WWW.NORTHWESSEXDOWNS.ORG.UK

North Wessex Downs Area of Outstanding Natural Beauty



NAURE RECOVER DAN

PRODUCED ON BEHALF OF THE NORTH WESSEX DOWNS AONB COUNCIL OF PARTNERS

CONTENTS

1.0	Introd	luction	3			
2.0	The Policy Framework4					
3.0	Our Vision					
4.0	Natur	e in the North Wessex Downs AONB	8			
5.0	Target	ts	12			
6.0	Priorit	ty Habitats and Species in the North Wessex Downs AONB	16			
	6.1	Habitats	16			
	6.2	Species	19			
	6.3	Semi-natural unimproved calcareous grassland (chalk grassland)	21			
	6.4	Rivers and streams	24			
	6.5	Floodplain grazing marsh and lowland fen	28			
	6.6	Lowland heath and acid grassland	30			
	6.7	Lowland meadows	33			
	6.8	Farmed land	35			
		Ancient and species-rich hedgerows	39			
		Arable field margins	42			
	6.9	Deciduous woodland	44			
	6.10	Wood pasture, parkland and ancient trees	48			
	6.11	Traditional orchards	51			
	6.12	Standing open waters and canals	54			
7.0	Next s	steps	58			

Maps

(Map 1)	The extent of the Big Chalk area showing the geographic importance of the North Wessex Downs AONB (April 2022)	9
(Map 2)	Landscape Character Types and Areas in the North Wessex Downs AONB	11
(Map 3)	Designations and Local Wild Life Sites	15
(Map 4)	Chalk grassland within the North Wessex Downs AONB	23
(Map 5)	Rivers and streams in the North Wessex Downs AONB	27
(Map 6)	Heathland restoration potential	32
(Map 7)	Farmer-led groups in the North Wessex Downs AONB	37
(Map 8)	Woodland in the North Wessex Downs AONB	45
(Map 9)	Orchards in the North Wessex Downs AONB	52

Cover image: Cow grazing Eddington Marsh SSSI. © Corinna Woodall



↑ Cherhill Downs with poppies flowering in the foreground. © NWDAONB

1.0 INTRODUCTION

We know that nature is in crisis. Scientists have warned that we are entering a mass extinction, that is highly likely to threaten the future of human survival and impact on our way of life. This situation is acute, but is not only happening 'somewhere overseas,' but here in the United Kingdom and thus in the North Wessex Downs Area of Outstanding Natural Beauty; this catastrophe has already happened on our own doorstep and the situation is worsening. The UK is one of the most nature depleted countries in the world; the UK's State of Nature Report 2019 reported that "41% of species have had strong or moderate decreases in abundance since the 1970's. 15% of our species are threatened with extinction and 2% are already extinct."

In tandem and together with an urgent need to tackle climate change, we need to do more to allow nature and wildlife to recover and to support natural processes to function. However, to plant trees everywhere to help sequester carbon and help to mitigate for climate change can also have an adverse impact on biodiversity, as well as the landscape character and natural beauty for which the AONB is designated. Nature recovery must be planned, hand in hand with climate change actions and with respect to enhancing and strengthening the quality of the area's natural beauty and in line with its national and international status as an IUCN Category V Protected Landscape.² This document is the initial North Wessex Downs Council of Partners' response to how the AONB team, stakeholders and local communities can approach this biodiversity call-to-arms and help nature to recover before it is too late, for both wildlife and society.

¹ UK State of Nature 2019 Report

² Adrian Phillips 2002, Management Guidelines for IUCN Category V Protected Areas; Protected Landscapes/Seascapes

2.0 THE POLICY FRAMEWORK

In 2010 Professor Sir John Lawton submitted the **Making Space for Nature**³ report to Government. The report made 24 recommendations as a call for action which would benefit wildlife and people. These principles have become an invaluable mantra ever since and much has been embedded in consequent environmental policy. Professor Lawton wrote to the Prime Minister, a decade later stating that he and the panel would particularly highlight the need for three overarching actions:

- 1) Better protect and manage our remaining wildlife habitats...
- 2) Deliver ecological restoration at scale...
- 3) Bring nature to people...

He concluded by saying, 'A decade ago, England needed more, bigger, better and joined up spaces for nature. Today, England still does. We urge you to make the next decade one of action, and to start now.'

The AONBs are committed to enabling an approach that creates opportunities within these protected landscapes for people to make an emotional connection with nature. The North Wessex Downs AONB will continue to work strategically and on the ground to enable individuals and communities to learn about, enjoy and experience the wildlife on their doorsteps. A key commitment from the Colchester Declaration is for each AONB to prepare a Nature Recovery Plan, of which this plan is the first.

The Colchester Declaration of July 2019 is a bold statement made by the National Association for AONBs (NAAONB) on nature recovery and establishing targets across the AONB family.

"Set against a backdrop of unprecedented concern for the future of the natural world, intergovernmental reports that the current global response to the effects of human impact on nature is insufficient – the National Association for Areas of Outstanding Natural Beauty believes that now is the time to significantly increase the scale and pace of nature conservation activity in AONBs. Using our unique network and partnership model, we are making a collective Declaration on Nature in AONBs, setting out our strategy for change.

With many AONB host authorities having taken the step of declaring a Climate Emergency, we are demonstrating our readiness to act to redress declines in species and habitats within the context of a wider response to climate change."

Extract from the Colchester Declaration 2019

This Nature Recovery Plan is aimed at anyone with an interest in nature and land in the North Wessex Downs AONB. This is just the start of an iterative process and an ongoing dialogue about how we restore biodiversity and ecological functions to long term health, alongside addressing the challenges of climate change.

This plan is fluid and will evolve as we gather more evidence and opportunities arise to really make a difference. We will continue to work with organizations and communities across the AONB to develop and refine how nature recovery is delivered, but it is likely to be a multi-pronged approach. We also especially welcome discussion with those who manage land, farmers, foresters, communities, ENGOs, and others. To achieve sustained and meaningful nature recovery, we need to find a way for it to fit with viable businesses and rural economies - and we need to work out together how to achieve this goal.

