the wider landscape
- Take steps to reduce deer grazing pressure at vulnerable ancient woodland sites where there is evidence that this is negatively impacting the condition of the woodland.
- Maintain the mosaic of woodland and grassland sites throughout the Braydon Forest Landscape Biodiversity Area.
- Identify and protect veteran and future veteran trees in woodland sites and wood pastures

### Bats

The mosaic of woodland and grassland habitats in the Braydon Forest provides important habitats for bats, particularly rare woodland species such as Bechstein's, Barbastelle and Lesser horseshoe bats, which are known to roost and forage within the landscape. It is important to maintain the mosaic of woodland, grassland and open water habitats which help support such a rich diversity of bat species. Identifying roosting sites and foraging grounds is important in understanding how this protected group of species is utilising the Area and how best we can conserve their habitats. Therefore, priorities for bats in this Area are:

- Maintaining mature and veteran trees, particularly those known to be used for roosting
- Identifying and favourably managing the next generation of mature / veteran trees
- Managing existing hedgerows and woodland used for foraging and commuting routes
- Hedgerow planting and woodland creation to improve connectivity between key roosting / foraging sites
- Maintaining the important mosaic of woodland, grassland and open water habitats which help support such a rich diversity of bat species
- Identifying and map important roosting sites and foraging grounds for the rarest species

### Hedgerows

The hedgerow networks in this Area are generally good and play an important role for connectivity in relation to several other priorities in the area including woodland and bats, and help to mitigate sediment

and nutrient run-off from arable fields. Elms would traditionally have been a significant feature of the hedgerows and their loss due to Dutch elm disease has left gaps in places. Some hedgerows have been removed, or traditional management abandoned in favour of fencing, leading to a reduction in habitat connectivity and the availability of habitats for species such as the endangered Brown hairstreak butterfly. In addition to this the use of fertilisers, herbicides and pesticides can reduce ground flora diversity adjacent to hedgerows. Priorities for hedgerows in this Area are:

- Lay / coppice degraded hedgerows, planting up gaps
- Allow mature standard trees to develop within hedgerows
- Replant species-rich hedgerows where these have been completely lost
- Manage hedgerows regularly to maintain a wide and dense base
- Maintain grassland buffer strips alongside hedgerows in arable fields

Neutral Grassland – SNAs: 212, 27, 28, 30, 31, 32, 33, 36, 39, 213

### Unimproved Neutral Meadows

Braydon Forest is important for unimproved neutral meadows, which are floristically rich and are an important habitat for ground nesting birds such as skylarks as well as for a diverse invertebrate fauna. Meadows are traditionally managed, being cut for hay in mid-summer and aftermath grazed by sheep or cattle, with important sites including the SSSIs of Cloatley, Stoke Common, Distillery, Emmett Hill and Avis Meadows. The Blakehill Farm complex to the northeast of the Area represents one the UK's largest neutral grassland restoration projects and the biggest of the Wiltshire Wildlife Trust's reserves.

- Informing landowners and managers where they own / manage important neutral meadow sites
- Secure favourable management on neutral meadows
- Restore degraded meadows using seed of local provenance
- Enlarge existing neutral sites through habitat creation

### Lepidoptera

The mosaics of habitats within the Braydon Forest are known to support a wide range of rare species of moths and butterflies including the marsh fritillary, brown hairstreak and the Barberry carpet moth. Marsh fritillary butterflies have been recorded from grasslands in the Braydon Forest in which its larval food plant, devil's-bit scabious occurs. Adults tend to be sedentary and remain in a series of linked metapopulations, which frequently die out and recolonise. It is therefore essential to conserve a cluster of sites in close proximity to ensure the long term survival of this species. More widely, hedgerows should be sympathetically managed to provide suitable habitat for brown hairstreak butterflies; avoiding winter flailing of hedgerows with known populations of brown hairstreaks, ensuring that there is sufficient new growth of blackthorn on which their larvae feed and encouraging ash standards which are used by males as 'master trees' on which they congregate and breed. The Barberry carpet moth is limited to a few small sites, mainly in Wiltshire, with colonies also in Gloucestershire, Dorset and introduced colonies elsewhere. Priorities for Lepidoptera are:

- Integrate actions that will benefit these endangered Lepidoptera into future management plans within the Braydon Forest.
- Survey and monitoring for key species, including winter egg counts on blackthorn to check for presence of brown hairstreak.

- Habitat management at existing key sites should include protection of ash standards and cutting of blackthorn hedgerows on rotation (brown hairstreak) and low-intensity grazing using cattle (marsh fritillary).
- Habitat enhancement around key sites to encourage connectivity between meta-populations
- Planting barberry in hedgerows and woodland edges

### Existing Projects / Initiatives

- **Rebuilding Biodiversity** – the 30 square miles of the Braydon Forest is the focus of the Wiltshire Wildlife Trust’s Rebuilding Biodiversity Living Landscape project. This project aims to promote species and habitat conservation on Wiltshire Wildlife Trust’s 12 nature reserves situated within the project area, as well as to influence and improve the management of land not owned by the Wildlife Trust. The project helps to deliver practical restoration works, for example, re-establishing wildlife meadows, planting trees, creating ponds and hedge planting to establish wildlife corridors which enable wildlife to move between biodiversity rich areas. It is important to continue the momentum of this project and maintain relationships with landowners within the area to promote opportunities for extending the scope of the project and increasing biodiversity gains outside of the reserves. Grassland, pond and woodland management actions implemented during the project need to be maintained to ensure that they can deliver their biodiversity objectives.
- **Agri-environment woodland schemes** - As part of the review of the Common Agricultural Policy, Natural England and the Forestry Commission are looking at the role that Environmental Stewardship can provide in supporting farmers to conserve other “woody habitats”, such as field trees, parkland, hedges and patches of scrub scattered through the landscape. Reforms resulting from this may be of immense benefit to increasing woodland and hedgerow connectivity within this Area
- **Butterfly Conservation** - Important sites for these species include Ravensroost and Avis Meadows, Ravensroost Woods and Somerford Common, which have all been surveyed regularly as part of the [UK Butterfly Monitoring Scheme](#). Somerford Common is a key site for butterfly and moth conservation in Wiltshire and work by the Forestry Commission and Butterfly Conservation here has seen the creation of wide sunny ‘box junctions’ where woodland paths cross and a rotational cutting back of vegetation to support populations of Marsh fritillary and Brown hairstreak butterflies.








### Rivers SNAs: 664 – Thames; 769 - Ray

Tributary streams of both the Thames and the Bristol Avon run through the Braydon Forest Landscape Biodiversity Area. This network of streams and brooks provides important wildlife corridors and helps support a number of other priority habitats including wet woodlands and meadows. It is important to buffer these waterways from agricultural run-off and to maintain riparian habitats along their course. Invasive plants such as Himalayan balsam can cause problems and it is important to implement systematic removal of these species. Priorities for rivers include:

- Identify sites with suitable conditions for restoration of floodplain meadows (MG4)
- Restore meadows and wet woodland habitats in the floodplains
- Protect, enhance and sensitively manage riparian habitats

- Plant woodland / buffer strips to intercept runoff
- Carry out systematic surveying and removal of invasive species such as Himalayan balsam and Japanese knotweed.

### 4.3.5 Conservation initiatives

	Bees for Everyone	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create suitable bumblebee habitats.	6, 9, 10	Click folder for project details 	<a href="#">Bumblebee Conservation Trust website</a>
	Meadow research project	Floodplain Meadows Partnership Based at the Open University has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these rare plant communities change in response to other environmental factors and help guide the management of floodplain meadows elsewhere.	1 - North Meadow and Clatinger Farm SACs	Click folder for project details 	<a href="#">Floodplain Meadows Partnership research site</a>
	Great Western Community Forest	The purpose of GWCF is to create a multi purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details 	Click here for GWCF webpage 

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

# Area 04 -Cotswold Limestone Lowlands

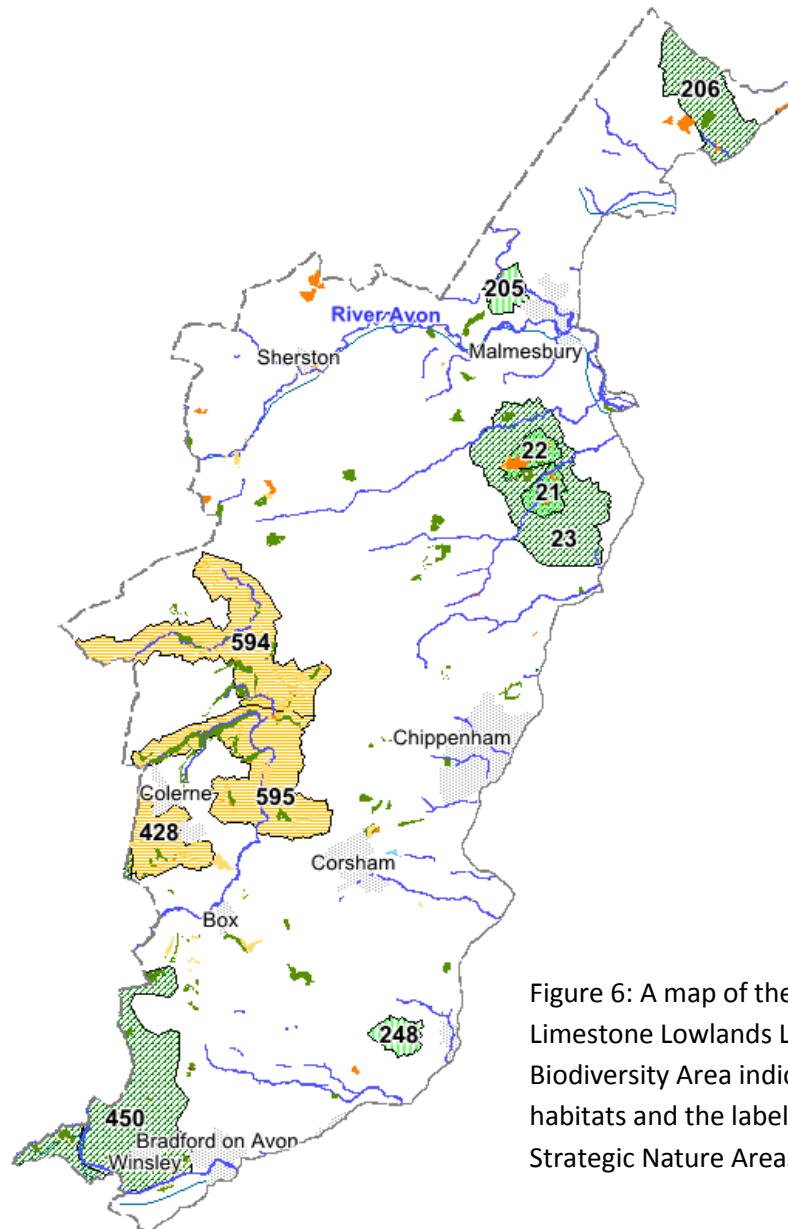


Figure 6: A map of the Cotswolds Limestone Lowlands Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

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### Strategic Nature Areas by Main Habitat

- Chalk Downland
- Coastal and Floodplain Grazing Marsh
- Limestone Grassland
- Neutral Grassland
- Neutral Grassland and Woodland
- River
- Woodland
- Woodland and Chalk Downland
- Woodland and Neutral Grassland

### Priority Habitats

- Lowland mixed deciduous woodland
- Lowland meadows
- Rivers
- Lowland calcareous grassland
- Wet woodland
- Eutrophic standing waters
- Purple moor-grass and rush pastures
- Lowland mixed deciduous woodland/Lowland wood-pasture and parkland
- Reedbeds
- Lowland fens
- Mesotrophic lakes
- Lowland wood-pasture and parkland
- Ponds

## 4.4.1 Area Profile

**National Character Areas** – [Cotswolds \(107\)](#), [Avon Vale \(117\)](#)

**Landscape Character Types** – Limestone Lowland (16), Limestone Valleys (10), Limestone Wold (9)

**Landscape Character Areas** – Malmesbury-Corsham Limestone Lowlands (16A), By Brook Limestone Valley (10A), Avon Limestone Valley (10B), and Cotswolds Dip Slope (9A).

**AONBs** – Cotswolds AONB covers the western half of the Area

**Related BAPs** - None

**SNAs** – There are 10 SNAs in Area 04, as well as The River Avon and a section of the Midford Brook in the south. See [here](#) for SNA targets for Area 04

**Geology** – The lowlands and wolds of Area 04 are characterised by an underlying geology of ancient great oolitic limestone of the Jurassic period, whilst the limestone valleys to the east of the Area are dominated by landslip and Inferior oolite or lias.

**Community Area Boards** – Malmesbury, Chippenham, Corsham, Melksham, and Bradford on Avon

## 4.4.2 Background

The Cotswolds Limestone Lowland Biodiversity Landscape Area is a rolling limestone region which has been largely farmed, but which has also retained significant areas of unimproved limestone grassland and areas of woodland.

The limestone wolds in the far west of the Area form a landscape of raised and gently undulating farmland underlain by ancient great oolitic limestone that slopes away to the east. The area is dissected by two steep and narrow tributary valleys, flowing into the By Brook and forming part of the Bristol Avon catchment. Hedgerows of varying quality, but with few hedgerow trees, enclose fields but are replaced by stone walls closer to settlements.

Moderately broad river valleys with gently undulating valley floors and steep limestone sides have been created to the east and south of the wolds by two rivers and their tributaries; the River Avon and By Brook. Many of the SSSIs found in Area 04 are concentrated along the course of these rivers, where significant areas of species rich lowland calcareous grassland and woodland are present along the valleys, especially where the valley sides are steepest and have escaped clearing for agriculture. Prime examples of lowland calcareous grassland can be found at West Yatton Down, Rack Hill, and Honeybrook Farm, one of the few remaining non-intensively managed lowland farms in Britain on which agricultural chemicals have never been used<sup>3</sup>.

Many good examples of rarer lowland mixed deciduous woodland types occur in the south of the Area. This includes Midford Valley Woods, on the slopes of the Midford Brook, which comprise some of the best examples of southern calcareous ash-wych elm woods on the oolitic limestone of the Wiltshire Cotswolds. North of this, Inwood is a structurally varied and botanically rich example of southern calcareous ash-wych elm and dry ash-maple woodland that has a particularly rich ground flora including large populations of the now rare spiked star-of-Bethlehem and the scarce meadow saffron.

There are very important sites for bats within the Area with Box Mine and Winsley Mines in the south designated as SSSIs and forming part of the [Bath and Bradford-on-Avon Bats SAC](#). They comprise networks of man-made tunnels which are used by bats for hibernation, mating and as a staging post prior to dispersal<sup>1</sup>. The SAC contains around 15% of the UK's overwintering populations of greater horseshoe bats (*Rhinolophus ferrumequinu*), as well as a small number of Bechstein's bats (*Myotis bechsteinii*) and lesser horseshoe bats (*Rhinolophus hipposidero*<sup>11</sup>).

The limestone landscape extends to the east of the river valleys of the Avon and By Brook forming the limestone lowlands, a large expanse of undulating lowland farmland used for arable and some permanent pasture and neutral meadows. The area is criss-crossed by shallow river valleys and still retains a strong hedgerow network. At the eastern boundary of the Area the underlying geology gradually transitions from the underlying geology of limestone to the clays of the Avon Vales to the east.

#### 4.4.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland mixed deciduous woodland	575.82
Lowland calcareous grassland	353.61
Lowland meadows	150.35
Rivers	101.93
Eutrophic standing waters	4.88
Wet woodland	2.12
Lowland wood-pasture and parkland	1.84
Lowland mixed deciduous woodland/Lowland wood-pasture and parkland	1.4
Reedbeds	0.47
Lowland fens	0.44
Purple moor-grass and rush pastures	0.21
Mesotrophic lakes/Ponds	0.04
Eutrophic standing waters/Ponds	0.02
<b>Total</b>	<b>1193.13</b>

#### 4.4.4 Priorities and Opportunities for Conservation

##### 1. Woodland

- Ancient Woodland
- Bats

##### 2. Limestone Grassland

- Limestone grassland and butterflies
- Arable plants
- Farmland birds

##### 3. Neutral Grassland

- Unimproved neutral meadows

##### 4. Rivers

## 1. Woodland – SNAs: 23, 206, 450, 515

### Ancient Woodland

The steep sided valleys of the limestone valleys include some extensive clusters of lowland mixed deciduous woodland which form an important component of the wider Cotswolds woodland network; a nationally significant feature for climate change adaptation of woodland species. While the cover of woodland remains fairly stable, most of the remnant woodlands are small and fragmented, and therefore also tend to be undermanaged and in poor condition. Priorities in relation to this habitat therefore include:

- Secure favourable management of existing ancient woodland sites
- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting, particularly where it would help to link woodlands in a north – south axis.

### Bats

This area supports internationally important roosts of Annex II bat species and also forms part of a nationally important landscape and migratory route for these species, linking with other nationally important roosts extending from Gloucestershire, through western Wiltshire (this area), eastern Somerset, Dorset and south Devon. Priorities for bats in this area are therefore:

- Study important roosts to improve understanding of how bats use the surrounding landscapes for commuting / foraging
- Protect and enhance suitable habitats around important roost sites
- Maintaining mature and veteran trees, particularly those known to be used for roosting
- Identifying and favourably managing the next generation of mature / veteran trees
- Managing existing hedgerows and woodland used for foraging and commuting routes
- Hedgerow planting and woodland creation to improve connectivity between key roosting / foraging sites
- Retaining and extending cattle grazed pastures which provide important foraging sites for bats.
- Maintaining the important mosaic of woodland, grassland and open water habitats which help support such a rich diversity of bat species
- Identifying and mapping important roosting sites and foraging grounds for the rarest species

### Existing conservation projects and initiatives

- **The Wiltshire Batscapes project** – West Wiltshire has been recognised as a key area for bats within the region and through projects such as the proposed Batscapes Project, work is planned to improve habitats for bats and increase the level of bat monitoring in this area. West Wiltshire is not within an HLS target area but this project aims to help farmers within the Batscapes project area into Entry Level Stewardships and, in the case of exceptional farms, Higher Level stewardship, as well as providing capital works grants towards habitat restoration that benefits bats.



## 2. Limestone Grassland – SNAs: 428, 594, 595

### Limestone grassland and butterflies

The steep valleys of the By Brook and associated tributaries support mainly linear strips of species-rich unimproved calcareous grassland, which in turn support diverse populations of associated declining butterfly species including the rare marsh fritillary. Knowledge of the extent of limestone grassland is good, however knowledge of important butterfly populations is very patchy. As with woodland habitats, this network of grassland sites forms part of the wider Cotswolds landscape forming a nationally significant feature facilitating climate change adaptation for grassland species. There has been severe loss of limestone grassland and butterfly populations due to grassland improvement, conversion to arable, use of pesticides and neglect (scrub encroachment), leaving small isolated habitats / populations. Many remaining areas could still be at risk. Priorities for action include:

- Butterfly surveys of limestone grassland sites
- Informing landowners and managers where they own / manage important limestone grassland / butterfly sites
- Protect and secure favourable management of remnant limestone grassland habitat
- Avoid use of pesticides on / near known limestone butterfly populations
- Reconnect limestone grassland networks, using stepping stone sites where necessary, particularly where known populations of limestone butterflies exist
- Restore degraded meadows by clearing scrub
- Create new limestone grassland sites in strategically important locations of suitable geology using seed sources of local provenance

### Farmland Birds

Outside the steep limestone valleys, the majority of the dip slope and rolling landscapes are heavily farmed, but supports important populations of farmland birds including the 'Arable 6' (lapwing, grey partridge, turtle dove, yellow wagtail, tree sparrow and corn bunting), which have all suffered significant declines in the past 50 years. Knowledge of important farmland bird populations is considered to be good. Many populations have now stabilised, however farmland birds are still vulnerable to changes in farmland management as a result of changing crop prices and policy reform such as the Common Agricultural Policy. Priorities for farmland birds in this area are therefore:

- Sowing wild bird seed mixtures
- Creating and maintaining skylark plots
- Beetle banks
- Fallow plots
- Cultivated field margins
- Low input cereals
- Planting, restoring and sensitive management of hedgerows
- Sensitive crop management

## Arable Plants

The Cotswolds is recognised as an important area for rare arable plants such as sheppard's needle and indigenous species such as Cotswold penny-cress, which have gone through significant declines due to advanced seed cleaning, increased use of fertiliser, new high yielding crop varieties and the introduction of herbicides. Knowledge of arable plant populations is poor. As with arable birds, rare arable plants are also vulnerable to changing crop prices, development (particularly photovoltaic farms) and policy reform which might favour less sensitive land management practices.

- Surveys to identify important sites / areas for rare arable plants
- Target important sites and surrounding areas for sensitive management
- Create uncropped cultivated margins – no herbicide / pesticide
- Control pernicious weeds in September (if necessary)

## Existing conservation projects and initiatives

- **Cotswolds Area of Outstanding Natural Beauty (AONB)** - The Landscape Biodiversity Area overlaps with the extent of the AONB which is well placed to coordinate conservation efforts at a landscape scale. The **England Biodiversity Strategy Delivery Plan** includes actions to encourage and support new and existing large scale initiatives for improved ecological networks across the Area of Outstanding Natural Beauty (AONB) designated landscapes. Additionally, AONB partnerships must integrate **Biodiversity 2020 and ecosystem targets** into all AONB Management Plan Reviews by Mar 2014. The AONB administers a **Sustainable Development Fund**, a regional grants scheme available to individuals, groups or businesses that have ideas or projects that will improve the Cotswolds both now and in the future.
- **Cotswolds Nature Improvement Areas** – The Cotswolds has identified two Nature Improvement Areas (NIAs) for the Cotswolds AONB; the Cotswolds Scarp NIA and the Cotswolds Valleys NIA. Although not successful in the first round of the government's NIA funding it is still the Cotswold Ecological Networks Forum's preferred method for the delivery of conservation effort at the landscape scale within the Cotswolds AONB. These NIAs have been identified from the SW Nature Maps Strategic Nature Areas and aim to link up and better manage existing sites across the project area. It is important to maintain the momentum generated from the NIA application process and to engage partners from across the environmental and business sectors to ensure that this project can be taken forward

### 3. Neutral Grassland – SNAs: 21, 22, 205, 248

#### Unimproved neutral meadows

Lowland hay meadows are mainly found on the limestone lowlands to the east and north of the wolds and valleys, generally closely associated with the course of the River Avon and its tributaries where alluvium and valley gravel have been deposited. Notable examples include Harries Ground, Rodbourne; a nationally important species rich area of lowland meadow which is also known to support the nationally scarce marsh fritillary butterfly. The abundance of Devil's-bit scabious is of particular importance as the food plant for the

larvae of the marsh fritillary butterfly. This butterfly prefers Devil's-bit scabious growing with upright leaves in relatively tall grassland as it is at this site. Issues include cessation of traditional meadow management practices. Priorities for neutral meadows are:

- Protect and secure favourable management of known lowland neutral meadows through agri-environment schemes or promotion of traditional meadow management
- Ensure that management of sites is in line with habitat requirements of notable meadow plants and species including the marsh fritillary butterfly.
- Enlarge existing neutral sites through habitat creation
- Identify clusters of lowland meadow sites and target action to conserve stepping stones to connect meta-populations and dispersal of neutral grassland species.

#### 4. Rivers – SNAs: 851, 859, 861 – Avon; 1040 – Midford Brook; 664 - Thames

Most of the Cotswold rivers represent key examples of oolitic limestone rivers, have high wildlife value and are of national importance. The Bristol Avon and By Brook rivers have created the extensive river system which is a key priority habitat within the area and has been integral in shaping the landscape and creating the conditions for many of the associated priority habitats. The upper reaches of the Bristol Avon begin in this area and support populations of salmonids and white clawed crayfish in the limestone valleys which do not occur further downstream in the clay vales. Riparian habitats include remnants of water meadows and riparian woodland, although much of these habitats have been lost, while other riparian habitats are vulnerable to poaching and development pressures. The river itself and the flora and fauna it supports are vulnerable to sedimentation due to thin cornbrash soils which are prone to erosion, particularly on steep slopes and in areas in arable production. Priorities in this area are therefore:

- Restore water meadows and riparian woodland
- Protect and manage riparian habitats sensitively
- Revert arable to grassland and plant woodland / buffer strips in areas of high erosion risk
- Improve fish habitats by creating reefs, creating riffles, removing barriers and sensitive bankside management
- For projects to enhance white-clawed contact the Environment Agency first








#### Existing conservation projects and initiatives

- **The By Brook and Bristol Avon** – Running through the north of the Area, these Rivers represent important wildlife corridors that support a range of associated habitats. Although neither is included as a priority catchment in the Environment Agency's Catchment Sensitive Farming Project, both have issues with agricultural run-off and invasive species. Both are covered by the **Wiltshire Rivers Monitoring Scheme** which is run by a network of volunteers who monitor Wiltshire's rivers to check for signs of pollution incidents affecting riverine fauna and flora. The Rivers have also been a focus of projects to mitigate the spread and impact of non-native invasive crayfish and the **Wiltshire Invasive Plants Project (WIPP)** which undertakes active removal of invasive plant species along the By Brook.

Additionally, opportunities for flood storage have been identified on the Upper Avon which may provide opportunities for the creation of floodplain/ wet grassland habitats. The **Bristol Avon Catchment**

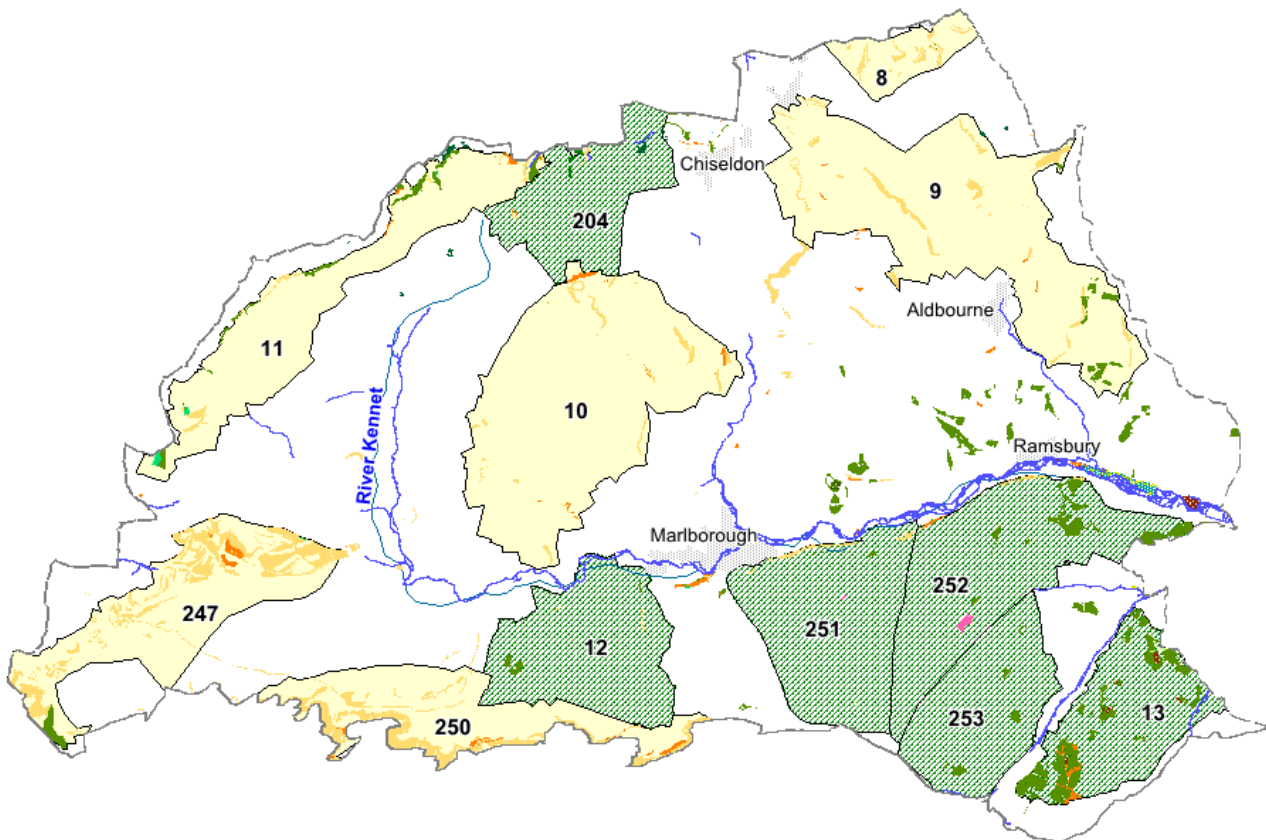
**Management Plan** outlines the strategic plan for the entire catchment and provides guidance on further opportunities for conservation within the Bristol Avon catchment.

## 4.4.5 Conservation Initiatives

	* Bees for Everyone*	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.	6, 9, 10	Click folder for project details 	<a href="#">Bumblebee Conservation Trust website</a>
	Meadow research project	Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these rare plant communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1: North Meadow and Cattlepost Farm SACs	Click folder for project details 	<a href="#">Floodplain Meadows Partnership research site</a>
	Great Western Community Forest	The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details 	Click icon for GWCF webpage 

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

## Area 05 – Marlborough Downs and Savernake Forest



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Figure 7: Marlborough Downs and Savernake Forest Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.5.1 Area Profile

**National Character Areas** – [Berkshire and Marlborough Downs \(116\)](#)

**Landscape Character Types** – Low Chalk Plain and Scarp (4), Open Downland (1), Chalk River Valley (5) and Wooded Downland (2)

**Landscape Character Areas** – Avebury Plain (4A), Horton Downs (1A), Marlborough Downs (1B), Kennet Chalk River Valley (5A), Savernake Plateau (2A)

**AONBs** – North Wessex Downs AONB

**Related BAPs** - None

**SNAs** – There are 12 SNAs in Area 5 and the River Kennet. See [here](#) for SNA targets

**Geology** –Cretaceous Middle and Upper Chalk form the main body of the plateau and create the scarp around the north-western boundary of the Area. Isolated deposits of Clay with Flint overlie the higher outcrops, such as Hackpen Hill, and alluvium forms the base of the many of the dry valleys that dissect the area. Sarsen stones occur across the Marlborough *Downs* and are particularly outstanding at Fyfield and Piggledene, which have been designated SSSIs<sup>1</sup>.

**Community Area Boards** – Swindon Borough, Marlborough, Royal Wootton Bassett & Cricklade, Calne, Devizes, and Pewsey

## 4.5.2 Background

The Marlborough Downs and Savernake Forest Landscape Biodiversity Area is typified by a landscape of high, undulating chalk downlands of rolling farmland with remnants of calcareous grassland, scattered woods, and dissected by dry valleys and coombes. The soils here are generally very thin with free draining, calcareous, nutrient poor soils which have been intensively farmed to create an open landscape of arable fields with few hedgerows and only small scattered clumps of trees, primarily beech. The landscape is generally devoid of water, with dry valleys and long steep scarps dissecting the downland<sup>1</sup>. Running through the centre of the area however is the River Kennet, a tributary of the River Thames, which rises just west of Marlborough and runs east into Berkshire. The Area is entirely within the [North Wessex Downs AONB](#) which extends south into the Vale of Pewsey and north and east into Oxfordshire, Berkshire and Hampshire.

There are two distinct areas of high chalk downland within the Area: the Marlborough Downs which extends north of the Kennet River Valley and Pewsey Downs which rise from the lower lying Vale of Pewsey to the south. The steep scarps of the Pewsey Downs are considered one of the finest examples of chalk downland in southern England and have been designated a SSSI and a SAC in recognition of this rare habitat and the significant population of the scarce early gentian (*Gentianella anglica*) which is found here.

To the north and west of the open chalk downlands extends an area of low chalk plain which has a steep northern scarp slope, dropping steeply down to the clay vales which form its north and west boundaries. The land on the scarps comprises a mixture of pasture, parkland and woodland, whilst the open plains are dominated by large-scale arable fields with little tree or hedgerow cover.

In the southeast of the Area is an expanse of wooded downland, where deposits of clay-with-flint overlie the chalk, creating heavier soils which support the more wooded character of the Area<sup>1</sup>. Large areas of ancient semi-natural woodland and notable veteran trees can be found in Savernake Forest. Savernake, a former royal hunting forest, is derived from ancient wood pasture management and much of it is designated as a Site of Special Scientific Interest because of its outstanding lichens and fungi, flora, invertebrates and breeding bird communities. The large numbers of veteran trees are important in their own right, but also support a wide range of bat and bird species including woodpeckers, flycatchers and redstarts and other hole-nesting species. More particularly they are the stronghold for many rare species of lichen, fungi and invertebrates.

To the west of Savernake, West Wood comprises an area of ancient semi-natural beech woodland with a rich fungal diversity which is well known for its springtime display of bluebells. The surrounding area is a woodland-farmland mosaic, linked via hedgerows and containing arable fields.

### 4.5.3 Priority Habitats

Priority Habitat	Area (ha)
Lowland calcareous grassland	1151.54
Lowland mixed deciduous woodland	743.72
Lowland meadows	127.42
Rivers	83.61
Wet woodland	23.26
Lowland fens/Coastal and floodplain grazing marsh	21.76
Lowland wood-pasture and parkland	20.84
Lowland beech and yew woodland	12.87
Heathland	12.51
Coastal and floodplain grazing marsh	10.51
Lowland mixed deciduous woodland/Lowland wood-pasture and parkland	4.17
Lowland dry acid grassland	3.45
Lowland meadows/Coastal and floodplain grazing marsh	3.37
Reedbeds	1.1
Eutrophic standing waters	0.17
Ponds	0.13
Lowland fens	0.12
Purple moor grass and rush pastures	0.1
<b>Total</b>	<b>2220.65</b>

### 4.5.4 Priorities and opportunities for conservation

#### 1. Chalk Downland

- Lowland calcareous grassland
- Chalk Downland butterflies
- Farmland Birds

#### 2. Woodland

- Ancient woodland
- Wood pasture and parkland
- Bats & Dormice

#### 3. Rivers

- Chalk Rivers

#### 1. Chalk Downland – SNAs 11, 247,250, 8, 9, 10

##### Lowland Calcareous Grassland

This priority habitat is mainly restricted to the steep chalk scarps and dry river valleys of the open downland which have avoided intensive agriculture and the associated improvement of soils via fertilisers. These tend to be floristically rich and support diverse communities of invertebrates, including rare butterfly species such as Adonis Blue and Chalkhill Blue. While much of the remaining calcareous grassland is designated as SSSI or is recorded as County Wildlife Sites, there is a need to buffer and connect existing core areas against the effects of climate change and dependency on a limited number of landowners. In addition the quality of

existing semi-natural habitat needs to be improved where this is unfavourable. Priorities in relation to this habitat include:

- Target areas identified through the Stepping Stones and Marlborough Downs NIA projects for reversion to chalk grassland
- Promote the use of agri-environment schemes to secure appropriate management and implement / increase grazing on under grazed calcareous grassland sites.
- Link areas of calcareous grassland by creating wide field margins and by planting hedgerows on arable field boundaries
- Maintain, and where possible, increase the population size and extent of UK BAP species associated with this habitat including: Early gentian, Juniper, Stone curlew, Skylark, Marsh fritillary, Silver-spotted skipper, and Adonis blue.

### Chalk Downland butterflies

The downland butterflies that characterise the Marlborough Downs are all vulnerable to habitat loss and fragmentation exacerbated by unfavourable land management, vagaries of the weather and the effects of climate change. There has been severe loss of chalk grassland and butterfly populations due to grassland improvement, conversion to arable, use of pesticides and neglect (scrub encroachment), leaving small isolated habitats / populations. Priorities in relation to this species group include:

- Protect and secure favourable management on remaining calcareous grassland, in particular south facing slopes which are particularly important for a number of chalk downland butterfly species.
- Increase the resilience of known populations by improving habitat quality at existing key butterfly sites through promotion of suitable agri-environment schemes.
- Link known colonies through creation of chalk grassland corridors and stepping stones.
- Co-ordinate butterfly surveys and monitoring of chalk grassland sites

### Farmland Birds

The Marlborough Downs are a hotspot for a number of farmland birds which have suffered severe national declines including Lapwing and Stone curlew. These species have been impacted greatly by changes in agricultural practices and it is important to take measures to secure their populations in those areas within which they still remain.

- Increase the uptake of agri-environment scheme options to implement management that benefits farmland birds including:
  - Sowing wild bird seed mixtures
  - Creating and maintaining skylark plots
  - Beetle banks
  - Fallow plots
  - Cultivated field margins
  - Low input cereals
  - Planting, restoring and sensitive management of hedgerows
- Sensitive crop management



- Support initiatives to co-ordinate the survey and monitoring of farmland bird species and the impact of management options on their continued survival.

### Existing conservation initiatives and projects

- The RSPB's **North Wessex Downs Farmland Bird Project** is based within the AONB and provides help and advice for landowners to create and manage habitat for farmland birds via promotion of Environmental Stewardship Schemes. The project concentrates on farmland bird species, in particular ten of the most seriously declining - corn bunting, grey partridge, tree sparrow, turtle dove, lapwing, yellow wagtail, skylark, linnet, yellowhammer and reed bunting. The project also ties in advice on other species groups, for example bumblebees and butterflies, and arable plants in particular. This project has the potential to produce benefits that will be felt beyond this Area and it is important that efforts are made to find ways of connecting up those areas where active management for farmland birds is occurring.
- The **'Stepping Stones'** project is a partnership project between the North Wessex Downs AONBs, Cranborne Chase and West Wiltshire Downs AONB, Natural England and the Wildlife Trust that is seeking to restore and link high quality calcareous grassland. In this Area the project has focussed on the area between the Pewsey Downs and Morgan's Hill to help support the establishment of chalk grassland species, including orchids.
- Nature Improvement Areas (NIAs) have been identified in the England Biodiversity Strategy Delivery Plan as a key mechanism for coordinating integrated landscape scale conservation. **Marlborough Downs Nature Improvement Area (NIA)** was one of the 12 NIAs identified in the first round of NIAs agreed by Defra. It is a farmer-led initiative aiming to increase connectivity and improve the condition of priority habitats within the NIA boundary, with particular focus on restoration of calcareous grasslands and ponds.
- **North Wessex Downs AONB** – the whole of Area 05 is covered by the North Wessex Downs AONB, one of three AONBs within the county. This is a protected landscape where work is determined by a statutory management plan. In line with the government's England Biodiversity Strategy Delivery Plan, AONB partnerships must integrate Biodiversity 2020 and ecosystem targets into all AONB Management Plan Reviews by Mar 2014. Additionally, the plan includes actions to encourage and support new and existing large scale initiatives to improved ecological networks across the Area of Outstanding Natural Beauty (AONB) landscapes. The AONB is in a strong position to adopt a strategic overview of conservation initiatives within its limits which can be aligned to increase connectivity and provide landscape scale conservation benefits. To support small scale conservation projects that benefit the North Wessex Downs AONB, the AONB has a small Sustainable Development Fund. This allows those within the AONB to undertake conservation work that can contribute to the overall aims for the landscape.

## 2. Woodland – SNAs 12, 204, 251, 253, 252, 13

### Ancient Woodland

Areas of ancient woodland are primarily concentrated in the southeast corner of Area 05, centred on the Savernake Forest. Issues leading to unfavourable conditions within the woodland include: loss of wood pasture management (grazing etc), lack of sufficient number of future veterans, encroachment by bracken and rhododendron, and insufficient deadwood of diameter >20cm necessary to support deadwood communities. In addition to this, grazing pressure has been identified in the most recent Natural England SSSI condition assessments as a significant factor contributing towards unfavourable condition of woodland sites in the Marlborough Downs and Savernake Forest Landscape Biodiversity Area. High deer grazing pressure leads to a lack of temporary open spaces and new growth which has led to a reduction in the level of woodland regeneration and will have long term detrimental impacts for the woodland if left unchecked. Woodland management and appropriate deer control measures are required to monitor and control deer numbers and allow the natural regeneration of these woodlands. Priorities in relation to this species group include:

- Secure favourable management of existing ancient woodland sites through promotion of woodland grant schemes such as England Woodland Grant Scheme (EWGS), agri-environment woodland options and the North Wessex Downs AONB Sustainable Development Fund.
- Buffer/extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting and integrate them into the wider landscape
- Identify future generations of veteran tree individuals and manage accordingly.
- Introduce appropriate deer control measures as required to monitor and control deer numbers and allow the natural regeneration of woodlands.

### Wood pasture and parkland

Area 05 contains some regionally important areas of wood pasture and parkland with notable areas within the wider Savernake Forest such as at Tottenham Park and Littlecote Park. Threats to this habitat include the general problem of management neglect, in particular a decline in the practice of pollarding. Many of the key species associated with old trees depend on the presence of rotting wood that can only be found in trees of a certain age or condition, and usually in relatively open situations. The loss of trees which provide these conditions means it is increasingly important that replacement trees are coming along. It is equally important to maintain the management of surrounding pasture to prevent the characteristic open nature of the habitat from being lost. Recent condition assessments in the Savernake Forest has found that some meadows have not received sufficient management having been undergrazed and where cut, the arisings being left to form a thick thatch. Priorities for wood pasture are:

- Ensure care of veteran trees to secure their survival and succession
- Secure sufficient supply of replacement trees
- Secure management of the open grasslands which surround them.

## Bats and Dormice

Savernake Forest is particularly important for a number of bat species, especially those closely associated with woodland habitats such as Barbastelle. Additionally, monitoring of nest boxes erected in Savernake has revealed the ancient woodland to be a stronghold within the county for dormice. Dormice are now only patchily distributed across southern Britain with a major factor in their decline being the increasing fragmentation of woodland. This has led to isolated, non-viable populations of these arboreal mammals for which even short distances can be a complete barrier to dispersal. Priorities for these woodland species include:

- Encourage wood pasture management by use of grazing
- Identify and favourably manage the next generation of mature/veteran trees
- Manage existing hedgerows and woodland used by bats for foraging and commuting
- Manage existing hedgerows and woodland used by dormice for nesting and foraging
- Manage and augment key flight lines between the ancient forest and known hibernation and mating sites for bats
- Maintain the important mosaic of woodland, grassland and woodland pond habitats that help support the rich diversity of bat species
- Identify and map important roosting sites and foraging grounds for bats
- Identify and map areas where dormice are present and aim to improve connectivity between disjunct areas

## Existing conservation initiatives and projects

- **Savernake Forest** - The Savernake Forest is derived from ancient wood pasture management, has many veteran trees and is a priority for conservation within the Area. The Forestry Commission has previously implemented wood-pasture projects within the Forest and is implementing a Forest Design Plan to manage the woodlands to promote a more diverse age structure and encourage understorey growth. The woodlands in and around Savernake provide important habitats for a number of priority species including dormice and Barbastelle bats. These species would benefit from increased woodland cover and improved connectivity. Protection of veteran trees is important as these provide roosting sites for bat species, as well as supporting deadwood communities.
- **North Wessex Downs AONB** –The AONB Management Plan includes actions to encourage and support new and existing large scale initiatives to improve ecological networks across the Area of Outstanding Natural Beauty (AONB) landscapes. The AONB is in a strong position to adopt a strategic overview of conservation initiatives within its limits which can be aligned to increase connectivity and provide landscape scale conservation benefits. In addition to this the AONB can support small scale conservation projects via their Sustainable Development Fund. This allows those within the AONB to undertake conservation work that can contribute to the overall aims for the landscape.