³ Making Space for Nature: a review of England's wildlife sites and ecological network.2010 Report to Defra

As signatories to the Colchester Declaration, we believe:

- 1. Natural Beauty has intrinsic value and means so much to people.
- 2. AONBs should be places of rich, diverse and abundant wildlife.
- 3. Nature recovery is central to the conservation and enhancement of natural beauty.
- 4. Climate change is the biggest threat to humanity and one of the greatest threats to bio-diversity. Designated landscapes offer some of the most powerful solutions to the challenges of climate change.
- 5. The network of AONBs and National Parks, their teams, partnerships, authorities and stakeholders offer a unique solution to tackling environmental challenges.

We pledge that:

By July 2020

- 1. To enable an approach that creates opportunities within AONBs for people to make an emotional connection with nature.
- 2. To prepare a Nature Recovery Plan for each AONB.

By 2024

- 1. To embed an ecosystems services approach into all AONB Management Plans.
- 2. To ensure all AONB management plans include meaningful measures around climate change mitigation and adaptation, including clear, measurable targets to support Net Zero.

By 2030

- 1. That at least 200,000 ha of SSSIs in AONBs will be in favourable condition. That at least 100,000 ha of wildlife-rich habitat outside of protected sites will have been created/restored in AONBs to further support the natural movement of plants and animals.
- 2. That at least 36,000 ha of new woodland will have been planted or allowed to regenerate in AONBs following the principle of the right tree in the right place.
- 3. That, by each AONB immediately adopting a species on the threatened list and by preparing and delivering a Species Action Plan, at least thirty species relevant to AONBs will be taken off the list by 2030.

We call on Westminster and Welsh Governments to provide the power and resources to make these targets achievable.

The Defra 25 Year Environment Plan⁴ (25 YEP) set out a vision for a national Nature Recovery Network.

"The concept for the Nature Recovery Network is simple. Our existing protected sites constitute our best areas for wildlife and provide many other economic and social benefits. They should form the core of any future network. However, for nature to recover we have to also look beyond protected sites and take action to extend and link our existing sites, both to support wildlife and to recover the range of economic and social benefits that nature provides."

⁴ A Green Future: Our 25 Year Plan to Improve the Environment. HM Government 2018

In January 2023 the government published the **Environmental Improvement Plan 2023** (EIP 23), the 25 YEP committed to a refresh every 5 years as set in law in the Environment Act 2021, this established the framework and the vision and the recent EIP 23 reinforces the intent.

The EIP apex goal is: Improving nature to halt decline in biodiversity to achieve thriving plants and wildlife. There are another nine goals and these all collectively contribute to Goal 10, which is to 'enhance beauty, heritage, and engagement with the natural environment.' The North Wessex Downs AONB is well placed to bring all these elements together and deliver on this ambitious goal.

The 2021 Environment Act introduced a statutory requirement in Sections 104 to 106 for a new approach to setting priorities for nature via the production of 'Local Nature Recovery Strategies' (LNRSs) that will include a statement of biodiversity priorities and a local habitat map. These Strategies will mainly be produced on a county scale and the Secretary of State has appointed Responsible Authorities who will draw up the LNRSs in conjunction with other supporting Authorities, working collaboratively with a diverse group of stakeholders. Many organisations are working towards similar goals and planning what they can do for nature. Secondary legislation and statutory guidance was published in April 2023 to set out the process and contents of an LNRS ahead of the national rollout.

The AONB Council of Partners and the team must seek the best opportunities to influence and deliver nature recovery priorities within the designation boundary. The AONB believes it has a key role in helping to guide the development of these LNRSs across the four counties of Berkshire, Wiltshire, Oxfordshire and Hampshire and sits on a number of strategic bodies that will be directly involved with this process. The AONB is keen to establish a forum or working group to bring the constituent LNRSs together, to ensure consistency of approach, continuity of mapping across the administrative boundaries and knowledge exchange within the AONB. This Nature Recovery Plan sets out the AONBs ambitions for wildlife. The aspiration is for this Nature Recovery Plan to be at the heart of the emerging Strategies and, in turn, the LNRSs will also inform subsequent iterations of this document too. Only by working collectively and cooperating across administrative boundaries and the protected landscape can we really hope to make the difference that we need to make, within a single generation and in the face of the climate change emergency.

Nature has been hugely depleted by a plethora of damaging actions, often in ignorance, but increasingly in the full face of all the evidence about the critical state that nature and our planet has reached. Enabling nature to recover will require active engagement and actions be they large or small will all count.

The Government's Dasgupta review on the Economics of Biodiversity⁵ included these headline messages:

- Our economies, livelihoods and well-being all depend on our most precious asset: Nature.
- We have collectively failed to engage with Nature sustainably, to the extent that our demands far exceed its capacity to supply us with the goods and services we all rely on.
- Our unsustainable engagement with Nature is endangering the prosperity of current and future generations.

With such stark messages, surely we have a major impetus to take meaningful action.

⁵ The Economics of Biodiversity: The Dasgupta Review- Full Report update 20 August 2021

3.0 OUR VISION

The North Wessex Downs Area of Outstanding Natural Beauty; a farmed landscape, abundant in wildlife, resilient, mitigating and adapting to climate change. A special place with thriving biodiversity, where people who live, work and visit, connect with nature.



↑ West Woods © John Totten

4.0 NATURE IN THE NORTH WESSEX DOWNS AONB

The North Wessex Downs AONB is important for nature but the landscape is under increasing pressure, and declines in some wildlife and natural systems are evident.

The habitats and species in the AONB largely reflect the chalk geology (82% of the AONB is underlain by chalk bedrock) and calcareous soils.

The most predominant habitats remaining are mainly areas of chalk grasslands, semi-natural broadleaved woodlands and wood-pasture, chalk streams and associated wetlands, and some tracts of arable farmland managed sympathetically for conservation.

Other habitats of particular significance within the AONB range from remnant heathlands on river gravel deposits in the east, such as areas of semi-acidic grassland around Inkpen, to the wide grassy verges of the drove-ways crossing the downs. At a local level, the hedgerow network, springs, remnant water cress beds, road verges, dew ponds and old orchards also provide important refuges and habitats. Habitat mosaics are especially important, for species such as bats which may travel long distances from their roosts in old trees or buildings to forage over a range of insect-rich habitats; including wetlands, farmland, wood pasture and grassland. Where the land is not managed agriculturally, there is a significant area of the AONB that is managed as racehorse gallops; often largely undisturbed they can be quiet spaces for some key farmland birds.