## 3. Rivers – 773,774 (Kennet)

### Chalk Rivers

The River Kennet, a tributary of the Thames, is an important chalk river bisecting an otherwise dry landscape. The flora of the River Kennet is generally species-rich and diverse with species such as stream water-crowfoot, starwort and watercress dominant in the upper half of the river where shallow water and

gravel are typical<sup>8</sup>. The river is important in providing suitable conditions for priority habitats along its length including significant areas of lowland meadow, lowland fens, wet woodlands and coastal and floodplain grazing marsh, all habitats which have become increasingly rare within the county. Although designated as a SSSI its current condition is listed as “unfavourable no change”. This is partly due to the presence of a number of non-native invasive species such as signal crayfish, problems with siltation, over abstraction and eutrophication from agricultural run-off. Priorities in relation to this habitat include:

- Contribute to programmes such as the Environment Agency’s Catchment Sensitive Farming Scheme which aim to decrease run-off from agricultural land and limit disturbance of riverbanks.
- Work with key stakeholders to fulfil the Water Framework Directive aims as set out in the [Thames River Basin Management Plan](#) and the [Kennet and Pang Catchment Abstraction Management Strategy](#) to restore the natural functions of the River Kennet and reduce abstraction pressure.
- Improve riparian vegetation and enhance wetland mosaics to encourage associated wildlife including waders and lapwings
- Increase width of riparian vegetation strips to buffer the effects of siltation from arable farming practices

### Existing Projects and Initiatives

- **River Kennet Water Abstraction** - Catchment Abstraction Management Strategies indicate that many of Wiltshire’s rivers are over-abstracted or over-licensed, including the Upper Kennet which has a legacy of unsustainable water abstraction to meet the needs of the Swindon Borough. This puts stresses on the natural environment of this river which are likely to be exacerbated in the future due to climate change. Action for the River Kennet (ARK) is a conservation group undertaking work to improve and restore the chalk stream habitat along the River Kennet, as well as actively campaigning to reduce water abstraction to sustainable levels. The Wiltshire Core Strategy commits the council to increase water efficiency in new developments and to engage with infrastructure providers and neighbouring planning authorities to ensure an overall improvement to critical water resources. Through this and the work of the Environment Agency and local groups such as ARK the aim must be to restore natural function to the River Kennet and reduce the levels of water abstraction.
- **Catchment Sensitive Farming** – The Rivers Lambourn and Kennet form a priority catchment within the Environment Agency’s Catchment Sensitive Farming Scheme. The Scheme provides advice to farmers to help them implement changes in farming that improve the quality of habitats adjacent to waterways to reduce run-off, pollution, sediment, and invasive species. The aim of the work is to improve riparian vegetation and enhance wetland mosaics such as those at Chilton Foliat water meadows to encourage associated wildlife including waders and lapwings. A Catchment Management Plan is currently in preparation for the Kennet Basin District which will identify relevant priorities and objectives for the catchment.

A **Catchment Sensitive Farming Capital Grant Scheme** Target Area is centred on the area to the north east of Marlborough, along the River Kennet into Berkshire. The Hampshire Avon CSFCGS








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<sup>8</sup> Nature England SSSI citation, 2012

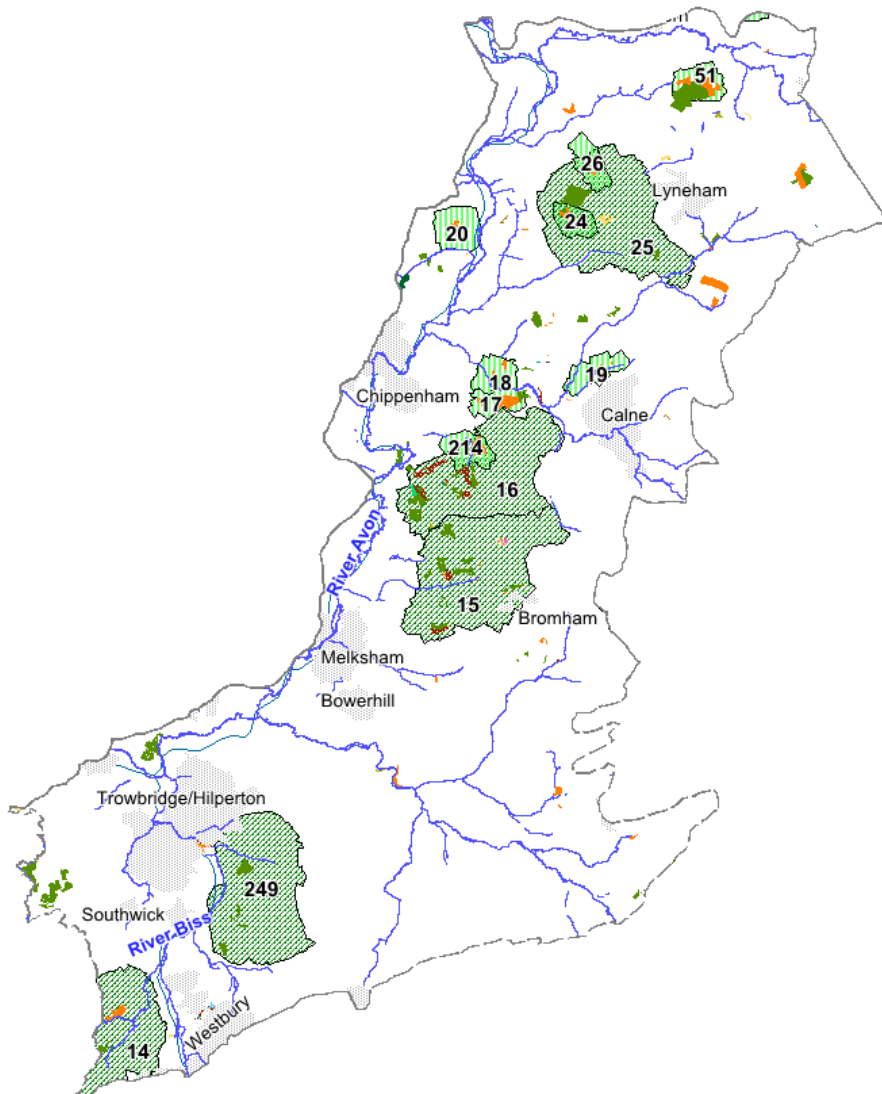
Target Area extends into the far southern section of the Area, following the southern end of the Wansdyke just north of the Pewsey Downs. Within these areas a range of capital items are available to farmers and landowners to help improve the ecological status of the priority rivers; for example watercourse fencing and roofing for manure stores and pesticide loading and wash down areas. This scheme presents an important opportunity to enhance the ecological status of the river system, which in turn will benefit the overall riverine environment and the associated habitats which it supports.

## 4.5.5 Conservation Initiatives

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

	<p>'Bees for Everyone'</p>	<p>A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.</p>	<p>8, 9, 10</p>	<p>Click folder for project details</p> 	<p><a href="#">Bumblebee Conservation Trust website</a></p>
	<p>Meadow research project</p>	<p>Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these valuable communities change in response to wider environmental factors and help guide the management of floodplain meadow elsewhere.</p>	<p>1, North Meadow and Gillingham Farm SACs</p>	<p>Click folder for project details</p> 	<p><a href="#">Floodplain Meadows Partnership website</a></p>
	<p>Great Western Community Forest</p>	<p>The purpose of GWCF is to create a multi purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.</p>	<p>1, 2, 3 &amp; 5</p>	<p>Click folder for project details</p> 	<p>Click icon for GWCF webpage</p> 

# Area 06 - Bristol Avon Vale



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Figure 8: A map of the Bristol Avon Vale Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

## 4.6.1 Area Profile

### National Character Areas – [Avon Vale \(117\)](#)

**Landscape Character Types** – Rolling Clay Lowland (11), Open Clay Vale (12), Limestone Ridge (8), Wooded Greensand Hills (7)

**Landscape Character Areas** –Avon Open Clay Vale (12B), Swindon-Lyneham Limestone Ridge (8A), Calne Rolling Clay Lowland (11A), Bowood Greensand Hills (7C), Trowbridge Rolling Clay Lowland (11C)

**AONBs** – N/A

**Related BAPs** - None

**SNAs** – There are 13 SNAs and two rivers; the Bristol River Avon and the River Biss. See [here](#) for SNA targets for Area 06

**Geology** – The Bristol Avon Vale is a low-lying clay-dominated landscape bounded by the dip slope of the Cotswolds to the west and by a band of Corallian Limestone and Greensand to the east, with the Salisbury Plain and West Wiltshire Downs beyond. In the south there is a gradual merging with the clay of Blackmore Vale and the Vale of Wardour<sup>6</sup>.

**Community Area Boards** – Malmesbury, Royal Wootton Bassett & Cricklade, Chippenham, Calne, Devizes, Melksham, Trowbridge, Bradford on Avon, Westbury, and Corsham Community Area Boards

## 4.6.2 Background

The Bristol Avon Vale is an area of predominantly open clay vales and rolling clay lowland, following the course of the Bristol River Avon, its tributaries and several other streams and rivers. The Bristol Avon Vale is characterised by intensively managed permanent pastures, whilst the river floodplain is dominated by arable agriculture, with pockets of neutral, generally damp grassland together with scattered woodland blocks. The floodplain has retained a strong hedgerow network, and mature trees, particularly crack willow *Salix fragilis* and the native black poplar *Populus nigra* subsp *betulifolia* are often found along ditches and streams. There are sparse hedgerow trees plus willows lines (some pollarded) marking the waterways and poplar shelter belts. Woodland blocks, including ancient woodland types and wet woodland of high ecological value, are also present and form important habitat, particularly for woodland bird assemblages. Green Lane and Biss Wood in the south of the Area are of international importance for bats, particularly Bechsteins (maternity roosts) and also Barbestelle and Horseshoe bats<sup>9</sup>.

Formed by a narrow band of coral rag limestone, a series of hills runs diagonally from the north east corner of the Area, stopping just north of Calne. These hills rise sharply from the lower clay vales to the west while along their eastern slopes there is a more gradual transition back down to the neighbouring clay vales. The land along this ridge is used primarily for pastoral farming and significant features include the airbase at Lyneham which has exploits the level hilltops characteristic of this area. On the slopes below the airfield, Catcomb Wood is a large, mainly ancient semi-natural woodland with a species-rich composition including wych elm and wood vetch.

An area of rolling greensand hills lies at the southern end of this limestone ridge. The landform is varied by the many small valleys which the tributaries of the River Avon and Marden have eroded into the hills. Considerable concentrations of lowland mixed deciduous woodland and wet woodlands are found in this region. Historic houses with parklands and wooded estates dominate the area: Bowood to the north, Spye Park to the south and Bowden Park to the east<sup>1</sup>. Spye Park is an important SSSI situated at the heart of the Bristol Avon Vale Biodiversity Landscape Area and represents a mosaic of habitats including large expanses of some of the finest examples of alderwoods in the country, along with oakwoods, parkland and an area of dry acidic grassland containing several locally uncommon plant species. Spye Park is one of the richest sites for epiphytic lichens in Wiltshire and also supports communities of bryophytes and vascular plants communities which flourish in the wet soil conditions present across large areas of the site.

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<sup>9</sup> Wiltshire Landscape Character Assessment, 2005

The Kennet and Avon canal runs from Bradford on Avon to Devizes through the south of the Bristol Avon Landscape Biodiversity Area and represents an important wildlife corridor that extends the entire width of the county and beyond. The banks of the canal provide a valuable habitat for a variety of wildlife including dragonflies, water birds, water voles, crayfish, and otters, while flower rich towpaths and hedgerows often line the canal providing important linear habitats for a range of species. In addition to this the line of the former Wiltshire and Berkshire Canal runs from here right up through Wiltshire, Swindon and Oxfordshire and provides a series of linear wetland features through the landscape.

### 4.6.3 Priority Habitats

Priority Habitats	Area (ha)
<b>Lowland mixed deciduous woodland</b>	465.27
<b>Lowland meadows</b>	209.06
<b>Rivers</b>	183.49
<b>Wet woodland</b>	63.81
<b>Lowland calcareous grassland</b>	23.17
<b>Lowland wood-pasture and parkland</b>	11.11
<b>Purple moor-grass and rush pastures</b>	8.37
<b>Lowland dry acid grassland</b>	4.4
<b>Lowland beech and yew woodland</b>	4.26
<b>Heathland</b>	3.93
<b>Eutrophic standing waters</b>	3.02
<b>Lowland fens</b>	1.78
<b>Reedbeds</b>	1.64
<b>Lowland mixed deciduous woodland/Lowland wood-pasture and parkland</b>	0.37
<b>Ponds</b>	0.02
<b>Total</b>	<b>983.7</b>

### 4.6.4 Priorities and opportunities for conservation

- 1. Neutral Grassland**
  - Neutral meadows
  - Arable plants
- 2. Woodland**
  - Ancient Woodland
  - Hedgerows
  - Bats
- 3. Rivers**
- 4. Standing Water**

1. Neutral Grassland - SNAs: 17, 18, 19, 20, 24, 26, 51, 214

#### Neutral Meadows

The heavy clays of the Avon Vales support many small, diverse neutral meadows where the land has not been subject to agricultural improvement, as is the case for the majority of these meadows through the area. Knowledge of the extent of the habitat is reasonable and most sites have been notified as County



Wildlife Sites. Many of these sites are at risk of agricultural improvement, conversion to arable, development and neglect (scrub encroachment). The remaining sites are relatively isolated, but often occur in clusters. Priority areas are therefore:

- Informing landowners and managers where they own / manage important neutral meadow sites
- Identify clusters of neutral grassland sites and target action on areas within and between cluster areas to act as stepping stones
- Protect and secure favourable management of known neutral meadows
- Restore degraded meadows using seed of local provenance
- Enlarge existing neutral sites through habitat creation
- Sow species-rich neutral grassland at new sites where ground conditions are suitable

## Arable Plants

The Severn and Avon Vales is recognised as an important area for rare arable plants, which have gone through significant declines due to advanced seed cleaning, increased use of fertiliser, new high yielding crop varieties and the introduction of herbicides. Knowledge of arable plant populations in the area is poor. As with arable birds, rare arable plants are also vulnerable to changing crop prices, development (particularly photovoltaic farms) and policy reform which might favour less sensitive land management practices.

- Surveys to identify important sites / areas for rare arable plants
- Target important sites and surrounding areas for sensitive management
- Create uncropped cultivated margins – no herbicide / pesticide
- Control pernicious weeds in September (if necessary)

## Existing conservation projects and initiatives

- A notable lack of project information relating to Area 06 has been submitted during the writing of this Landscape Conservation Framework. Nationally applicable schemes such as agri-environment and woodland grant schemes are available in this Area, but little project work relating to a number of the priority habitats and species outlined in this section appears to be focussed here. The project information in this document reflects only what has been submitted to us by partners during the writing of this framework. More projects will be in place that we are not aware of and persons wanting to highlight such projects should contact the LNP coordinator at [info@link2nature.org.uk](mailto:info@link2nature.org.uk).

## 2. Woodland – SNAs: 14, 15, 16, 25, 249

### Ancient Woodland

The vales include some localised well wooded areas to the east of Chippenham / Melksham, between Westbury and Trowbridge, and the areas surrounding Lyneham. While the cover of woodland is well understood and remains fairly stable, many of the woods are undermanaged and in poor condition, with rhododendron causing problems in many (probably having been introduced at Bowood). Priorities in relation to this habitat therefore include:

- Secure favourable management of existing ancient woodland sites
- Restore woodlands through the removal of rhododendron and other invasive species, where these are causing a problem
- Buffer / extend ancient woodland sites with appropriate new woodland planting

- Improve connectivity between ancient woodland sites through hedgerow and woodland planting

## Hedgerows

The hedgerow networks across much of this area are in a generally degraded state as a result of Dutch elm disease, but also poor management practices and increasing arable field sizes. Use of fertilisers, herbicides and pesticides also reduce ground flora diversity due to generally intensive agricultural practices in the area. The remaining hedgerows network will not recover naturally, but will require management intervention at a landscape scale. Hedgerow networks also play an important role for connectivity in relation to several other priorities in the area including woodland and bats, and help to mitigate sediment and nutrient run-off from arable fields. Priorities in relation to this habitat therefore include:

- Lay / coppice degraded hedgerows, planting up gaps
- Allow mature standard trees to develop within hedgerows
- Replant species-rich hedgerows where these have been completely lost
- Manage hedgerows regularly to maintain a wide and dense base
- Maintain grassland strips alongside hedgerows in arable fields

## Bats

The Bristol Avon Vale contains a number of important sites for some of our rarest UK bat species, many of whom rely on the woodlands and open pastures present within the Vale. Horseshoe bats are at the edge of their known range in the western side of this area, but may be expanding. A breeding population of rare Bechstein's bats is also known to occur in the south of the area, however it may also occur further north and its use of the wider landscape is not currently well known. Barbastelle bats have been recorded, but there are currently no known roosts in the area. While the roosts are well protected by law, the surrounding habitats are vulnerable to changes in land management practices and development. Priorities for bats in this area are therefore:

- Study important roosts to improve understanding of how bats use the surrounding landscapes for commuting / foraging
- Protect and enhance suitable habitats around important roost sites
- Maintaining mature and veteran trees, particularly those known to be used for roosting
- Identifying and favourably managing the next generation of mature / veteran trees
- Managing existing hedgerows and woodland used for foraging and commuting routes
- Hedgerow planting and woodland creation to improve connectivity between key roosting / foraging sites
- Maintaining the important mosaic of woodland, grassland and open water habitats which help support such a rich diversity of bat species
- Identifying and mapping important roosting sites and foraging grounds for the rarest species

## Existing conservation projects and initiatives

- West Wiltshire has been identified as a priority for Heritage Lottery Funding and although the area is known to be very important for bats, with the EU recognised Bath and Bradford-on Avon Bats SAC near Winsley and Box, only limited work has been conducted to assess population levels and enhance suitable habitats. The **Wiltshire Batscapes Project** is currently in the process of applying for Heritage Lottery Funding, with the aim of improving habitats for bats in west Wiltshire and

increasing bat monitoring efforts. The aim is to take a strategic view of bat conservation across west Wiltshire, linked with the Bath and Bradford-on-Avon Bats SAC. West Wiltshire is not within a target HLS area but this project aims to help farmers within the Batscapes project area into Entry Level stewardships and, in the case of exceptional farms, Higher Level stewardship, as well as providing capital works grants towards habitat restoration for bats.

### 3. Rivers – SNAs: 665, 666 – Bristol Avon; 669 - Biss

The Bristol Avon forms an important wildlife corridor through Wiltshire and is likely to become increasingly important as a north-south route aiding the movement of species in response to climate change. The river has extensive floodplains as it flows through some of the flatter landscapes of the clay vales. However, floodplain grassland and wet woodland have been largely lost due to agricultural practices, leaving a predominately arable landscape in the floodplain, which in turn causes problems for water quality in the river and downstream. Riparian habitats have also been damaged by poaching, development and flood defences. Opportunities should be taken to enhance the riparian environment including planting/ pollarding of riparian tree species such as willow, alder and black poplar; create/restore riparian woodland, alder cars and floodplain meadows. These measures will not only benefit the biodiversity of the riparian habitat but will link with aims relating to the Water Framework Directive to reduce agricultural runoff, pesticide leaching and siltation by increasing the buffer zone along our waterways. Although not identified as one of the Environment Agency's Priority Catchments the Bristol Avon has considerable issues relating to water quality and the presence of invasive species, such as Himalayan balsam and the American signal crayfish, along its length. Priorities in this area are therefore:

- Identify sites with suitable conditions for restoration of floodplain meadows (MG4)
- Restore meadows and wet woodland habitats in the floodplains
- Protect, enhance and sensitively manage riparian habitats through
- Revert arable land in the floodplain to permanent pasture and plant woodland / buffer strips to intercept runoff
- Improve fish habitats by removing barriers and securing sensitive bankside management<sup>10</sup>

### 4. Standing Water

The Kennet and Avon canal represents the most significant area of standing open water and a highly important wildlife feature within Area 06. It is important to maintain and enhance this wildlife corridor to maximise its potential within the wider ecological network. The canal system represents an important link within the Wiltshire Green Infrastructure network that should be recognised and enhanced further. Further restoration works are also planned along the line of the Wilts and Berks canal which will have significant effects on these wetland features, but also provides opportunities to create new features and create a more continuous wetland feature if carried out sensitively. Priorities for this habitat therefore include:

- Ecological survey work to identify sensitivities of each section
- Appropriate timing and sensitive working methods to reduce potential impacts
- Channel designed and managed to support marginal wetland habitats

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<sup>10</sup> Contact the Environment Agency / Wiltshire Council drainage team before planning or carrying out any works to the channel as a licence may be required








- Offline wetland features, tree planting and grassland creation alongside the canal (where land available), to maintain and improve its value as a wildlife corridor

## Existing conservation projects and initiatives

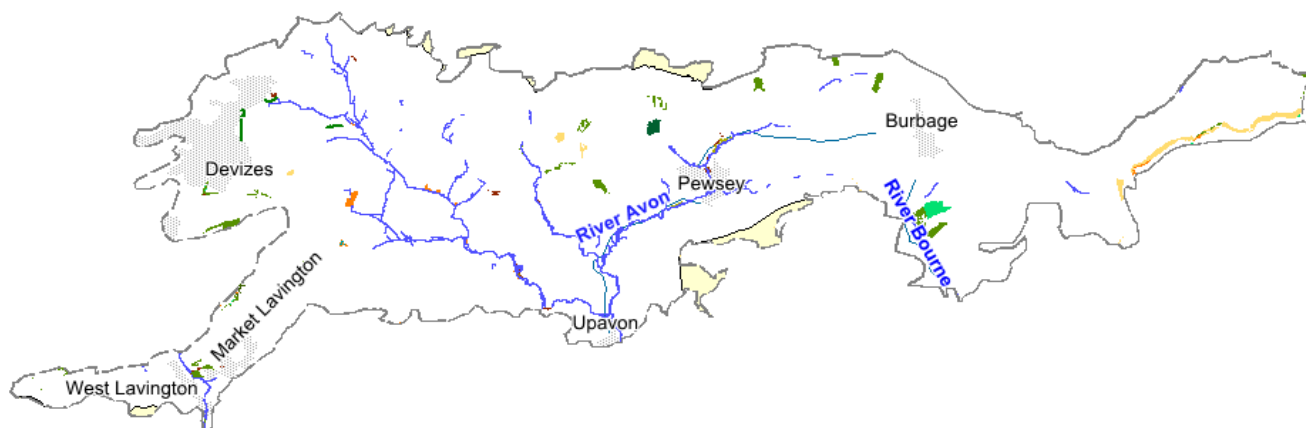
- **Wiltshire Invasive Plants Project** - The project aims to control invasive plants in the north of Wiltshire, where they can spread rapidly. The main plant targeted is Himalayan balsam, which is controlled by organising volunteer tasks to pull it. The project also tackles other invasive plants, particularly giant hogweed and Japanese knotweed. This is mainly done by raising awareness with landowners, but the project officer and some volunteers are trained to use pesticides. There is potential to increase the scope of this project to cover the Bristol Avon, particularly in the north of Area 06 around Chippenham which has been identified as a problem area for Himalayan Balsam.

### 4.6.5 Conservation Initiatives

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

	'Bees for Everyone'	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create suitable bumblebee habitats.	8, 9, 10	Click folder for project details 	<a href="#">Bumblebee Conservation Trust website</a>
	Meadow research project	Floodplain Meadows Partnership: Based at the Open University has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these rare plant communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1 - North Meads and Clattinger Farm SACs	Click folder for project details 	<a href="#">Floodplain Meadows Partnership research site</a>
	Great Western Community Forest	The purpose of GWCF is to create a multi purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodlands, grasslands, meadows, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details 	Click icon for GWCF webpage 

## Area 07 – Vale of Pewsey



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### Strategic Nature Areas by Main Habitat

	Chalk Downland
	Coastal and Floodplain Grazing Marsh
	Limestone Grassland
	Neutral Grassland
	Neutral Grassland and Woodland
	River
	Woodland
	Woodland and Chalk Downland
	Woodland and Neutral Grassland

### Priority Habitats

	Lowland mixed deciduous woodland
	Lowland meadows
	Rivers
	Lowland calcareous grassland
	Wet woodland
	Purple moor-grass and rush pastures
	Lowland mixed deciduous woodland/Lowland wood-pasture and parkland
	Reedbeds
	Lowland wood-pasture and parkland
	Lowland fens
	Lowland beech and yew woodland

Figure 9: Vale of Pewsey Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.7.1 Area Profile

**National Character Areas** – [Berkshire and Marlborough Downs \(116\)](#), [Avon Vale \(117\)](#), [Salisbury Plain and West Wiltshire Downs \(132\)](#)

**Landscape Character Types** – Greensand Vale (15)

**Landscape Character Areas** – The Vale of Pewsey (15A)

**AONBs** – North Wessex Downs AONB

**Related BAPs** - None

**SNAs** – There are no SNAs within Area 6, although details on adjoining SNAs can be found [here](#)

**Geology** – The base of the Vale is underlain by Upper Greensand with small areas of Gault Clay towards the western edge. A series of low undulating foothills of Lower Chalk flank the Vale sides and create some isolated outlier hills. At the junction of the porous chalk and impermeable greensand numerous springs issue which collect within the Vale forming minor streams draining to the headwaters of the Salisbury Avon. These stream and rivers deposit alluvium which creates rich soils in the mid section of the Vale.

**Community Area Boards** – Pewsey, Tidworth, and Devizes Community Area Boards

## 4.7.2 Background

Running through the geographical centre of the county is the Vale of Pewsey, an undulating, low lying greensand valley that separates the high chalk plateau of the Salisbury Plain to the south and the Marlborough Downs to the north. Relatively steep, rounded chalk scarps form the northern and southern boundaries as the land rises onto the chalk plateaus either side which are characterised by their elevation, large agricultural fields and comparatively low tree and hedgerow cover. Areas of lowland calcareous grassland are mainly restricted to a few small hills of Lower Chalk that are dotted along the northern edge of the Vale.

The Vale starts at the town of Devizes on the western edge and then narrows and undulates towards the east and the Hampshire border. It is predominantly a lowland landscape of meadows and pasture along the waterways and arable farming with medium to large fields enclosed by hedgerows dominating the chalk foothills. The Vale of Pewsey is an intensively farmed agricultural landscape and this has had consequences for the biodiversity of the area with removal of hedgerows in some places to create larger fields, wet woodlands being cleared and drained and orchards grubbed up. Elsewhere active efforts are being made to protect and enhance the same habitats and active replanting of hedgerows and orchards is underway<sup>11</sup>.

The Vale of Pewsey is threaded by various streams which feed the headwaters of the Hampshire Avon. These streams provide important riparian habitat and support a number of important wetland habitats including wet woodlands, flood meadows, fens and marshes. Jones's Mill is a SSSI and Wiltshire Wildlife Trust reserve along the headwaters of the Salisbury Avon, north east of Pewsey. Previously managed as a water meadow with some water cress beds, the pattern of vegetation here is complex with a mixture of fens, willow-scrub and willow and alder carr. It represents the best known example of calcareous valley mire in Wiltshire.

Built in the 18<sup>th</sup> century, the Kennet and Avon canal runs through the Vale and acts as an important wildlife haven and corridor for species including water vole, dragonflies, water birds and otters. Flower rich towpaths and hedgerows often line the canal and provide important linear habitats for a range of species which aid species dispersal across the county from east to west.

## 4.7.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland mixed deciduous woodland	141.97
Lowland calcareous grassland	101.57
Lowland meadows	31.31
Rivers	30.73
Lowland beech and yew woodland	29.81
Wet woodland	23.6
Lowland wood-pasture and parkland	16.18
Purple moor-grass and rush pastures	9.6
Lowland mixed deciduous woodland/Lowland wood-pasture and parkland	4.9
Reedbeds	3.07
Lowland fens	1.08
<b>Total</b>	<b>393.82</b>

<sup>11</sup> Wiltshire Wildlife Trust, 50<sup>th</sup> Anniversary Living Landscapes publication

## 4.7.4 Priorities and opportunities for conservation

### 1. Chalk Downland

- Lowland calcareous grassland
- Farmland Birds
- Arable Plants

### 2. Hedgerows

### 3. Rivers and associated habitats

### 4. Standing Water (canals)

#### 1. Chalk Downland – SNAs: 250, 52

##### Lowland calcareous grassland

The area is flanked by two very large resources of calcareous grassland, namely North Wessex Downs to the north and Salisbury Plain to the south. It is vital to maintain habitat connectivity within the Vale to aid the dispersal of species between these two significant areas of calcareous grassland, allowing species to shift in response to climate change and environmental pressures. Within the Area, calcareous grassland is mainly limited to the foothills of these chalk plateaus however the lower chalk does extend further between these areas, providing opportunities to create stepping stones in a north / south direction where this has been lost to arable use. It is important to monitor and maintain the integrity of these features within the largely arable landscape through the appropriate application of agri-environment options and conservation efforts.

Priorities are therefore:

- Identify existing calcareous meadows and suitable restoration sites on lower chalk extending between Salisbury Plain and North Wessex Downs, targeting action in these areas as stepping stones
- Inform landowners and managers where they own / manage calcareous meadow sites
- Protect and secure favourable management of known calcareous meadows
- Restore degraded meadows using seed of local provenance
- Enlarge existing calcareous meadows through habitat creation
- Sow species-rich calcareous grassland at new sites where ground conditions are suitable

##### Farmland Birds

The adjacent landscape of North Wessex Downs and Salisbury Plain are known to support important populations of farmland birds, which have all suffered significant declines. Given the location of this area between those landscapes, there are significant opportunities to connect these important farmland bird populations and extend their distribution. Knowledge of important farmland bird populations is considered to be good. Priorities for farmland birds in this area are therefore:

- Sowing wild bird seed mixtures
- Creating and maintaining skylark plots
- Beetle banks
- Fallow plots
- Cultivated field margins
- Low input cereals
- Planting, restoring and sensitive management of hedgerows
- Sensitive crop management

## Arable Plants

Both Salisbury Plain and North Wessex Downs are recognised as important areas for rare arable plants, which have gone through significant declines due to advanced seed cleaning, increased use of fertiliser, new high yielding crop varieties and the introduction of herbicides. Although the Pewsey Vales area is not currently known to be important for these species, there is a significant level of arable land use in the area, the adjacent seed sources provide good opportunities for colonisation, and the area could provide a more permeable landscape for these species to improve the robustness of those populations and aid climate change adaptation. Knowledge of arable plant populations in the area is poor. As with arable birds, rare arable plants are also vulnerable to changing crop prices, and policy reform which might favour less sensitive land management practices.

- Surveys to identify important sites / areas for rare arable plants
- Target important sites and surrounding areas for sensitive management
- Create uncropped cultivated margins – no herbicide / pesticide
- Control pernicious weeds in September (if necessary)

## Existing conservation projects and initiatives

- The RSPB's **North Wessex Downs Farmland Bird Project** provides help and advice for landowners to create and manage habitat for farmland birds via promotion of Environmental Stewardship Schemes. The project concentrates on farmland bird species, in particular ten of the most seriously declining - corn bunting, grey partridge, tree sparrow, turtle dove, lapwing, yellow wagtail, skylark, linnet, yellowhammer and reed bunting. The project also ties in advice on other species groups, for example bumblebees and butterflies, and arable plants in particular. This project has the potential to produce benefits that will be felt beyond this Area and it is important that efforts are made to find ways of connecting up those areas where active management for farmland birds is occurring.
- The **'Stepping Stones'** project is a partnership project between the North Wessex Downs AONBs, Cranborne chase and West Wiltshire Downs AONB, Natural England and the Wildlife Trust that is seeking to restore and link high quality calcareous grassland. In this Area the project has focussed on the area between the Pewsey Downs and Morgan's Hill to help support the establishment of chalk grassland species, including orchids.

## 2. Hedgerows

The hedgerow networks across much of this area are in a generally degraded as a result of Dutch elm disease, but also poor management practices and increasing arable field sizes. Use of fertilisers, herbicides and pesticides also reduce ground flora diversity due to generally intensive agricultural practices in the area. The remaining hedgerows network will not recover naturally, but will require management intervention at a landscape scale. Hedgerow networks also play an important role for connectivity within and beyond the Vale of Pewsey, and help to mitigate sediment and nutrient run-off from arable fields. Priorities in relation to this habitat therefore include:

- Lay / coppice degraded hedgerows, planting up gaps
- Allow mature standard trees to develop within hedgerows
- Replant species-rich hedgerows where these have been completely lost



- Manage hedgerows regularly to maintain a wide and dense base
- Maintain grassland strips alongside hedgerows in arable fields

### 3. Rivers & associated habitats – SNAs: 775 – Avon; 779 - Bourne

The upper reaches of the Salisbury Avon thread through the area, forming an important wildlife corridor through Wiltshire that is likely to become increasingly important as a north-south route aiding climate change adaptation. The condition of the River Avon System SSSI that extends south from the Vale is currently categorised as ‘unfavourable no change’ according to Natural England’s most recent SSSI condition assessment<sup>12</sup>. This is due to a number of factors including inappropriate water levels, invasive freshwater species, siltation, water abstraction, and water pollution resulting from both agricultural run-off and discharge. The river is flanked by floodplain meadows, fens, small marshes and wet woodland along much of its length; although in many areas these have also been lost to intensive agriculture. Wetland habitats associated with the river and its tributaries support rare and protected species including Desmoulin’s whorl snail, whilst the Salisbury Avon itself supports important populations of Atlantic salmon. Priorities in this area are therefore:

- Identify and inform riparian landowners of existing important wet meadows wet woodland sites to secure favourable management
- Identify sites with suitable conditions for restoration of floodplain meadows (MG4), and wet woodland
- Restore meadows and wet woodland habitats in the floodplains
- Protect, enhance and sensitively manage riparian habitats
- Improve salmon habitats by creating reefs, creating riffles, removing barriers and sensitive bankside management<sup>13</sup>

### 4. Standing Water (Canals)

The Kennet and Avon Canal runs through the area in an east – west direction providing a strategically important continuous linear wetland feature through the landscape, linking the catchments of the Bristol Avon to the west, Salisbury Avon to the south and Kennet to the east. Visitor numbers have continued to grow since its restoration, increasing recreational pressure and demand for canal-side development. It is important to maintain and enhance this strategic wildlife corridor to maximise its potential within the wider ecological network. Priorities for this habitat therefore include:

- Protect existing habitats of the canal and adjacent areas
- Restore riparian habitats where they become damaged or degraded through neglect
- Sensitive degrading regime to protect bankside habitats and fauna where possible
- Creation of offline wetland features, tree planting and grassland creation alongside the canal (where land available), to maintain and improve its value as a wildlife corridor

### Existing conservation projects and initiatives

- **Catchment Sensitive Farming ‘Priority Catchment’** - The upper reaches of the Salisbury Avon rise within the Vale of Pewsey. As a result of this, activities which impact upon the availability and quality

<sup>12</sup> Natural England SSSI condition assessment, 2012








<sup>13</sup> Contact the Environment Agency / Wiltshire Council drainage team before planning or carrying out any works to the channel as a licence may be required

of water in the Vale have the potential to have far reaching impacts throughout the downstream system. The Vale falls within the Catchment Sensitive Farming Hampshire Avon Priority Catchment and Capital Grant Scheme Target Area. Therefore, within this Area advice and support is available to landowners to reduce activities detrimental to the ecological status of the Avon. Capital works funding is available to undertake works to enhance natural flows within the headwaters and upper reaches of the Avon and for planting of riparian trees and vegetation to reduce run-off. Additionally, the England Biodiversity Strategy states that the Environment Agency and Natural England will work together with farmers to encourage the inclusion of Entry Level options under the Environmental Stewardship scheme where there are diffuse pollution problems.

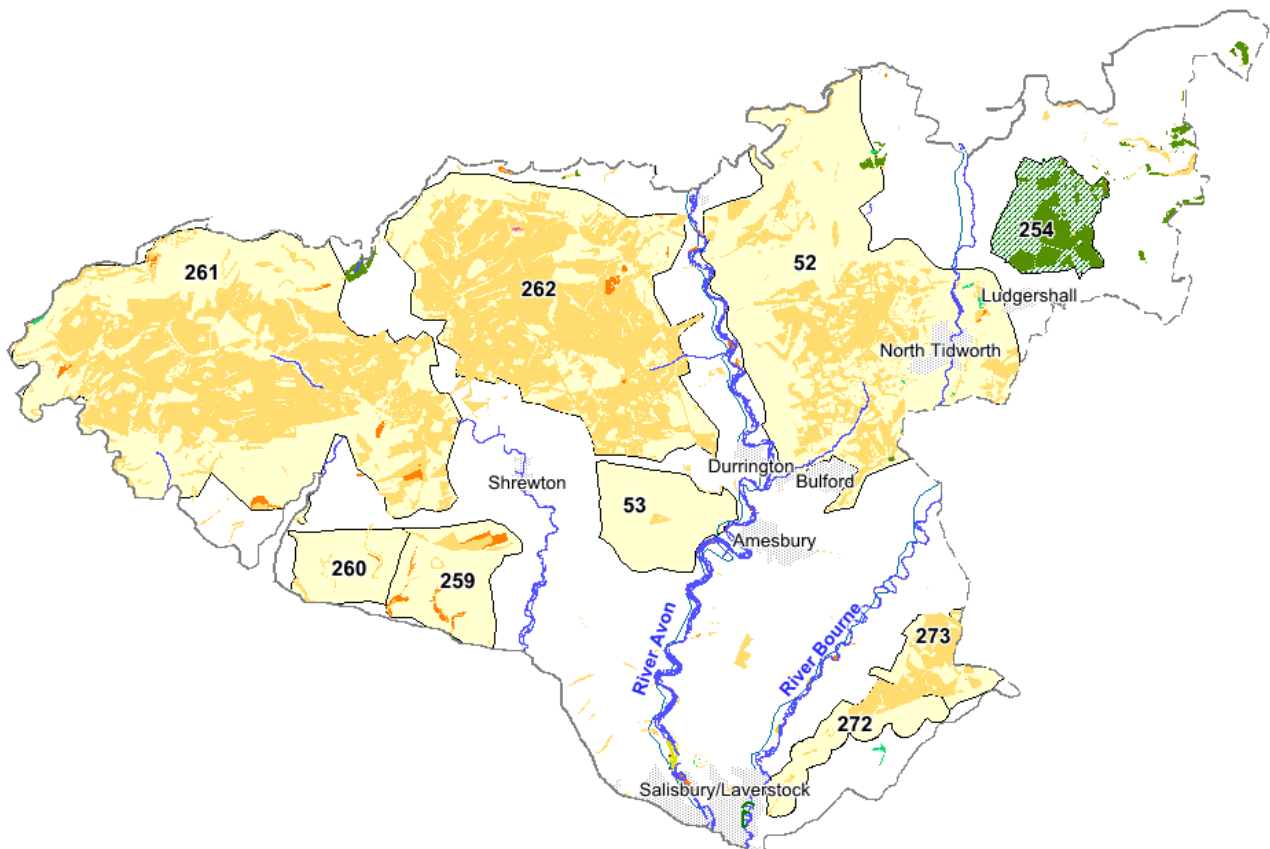
- **Kennet and Avon Canal Trust** – Since 1962 the Kennet and Avon Canal Trust has been working with volunteers, Local Authorities and British waterways to protect and enhance the waterway, resulting in re-opening of 87 ½ miles of the formerly derelict canal. It is important to continue to work with the Trust to maintain the canal as a wildlife feature and to enhance the habitats along its length to aid the movement of species.

### 4.7.5 Conservation Initiatives

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

	"Bees for Everyone"	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.	8, 9, 10	Click folder for project details 	<a href="#">Bumblebee Conservation Trust website</a>
	Meadow research project	Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these wetland communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1 - North Meadow and Gattagey Farm SACs	Click folder for project details 	<a href="#">Floodplain Meadows Partnership website</a>
	Great Western Community Forest	The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the core of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details 	Click icon for GWCF website 

## Area 08 – Salisbury Plain



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Strategic Nature Areas by Main Habitat	Priority Habitats
Chalk Downland	Lowland mixed deciduous woodland
Coastal and Floodplain Grazing Marsh	Lowland meadows
Limestone Grassland	Rivers
Neutral Grassland	Lowland calcareous grassland
Neutral Grassland and Woodland	Wet woodland
River	Purple moor-grass and rush pastures
Woodland	Lowland mixed deciduous woodland/Lowland wood-pasture and parkland
Woodland and Chalk Downland	Reedbeds
Woodland and Neutral Grassland	Coastal and floodplain grazing marsh
	Lowland fens
	Lowland beech and yew woodland
	Heathland
	Lowland fens/Coastal and floodplain grazing marsh
	Traditional orchards

Figure 10: Salisbury Plain Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.8.1 Area Profile

**National Character Areas** – [Salisbury Plain and West Wiltshire Downs \(132\)](#)

**Landscape Character Types** – High Chalk Plain (3), Chalk River Valley (5)

**Landscape Character Areas** – Salisbury Plain West (3A), Salisbury Plain East (3B), Salisbury Plain (3C), Borne Chalk River Valley (5C), Upper Avon Chalk River Valley (5D), Porton Down (3C).

**AONBs** – N/A (slight corner of NWAONB and CC&WWD AONB)

**Related BAPs** - None

**SNAs** – There are nine SNAs in the Salisbury Plain BAP Area as well as sections of three rivers; the Avon, the Bourne and the Wyle. See [here](#) for SNA targets for Area 08

**Geology** – The Salisbury Plain lies atop of a plateau of Upper and Middle Chalk which rises in the heart of Wiltshire, rising between the Vale of Pewsey to the north and the Wylve River Valley to the south. Landform is typical of the upland chalk with an open, rolling topography which slopes gently toward the south. The surface of the plain is dissected by dry valleys some of which link into the true river valleys such as the Avon, and the Till south of Tilshead. The dominant substrate is chalk in all but the river corridors of the Wyle, Avon and Bourne which represent areas of river alluvia and river terrace gravels.

**Community Area Boards** – Tidworth, Pewsey, Devizes, Amesbury, Westbury, Warminster, Southern Wiltshire Area Board, Salisbury, and South West Wiltshire Area Board

## 4.8.2 Background

The Salisbury Plain represents the largest area of unimproved chalk downland in northwest Europe with around 40% of the UK's estimated 41,000 ha of lowland calcareous grassland in this area alone. It is internationally important for both its chalk grassland and chalk rivers, as well as for the many notable animal and plant species associated with both of these habitats. Salisbury Plain has been owned and managed by the Ministry of Defence since the start of the 20<sup>th</sup> century and since then has been the site for the UK's largest military training area. This area of the Plain has largely avoided the intensive agricultural practices of the last century and this has allowed it to maintain populations of rare and diverse plant communities, scarce invertebrate species and has seen it recognised as an internationally important site for breeding and wintering populations of birds including stone curlew, hen harriers and lapwing, as well as a focus for efforts to reintroduce the great bustard. Within the Military Training Area the army undertakes habitat management to enhance the priority habitats including scrub clearance and allowing tenant farmers to graze the grassland. The botanically and structurally diverse grasslands support outstanding assemblages of rare and uncommon chalk downland invertebrates including declining species of downland butterflies such as the Adonis blue and Duke of Burgundy.

Large areas of the wider plain are used for farming, both arable and livestock, generally with large fields and few trees or hedgerows. There are some shelter belts of conifers, clumps of deciduous woodland and scattered shrubs including juniper. Most habitations are restricted to the sheltered chalk valleys of the Upper Avon and the Bourne with large expanses of the plain left open for agriculture and military purposes.

The Rivers Bourne and the Upper Avon form two important chalk river valleys which cut through the chalk, creating strikingly different habitats to elsewhere on the Plain. Both rivers run southwards before feeding into the Salisbury River Avon system. The Bourne river corridor is characterised by lines of willows and the presence of water meadows, for instance at Porton Meadows SSSI. The upper and lower sections of the Upper Avon valley are steep and enclosed whilst the middle section is wider and more open. The valleys support an intricate mix of pastoral fields, woodlands and scattered settlements. Areas of wet and dry woodlands cling to the valley sides and are joined by a full network of hedgerows and hedgerow trees. There are a number of outstanding examples of lowland meadows along the valley such as those at Lower Woodford Water Meadows SSSI<sup>14</sup>.

More concentrated areas of woodland are found in the northeast corner of the Plain, including at Collingborne, an extensive area of Forestry Commission plantation on an ancient woodland site that is being managed to remove non-natives and return it back to more natural mixed deciduous woodland. The woodlands in the surrounding area range from ancient woodland types to more recent mixed plantations

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<sup>14</sup> Wiltshire Landscape Character Assessment, 2005

and shelterbelts, with ash and field maple dominating the more calcareous soils and a mix of birch and pedunculate oak on the acidic clays.