Natural England's Inventory of Priority Habitat together with local surveys, provides an initial basis to understand the most valuable remaining habitats still found in the AONB. These figures identify discrete habitats, when in reality they are often found in mosaics and in combination. Also, this data, taken from the Monitoring Environmental Outcomes in Protected Landscapes (MEOPL) reports sent to the National Parks and AONBs annually, is likely to have a degree of overlap.

The Intergovernmental Panel on Climate Change (IPCC) in 2022 stated with high confidence that in Europe one of the key climate change impacts on wildlife will be shifts in ranges, with species generally following the warming climate northwards. In order to address nature recovery, this south-north migration of certain species must be planned for and integrated into future nature recovery networks. The position of the North Wessex Downs AONB in relation to the lowland chalk landscapes is strategically important, especially in the face of climate change.

The North Wessex Downs AONB is part of an initiative called 'Big Chalk'⁶. This is an ambitious programme that aims to secure and restore a calcareous landscape mosaic of grassland, arable and woodland habitats on a previously unimagined scale. Focussing on the calcareous landscapes running from the Kent Downs to the Midlands, it is an enormous area, covering some 24,867 sq. km. These chalk and limestone landscapes have a greater variety of species, (including pollinators vital to our food system) than any other in the UK, and when combined could support wide ranging climate resilience, enabling the most species to adapt to climate change. The North Wessex Downs AONB's location is pivotal, providing a key means of species to move northwards from Cranborne Chase AONB, Salisbury Plain and the South Downs National Park, and further north to the Cotswolds and Chilterns AONBs'.

⁶ Big Chalk Development Report 2022 Executive Summary



(Map 1) The extent of the Big Chalk area showing the geographic importance of the North Wessex Downs AONB (April 2022) **^**

The North Wessex Downs are of high scenic quality, and their wildlife and cultural heritage are an integral part of their character and value. Although predominantly a chalk landscape, the character differs markedly across the AONB, depending on local surface geology, soils, landform, land use, vegetation and settlement patterns. Natural England has set out a Landscape Character Assessment (LCA) methodology to formally identify what makes one area different from another. Within the North Wessex Downs AONB there are 33 different Character Areas, that are recognized as falling into eight 'Landscape Character Types'. In considering and planning how we are going to restore the AONB's lost habitats, it is really important to keep in mind the landscape character.

The current NWDAONB Management Plan 2019-24 <u>https://www.northwessexdowns.org.uk/our-work/</u> <u>management-plan/</u> sets out priorities for future land management to support and enhance the special qualities of the AONB by Landscape Character Type. Chapters 2 and 3 should be referred to when planning habitat restoration/creation as an initial cross check; that the management intervention proposed is appropriate; and will strengthen the landscape character and contribute to the AONB's staututory purpose of conserving and enhancing natural beauty.



↑ Wildflower meadow on chalk, Avebury © Corinna Woodall 2023



Landscape Character Types

14 Marlborough Downs		of Eldungton Ecception of any	
IA Manborough Downs	- C.	6A Vale of Pewsey	
1B Lambourn Downs		6B Shalbourne Vale	
1C Horton Downs		6C Wanborough Vale	
1D Blewbury Downs		CD: Thereas Floodele's Desses	
24 Brightwalton Downs		6DI Thames Floodplain - Benson	
2R brightwatch Downs		6Dii Thames Floodplain - Moreton	
2B Ashmapstead Downs		6Diii Thames Floodplain - Streatley and Basildon	
2C Lambourn Wooded Downs		74 Kennet Valley	
2D Walbury Hill - Watership Down Scarp		7B Lambourn Vallov	
2E Chute Forest - Faccombe		76 Lambourn valley	
2E Litchfield Downs		/C Bourne Valley	
2F Litchileid Downs		7D Pang Valley	
2G Hannington Downs	÷	8A Hermitage Wooded Commons	
3A Savernake Plateau		8B Winterbourne Farmland	
4A Salisbury Plain		OC Wiskham Weeded Heath	
54 Avenury Plain		8C Wicknam wooded Heath	
ER Chicolden Washerouch Disin		8D Hungerford Farmland	
58 Chiseldon - Wanborough Plain		8E Highclere Parklands	
5C Hendred Plain		8E Ewhurst Parklands	
5D Moreton Plain	_		

(Map 2) Landscape Character Types and Areas in the North Wessex Downs AONB $m \uparrow$

5.0 TARGETS

The North Wessex Downs AONB extends to 1,730km²,⁷ and this is the first initial analysis to establish how biodiverse the whole AONB is and to take the first steps towards establishing targets for this Protected Landscape.

At this time there are a plethora of targets for achieving 'more nature' and these are not necessarily related nor have the same origin. These targets have not been rationalised as yet, to provide fewer, more simple targets for the North Wessex Downs AONB, as further guidance is awaited from Defra. It is known, however, that the Protected Landscapes are very much expected to have a key role in facilitating nature's recovery, though the Partnership, plans, projects and the ability to convene.

The Prime Minister, in September 2020 ahead of signing the United Nations Pledge for Nature,⁸ committed the UK and its devolved administrations to protecting 30% of the UK's land for nature by 2030. He subsequently signed up to the Convention on Biological Diversity in Montreal 2022 (Target 3 of the Kunming-Montreal Global Biodiversity Framework)⁹. At the time of the original commitment, there was an assumption that the Protected Landscapes already covered 26% of the UK's land surface and were already richer in nature, however it had been overlooked that these are landscape designations, with no real additional means of delivering more nature in these areas than outside the designated boundary (other than perhaps some more targeted agri-environment grants and temporarily the Farming in Protected Landscapes grant). AONBs can help to deliver on these targets; however, our resourcing needs to be matched with enabling us to achieve this ambition.