### 4.8.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland calcareous grassland	15662.72
Lowland mixed deciduous woodland	787.09
Lowland meadows	299.53
Rivers	137.89
Lowland beech and yew woodland	40.11
Coastal and floodplain grazing marsh	40.09
Lowland mixed deciduous woodland/Lowland wood-pasture and parkland	8.4
Heathland	5.43
Wet woodland	5.21
Reedbeds	3.08
Lowland fens/Coastal and floodplain grazing marsh	2.74
Purple moor-grass and rush pastures	2.11
Traditional orchards	0.46
Lowland fens	0.1
<b>Total</b>	<b>16994.96</b>

### 4.8.4 Priorities and opportunities for conservation

#### 1. Chalk Downland

- Lowland calcareous grassland
- Chalk downland butterflies
- Farmland birds and arable plants

#### 2. Rivers

- Chalk rivers

#### 3. Woodland

#### 1. Chalk Downland – SNAs 259, 260, 261, 262, 272, 52, 273, 53

##### Lowland calcareous grassland

With roughly 40% of the UK's lowland calcareous grassland within this single Landscape Biodiversity Area it is vital to implement appropriate management regimes to protect and enhance the internationally important areas of grassland on Salisbury Plain, Porton Down, and Parsonage and Wyle Downs NNRs. While most of the chalk grassland is protected within the Salisbury Plain SAC and SSSIs, there is a need to buffer and connect existing core areas against the effects of climate change. In addition, the quality of existing semi-natural habitat needs to be improved where this is unfavourable. The Salisbury Plain falls within a High Level Stewardship Scheme Target Area and opportunities should be taken, via agri-environment options or other means, to implement grazing management on grasslands, provide nesting and foraging habitats for ground nesting and farmland birds, and establish conservation headlands that benefit birds and butterflies. There has been an extensive programme to restore grazing animals (cattle and sheep) to Salisbury Plain since the late 1990's, as well as a programme of removing coniferous and some broadleaved plantations in the same

period. Opportunities should be identified to continue this process and to take steps to revert this land where possible back to calcareous grassland.

- Target priority areas identified through the Stepping Stones project where the data suggest appropriate habitat creation or restoration might provide the best contribution to enhancing ecological connectivity and thus offer significant biodiversity gain.
- Remove conifer plantation trees on former chalk grassland sites and revert to calcareous grassland through appropriate management and grazing
- Establish new stands of juniper on chalk grassland with appropriate grazing management regime and where this is failing – consolidate through planting.
- Implement / increase grazing on under grazed calcareous grassland sites via agri-environment schemes

### Chalk Downland butterflies

The botanically and structurally diverse grasslands support outstanding assemblages of rare and uncommon chalk downland invertebrates including declining species of downland butterflies such as the Adonis blue and Duke of Burgundy. The downland butterflies that characterise the Salisbury Plain are all vulnerable to habitat fragmentation exacerbated by unfavourable land management, vagaries of the weather and the effects of climate change. Priorities for downland butterfly species include:

- Increase the resilience of known populations by improving habitat quality at existing key butterfly sites.
- Link known colonies through arable reversion and creation of chalk grassland corridors and stepping stones.
- Co-ordinate survey and monitoring of key species

### Existing conservation projects and initiatives

- **RSPB's 'Wiltshire Chalk Country' Futurescapes project** - The RSPB's Futurescapes project seeks to identify opportunities and mechanisms for the creation and restoration of chalk grassland to reconnect Salisbury Plain, Porton Down and the Stonehenge World Heritage Site, establishing 'corridors' for wildlife to mitigate the effects of climate change. This represents a genuine landscape scale conservation initiative and opportunities should be identified to maintain and expand its momentum and scope.
- **'Stepping Stones'** project is a partnership project between the North Wessex Downs AONBs, Cranborne chase and West Wiltshire Downs AONB, Natural England and the Wildlife Trust. The project compiled detailed habitat data for over 125,000 hectares of land, representing the majority of the Wiltshire chalk landscape stretching from Calne and Marlborough in the north to Mere and Salisbury in the south. The project has established the degree of isolation of priority grassland sites by modelling existing ecological networks, used the modelled networks to identify opportunity areas for increasing priority grassland connectivity, and has demonstrate how this model and associated datasets can be used to help target management and restoration on the ground within priority areas. In addition to this it is delivering onsite habitat enhancements to promote chalk grassland species including orchids and rare butterflies such as the Duke of Burgundy.

- **Butterfly Conservation's 'Duke of Burgundy project'** – Surveys have been conducted at Porton Down in Area 08, a known stronghold of the Duke of Burgundy, as part of a national project to survey sites where this rapidly declining species is still thought to occur. These surveys will be repeated in coming years to build up a picture of the distribution and abundance of this rare butterfly species and the information used to guide conservation efforts.

## Farmland birds and arable plants

The Salisbury Plain is a hotspot for farmland birds, holding nationally important populations of species which have shown considerable declines in both population size and distribution in recent decades. This includes the stone curlew, an enigmatic species of chalk downland whose numbers of breeding pairs has been increasing on the plain following the introduction of targeted conservation projects by the RSPB. However, along with other farmland birds, this species is sensitive to land management practices, poor weather conditions and disturbance from walkers and farming operations.

The low intensity agriculture practices on the Salisbury Plain has made it a hotspot for brown hare and arable plants such as prickly poppy and pheasants eye which have suffered particularly heavy losses believed to be primarily due to changes in farming methods. Nationally populations of arable plants have declined dramatically over the past 60 years, and are now viewed as the rarest group of plants in the UK. However, knowledge of arable plant populations is generally poor and more work is needed to identify priority areas for their conservation. Priorities for species associated to the farmed environment include:

- Increase uptake of stone curlew nesting plots (cultivated 2 ha plots) and Farmland Bird Package of options in Stewardship agreements to expand the core range of vulnerable farmland bird species.
- Increase uptake of Higher Level Stewardship to increase the amount of land managed as conservation headlands to expand the populations of declining farmland species.
- Creation of habitat strips away from the major roads (A303, A36 and A350) to provide hunting opportunities away from these busy roads for birds of prey such as barn owls and kestrels.
- Surveys to identify important sites/areas for rare arable plants

## Existing conservation projects and initiatives

- **Wessex Stone Curlew project** –through this project the RSPB have worked with individual farmers, as well as partner organisations such as the MoD, Natural England, the National Trust and the Wildlife Trusts to create more suitable habitat for stone-curlews, both on military land and in the farmed landscape. This work has largely involved creating nesting plots which are managed specifically for stone-curlews. These plots are available under the Environmental Stewardship schemes, and compensate the farmers to manage an area within a field that will encourage nesting stone-curlews safely away from agricultural operations.
- **North Wessex Downs and South Wiltshire Farmland Bird Projects** – These projects provide free help and advice for farmers, their agents and advisors, to create and manage habitat for farmland birds using Environmental Stewardship. Farmers are encouraged to include the Farmland Bird Package of options in Stewardship agreements, providing farmland birds with their three basic ecological requirements, the 'Big 3': Safe, in-field nesting habitat; Insect-rich habitat, to feed chicks in summer; Seed-rich habitat, for food over winter. This management also benefits other wildlife

associated with arable farmland, in particular rare arable plants like shepherd's needle and animal species associated with farmland environments such as brown hare.

- **Reintroducing Great Bustard to Southern England** project – The Great Bustard Group along with project partners from the RSPB, Natural England and the University of Bath are working to reintroduce the great bustard onto Salisbury Plain. The project aims to establish a self-sustaining population of Great Bustards on Salisbury Plain and to formulate and promote agri-environment options to improve the suitability of the 'wider countryside' for great bustards.

## 2. Rivers – 775,776,777,778,782 (Avon) 779,789 (Bourne)

### Chalk Rivers

The Rivers Till, Bourne and the Upper Avon all form part of the River Avon SAC and SSSI, a chalk river system which cuts through Salisbury Plain, shaping the landscape and supporting a range of habitats and species which are strikingly different to those found across the wider Plain. The unfavourable condition of the River Avon System SSSI is due to a number of factors including low water levels, presence of invasive species, siltation, water abstraction, pollution from diffuse sources (e.g. agricultural) and point discharges (e.g. some sewage treatment works). The recently published European Site Conservation Objectives for the River Avon SAC are to maintain and restore the population and distribution of species and habitats for which the SAC was designated. This includes a number of freshwater species including Desmoulin's whorl snail, Sea and Brook lampreys, Atlantic salmon, Bullhead, Water-crowfoots and Water-starwort.

- Contribute to the reduction in diffuse pollution through measures identified in the Hampshire Avon Nutrient Management Plan (Environment Agency and Natural England in prep)
- Support measures to ensure that water bodies achieve 'good ecological status' in line with the aims of the Water Framework Directive by 2015.
- Control invasive plant species, particularly Himalayan balsam and Japanese knotweed in line with the priorities of the Source to Sea project
- Plant riverside trees in line with the priorities of the Keeping Rivers Cool project to increase shading along waterways.
- Reduce silt laden runoff from agricultural land and highways
- Work with landowners and angling clubs to restore sections of river to a more natural state as part of the Wessex Chalk Streams Project.

### Existing conservation projects and initiatives

- **Catchment Sensitive Farming** - The Salisbury/Hampshire River Avon system has been designated a Priority Catchment as part of the Catchment Sensitive Farming scheme. Although no Capital Grant Target Areas overlap with this Area there are a number of projects working to restore the natural function of the Hampshire Avon, including the River Avon Restoration Plan, the **Wessex Chalk Stream Project**, the Environment Agency's '**Keeping Rivers Cool**' project and the **Source to Sea** project (details of which are available in the Conservation Initiative section of the Area profile).

As part of the **River Avon Restoration Plan** a '[Directory of Actions](#)' has been produced to provide a common direction for the many parties who wish to safeguard the River Avon. It provides specific information for each SSSI river reach as well as suggested restoration options. The current level of



conservation work focussed on this river system provides an important opportunity to make real and lasting improvements across the full extent of the Hampshire Avon system. It is important to support and, where possible, extend these efforts to maximise the benefits associated to this body of work.







### 3. Woodland

The woodland priority habitat in Area 08 is concentrated in the north east of the area around Collingborne and in the valleys carved by the tributaries of the River Avon. The Salisbury plain is largely unwooded and limited opportunities exist to re-establish large area of woodland due the military use of the Plain, the extent of agricultural land and the grassland character of the Plain. Where coniferous plantations are cut down these are should either reverted to calcareous grassland or replanted with mixed deciduous trees depending on what is most appropriate Hedgerows link areas of woodland and these vary in quality with some strong and full, whilst in other places they are low with many gaps. Priorities include:

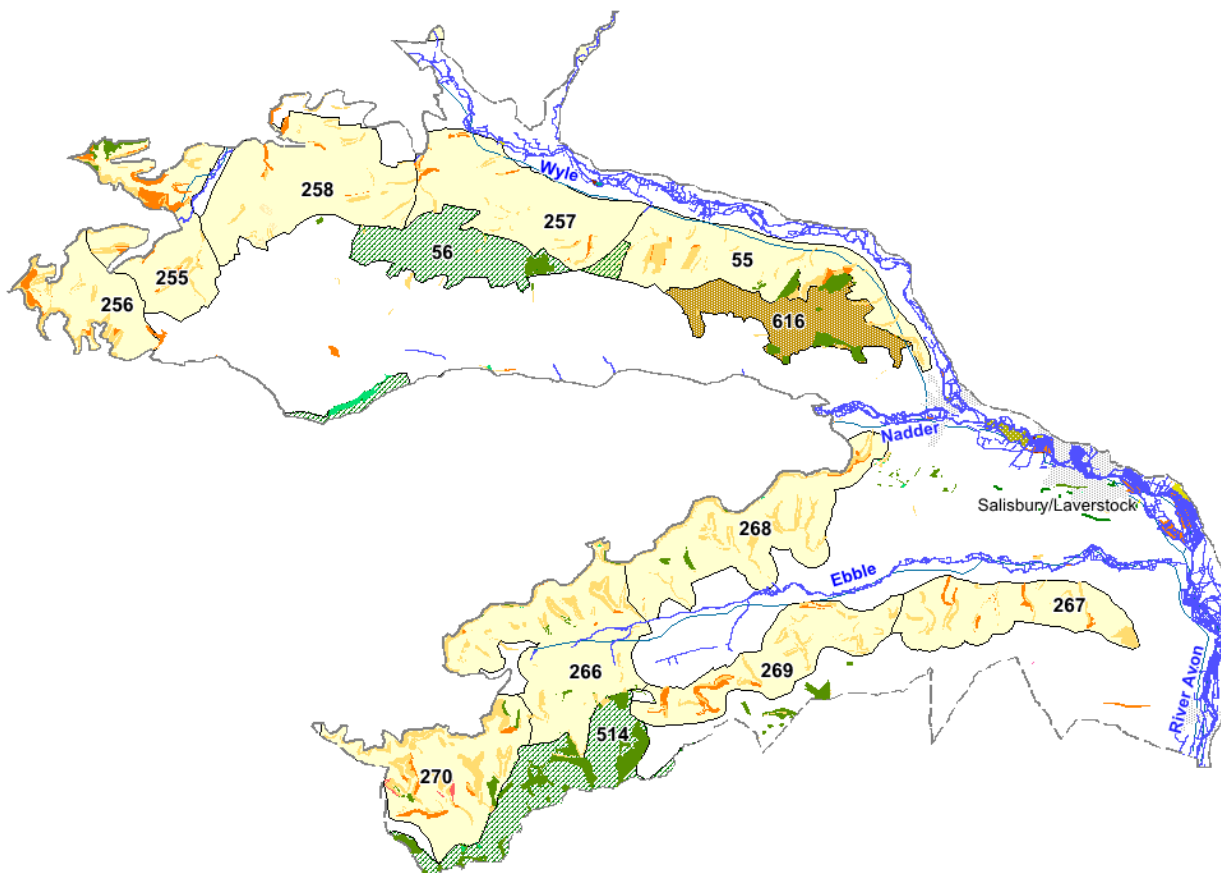
- Secure favourable management of existing ancient woodland sites through promotion of woodland grant schemes such as England Woodland Grant Scheme (EWGS), agri-environment woodland options.
- Improve connectivity between areas of woodland by strengthening of the hedgerow network and strategic application of agri-environment hedgerow options and capital works.
- Take opportunities to revert areas of coniferous plantation to mixed deciduous woodland where appropriate.
- Buffer/extend ancient woodland sites with appropriate new woodland planting

### Conservation initiatives

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

	'Bees for Everyone'	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create suitable bumblebee habitats.	8, 9, 10	Click folder for project details	
	Meadow research project	Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these rare plant communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1- North Meadow and Clatridge Farm SAC	Click folder for project details	
	Great Western Community Forest	The purpose of GWCF is to create a multi purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details	

## Area 09 - West Wiltshire and Cranborne Chase Downs



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### Strategic Nature Areas by Main Habitat

	Chalk Downland
	Coastal and Floodplain Grazing Marsh
	Limestone Grassland
	Neutral Grassland
	Neutral Grassland and Woodland
	River
	Woodland
	Woodland and Chalk Downland
	Woodland and Neutral Grassland

### Priority Habitats

	Lowland mixed deciduous woodland
	Lowland meadows
	Rivers
	Lowland calcareous grassland
	Wet woodland
	Purple moor-grass and rush pastures
	Arable field margins
	Reedbeds
	Coastal and floodplain grazing marsh
	Lowland fens
	Eutrophic standing waters
	Traditional orchards
	Lowland meadows/Coastal and floodplain grazing marsh
	Heathland
	Lowland beech and yew woodland

Figure 11: West Wiltshire and Cranborne Chase Downs Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.9.1 Area Profile

**National Character Areas** – [Salisbury Plain and West Wiltshire Downs \(132\)](#), [Dorset Downs and Cranborne Chase \(134\)](#)

**Landscape Character Types** – Wooded Downland (2), Chalk River Valley (5)

**Landscape Character Areas** – Cranborne Chase Wooded Downland (2D), West Wiltshire Downs Wooded Downland (2E), Fovant Down (2F), Lowe Avon Chalk River Valley (5B), Wyle Chalk River Valley (5E), Ebble Avon Chalk River Valley 5F).

**AONBs** – Cranborne Chase and West Wiltshire Downs AONB

**Related BAPs** – Wessex Water BAP

**SNAs** – There are 13 SNAs and the rivers Wyle, Ebbles, Nadder, Bourne and Avon present within Area 09, See [here](#) for SNA targets.

**Geology** – The underlying geology of the downlands is almost exclusively of chalk, although running in parallel to the south of the River Wyle is a band of clay-with-flints, a geological type also present in several patches scattered throughout the southern portion of the Area.

**Community Area Boards** – Warminster, Amesbury, South West Wiltshire Area Board, Salisbury, and Southern Wiltshire Area Board

## 4.9.2 Background

Lying south of the Salisbury Plain and the Wyle Valley, the West Wiltshire Downs and Cranborne Chase Landscape Biodiversity Area is characterised by open chalk downland with some significant areas of woodlands. Much of the woodlands are of ancient woodland types, particularly on the clay with flint deposits of the plateaus of the West Wiltshire Downs. Great Ridge and Grovely Woods are two of the largest woodlands in southern Wiltshire and these are situated on chalk ridges south of the River Wyle. The downlands are used extensively for agriculture and have large arable fields, with areas of unimproved chalk grassland mainly confined to the steep scarps and ridges which have avoided intensive agricultural practices.

At the very south of the county, Cranborne Chase lies on an undulating plateau of Upper and Middle Chalk, with local deposits of clay with flint deposits. It is a relict of an ancient hunting forest and comprises one of the largest tracts of semi-natural woodland in the region. The area has a strong agricultural and woodland heritage which includes remnants of enclosed medieval coppice, common land and wood-pasture and hazel plantations which are found within and adjoining the woodland areas, often linked via hedgerows and mature trees. Cranborne Chase is designated as a SSSI and comprises a diverse mix of woodland and ground flora, as well as some of the richest sites for lichens in southern England.

The chalk rivers systems are of great ecological importance within the region; the River Wyle, along with the River Nadder of Area 10, is of particularly high biological interest and together these rivers form a part of the internationally important River Avon System Special Area of Conservation. Key sites along the Nadder include the water meadows at Harnham, near the confluence of the Nadder and the Avon south of Salisbury. The River Ebbles, another of the River Avon’s chalk river tributaries runs through Area 09 and feeds into the Avon near Bodenham.

## 4.9.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland calcareous grassland	1762.67
Lowland mixed deciduous woodland	715.77
Lowland meadows	544.77
Rivers	231
Purple moor-grass and rush pastures	49.57
Lowland beech and yew woodland	41.95
Coastal and floodplain grazing marsh	14.22
Arable field margins	12.21
Wet woodland	6.4
Lowland fens	2.56

Lowland meadows/Coastal and floodplain grazing marsh	2.03
Heathland	0.45
Traditional orchards	0.43
Reedbeds	0.3
Eutrophic standing waters	0.09
<b>Total</b>	<b>3384.42</b>

#### 4.9.4 Priorities and opportunities for conservation

1. Chalk Downland
  - Lowland calcareous grassland
  - Downland birds and butterflies
2. Rivers
  - Chalk rivers
3. Woodland
  - Lowland mixed deciduous woodland
  - Bats

##### 1. Chalk Downland – SNAs 255, 256, 257, 258, 266, 267, 268, 269, 270, 55

#### Lowland calcareous grassland

Species-rich calcareous grassland is present in many small, fragmented and isolated patches over much of the West Wiltshire and Cranbourne Chase downs. It is mainly restricted to the steep scarps and ridges of the downlands which, due to their topology, have largely avoided direct agricultural improvement. Many of the remaining fragments are designated as SSSIs or County Wildlife Sites and these form the basis of the Chalk Downland Strategic Nature Areas in Area 09. There is a need to expand and connect these areas to increase their resilience and buffer them from the effects of climate change and allow the movement of species through this environment. In addition the quality of existing semi-natural habitat needs to be improved where this is unfavourable. Priorities for this habitat include:

- Target priority areas identified through the Strategic Nature Area and Stepping Stones projects where the data suggest appropriate habitat creation or restoration can provide the best contribution to enhancing ecological connectivity and offer significant biodiversity gain.
- Use relevant options in Environmental Stewardship Schemes to implement / increase grazing on under-grazed calcareous grassland sites

#### Existing conservation projects and initiatives

- **'Stepping Stones'** project is a partnership project between the North Wessex Downs AONBs, Cranborne chase and West Wiltshire Downs AONB, Natural England and the Wildlife Trust. The project compiled detailed habitat data for over 125,000 hectares, representing the majority of the Wiltshire chalk landscape stretching from Calne and Marlborough in the north to Mere and Salisbury in the south. The project has established the degree of isolation of priority grassland sites by modelling existing ecological networks, it has used these modelled networks to Identify opportunity areas for increasing priority grassland connectivity, and has demonstrate how this model and associated datasets can be used to help target management and restoration on the ground within priority areas.

- **'New Life for Chalk Downland' Project** – The Wiltshire Wildlife Trust's New Life for Chalk Grassland project aims to help halt the loss of chalk grassland in Wiltshire by restoring grassland and reverting marginal arable land back to grassland. Encompassing around 158,990 hectares of land in southern Wiltshire, the project trialled new conservation techniques for the management of chalk grassland and encouraged farmers and landowners to take them up. It is important to maintain the relationships with landowners and grazing regimes put in place through the project and to look for opportunities to extend the grazing management to areas that can increase connectivity of chalk grassland across the downlands of southern Wiltshire and beyond. The reversion of arable land to calcareous grassland will not only increase biodiversity in these areas but will also increase the carbon storage potential of this land and further reduce the risk of agricultural and pesticide runoff into the Hampshire Avon system.
  
- **Agri-environment schemes** – The area between Salisbury, Tisbury and Shaftesbury falls within the Dorset Downs and Cranborne Chase Higher Level Stewardship (HLS) Target Area, while the area between Salisbury Tisbury and Warminster falls within the Salisbury Plain and West Wiltshire Downs HLS Target Area. These represent areas where Natural England wishes to focus delivery of HLS to maximise environmental outcomes and value for money. Within these target areas nationally important areas for biodiversity occur including chalk grassland, wet grasslands besides streams, ancient semi-natural woodlands, wood-pasture and parklands, and the River Avon river system. The area is nationally important for its assemblages of farmland birds, butterflies (including the rare Duke of Burgundy), bats and scarce grassland fungi. Applications for HLS in these areas must include options to maintain/restore/create these habitats or provide habitat for the important species assemblages noted in these areas.