This plan sets out what needs to be achieved for the North Wessex Downs AONB to deliver on this 30% target, assuming that all the mechanisms and funding will be provided. However, without an appropriate upscale of immediate investment and framework perhaps these targets are more realistically 2042 (the end date of the 25YEP), but will it be too late by then?

The NAAONBs also committed to AONBs delivering 100,000 ha of recovered habitat by 2030 outside of protected sites through the Colchester Declaration. Just dividing this up between all the UK AONBs suggests that the North Wessex Downs' share of this would be 2,632 ha. Though being the third largest AONB probably we should have greater ambition and strive to deliver a greater amount of habitat. It could be argued, that we have more opportunity with a larger landscape to achieve these targets.

To meet 30 by 30 targets for the North Wessex Downs AONB, there is a need to increase the extent of habitat to 520 square kms by 2030. This would mean creating as a minimum a further 238 square kms of additional habitat, or approximately 34 square kms of new habitat per annum (roughly 3.5 x the size of Newbury!) for the next seven years from the publication of this document. An enormous increase in resources is required to be able to achieve this, and without investment to match this aspiration, these targets will not be met by 2030. These targets as a minimum must be achieved by 2042 to give nature a fighting chance.

Wildlife and Countryside Link consider that it is a reasonable assumption that wildlife should do better in the Protected Landscapes and that the 30 by 30 target should be increased to 40 by 30 targets in AONBs. The North Wessex Downs AONB is starting from a lower base of biodiversity than the average AONB (17.8% as opposed to 28.8% across the rest of the AONBs¹⁰) and therefore will

⁷ MEOPL 21 data suggests area is 1731.5Km2, but have used 1730kms as stated in North Wessex Downs Management Plan 19-24

⁸ Government press release 28 September 21

^{9 &}lt;u>https://www.cbd.int/article/cop15-final-text-kunming-montreal-gbf-221222</u>

¹⁰ Bruce Winney pers. Comm.

require substantial investment to be able to be on a parity for nature with other AONBs and National Parks. However, with its substantial arable land-use there will also be opportunities to maximise regenerative farming approaches and carry out in-field practices that will be more biodiversity friendly, but less straightforward to monitor and measure for the AONB - could these somehow count toward the 30 by 30 targets?

The EIP 23 also establishes the intention for a new outcomes framework for AONBs to set targets for their contributions to natural environment and climate commitments which will then be embedded in the AONB Management Plans due to be reviewed by March 2025. These will be outcomes for the landscape, though not solely to be delivered by AONB Partnerships, but all stakeholders involved in that geographic area.

This document also draws heavily on the 'Climate Change Adaptation Manual. Evidence to support nature conservation in a changing climate', produced by Natural England and RSPB and revised in 2020. The manual assesses the sensitivity of each priority habitat to climate change and makes recommendations to increase resilience and to help species adapt. We have incorporated these assessments; high, medium and low using a 'traffic light' system, and highlighted some key actions to support these habitats as our climate changes.



↑ Bee Orchid, Weyden Hill © Corinna Woodall

Targets in the EIP 23 include:

- Restoring or creating 500,000 Ha of habitat in England by 2042.
- 50% of SSSIs on track to achieve favourable condition by 31 January 2028.
- Improve the red list index for species extinction by 2042 compared to 2022 levels.
- Increase tree canopy or woodland cover from 14.5% to 16.5% of total land in England by 2050 (interim target is 0.26%= 34,000 ha by 31 January 2028).
- Create, restore, and extend around 70 areas for wildlife through projects including new National Nature Reserves, and the next rounds of the Landscape Recovery Projects.
- Support a transformation in the management of 70% of our countryside by incentivising farmers to adopt nature friendly farming practices.

How the Colchester Declaration and EIP targets translate to the North Wessex Downs AONB $^{\mbox{\tiny 11}}$

Target	Timeline	Source	Target for the NWD AONB (ha)
20,000 ha of SSSI in favorable condition	2030	Colchester Declaration	1,916
36,000 ha of new woodland	2030	Colchester Declaration	3,058
100,000 ha of wildlife-rich habitat outside of protected sites will have been created/restored	2030	Colchester Declaration	2,632
Remove 30 species from threatened list	2030	Colchester Declaration	1 species action plan
30% protect for nature	2030	United Nations Pledge for Nature	52,000
500,000 ha of habitat created or restored	2042	Defra 25YEP and EIP23	13,158
34,000 ha of new woodland	2028	EIP23 Interim target	2,185
50% of SSSIs on track to favourable condition by 2028	2028	EIP23 Interim target	1,677
70% of the NWDAONB covered by nature friendly farming practices	2030	EIP23	121,100



↑ Knapweed © Corinna Woodall

11 Local Wildlife Sites mapping from 2005, to be updated in final document





Data Sources:

SAC, NNR, SSSI, LNR:

© Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2023

Local Wildlife Sites sourced from:

© Thames Valley Environmental Records Centre Map produced by Thames Valley Environmental Records Centre in 2023 (c) Crown Copyright. All rights reserved Oxfordshire County Council Licence No 100023343 (2023) FOR REFERENCE PURPOSES ONLY, NO FURTHER COPIES MAY BE MADE

© Hampshire Biodiversity Information Centre Partnership © Wiltshire & Swindon Biological Records Centre 2022

(Map 3) Designations and Local Wild Life Sites 🛧

6.0 PRIORITY HABITATS AND SPECIES IN THE NORTH WESSEX DOWNS AONB

6.1 HABITATS

The table (page 17) is an initial attempt to summarise what we know about the extent of priority habitats within the North Wessex Downs AONB. It also sets out to establish some targets for these habitats. As set out in the previous chapter, there are a plethora of targets coming from a variety of different sources, however, apart from the new Environmental Land Management Schemes and the developing new private finance and green markets emerging for biodiversity, carbon sequestration and nutrient neutrality, it is not clear how these will help to achieve nature recovery aspirations on the ground.