### Downland birds and butterflies

The birds and butterfly species that characterise chalk downland are vulnerable to habitat fragmentation exacerbated by unfavourable land management, vagaries of the weather and the effects of climate change. Changes in agricultural practices have led to a reduction in suitable nesting sites and availability of food, particularly over the winter. Much of the chalk downland has been used for large scale arable production which has resulted in dramatic declines for species associated with less intensive farmland environments including arable weeds, farmland birds and mammals such as brown hare and harvest mouse. Priorities relating to these species include:

- Promote the uptake of the Farmland Bird Package of options in environmental stewardship agreements to expand the core range of vulnerable farmland bird species.
- Increase the resilience of known populations of downland butterflies by improving habitat quality at existing key sites and looking for opportunities to link known colonies through arable reversion and creation of chalk grassland corridors and stepping stones.
- Co-ordinate survey and monitoring of key species.

### Existing conservation projects and initiatives

- **The South Wiltshire Farmland Bird Project** –The South Wiltshire Farmland Birds Initiative is part of the wider South West Farmland Birds Initiative that works closely with farmers to stabilise and

increase the numbers of farmland birds and rare arable plants. Through the use of Government grant schemes, such as Environmental Stewardship, land managers are encouraged to adopt measures that provide for farmland birds. This project has the potential to produce benefits that will be felt beyond this Area and it is important that efforts are made to find ways of connecting up those areas where active management for farmland birds and arable plant species is occurring.

- **Stepping Stones project** – The project used the occurrence of six butterfly species found on calcareous grassland in this Area - Dingy skipper, marsh fritillary, Adonis blue, chalk hill blue, Small blue and Duke of Burgundy - to assess the ecological networks between areas of calcareous grassland. This project identified priority areas where appropriate habitat creation or restoration can enhance ecological connectivity and offer significant biodiversity gains by buffering species from the impact of climate change and habitat degradation or loss.

## 2. Rivers – SNAs 675, 676, 677, 678, 780 – Wyle; 707, 792, 1075 – Ebbble; 784 – Nadder; 783, 785, 786, 787, 788, 790, 791, 1076; 789 - Bourne

### Chalk Rivers

The Hampshire Avon represents an internationally important chalk rivers system that supports rich and diverse communities of plants and animals, as well as associated habitats including lowland meadows and rush pastures. The unfavourable condition of the River Avon System SSSI, which includes the Wyle and the Nadder, is due to a number of factors including inappropriate water levels, invasive freshwater species, siltation, water abstraction levels, and water pollution resulting from both diffuse sources (e.g. agricultural runoff) and point discharges (e.g. some sewage treatment works). The Hampshire Avon has been identified as a Priority Catchment for work as part of the Government's Catchment Sensitive Farming Scheme which aims to support action by farmers and land managers to tackle diffuse water pollution from agricultural sources. Priorities for chalk rivers include:

- Support catchment scale projects which contribute towards achieving Natura 2000 objectives for the River Avon SSSI and help meet the requirements of the EU Water Framework Directive to achieve 'good ecological status' of water bodies by 2015.
- Encourage the take up of capital grants available for the Nadder and Wylde catchments under the Catchment Sensitive Farming scheme to reduce agricultural and pesticide runoff, reduce soil erosion by livestock and vehicles, and halt river sedimentation from runoff
- The systematic monitoring and control of invasive plant and animal species along the length of the Salisbury Avon and its tributaries, coordinated with the provision of some replacement planting or specialist management to encourage a more appropriate flora.
- Increase in the area of reedbeds, swamps and marsh habitats along the rivers to reduce run-off, increase the flood capacity of the river and provide habitat for riparian species.
- Work with riparian landowners to implement sympathetic management, particularly restoration & enhancement works, to restore natural processes to the river and enhance resilience to climate change.
- Co-ordinated monitoring of rivers to identify presence of invasive plants and signs of pollution incidents affecting riverine fauna and flora
- Support management to benefit populations of native freshwater species including water voles, brown trout, brook lampreys, bullhead, white-clawed crayfish and riparian bird species.

## Existing projects and initiatives

- There are a number of projects working to restore the River Avon to a naturally functioning and self-sustaining river system that exhibits the full range of characteristic habitats that benefit the distinctive chalk stream flora and fauna. These include the **Wessex Chalk Streams Project**, the EA's '**Keeping Rivers Cool**' project and the '**Source to Sea**' project (details of which are available in the Conservation Initiative section of the Area profile). As part of the **River Avon Restoration Plan** a '[Directory of Actions](#)' has been produced to provide a common direction for the many parties who wish to safeguard the River Avon. It provides specific information for each SSSI river reach as well as suggested restoration options. The current level of conservation work focussed on this chalk river system provides an important opportunity to make real and lasting improvements across the full extent of the Hampshire Avon system. It is important to support and, where possible, extend these efforts to maximise the benefits resulting from this body of work.
- **Catchment Sensitive Farming** - The Hampshire Avon is designated as a Priority Catchment as part of the Catchment Sensitive Farming (CSF) scheme, with a CSF Capital Grant Scheme Target Area encompassing the Rivers Wylde, Nadder, East and West Avon. Capital grants are available in this target area for work to reduce agricultural and pesticide runoff in watercourses, limit physical damage to soil caused by livestock and vehicles, and halt sedimentation from runoff. Further buffering of these important chalk streams can be achieved by improving management of riparian habitat, including the control of non-native invasive plant species which should be coordinated with the provision of some replacement planting or specialist management to encourage a more appropriate flora.

### 3. Woodland – SNAs 56, 514, 616

#### Lowland mixed deciduous woodland

Significant tracts of ancient and semi-natural woodland are located on the chalk ridges south of the Wyle and on the rounded chalk downs of the Cranborne chase. In 2009 the Cranborne Chase was identified as an Ancient Woodland Priority Area by the Forestry Commission. Priority Areas represent areas where landscape connectivity and permeability offer the best opportunity to link and extend ancient woodlands, either through new native woodland planting or through the management or creation of other semi-natural habitats. The agricultural and woodland heritage in the Cranborne Chase provides opportunities to implement management to improve biodiversity and at the same time harness the woodland resource for fuel and other renewable schemes. There is a need to extend and improve existing woodlands and link up those which are fragmented through restoration of hedgerows and planting of new trees. Priorities for this habitat include:

- Secure the favourable management of ancient woodland sites by engaging with landowners and promoting the use of agri-environment and Forestry Commission schemes to restore woodland structure and biodiversity.
- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting, and integrate them into the wider landscape
- Survey woodlands for the presence of priority woodland species including dormice, bats and breeding birds, ensuring that management reflects the needs of these species where present.

## Existing projects and initiatives

- The **Cranborne Chase Ancient Woodland Project** aims to link up, extend and improve areas of ancient semi-natural woodland within the AONB via improved woodland management and the planting native woodland species in strategically important areas. This integrated project aims to deliver benefits for both the priority semi-natural woodlands and also for those using this important resource.

## Bats

West Wiltshire is a key area for bats with a number of protected hibernation sites for several of the UK’s rarest species in the vicinity. Further work is also required to investigate the Area for significant bat roosts, of which many more are likely to be present than have currently been recorded.










- Maintaining mature and veteran trees, particularly those known to be used for roosting
- Identifying and favourably managing the next generation of mature / veteran trees
- Managing existing hedgerows and woodland used for foraging and commuting routes
- Hedgerow planting and woodland creation to improve connectivity between key roosting / foraging sites
- Maintaining the important mosaic of woodland, grassland and open water habitats which help support such a rich diversity of bat species
- Identifying and mapping important roosting sites and foraging grounds for the rarest species

## Existing conservation projects and initiatives

- **Wiltshire Batscapes project** – An area of opportunity has been identified under the proposed West Wiltshire Batscapes Project to take a strategic view of bat conservation across west Wiltshire and increase connectivity of woodland for bats commuting between Purbeck in Dorset and Woodchester in Gloucestershire. This project will employ agi-environment schemes to improve habitats for bats, particularly through new woodland / tree planting and maintaining grazed pastures

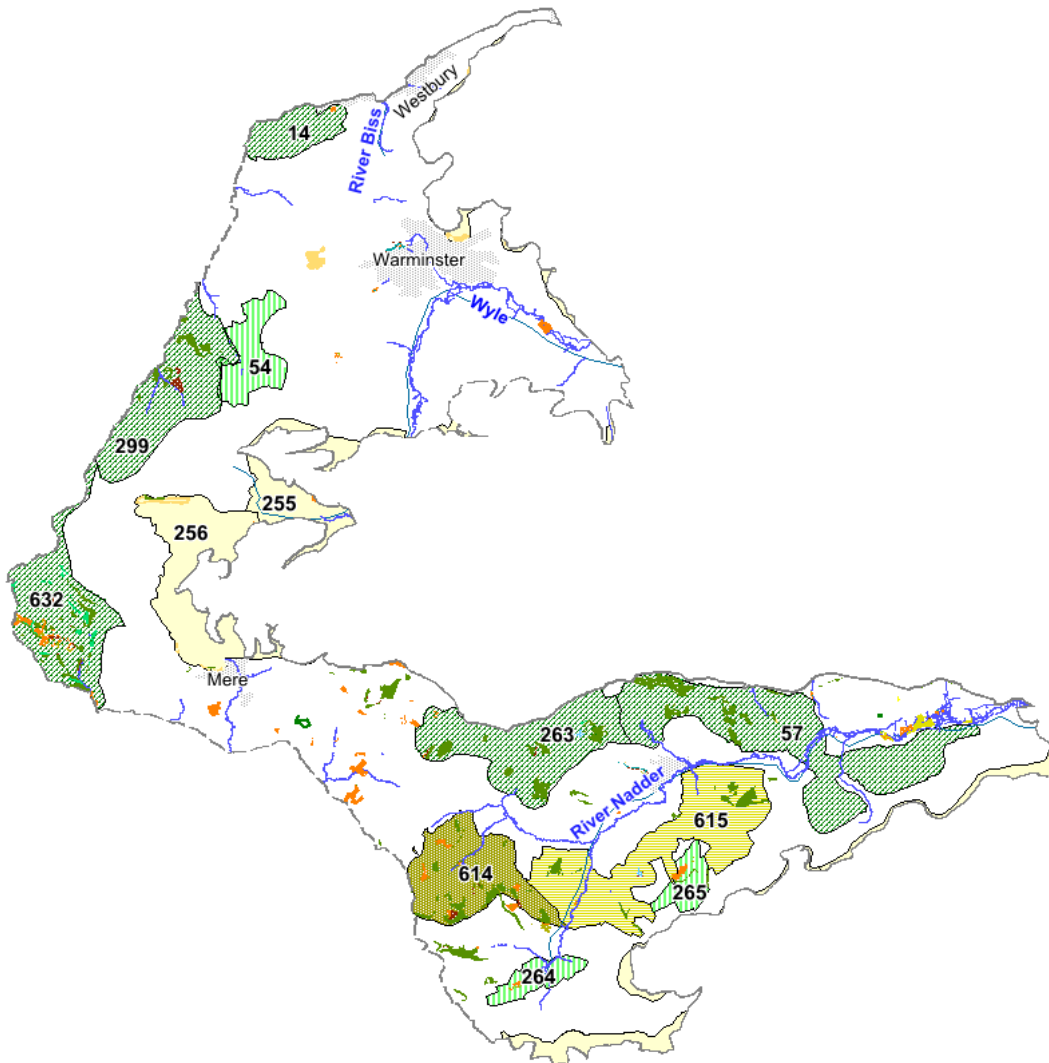
## 4.9.5 Conservation Initiatives

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

	"Bees for Everyone"	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.	8, 9, 10	 Click folder for project details	 <a href="#">Bumblebee Conservation Trust website</a>
	Meadow research project	Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of six floodplain meadows for many years. This information is used to develop our understanding of how these rare plant communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1 - North Meadow and Clattinger Farm SAC	 Click folder for project details	 <a href="#">Floodplain Meadows Partnership research site</a>
	Great Western Community Forest	The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	 Click folder for project details	 Click icon for GWCF webpage



## Area 10 - Warminster and the Vale of Wardour



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Strategic Nature Areas by Main Habitat	Priority Habitats
Chalk Downland	Lowland mixed deciduous woodland
Coastal and Floodplain Grazing Marsh	Lowland meadows
Limestone Grassland	Rivers
Neutral Grassland	Lowland calcareous grassland
Neutral Grassland and Woodland	Wet woodland
River	Purple moor-grass and rush pastures
Woodland	Lowland fens/Coastal and floodplain grazing marsh
Woodland and Chalk Downland	Eutrophic standing waters
Woodland and Neutral Grassland	Lowland beech and yew woodland
	Lowland fens
	Lowland wood-pasture and parkland
	Lowland meadows/Coastal and floodplain grazing marsh
	Lowland dry acid grassland
	Coastal and floodplain grazing marsh

Figure 12: Warminster and the Vale of Wardour Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

### 4.10.1 Area Profile

**National Character Areas** – [Blackmoor Vale and Vale of Wardour \(133\)](#), little bit of [Avon Vale \(117\)](#)

**Landscape Character Types** – Greensand Terrace (6), Wooded Greensand Hills (7), Wooded Clay Vale (13), small area of Wooded Downland (2)

**Landscape Character Areas** – Fovant Terrace (6C), Donhead-Fovant Greensand Hills (7B), The Vale of Wardour (13A), Longleat-Stourhead Greensand Hills (7A), Kilmington Terrace (6B), West Wiltshire Downs Wooded Downland (2E), Warminster Terrace (6A).

**AONBs** – Cranborne Chase and West Wiltshire Downs AONB

**Related BAPs** – Center Parcs BAPs

**Strategic Nature Areas** – There are 12 SNAs in Area 10, as well as three rivers: the Biss, the Nadder and the Wyle. See [here](#) for SNA targets.

**Geology** – This Area represents a mosaic of underlying geology with Upper Greensands predominantly around the Warminster area, whilst the valleys of the south are dominated by Kimmeridge and Gault Clays. An area of Purbeck & Portland stone is present to the north of the River Nadder.

**Community Area Boards** – South West Wiltshire Area Board, Warminster, and Westbury

## 4.10.2 Background

The Warminster and Vale of Wardour Landscape Biodiversity Area encompasses a geologically and ecologically diverse corner of Wiltshire. Situated in the southeast corner of Wiltshire, the Vale of Wardour is an area of clay vale and wooded hills that contrasts greatly with the adjoining areas of open chalk downland to the north and east. The River Nadder, which runs northeast from Donhead St Mary towards Salisbury, and the River Wyle, which runs along the base of the Salisbury Plain escarpment to the north, form two of five chalk rivers which meet at Salisbury to form the Salisbury Avon and are designated as part of the Salisbury Avon SAC. Their clean waters are home to native brown trout, whilst lowland meadows and areas of purple moor grass and rush pasture can be found closely associated along their course.

Valley floors are composed of alluvium deposits from the rivers and these areas have been utilised as meadows, small pasture fields and arable land with hedgerows and mature trees. Alongside the alluvium deposits, sand and clay deposits overlie the chalk bedrock giving rise to a variety of soil types ranging from acid through to basic, which contrast greatly with the more or less homogenous chalk soils associated with the surrounding West Wiltshire Downs. This range of soil types supports a diverse mix of associated habitat types including wet woodland, conifer woodlands, and both neutral and calcareous grasslands. Sizeable patches of lowland mixed deciduous woodland are present, with extensive areas of ancient woodland types located around Longleat, Dilton Marsh and Stourton to the west and the Fonthill area to the east. The woodlands provide a rich habitat with a mix of native woodland species such as oak, field maple and ash, as well as alder in the damper areas. The woodland floors have a rich flora of vascular plants, as well as exceptional communities of bryophytes and lichens in the wetter woodlands such as Bradley Woods SSSI.

A significant area of Purbeck and Portland stone is found in the Area north of the Nadder and this has led to the siting of over fifty stone quarries around the areas of Dinton, Teffont Eavis and Chilmark. Today many of these quarries represent important sites for wildlife such as Chilmark Quarries which has been designated a Special Area of Conservation for its importance as a hibernation site for protected species of bats including Greater and Lesser horseshoes, Barbastelles and Bechstein's.

### 4.10.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland mixed deciduous woodland	593.09
Lowland meadows	168.13
Lowland calcareous grassland	79.02
Rivers	65.39
Lowland beech and yew woodland	38.94
Wet woodland	38.86
Coastal and floodplain grazing marsh	27.44
Purple moor-grass and rush pastures	23.85
Lowland meadows/Coastal and floodplain grazing marsh	10.44
Lowland fens	9.95
Eutrophic standing waters	5.7
Lowland fens/Coastal and floodplain grazing marsh	0.5
Lowland wood-pasture and parkland	0.33
Lowland dry acid grassland	0.05
<b>Total</b>	<b>1061.69</b>

### 4.10.4 Priorities and opportunities for conservation

#### 1. Woodland

- Lowland mixed deciduous woodland
- Bats

#### 2. Woodland and neutral grassland

- Neutral grassland

#### 3. Neutral Grassland

- Unimproved neutral grassland

#### 4. Chalk Downland

- Lowland calcareous grassland and butterflies

#### 5. Rivers

- Chalk Rivers

#### 1. Woodland –SNAs 14, 299, 632, 263, 57,

#### Lowland mixed deciduous woodland – SNAs 299, 632, 14, 263

Lowland mixed deciduous woodland represents the most abundant priority habitat in Area 10 with a significant tract of woodland, containing both ancient and wet woodland types, running in the clay vale along the county boundary from Longleat in the north to Stourton on the Somerset border. These woodlands are an important feature for climate change adaptation of woodland species, forming a continuous tract of habitat in which species can migrate in response to changing conditions. The unfavourable condition of some woodland sites in this area is the result of a lack of woodland management, high deer grazing pressure and presence of exotic species such as laurel and rhododendron. Priorities for woodland in this area include:

- Secure the favourable management of woodland sites, in particular ancient woodland sites, to promote age and structural diversity.
- Buffer ancient woodland sites with appropriate new woodland planting
- Maintain and improve connectivity between ancient woodland sites through hedgerow and woodland planting, and integrate them into the wider landscape
- Implement appropriate deer management strategies to promote natural regeneration of woodland, ground flora and coppice.

### Existing projects and initiatives

- **Cranborne Chase and West Wiltshire Downs AONB** – The AONB is a protected landscape where work is determined by a statutory management plan. In line with the governments England Biodiversity Strategy Delivery Plan, AONB partnerships must integrate action to encourage and support new and existing large scale initiatives to improved ecological networks across the Area of Outstanding Natural Beauty (AONB) landscapes.
- **The Cranborne Chase Ancient Woodland Project** aims to link up, extend and improve areas of ancient semi-natural woodland within the AONB via improved woodland management and the planting native woodland species in strategically important areas. This integrated project aims to deliver benefits for both the priority semi-natural woodlands and also for those using this important resource.
- Opportunities exist in this Area to engage with the [Selwood Living Landscape project](#) across the Somerset border which encompasses the old hunting forest of Selwood from Frome in the north to Wincanton in the south. This project aims to restore and reconnect the landscape of Selwood, a connected patchwork of small hay meadows and pastures, ancient woodland, species rich hedgerows, ponds and the headwater streams of the Rivers Brue and Frome. By incorporating lessons learnt from this project we will be better equipped to implement similar, integrated woodland projects in West Wiltshire.

### Bats

Several important sites for bats are present within Area 10 including Chilmark Quarries SAC, a disused quarry and cave system that is an important hibernation site for several rare species of bats including: Greater and Lesser Horseshoes, Barbastelle, and the largest known over-wintering site of Bechstein’s bats in Britain. There have been significant issues relating to access at this site and the long-term safeguard of the hibernacula requires preventing the collapse of the underground voids and restricting unauthorised access and disturbance. It is important to work with owners of disused stone mines and quarries to create suitable hibernation and roosting sites for bats. The mosaic of woodland, grassland and open water provide valuable roosting sites for bats and link with similarly suitable habitats in Dorset, Somerset and west Wiltshire to extend foraging and commuting routes across the Wessex region. Priorities for bats include:

- Identifying and mapping important roosting sites and foraging grounds for the rarest species
- Achieve favourable condition of important hibernation sites by
- Maintaining mature and veteran trees, particularly those known to be used for roosting
- Identifying and favourably managing the next generation of mature / veteran trees
- Managing existing hedgerows and woodland used for foraging and commuting routes

- Hedgerow planting and woodland creation to improve connectivity between key roosting / foraging sites
- Maintaining the important mosaic of woodland, grassland and open water habitats which help support such a rich diversity of bat species

### Existing projects and initiatives

- **West Wiltshire ‘Batscapes’ project** - West Wiltshire has been recognised as a key area for bats and via projects such as the proposed Wiltshire Batscapes Project, efforts are planned to improve habitats for bats in west Wiltshire and increase the level of bat monitoring. The aim is to take a strategic view of bat conservation across the area and, although not within a target HLS area, this project will help farmers within the Batscapes project area into Entry Level stewardships and, in the case of exceptional farms, Higher Level stewardship, where opportunities exist on these farms to enhance habitat for bats.

## 2. Woodland and Neutral grassland – SNA 614, 615

Scattered woodlands are found throughout the Vale of Wardour, alongside neutral grassland and lowland meadows on the river valley of the River Nadder. In the clay vales, along the valley floor and in close association to the River Nadder system from Fovant east to Fonthill and Donhead St Mary, are areas of lowland meadow and wet woodland priority habitat. This mosaic of woodland and grassland supports a wide variety of bird, bat and invertebrate species.

- Maximise the biodiversity of woodland edge habitats with headlands of unimproved grassland and scattered scrub
- Maintain and extend the mosaic of woodland and neutral meadows through the application of agri-environment schemes to enhance existing sites and identify potential areas for reversion.