There are complex discussions that are ongoing with Defra and Natural England and the protected landscapes family, about how these targets might be apportioned, what is going to be measured, what will count, how will it be monitored, and reported? There are various decisions that are being waited upon but, for pragmatism, this edition of the Nature Recovery Plan is mainly focussing on how to meet on the 30 by 30 commitment. There will be significant overlap and crossover with other targets set out in the EIP 23 and the Colchester declaration, but until further guidance and clarity is obtained, it seems an unnecessary level of complication. It should be possible to retrofit the progress figures once the metrics and frameworks have been agreed. It is also accepted that most habitats cannot be created or restored overnight and that it will take some considerable time to expand and establish these new areas for nature; the 2030 timeframe even with full resources is aspirational but maybe not realistic.

The main source of data in the table below is from the Monitoring Environmental Outcomes in Protected Landscapes, cut for the Protected Landscapes by Natural England in 2021/22; this is primarily 'Priority Habitat' data. Part of the discussion over what is eligible to be counted towards 30 by 30, is that land as part of contributing to the delivery of this target, must have longevity of the habitat creation and long-term management with nature conservation as an objective. It is known that for some of these habitats that there are more sites that support these priority habitats in the North Wessex Downs, but they are not in any agri-environmental or woodland management scheme. It is unknown whether they are being managed with a nature conservation objective in mind; thus, the area of reasonable 'habitat' is likely to be greater than stated in this table. The developing spatial frameworks for nature recovery through the Local Nature Recovery Strategies and networks will have greater resources to be able to deliver more accurate mapping and data. One of the AONB's roles will be to coordinate how the four county LNRS's that straddle the North Wessex Downs AONB will knit together and how the emerging knowledge and data will be consistent and contiguous.

The priority habitat data, gives a reasonable reflection of the extent and rarity of habitats in the AONB; it gives a good indication of the order of magnitude. The targets have been arrived at based on these initial coverage figures; the author's knowledge and extent of habitats in the North Wessex Downs over the past 30 years; plus experience over the practicalities of habitat creation and restoration. With the global aspirations of 30 by 30, this is no doubt a stretching target to achieve in the AONB with such an intensively managed and farmed landscape. Time can be spent trying to refine these figures; however, this is a wake-up call as to how nature depleted even a protected landscape has become, and we need to urgently and rapidly up-scale efforts to conserve, enhance and maintain what habitats that remain and then expand and link this small core of sites. We just have to start; the scale of what we must achieve is enormous and in the unlikely event we overdeliver, then this will be a bonus!

The next steps will be to undertake some modelling and feasibility studies to test if these targets are realistic, and if so, where they can best be accommodated. For the North Wessex Downs AONB there will be a tension between food production and changing a significant proportion of land over to primarily being managed for nature. Principles will need to be established, for example, in general not creating new habitat on grade 1 and 2 agricultural land. However, to enable species to be able move across the landscape, this needs to be accompanied with more ecological and environmentally friendly approaches to farming within the intensively farmed arable areas. There is a debate over 'land sharing'¹² and 'land sparing' representing two opposite ends to a continuum in land management: land sparing involves large, separate areas



↑ Cuckoo Flower or Lady's Smock

of land managed for agriculture and others left 'for nature' and land sharing involves a patchwork of low-intensity agriculture which incorporates natural features such as ponds and hedgerows. This is a particularly interesting dilemma in the North Wessex Downs, which supports a range of species depending on a more semi-natural agricultural system, such as arable plants and farmland birds those species could lose out in areas where a more land sparing approach is being adopted. Thus, the new spatial strategies being developed through the Local Nature Recovery processes will require careful mapping, detailed consideration of species and habitat requirements, and understanding of risks and opportunities.

It is also acknowledged that there is a lot of potentially wildlife-friendly habitat that is not classified as priority habitat, but that can form important corridors and refuge sites, especially for more generalist species. The table does not take account of the kilometres of grass verges that crisscross the AONB, or ditches and patches of rough ground and common land that is not designated. All of this land is important and has the potential to be enriched and enhanced. Sometimes it will just require a tweak of management and in other situation it will need pro-active intervention, for example, planting plug plants or seeding with wildflowers.

In recent years there has been an increasing interest in 'rewilding'. <u>Rewilding Britain</u> is a charity that is developing networks and promoting this approach. It defines rewilding as '... the large-scale restoration of ecosystems to the point where nature can take care of itself. It seeks to reinstate natural processes and where appropriate and when the time is right, reintroduce missing species- allowing them to shape the landscape and habitats... 'The North Wessex Downs AONB is an ancient man-made landscape, with evidence of human influence stretching back at least 5,000 years when the barrows at Avebury were constructed. The ecology of the area evolved alongside this longstanding human influence, but the post World War II intensification and drive for food production, and self-sufficiency with the advent of artificial fertilisers and pesticides, has seen a catastrophic loss of biodiversity that had adapted to extensive semi-natural management systems. For example, the fragments of semi-natural habitat that remain, such as small areas of chalk downland, must be protected and extended in the first instance, as they support key species that may otherwise be lost in the transition from 'traditional management' to a rewilding approach. Rewilding will have its place within the AONB, and each opportunity to do this should be considered and planned, with the area's existing biodiversity, ecological and cultural heritage requirements and the landscape character in mind. The creation of extensive areas of wildlife friendly managed land within the AONB, will benefit biodiversity, but should also strengthen and enhance the sense of place that is the North Wessex Downs.

^{12 &}lt;u>https://royalsociety.org/blog/2014/12/land-sharing-vs-land-sparing-can-we-feed-the-world-without-destroying-it/</u>

Proposed habitat targets in the North Wessex Downs AONB

Priority habitat	Area of priority habitat in the NWDAONB (Total 173000 ha)	% of priority habitat occuring across the NWDAONB	Proposed increase in habitat (ha) by 2030 to achieve 30% coverage for nature in NWDAONB	Proposed combined % (existing + new habitat) contribution to meet 30% habitat by 2030 in NWDAONB	Climate Change sensitivity (low, medium or high)
Floodplain grazing marsh	823	0.48	390	0.7	Medium
Calcareous grassland	3,598	2.1	14,040	10.2	Low
Lowland fens	88	0.05	88	0.1	High
Lowland meadows (dry)	403	0.23	500	0.5	Low
Traditional orchard	104	0.6	50	0.1	Low
Lowland heathland & acid grassland	64	0.04	50	0.1	Medium
Other	2,321	1.34	1,000	1.9	Medium
Deciduous woodland	14,474	8.4	7,700	12.8	Low
Sub Total	21875	13.24			
Other non- priority habitat woodland (not under agreement)	6,625	3.82	0	3.8	Low
Priority	28500	17.06%	23,818	30.2	
habitat plus all woodland TOTAL					
Rivers & streams	611kms in length		Improve quality of habitat, water quality & quantty to meet good ecological status		
Ancient species rich hedgerows	Unknown	Unknown	Increase by 40%	Unknown	Low
Arable field margins	Unknown	Unknown	Expand by 70%	Unknown	Low
Woodpasture, parkland,	Unknown	Unknown	2,000	Unknown	Low

6.2 SPECIES

For each priority habitat, a shortlist of some key species has been identified. This has involved analysing species datasets provided by Natural England; reviewing records in the National Biodiversity Network Atlas; consulting with colleagues and local experts. The species identified in the plan have been initially chosen for a range of different reasons. It is important to say here that these are not the only species that the AONB will work on and that these lists are not set in stone, but again are a starting point for debate and to help focus action and resources.

The species identified have been included, as with respect to the North Wessex Downs AONB they are:

- locally valued and distinctive of the area
- the most threatened and restricted to only a couple of other places in the UK and a significant proportion of the population is within the North Wessex Downs AONB
- endangered, and focussed action at a landscape-scale may help to increase abundance and sustain populations
- flagship species, which if habitats are generally managed with this species in mind, the quality of the habitat will benefit alongside a range of other species
- threatened species, previously occurring in the AONB that have been lost due to destruction of habitat, persecution, disease, invasive non-native species or intensive land management practices, but if conditions improved they could be re-introduced

Species of principle concern have primarily been identified, but if they are not listed in this document, it does not mean that they are not important or that the AONB would not get involved with some initiative or project to help. The Colchester declaration has set a target for each AONB to adopt a threatened species; and to produce an action plan to remove that species from the threatened list by 2030. This needs to be carried out collaboratively with others both inside the AONB and beyond, as it is unlikely that a single protected landscape's efforts are going to achieve this wholly in isolation. There are also a couple of species that have been identified in this plan, for which momentum is growing and that the AONB has been able to support through Farming in Protected Landscapes and other means. Pragmatism and opportunity suggest that one of these may be the species to be adopted and be the subject of the first plan, but this could be one of many species' plans.

The reintroduction of species' is becoming more of a mainstream possibility, both at a local or a national scale. In the North Wessex Downs AONB it is now commonplace to see red kites, which were reintroduced into the Chilterns in the early nineties; the first beavers to be reintroduced in this protected landscape were partly established with an AONB grant. More species' introductions might be appropriate within the North Wessex Downs in the future However, due to the complex and careful considerations that need to be taken into account, the AONB will be guided and advised by the appropriate experts for that species.

Invasive non-native species (INNS) are species that have been introduced into areas that are outside of their normal range by human activity and that now pose a threat to native wildlife. There are a number of INNS that are causing or have the potential to cause real harm to important habitats and species in the North Wessex Downs AONB. For example, there are probably no white-clawed crayfish remaining in our chalk streams and rivers anymore, as they have been wiped out mainly by the North American signal crayfish. There are no red squirrels remaining in the AONB, as they have been outcompeted by their American grey squirrel cousins too. Water voles have suffered huge declines due to habitat loss, but also because they have been predated by non-native mink. In the water environment, INNS can wreak havoc and spread very easily. Of particular concern in the AONB is New Zealand pigmy weed or swamp stonecrop that is threatening to break into the River Kennet SSSI from Wilton Water, due to it having escaped from a village pond where it had been introduced. The AONB together with the Kennet Catchment Partnership is attempting to secure funding and to have the site accepted into a biological control trial. Himalayan Balsam is found at four sites across the Kennet Catchment, which may be possible to control before it spreads further. These plant INNS tend to outcompete and shade or swamp native species, causing habitats to be less diverse. Actions to bring priority habitats into favourable conservation management and also restore the populations of certain principle species, may also include the control of these invasive non-native species.



↑ Chalk wildflower seed mix Photo credit Charles Flower

6.3 SEMI-NATURAL UNIMPROVED CALCAREOUS GRASSLAND (CHALK GRASSLAND)

Chalk grassland is one of the most biologically rich and diverse habitats in the UK. Over 40 species of flowering plants are found in a single square metre of the best quality turf. Around 9% of chalk grassland in the UK lies within the North Wessex Downs. Traditionally grazed by sheep, cattle and rabbits, the area's chalk grassland supports important populations of the early gentian, protected under S.41 of the NERC 2006 Act and one of Britain's few endemic plants. Unimproved chalk grassland is also important for the survival of many scarce invertebrate species such as the wartbiter cricket and the internationally threatened marsh fritillary butterfly. Other scarce chalk grassland butterflies include the Adonis blue, Duke of Burgundy, chalkhill blue and small blue; the habitat also supports good populations of skylarks.

Nationally, areas of chalk grassland are a shadow of their former extent in the 1900s. In the North Wessex Downs the area of chalk grassland declined by 32% between 1968 and 1998. The remaining areas are suffering increased fragmentation. Today small, isolated blocks of chalk grassland are largely restricted to the steep scarp slopes, dry valleys and areas maintained as pasture around archaeological sites. For the resilience of this habitat and the species supported, future efforts need to support greater connectivity. The total area of chalk grassland in the North Wessex Downs now is not accurately known; it is thought that 29 SSSIs in the North Wessex Downs contain chalk grassland, totaling 1,421 hectares – just under half the total SSSI area (and 0.8% of the AONB). A further suite of approximately 249 Local Wildlife Sites (LWS) have a chalk grassland component. These sites total 2,163 hectares (1.3% of the AONB) and were identified in the Chalk Strategy for the AONB, completed in 2005, which will be reviewed and updated as a priority to understand the existing resource and help target action nearly 20 years later.

A significant area of grassland on the chalk within the AONB is managed for racehorse gallops and the drove-way corridors like the Ridgeways and the Fairmile are important elements of the mosaic of habitats in the AONB, stretching for miles continuously across often intensively farmed land. The former have areas of unmanaged land between the gallops which provide the two current curlew breeding areas. Along these and their boundaries are some of the best areas for corn bunting, yellowhammer and linnet.