## 3. Neutral Grassland – SNAs: 265, 264, 54

### Unimproved neutral grassland

In the clay vales, along the valley floors and in close association with the headwaters and course of the river system, are areas of lowland meadow and wetland habitats including fens. Areas of lowland meadow can be found in close proximity to the waterways in the headwaters of the River Nadder near Donhead St Mary and Antsy, and in the southwest of the county around Mere. Meanwhile areas of unimproved neutral grassland are also found within the Longleat estate, in close association with both broadleaved and coniferous woodlands. Neutral grassland sites are vulnerable to development and agricultural improvement. Sites are generally small and fragmented and although some have been afforded County Wildlife Site status, few are covered by any statutory designations. Many of these sites are at risk of agricultural improvement, development and neglect (scrub encroachment). Priorities for this habitat include:

- Informing landowners and managers where they own / manage important neutral meadow sites
- Identify clusters of neutral grassland sites and target action on areas within and between cluster areas to act as stepping stones
- Protect and secure favourable management of known neutral meadows
- Restore degraded meadows using seed of local provenance
- Enlarge existing neutral sites through habitat creation

#### 4. Chalk downland – SNAs 256 & 255

##### Lowland calcareous grassland and butterflies

The area of lowland calcareous grassland in this Area 10 is a fraction of that in the adjoining Cranborne and West Wiltshire Downs Landscape Biodiversity Area, with the main concentrations restricted to the fringes of the West Wiltshire Downs around the Deverills. Invertebrate species, including a number of rare and charismatic chalk downland butterflies, occur here and these are particularly vulnerable to habitat fragmentation exacerbated by unfavourable land management, habitat loss and the effects of climate change. There is a need to expand and connect these areas of calcareous grassland to allow the movement of species in response to climate change and increase their resilience to environmental stressors. The quality of existing semi-natural habitat needs to be improved where this is unfavourable and opportunities taken to strengthen the network of calcareous grassland sites through habitat creation and enhancement. Priorities for calcareous grassland in Area 10 are:

- Target arable land on chalk soils in the Stepping Stones and Wiltshire Chalk Country project areas for reversion to chalk grassland
- Use relevant options in Environmental Stewardship to implement / increase grazing on under-grazed calcareous grassland sites
- Increase the resilience of known populations by improving habitat quality at existing key butterfly sites.
- Link known colonies through arable reversion and creation of chalk grassland corridors and stepping stones.
- Co-ordinate survey and monitoring of key species

##### Existing projects and initiatives

- The **'Stepping Stones'** project is a partnership project between the North Wessex Downs AONBs, Cranborne Chase and West Wiltshire Downs AONB, Natural England and the Wildlife Trust. The project seeks to restore the connectivity and quality of chalk habitats using butterfly populations as indicators of habitat connectivity. The project has compiled detailed habitat data for over 125,000 hectares, representing the majority of the Wiltshire chalk landscape stretching from Calne and Marlborough in the north to Mere and Salisbury in the south. The project has established the degree of isolation of priority grassland sites by modelling existing ecological networks, it has used these modelled networks to identify opportunity areas for increasing priority grassland connectivity, and has demonstrated how this model and associated datasets can be used to help target management and restoration on the ground within priority areas.
- **Agri-environment schemes** – The area of chalk downland between Warminster, Tisbury and Mere falls within the Salisbury Plain and West Wiltshire Downs Higher Level Stewardship (HLS) Target Area. This represents an area where Natural England wishes to focus delivery of HLS to maximise environmental outcomes and value for money. This area includes important areas of chalk downland, species-rich grasslands, wetlands and woodlands. These habitats support a range of key species including butterflies, farmland birds and bats which rely on the presence of woodland, permanent pasture and hedgerows. Applications for HLS in these areas should include options to maintain/restore/create these habitats or provide habitat for the important species assemblages noted for these areas. The appropriate application of these schemes can enhance overall

connectivity and provide a mechanism to protect and enhance the remaining priority habitats within this area

## 5. Rivers – SNAs: 669 – Biss; 678 – Wyle; 708, 781 - Nadder

### Chalk Rivers

The Hampshire Avon represents an internationally important chalk rivers system that supports rich and diverse communities of plants and animals, as well as associated habitats including lowland meadows and rush pastures. The unfavourable condition of the River Avon System SSSI, which includes the Wyle and the Nadder, is due to a number of factors including inappropriate water levels, invasive freshwater species, siltation, water abstraction levels, and water pollution resulting from both diffuse discharges (e.g. agricultural runoff) and point discharges (e.g. some sewage treatment works). The Hampshire Avon has been identified as a Priority Catchment for work as part of the Government's Catchment Sensitive Farming Scheme which aims to support action by farmers and land managers to tackle diffuse water pollution from agricultural sources. Priorities for chalk rivers include:

- Support catchment scale projects which contribute towards achieving Natura 2000 objectives for the River Avon SSSI and help meet the requirements of the EU Water Framework Directive to achieve 'good ecological status' of water bodies by 2015.
- Encourage the take up of capital grants available for the Nadder and Wyle catchments under the Catchment Sensitive Farming scheme to reduce agricultural and pesticide runoff, reduce soil erosion by livestock and vehicles, and halt river sedimentation from runoff
- The systematic monitoring and control of invasive plant and animal species along the length of the Salisbury Avon and its tributaries, coordinated with the provision of some replacement planting or specialist management to encourage a more appropriate flora.
- Increase in the area of reedbeds, swamps and marsh habitats along the rivers to reduce run-off, increase the flood capacity of the river and provide habitat for riparian species.
- Work with riparian landowners to implement sympathetic management, particularly restoration & enhancement works, to restore natural processes to the river and enhance resilience to climate change.
- Co-ordinated monitoring of rivers to identify presence of invasive plants and signs of pollution incidents affecting riverine fauna and flora
- Support management to benefit populations of native freshwater species including water voles, brown trout, brook lampreys, bullhead, white-clawed crayfish and riparian bird species.








### Existing projects and initiatives

- There are a number of projects working to restore the River Avon to a naturally functioning and self sustaining river system that exhibits the full range of characteristic habitats that benefit the distinctive chalk stream flora and fauna. These include the **Wessex Chalk Streams Project**, the EA's '**Keeping Rivers Cool**' project and the '**Source to Sea**' project (details of which are available in the Conservation Initiative section of the Area profile). As part of the **River Avon Restoration Plan** a '[Directory of Actions](#)' has been produced to provide a common direction for the many parties who wish to safeguard the River Avon. It provides specific information for each SSSI river reach as well as suggested restoration options. The current level of conservation work focussed on this chalk river system provides an important opportunity to make real and lasting improvements across the full

extent of the Hampshire Avon system. It is important to support and, where possible, extend these efforts to maximise the benefits resulting from this body of work.

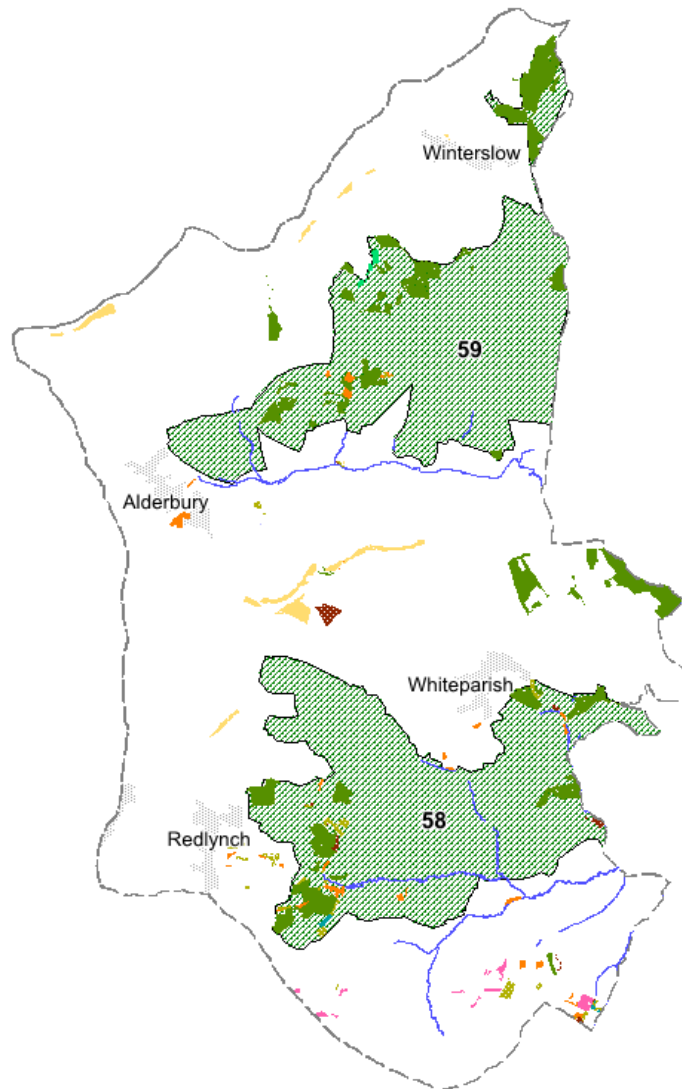
## 4.10.5 Conservation Initiatives

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

	<p>'Bees for Everyone'</p>	<p>A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.</p>	<p>6, 9, 10</p>	<p>Click folder for project details</p> 	<p><a href="#">Bumblebee Conservation Trust website</a></p>
	<p>Meadow research project</p>	<p>Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these rare plants communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.</p>	<p>1, North Meadow and Clattons Farm SACs</p>	<p>Click folder for project details</p> 	<p><a href="#">Floodplain Meadows Partnership research site</a></p>
	<p>Great Western Community Forest</p>	<p>The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodlands, grassland, wetlands, hedgerows, ponds and rivers.</p>	<p>1, 2, 3 &amp; 5</p>	<p>Click folder for project details</p> 	<p>Click icon for GWCF webpage</p> 



# Area 11 - Tytherley and Langley Woods



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Strategic Nature Areas by Main Habitat	Priority Habitats
Chalk Downland	Lowland mixed deciduous woodland
Coastal and Floodplain Grazing Marsh	Lowland meadows
Limestone Grassland	Rivers
Neutral Grassland	Lowland calcareous grassland
Neutral Grassland and Woodland	Wet woodland
River	Purple moor-grass and rush pastures
Woodland	Eutrophic standing waters
Woodland and Chalk Downland	Lowland beech and yew woodland
Woodland and Neutral Grassland	Heathland
	Lowland fens

Figure 13: A map of the Tytherley and Langley Woods Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

## 4.11.1 Area Profile

National Character Area – [Salisbury Plain and West Wiltshire Downs \(132\)](#), [New Forest \(131\)](#)

Landscape Character Types – Forest-Heathland Mosaic (14) and Wooded Downland (2)

**Landscape Character Areas** – Farley Forest (14A), Witherington Wooded Downland (2C) and Landford Forest (14B)

**AONBs** – N/A

**Related BAPs** – [Nature in the New Forest: action for biodiversity \(2012\)](#)

**SNAs** – There are 2 SNAs in Area 11 – Tytherley Woods (59) and Langley Woods (58). See [here](#) for SNA targets.

**Geology** – Area 11 is characterised by an underlying geology of London Clay & Reading Beds to the north and south of the Area, with a band of Wooded Downland on Chalk running through the central band.

**Community Area Boards** – Southern Wiltshire Community Area Board

### 4.11.2 Background

The Area to the southeast of Salisbury is characterised by a highly wooded landscape on distinct bands of sand and clay in the north and south and separated in the middle by an area of chalk on which areas of calcareous grassland occur.

The northern section of this Area comprises the Tytherley Forest, a mix of habitats including high canopies of oak and other deciduous species alongside areas of neutral grassland. Containing many areas of ancient woodland, the area is well known for its diversity and abundance of butterfly species. To the south, the Langley Woods and the New Forest form part of the New Forest SAC and are characterised by abundant acid woodland and conifer plantations, together with heathland and bog habitats. Central to the Langley Wood complex is the Langley Wood National Nature Reserve, an extensive tract of ancient forest on acid clays where the variation in soils and drainage has resulted in an exceptionally rich and varied woodland both structurally and botanically: - The epiphyte lichen flora is particularly rich and a wide range of breeding birds including BAP species: Nightingale, Nightjar, Lesser Spotted Woodpecker and Wood Warbler have all been recorded here. 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.

Remnants of traditional common land used for grazing are still evident in the south of the county and are closely associated with village areas. Within the woodlands are damp boggy areas containing purple moor grass and rush pasture which are an increasingly rare priority habitats within the county and southern England at large. These habitats are important for reptiles and ground nesting birds including curlew and nightjar, as well as rare plant species including the insectivorous sundew and pale butterwort which are characteristic of wet heaths and sphagnum bogs. Within the mosaic of wet habitats and woodland are important ponds which provide valuable habitats for rare amphibian species including great crested newts.

Separating the two woodland areas is a band of chalk downland which contains some significant areas of priority lowland calcareous grassland, in particular along the north facing scarp of Upper Chalk to the south west of Salisbury which includes West Grimstead Down and Pepper Box Nature Reserve. This area includes the Brickworth Down and Dean Hill SSSI which typifies the succession of chalk grassland through to juniper scrub and yew woodland and is the best example of this transition in Wiltshire.

Blackwater River and the River Dunn represent the two significant areas of running water priority habitat in Area 11. Tributaries of the River Test, these rivers form important wildlife corridors, connecting associated wetland habitats in Wiltshire with those to the east in Hampshire. Designated as a SSSI, the River Test is an

important chalk river which supports a rich community of plant and animal species including trout and salmon.

### 4.11.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland mixed deciduous woodland	442.24
Lowland calcareous grassland	62.39
Lowland meadows	35.58
Purple moor-grass and rush pastures	35.55
Wet woodland	18.3
Heathland	15.36
Rivers	11.72
Lowland beech and yew woodland	5.09
Lowland fens	3.09
Eutrophic standing waters/Ponds	0.04
<b>Total</b>	<b>629.36</b>

### 4.11.4 Priorities and opportunities for conservation

#### 1. Woodland

- Ancient Woodland
- Mosaic of heath, bog and wet habitats
- Woodland butterflies
- Bats

#### 2. Rivers and streams

#### 3. Lowland Calcareous Grassland

#### 1. Woodland – SNAs: 58 & 59

##### Ancient Woodland

There are extensive areas of ancient woodland types within Area 11, with over 2000 ha of this habitat recorded in the [Ancient Woodland Inventory \(AWI\)](#). The largely wooded character of this Landscape Biodiversity Area is the result of large tracts of ancient woodland types concentrated around two main blocks, the Tytherley Woods in the north and Langley Woods and the New Forest in the south. These woods are well known for their rich and varied woodland which support a wealth of rare butterflies, birds and lichens. Extensive, continuous woodland management is required to maintain the diversity of these woodlands. Issues include loss of edge and glade habitats, lack of regenerations resulting from increased deer grazing pressure and encroachment by invasive species. Whilst woodland areas have suffered from over-grazing, under-grazing is an issue with some of the wood pastures and meadows which intersperse these woodlands. Priorities for this habitat include:

- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting, and integrate them into the wider landscape
- Manage wood pastures through grazing options in agri-environment schemes

- Promote conversion of plantation woodlands to a more natural mix of deciduous woodland species of diverse age and structure
- Introduce appropriate deer management to encourage regeneration of woodland understorey.
- Promote the application of England Woodland Grant Schemes to conserve and enhance remaining areas of natural and semi-natural woodland.
- Ensure that work undertaken within and adjacent to the New Forest should complement the aims of the New Forest Action Plan for Biodiversity and coordinate with other current cross-border biodiversity initiatives.

### Mosaic of heath, bog and wet habitats

In this south eastern corner of the county the underlying geology of clay and acidic top soils has resulted in damp, boggy conditions which support areas of wet grassland, bog and wet heath. These habitats are increasingly rare within Wiltshire and southern England at large as a result of drainage, ploughing and the increased application of fertilisers and herbicides. This mosaic of habitats represent remaining fragments of common land and open habitats, primarily maintained through sustainable grazing and a range of management practices including cutting and burning of vegetation. These habitats are present generally as small, fragmented patches scattered throughout the woodlands which are extremely vulnerable to changes in land use and hydrology, as well as succession to woodland where management is lacking. Priorities for these habitats include:

- Promote the uptake of agri-environment and woodland schemes to maintain the mosaic of heath, bog and wet habitats through appropriate grazing management.
- Take steps to maintain the hydrology of wet heath, bog and purple moor grass sites to ensure that there is no loss of priority habitats characteristic of these wet soils.
- Conserve and augment the mosaic of heathland, bog and other wet habitats within the New Forest National Park where it overlaps the Wiltshire boundary and in adjacent areas as opportunity presents.
- Complement the grazed commons work of the New Forest National Park by augmenting across the border into Wiltshire wherever appropriate
- Maintain favourable management of ponds and open water to promote use by amphibians including Great- crested newts.

### Existing projects and initiatives

- **New Forest Park Authority** – The New Forest National Park Authority has produced [New Forest: An action plan for biodiversity](#) which considers the state of nature at present and sets out the objectives and strategic actions required to conserve and enhance biodiversity to 2020. In addition to this a [Landscape Action Plan](#) for the New Forest National Park has recently been submitted for consultation which sets out proposals on how to look after the landscape, conserve its history and wildlife, and help plan for its future. There are important strategic opportunities to extend the New Forest and the grazing resource it supports could be a key tool for improving grassland management in southern Wiltshire if the right economic and management linkages could be made between landowners and the local Commoning community. In addition to this the New Forest Land Advice Service can assist landowners in applying for agri-environment grants and other sources of funding.

- **The Deer Initiative** – In both the Tytherley and Langley Woods there is considerable deer grazing pressure. In places this has led to reduced regeneration of understorey and ground flora which ultimately will reduce the biodiversity of the woodlands. It is a priority to establish appropriate deer management regimes to allow the woodland structure to recover. The Deer Initiative has worked with Butterfly Conservation in Bentley Woods as part of the South East Woodland Project to try and reduce deer numbers. With funding to this project now finished it is important to ensure that appropriate measures are taken to manage deer numbers across the woodlands of Area 11.

## Woodland Butterflies

The Tytherley and Langley Woods are noted for their abundance and diversity of woodland butterflies including a number of priority species such as the Duke of Burgundy, Marsh fritillary and the Purple Emperor. Bentley Wood to the east of Salisbury is a large, mixed woodland and is nationally recognised for its importance as a site for butterflies. Significant efforts have been undertaken here by Butterfly Conservation, the Forestry Commission and Natural England to implement management options to enhance the woodlands for butterfly species. This management needs to be maintained and similar management implemented across the Tytherley and Langley Woods to ensure that woodlands are in a favourable condition for butterflies. Priorities for woodland butterflies include:

- Secure suitable management to enhance woodlands for butterflies including widening of woodland rides and selective thinning at woodland edges, in line with Butterfly Conservation's South East Woodlands Project
- Continue to monitor the impacts of these management measures on butterfly and other woodland species.
- Improve connectivity between woodland sites, particularly where known populations of priority woodland butterflies exist, to allow the movement of individuals between populations and help species move in relation to climate change.

## Existing projects and initiatives

- Butterfly Conservation's three year funded '**South East Woodlands Project**' - This project aimed to reinvigorate woodland management in key woodland sites across the Southeast and halt the loss of rare woodland species such as the Marsh Fritillary and the Purple Emperor. This project came to an end in 2010 and therefore it is important not to lose the beneficial management measures put in place through this period. It is also important to continue to monitor the impact that these management measures have had on the butterfly and woodland species in order to apply these findings elsewhere.

## 2. Rivers and Streams

The rivers Blackwater and Dunn, both tributaries of the River Test, represent the two significant areas of running water priority habitat in Area 11. The River Test to the east has experienced a long history of modification and the last assessments by Natural England in 2012 showed the river to be in unfavourable condition and failing to meet objectives set by the Water Framework Directive. Issues include inappropriate water levels, siltation, water pollution - agriculture/run off, water pollution – discharge. As tributaries of the River Test it is important to ensure that the Rivers Dunn and Blackwater are managed to maintain water quality and riparian habitats, reducing negative impacts on the river system down stream in the River Test.

Wiltshire Council has identified opportunities for wet grassland buffering and extension around the Rivers, especially around Alderbury. Priorities for this habitat include:

- Retain, buffer and extend areas of wet grassland around the River Dunn and River Blackwater.
- Support catchment scale projects which contribute towards achieving Natura 2000 objectives for the River Avon SSSI and help meet the requirements of the EU Water Framework Directive to achieve 'good ecological status' of water bodies by 2015.
- Encourage the take up of capital grants available for the Blackwater and Dun catchments under the Catchment Sensitive Farming scheme to reduce agricultural and pesticide runoff, reduce soil erosion by livestock and vehicles, and halt river sedimentation from runoff
- Work with riparian landowners to implement sympathetic management, particularly restoration & enhancement works, to restore natural processes to the river and enhance resilience to climate change.
- Co-ordinated monitoring of rivers to identify presence of invasive plants and signs of pollution incidents affecting riverine fauna and flora

### Existing conservation projects and initiatives

- **River Test and Itchen River Restoration Plan** - The Environment Agency and Natural England are developing a restoration strategy for these rivers to identify the required works, or improved management, to improve the physical habitat condition of the rivers.
- **Catchment Sensitive Farming** - The Rivers Test and Itchen are designated as a Priority Catchment as part of the Catchment Sensitive Farming (CSF) scheme, with a CSF Capital Grant Scheme Target Area encompassing the Rivers Dun and Blackwater. Capital grants are available in this target area for work to reduce agricultural and pesticide runoff in watercourses, limit physical damage to soil caused by livestock and vehicles, and halt sedimentation from runoff. Further buffering of these important chalk streams can be achieved by improving management of riparian habitat, including the control of non-native invasive plant species which should be coordinated with the provision of some replacement planting or specialist management to encourage a more appropriate flora.

### Bats

The woodlands of South East Wiltshire are particularly important for a wide range of bat species, supported by a rich mosaic of habitats including woodland, wood pasture, wet woodland, purple moor grass pasture and woodland ponds. However, very little monitoring data is available on these areas and it is likely that important roost sites of rare and endangered woodland species are likely to be in this area. Priorities for this species group include:

- Collect baseline data on bat activity within the area and identify and map important roosting sites and foraging grounds for the rarest species
- Maintain mature and veteran trees, particularly those known to be used for roosting
- Identify and favourably manage next generation of mature/veteran trees
- Manage existing hedgerows and woodland used for foraging and commuting routes
- Hedgerow planting and woodland creation to improve connectivity between key roosting/foraging sites







- Maintaining the important mosaic of woodland, grassland and open water habitats which help support the rich diversity of bat species

### 3. Lowland calcareous grassland

The chalk downland between the Tytherley and Langley Woods is important for its lowland calcareous grassland, juniper scrub and yew woodland, as well as a number of species with restricted ranges which are characteristic of these habitats. Under-grazing on some sites has led to encroachment by scrub whilst overgrazing on others has resulted in a lack of juniper scrub regeneration. Appropriate grazing management should maintain a dynamic mosaic of rich mixed scrub habitat of varying ages and species with calcareous grassland and woodland which can offer a variety of surfaces and features for invertebrates, together with overwinter cover and abundant nectar sources (NE condition assessment 2010). Priorities for this habitat include:

- Implement / increase grazing on under grazed calcareous grassland sites via agri-environment schemes to improve sward composition and control scrub.
- Establish new stands of juniper on chalk grassland with appropriate grazing management regime and where this is failing – consolidate through planting.
- Target conservation actions in areas where the data suggest appropriate habitat creation or restoration might provide the best contribution to enhancing ecological connectivity.

#### 4.11.5 Conservation initiatives

	Bees for Everyone	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.	8, 9, 10	Click folder for project details	
	Meadow research project	Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these wetland communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1 - North Meadow and Cattlegrange Farm SACs	Click folder for project details	
	Great Western Community Forest	The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the cores of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and trees.	1, 2, 3 & 5	Click folder for project details	

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas

## 5. Taking Forward the Landscape Biodiversity Areas Framework

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This document puts forwards a framework for identifying priorities and opportunities across Wiltshire and Swindon. This is only the first step towards realising the potential to create more, biodiverse, interconnected, landscape scale conservation initiatives in Wiltshire and Swindon and more efforts are needed to help deliver the priorities and opportunities outline in this document.

Key steps towards realising the priorities and opportunities for landscape scale conservation identified in this document include:

- Designing a **Delivery Plan** based on the priorities and opportunities identified in this document. This needs to identify organisations and partnerships who can work together to take forward these actions, identify spatially explicit areas within which to focus work and funding opportunities to support the work and outline a suitable monitoring and reporting system to determine the success of conservation actions and report these within and beyond the environmental community.
- Looking in greater detail at land within each of the Strategic Nature Areas and identifying where the best opportunities exist to meet the quantitative targets for priority habitat creation and restoration. This will require more detailed mapping of SNA areas and collaboration with landowners and conservation practitioners to assess land use and ownership.
- Developing a monitoring and reporting system that allows us to quantitatively measure the impact of conservation actions against targets for reducing biodiversity loss and to report on the progress of conservation projects towards meeting our overall aims to halt the loss of biodiversity and create a more coherent and resilient network of ecologically thriving landscapes.

The Local Nature Partnerships have been identified as a key means of coordinating local delivery of the England Biodiversity Strategy and it is through the Local Nature Partnership that the new Wiltshire and Swindon Landscape Biodiversity Frameworks will be taken forward. Via the LNPs working groups it will be engaging with the wider conservation community to help identify the priorities and opportunities for conservation across the region and to try and facilitate work to address these. Members of the BAP Partnership and the BAP Steering group have been invited to join or engage with the LNP's newly established Biodiversity Working Group which aims to take forward the work of the BAP and help realise targets for the natural environment in line with the England Biodiversity Strategy.

It is important to remember though that recommendations made in this and related documents are only as good as the data upon which they are based. Actions that are required across the whole of the county include improving our understanding of the habitats and species present here. This is a huge task and one which cannot fall to a single group or organisation. By contributing to our understanding of what habitats and species are present within the local area we will be better informed to direct conservation efforts. Support should be given for initiatives aimed at increasing our understanding of the distribution and quality of priority habitats within our county. Please visit the [Get involved](#) section to see how you can get involved with monitoring and recording wildlife within your area and see what resources and guidance are available to assist you.



## 6. Partnership

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We are grateful to all those organisations and groups who have engaged with us during the review of the Wiltshire and Swindon Biodiversity Action Plans either through participating in the BAP steering groups or by submitting information on their current conservation activities within the region



The landscape addition to the Wiltshire and Swindon BAPs links closely with work being undertaken by:

[Link2Nature - The Wiltshire & Swindon Local Nature Partnership](#)

[Wiltshire Environmental Intelligence Network](#)

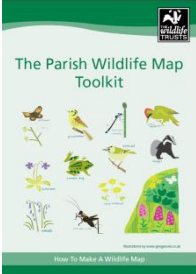
[Wiltshire Community Area Boards](#)

[Swindon Localities Boards](#)

## 7. Get Involved

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### 7.1 Monitoring & Recording



**The Parish Wildlife Toolkit** – This toolkit guides you through the production of a Parish Wildlife Map, a graphical representation of some of the key habitats and species within your parish boundary, created from a combination of background materials and surveys. Undertaken in conjunction with your Local Records Centre, the Parish Wildlife Map will contribute to a greater understanding of the natural environment within your local area and can be useful in developing neighbourhood plans and responding to planning issues.



**The Wiltshire & Swindon Biological Records Centre** - The Wiltshire and Swindon Biological Records Centre (WSBRC) is a not-for-profit partnership initiative housed at the [Wiltshire Wildlife Trust](#) which provides a central reference point for environmental information on species, sites, habitats and geology in Wiltshire and Swindon to which people can contribute their own records.



**NBN Gateway** – This site allows you to view species distribution maps and download UK biodiversity data provided by contributing data providers such as local record centres, species recording groups, NGOs and statutory agencies. The website also provides maps of wildlife sites both (statutory and non-statutory), allows you to view distribution maps by species designations e.g BAP or Red data book, and provides useful links for further information on particular species. The Wiltshire and Swindon Biological Records Centre has submitted over one million records to NBN which have been combined with data from a range of other sources to produce the distribution maps available via the NBN gateway.



**iRecord** – iRecord is a website for managing and sharing your wildlife records. Individuals register with the site and are then free to submit, visualise and manage their own records and those of other iRecord users. All wildlife sightings for non-sensitive species are shared with other users and will be made available to [National Recording Schemes](#) and [Local Record Centres](#).



**Biodiversity Action reporting System (BARS)** – BARS is a web based information system which allows you to visualise where practical action is in place to benefit important habitats and species, as well as generate summaries of the data. This information can then help national and local communities plan and better coordinate their conservation activities. A new version of BARS was released in April 2012 which allows groups and organisations to upload information on spatially explicit conservation projects.

## 8. Main sources of information

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[Wiltshire Council - Landscape Character Assessment](#)

[Cranborne Chase & West Wiltshire Downs AONB landscape character assessment \(2003\)](#)

[Natural England SSSI site descriptions](#)

[Wiltshire and Swindon Wildlife Sites Handbook 2013](#)

[Natural England National Character Areas](#)

[Biodiversity South West – Nature Map](#)

[Wiltshire Wildlife Trust](#)

[Natural Choice: securing the value of nature – Natural Environment White Paper \(2011\)](#)

[National Ecosystem Assessment \(2011\)](#)

[JNCC website](#)

## 9. Glossary

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**Ancient woodland** – This is the term used to describe land which has been continuously wooded since at least 1600. It is generally regarded as being of very high wildlife value, with a rich diversity of plants and animals.

**Ancient Woodland Inventory (AWI)** - The Ancient Woodland Inventory (AWI) is a provisional guide to the location of Ancient Woodland. It was put together by Natural England following extensive surveying in the 1980s and 90s. Ancient Woodlands have increased protection under planning guidance in England and as such the AWI is an important tool in helping to identifying and protect the remaining areas of this important habitat.

**Condition Assessments** - The condition of the SSSI land in England is assessed by Natural England, using categories agreed across England, Scotland, Wales, and Northern Ireland through the Joint Nature Conservation Committee. There are six reportable condition categories: favourable; unfavourable recovering; unfavourable no change; unfavourable declining; part destroyed and destroyed.

**Favourable** - Favourable condition means that the SSSI land is being adequately conserved and is meeting its 'conservation objectives', however, there is scope for the enhancement of these sites.

**Unfavourable recovering** - Unfavourable recovering condition is often known simply as 'recovering'. SSSI units are not yet fully conserved but all the necessary management measures are in place. Provided that the recovery work is sustained, the SSSI will reach favourable condition in time.

**Unfavourable declining** - This means that the special interest of the SSSI unit is not being conserved and will not reach favourable condition unless there are changes to site management or external pressures. The site condition is becoming progressively worse.

**Green Infrastructure** – Refers to the living network of green spaces, water and other environmental features in both urban and rural areas. The Government is seeking to use green infrastructure as a driver of economic growth, regeneration and improved public health, wellbeing and quality of life<sup>15</sup>.

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<sup>15</sup> Natural Choice – Natural Environment White Paper, 2011

**Local Nature Partnerships (LNPs)** – A key vision of the Natural Environment White Paper, the Local Nature Partnerships have been established to help facilitate cross sector collaboration in their local area to manage the natural environment as a system and to embed its value in local decisions for the benefit of nature, people and the economy. More information is available via the Defra [LNP webpage](#).

**Landscape Scale** – there is no agreed definition of Landscape Scale. It commonly refers to action that covers large spatial scales, usually addressing a range of ecosystem processes, conservation objectives and land uses.

**Main habitat** -The broadest classification of the feature on the unit selected from a list of habitats based on the BAP Broad Habitat classification.

**National Character Areas (NCAs)** are sub-divisions of England identified by Natural England as being unique on the basis of their physical, wildlife, land use and cultural attributes. Up to date NCA profiles are in the process of being compiled by Natural England and these should be consulted when considering each of the Landscape Biodiversity Areas as they provide a comprehensive description of the Area and highlight environmental opportunities appropriate to the individual NCA.

**Sites of Special Scientific Interest (SSSI)** - Sites of Special Scientific Interest (SSSIs) conserve and protect the best of our wildlife, geological and physiographical heritage for the benefit of present and future generations. Sites of Special Scientific Interest (SSSIs) give legal protection to the best sites for wildlife and geology in England under the Wildlife and Countryside Act 1981 (as amended).

**Strategic Nature Areas (SNAs)** – Landscape scale conservation areas identified as part of the [South West Nature Map](#) using the [Rebuilding Biodiversity in the South West](#) methodology, a science based framework for identifying viable target areas for priority habitats and creation of a robust ecological network. They are not do not represent solid areas of any one given habitat, but to contain a mix of habitat patches alongside other vegetation and productive land uses, with either the priority habitat occurring as a binding matrix in which other land uses are embedded or as numerous patches in a diverse mosaic, in keeping with the landscape character of the area.

**The Phase 1 habitat Survey** – This is a classification and associated field survey technique which provides a relatively rapid system to record semi-natural vegetation and other wildlife habitats. Each habitat type/feature is defined by way of a brief description and is allocated a specific name, an alpha-numeric code, and unique mapping colour. The system has been widely used and continues to act as the standard ‘phase 1’ technique for habitat survey across the UK<sup>16</sup>.

**Wiltshire Landscape Character Assessment** - The Wiltshire Landscape Character Assessment was commissioned by Wiltshire County Council and undertaken by Land Use Consultants between January 2004 and April 2005. It involves identification of those features or combinations of elements that contribute to the character of the landscape, thereby enabling the special character and qualities of a particular area to be understood<sup>1</sup>.

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<sup>16</sup> JNCC website, 2012

## 10. Appendix

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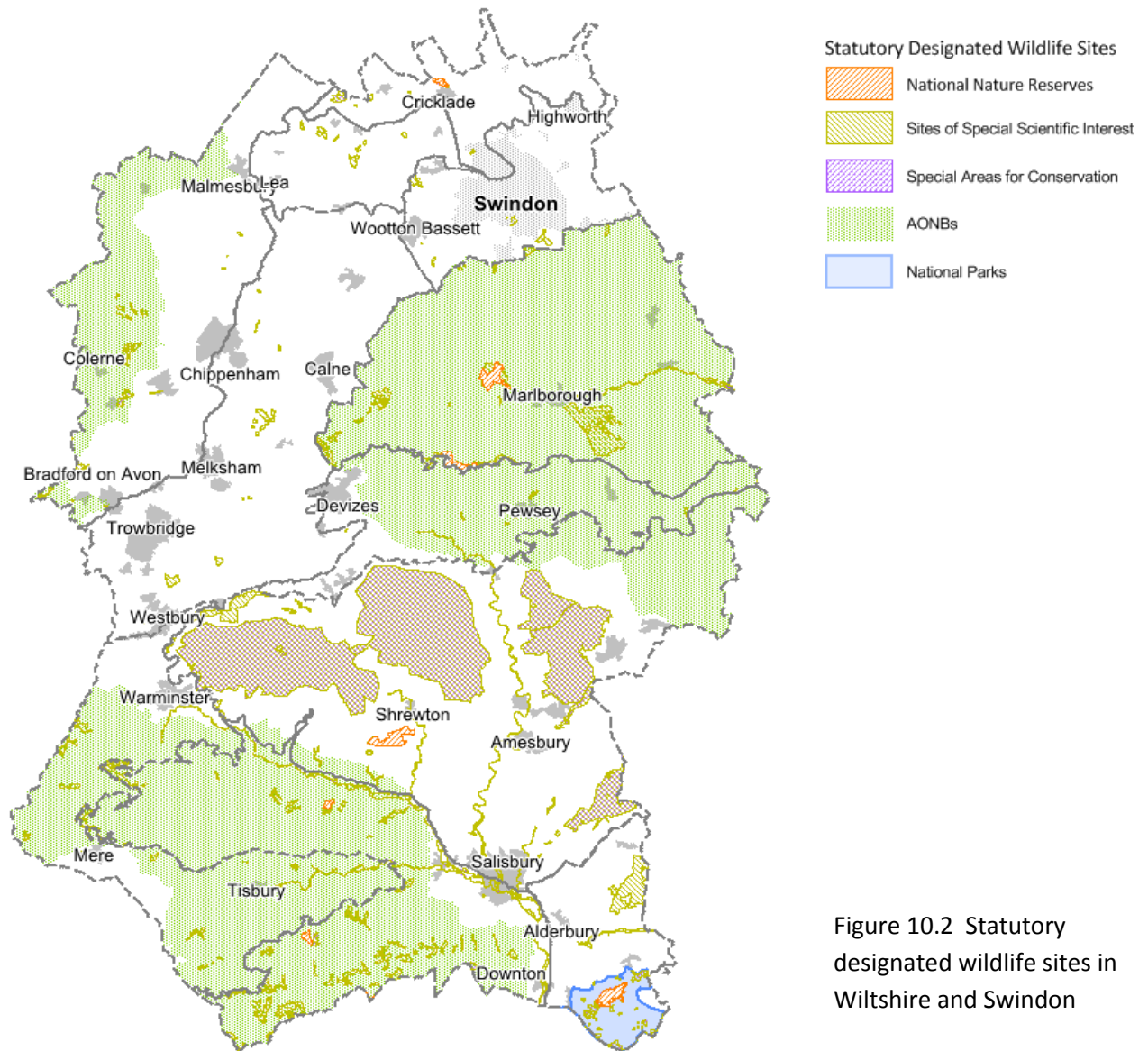


Figure 10.1 Wiltshire Community Area Boards and Swindon Borough.

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		Broad Habitats																
Priority Habitats	Total hectareage of PHT	Acid grassland	Arable	Bracke n	Broadleaved, mixed & Yew woodland	Built-up areas & gardens	Calcareous grassland	Conifer woodland	Dense scrub	Fen, marsh & swamp	Heathland	Improved grassland	Neutral grassland	Possibly unimproved grassland	Probably improved grassland	Rock exposures	Running Water	Standing open water
Total hectareage of broad habitat		114.98	75889.22	6.66	25581.77	1052.86	19424.29	3815.82	1150.8	340.57	37.68	39884.61	17834.94	677.68	179.35	447.39	980.47	1024.25
Arable field margins	12.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coastal and floodplain grazing marsh	95.68	-	-	-	-	-	-	-	0.1%	0.2%	-	-	0.4%	-	-	-	-	-
Eutrophic standing waters	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7%
Eutrophic standing waters/Ponds	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heathland	37.68	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Lowland beech and yew woodland	178.34	-	-	-	0.7%	-	-	-	-	-	-	-	-	-	-	-	-	-
Lowland calcareous grassland	19217.47	-	-	-	-	-	98.7%	-	4.0%	-	-	-	-	-	-	-	-	-
Lowland dry acid grassland	7.98	6.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lowland fens	21.92	-	-	-	-	-	-	-	-	6.4%	-	-	-	-	-	-	-	-
Lowland fens/ Coastal and floodplain grazing marsh	25.0	-	-	-	-	-	-	-	-	7.3%	-	-	-	-	-	-	-	-
Lowland meadows	1935.12	-	-	-	-	-	-	-	0.1%	-	-	-	10.8%	-	-	-	-	-
Lowland meadows/ Coastal and floodplain grazing marsh	15.84	-	-	-	-	-	-	-	-	-	-	-	0.1%	-	-	-	-	-
Lowland mixed deciduous woodland	4747.79	-	-	-	18.6%	-	-	-	-	-	-	-	-	-	-	-	-	-
Lowland mixed deciduous woodland/ Lowland wood-pasture and parkland	19.24	-	-	-	0.1%	-	-	-	-	-	-	-	-	-	-	-	-	-
Lowland wood-pasture and parkland	53.5	-	-	-	0.1%	-	-	-	-	-	-	-	0.1%	-	9.0%	-	-	-
Mesotrophic lakes/Ponds	35.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4%
Ponds	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purple moor-grass and rush pastures	139.57	-	-	-	-	-	-	-	-	41.0%	-	-	-	-	-	-	-	-
Reedbeds	9.93	-	-	-	-	-	-	-	-	2.9%	-	-	-	-	-	-	-	-
Rivers	975.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99.5%	-
Traditional orchards	0.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wet woodland	221.65	-	-	-	0.9%	-	-	-	-	-	-	-	-	-	-	-	-	-
Not designated PHT	160674.79	93.1%	100%	100%	79.7%	100%	1.3%	100%	95.9%	42.1%	0%	100%	88.5%	100%	91.0%	100%	0.5%	94.8%

Table 10.1 Illustrates the total hectareage of Broad and Priority Habitats in Wiltshire and Swindon, and the percentage of Broad habitats which are designated as Priority Habitats. The “ – ” symbol is used in place of 0%.



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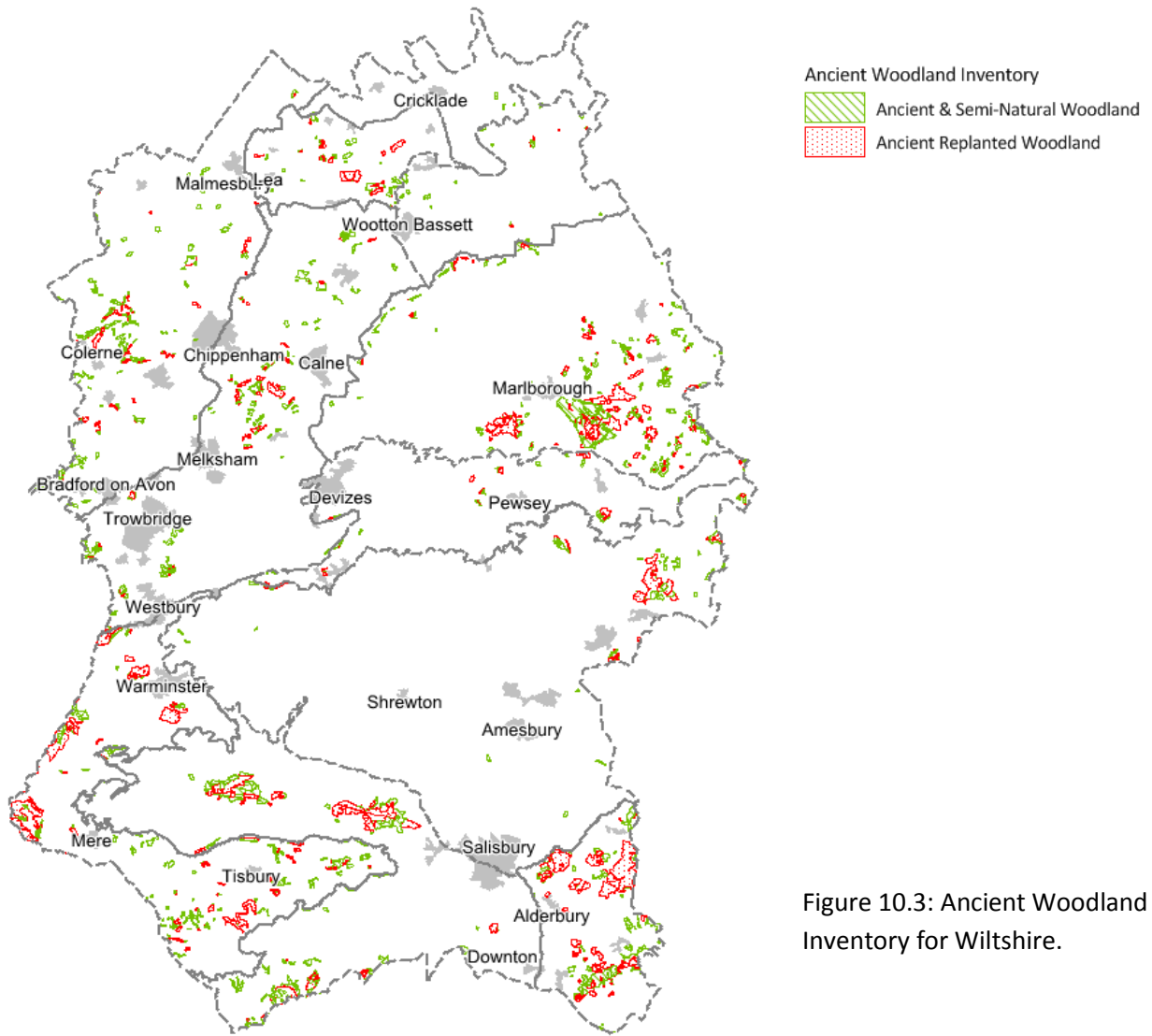


Figure 10.3: Ancient Woodland Inventory for Wiltshire.

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