The North Wessex Downs AONB is also a key partner in the Big Chalk Programme¹³. Working with other chalk based protected landscapes and also stakeholders outside these boundaries across landscapes in Southern England is seeking to restore habitats and species. What is clear from the Big Chalk mapping, is how strategically vital the geography of the NWDAONB is, as a crucial part of the jigsaw to make these southern England chalk landscapes resilient, supporting calcareous species and habitats in the face of climate change. The existing small amount of good quality chalk grassland habitat is hugely insufficient to facilitate adaptation for dependent species; it is essential that there is a significant step-change in creating and connecting chalk grassland. There also needs to be a substantial push to make the arable land on the thin chalk soils in between patches of habitat more wildlife friendly. More extensive practices need to be encouraged alongside reduced inputs of pesticides and fertilisers, so that chalk grassland species have a chance of spreading out of these small refuges.

Sheep farming historically played a significant part in shaping the downs, but sheep numbers have significantly declined. With significant calcareous grassland to be created and restored, livestock grazing will be crucial. Regenerative farming may in part encourage animals back into the landscape and on other ungrazed sites cut-and-collect techniques and green waste disposal need to become more mainstream.

¹³ Development of Partnership Involvement in the Big Chalk Programme, Resources for Change April 2022

Priority species - Semi-natural Calcareous Grassland

Duke of Burgundy butterfly; Adonis blue butterfly; wartbiter bush cricket; burnt orchid; early gentian; juniper; pasque flower; basil thyme; striped lychnis moth; marsh fritillary butterfly; licorice piercer moth; chalkhill blue butterfly; skylark; large blue butterfly

Action for Semi-natural Calcareous Grassland	2024	2030	2042			
Maintain and restore the existing extent of 3,598 ha of lowland calcareous grassland		•				
Ensure appropriate management to achieve favourable or recovering condition to 90% of lowland calcareous grassland		•				
Increase the extent of flower rich lowland calcareous grassland, restoring, re-creating or establishing 14,032 ha by 2042		4000 ha Realistic interim target	•			
Update the NWDAONB Chalk Grassland Strategy, review the target areas						
Identify the best opportunities to connect and extend existing core areas of chalk grassland working with developing Local Nature Recovery Strategies, West Berkshire Natural Solutions Local Nature Partnerships, landowners and other partnerships						
Work with farmer groups/clusters to extend chalk grassland						
Seek to connect, or help facilitate chalk grassland habitat projects across the AONB and beyond into the Big Chalk 'bridging' areas			•			
Key: To be started 📥 Underway 🛑 Completed 🔶						
SENSITIVITY TO CLIMATE CHANGE	W MED		GH			

Climate Change Adaptation : Calcareous grassland : Low sensitivity

- Relatively robust to climate change threats, other issues pose greater threats, thus main action should focus on ensuring other sources of harm reduced to increase resilience
- Increase size, heterogeneity and connectivity of existing patches and factor this into long term site management objectives
- Manage grazing of sites flexibly in response to seasonal variations in vegetation growth
- Accept changes to community composition when driven by climate change. Consider a certain level of scrub to provide shade for stock and refugia for invertebrates

Key opportunities for calcareous grassland

- National Grid Visual Impact Provision (VIP) project near Roundway Down near Devizes; potential to extend chalk downland with the Pewsey Downs Farmers Group
- Mend the Gap Project potential funding to help to connect and extend chalk grassland
- Work with Ridgeway Farmers and the Ridgeway National Trail, the Trust for Oxfordshire's Environment (TOE) and other funders to connect species rich chalk grassland along the Ridgeway verges and also adjacent to the Ridgeway spine
- Encourage targeted chalk projects to be funded through Farming in Protected Landscapes, Countryside Stewardship and Environmental Land Management Schemes and other funding opportunities
- Develop opportunities to be taken forward as part of the Big Chalk Programme
- Potential to restore core juniper sites in partnership with Plantlife
- Explore reviving the potential Wiltshire chalk downland butterfly project in partnership with Butterfly Conservation



(Map 4) Chalk grassland within the North Wessex Downs AONB 🛧

6.4 RIVERS AND STREAMS

The spring-fed streams and rivers of the North Wessex Downs AONB support an extremely diverse range of plant and animal communities. It is estimated that 85% of the world's chalk streams are in England and the AONB holds a significant proportion of this resource. There are 618kms of rivers and streams in the designated boundary, the majority, with the main exception of the middle Thames, being chalk streams. The River Kennet has the highest diversity of species per site surveyed of any river in lowland England. The River Lambourn is one of the least modified rivers of its type. Water vole, pea mussels, brook lamprey and the nationally scarce riverwater dropwort can be found along their reaches. Sadly, it may be too late for the white clawed crayfish in these AONB rivers as they have been outcompeted by the invasive American signal crayfish. The rivers irrigate adjacent areas creating the distinctive valley landscape with its remnant fens and water meadows.

In recognition of their outstanding nature conservation value, the Lambourn, Kennet and Hampshire Avon rivers are all designated SSSIs, while the River Lambourn, the Hampshire Avon, and the Kennet and Lambourn Floodplain (a series of discrete sites supporting the globally vulnerable Desmoulin's whorl snail) are also SACs.

There has been considerable focus and investment from the Environment Agency, Natural England, landowners and the rivers trusts, such as Action for the River Kennet, to improve the condition of many of the AONB rivers. Much of the main river sections of the Kennet and Lambourn rivers (largely designated as SSSI) have received a lot of attention regarding habitat restoration, water quality (diffuse and point source pollution) and abstraction pressures over the past couple of decades.

The Water Environment Regulations 2017 require River Basin Management Plans for each river basin district, setting legally binding specific environmental objectives that underpin water regulation (such as permitting) and planning activities. These plans are regarded as the foundation for delivering on the government's 25YEP goal of 'clean and plentiful water.' All the SSSI rivers have restoration strategies; Diffuse Water Pollution Plans, Water Level Management Plans, etc but there is still much to do to counter ongoing pressure and further redress historic morphological, infrastructure and pollution damage. Sewerage is discharged regularly into our rivers, often in response to overflows during storm events. Water companies and regulators need to address failing infrastructure and invest, so that the ecological integrity of our rivers and streams are not undermined further by a failure to deal with this increasing threat.

The River Pang is an important chalk stream and together with its associated wet grassland, grazing marsh and fen habitats, ancient species rich hedges and pockets of woodland form an important corridor for wildlife. Thames Water has identified the River Pang as a Flagship chalk stream in the CaBA Chalk Stream Strategy 2022 (Implementation Plan). There are two farmer groups; one for the Upper Pang and another based around the Lower Pang, which are keen to enhance the biodiversity of the river valley.

In 2021, the North Wessex Downs AONB coordinated the Sparkling Streams partnership¹⁴ to help restore a section of the River Kennet. It carried out enhancements and natural flood management, including tree and hedge planting near the Rivers Shalbourne and Dun, as well as creating wetlands to slow down overland flows and improve water quality in these chalk streams. This was funded by the Green Recovery Challenge Fund. The partnership and other stakeholders are now seeking to extend the approach and practices to other chalk streams in the AONB.

A focus on a sub-catchment and smaller tributaries which have received less resource over the years, could make a significant contribution to improving the biodiversity and water quality and

¹⁴ Including Action for the River Kennet, Southern Streams Farmer Group and Hungerford Town and Manor

quantity of these chalk river systems. Many of these rivers are winterbournes, which can be dry or have intermittent flow in the summer months, they can support unique biodiversity, but are also vulnerable to damaging management practices. Given the complexity of river management and the initiatives and organisations working across the AONB, a strategic look at each sub-catchment to map where activity has or is happening, and an assessment of need for appropriate action, should be carried out to focus future resources effectively.



↑ Water crowfoot in the Winterbourne © Corinna Woodall

The Watercress and Winterbournes Landscape Partnership led by the Hampshire and Isle of Wight Trust is working with the community landowners and businesses on the Bourne Rivulet. Vitacress is developing a scheme for watercress and salad growing and processing to improve the water quality of runoff/waste as part of this scheme; there are a number of projects and partnerships working on and around the River Avon and its catchment too. With such a significant proportion of the chalk stream resource within the protected landscape boundary, the AONB can help to improve the condition of these rivers and streams and to help restore a functioning chalk landscape.

The River Thames from Dorchester to Purley on Thames, although not on the chalk geology, forms the north-eastern edge of the North Wessex Downs AONB and is a significant biological channel and corridor. This is a busy stretch of river which is part of the main navigation with heavy boat traffic and locks, but the upper Thames is still home to several special species including the club-tailed dragonfly which is only found in a few southern rivers. It falls within the Mend the Gap Project area which could offer opportunities for enhancing riparian habitat that might benefit the water quality, biodiversity and flood management of the main river.

Priority species - Rivers & streams

Water vole; otter; native brown trout; bullhead; brook lamprey; club-tailed dragonfly; white clawed crayfish

Action for rivers and streams	2024	2030	2042
Maintain, restore & enhance the existing lengths of chalk rivers, including removing obstruction to fish migration, or bypassing structures			•
Support the objectives of catchment partnerships to deliver the actions required under River Basin Management Plans to achieve good ecological status for the AONB watercourses			
Support landowners, Local Authorities & Natural England, Environment Agency, developers, to achieve nutrient neutrality on the Rivers' Lambourn, Avon, Ebble and Bourne			
Seek opportunities to improve the water quality and biodiversity of the River Thames & opportunities to enhance floodplain habitats			•
Identify the best opportunities to restore river habitats and their catchments, working with developing Local Nature Recovery Strategies, Local Nature Partnerships, EA, West Berkshire Natural Solutions, landowners & other partnerships		•	
Seek to support or develop initiatives to control the spread and eradicate invasive non native species though out the river network, such as Crassula helmsii and mink			•
Carry out a review of sub-catchments to ascertain needs & where the AONB & partners can add value	•		
Investigate condition and requirements for restoring, conserving & enhancing winterbournes		•	

Key: To be started 📥 Underway 🛑 Completed 🔶

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Rivers and Streams : High sensitivity to climate change

• Measures needed are largely the same as those needed to restore their health and integrity and natural ecosystem function

LOW

() MEDIUM 🚺 HIGH

- Promote land uses and land management practices that maximise natural rainfall retention within the catchment
- Allow more water to be stored within the catchment to reduce the extremes of peak and low flows
- Slow the spread of invasive species and increase the availability of cooler water by providing appropriate level of riparian shade

Key opportunities for River Restoration

- Review lessons learned and explore further opportunities to replicate the Sparkling Streams model to other sub-catchments, working in Partnership with the EA, ARK, Kennet Valley Flood Forum, farmer groups and water companies
- Investigate opportunities for restoring and enhancing the River Lambourn and reconnecting and enhancing the biodiversity of the floodplain through Nutrient Neutrality and other mechanisms
- Encourage targeted Natural Flood Management projects to be funded through Farming in Protected Landscapes, Mend the Gap, Countryside Stewardship and Environmental Land Management Schemes
- Develop opportunities to add value and enable delivery of high quality river restoration and chalk landscape management projects on and around the River Avon and its catchment
- Explore the possibility of the Landscape Recovery Schemes for river and river valley restoration and enhancement
- Support Thames Water's focus on the River Pang as a Flagship chalk stream identified in the CaBA Chalk Stream Strategy 2022 (Implementation Plan)
- Explore potential to create Ark sites for the reintroduction of white-clawed crayfish
- Seek opportunities for Chalk Stream restoration through Big Chalk
- Encourage appropriate opportunities for canopy creation along or in the vicinity of streams and rivers, to provide shade and also natural flood management functions



(Map 5) Rivers and streams in the North Wessex Downs AONB 🛧

6.5 FLOODPLAIN GRAZING MARSH AND LOWLAND FEN

Floodplain grazing marsh is not a specific habitat but a landscape type which supports a variety of habitats; with the characteristic features being hydrological and topographical rather than botanical. Grazing marsh is defined as periodically inundated pasture or meadow, typically with ditches containing water. The majority of sites have low botanical grassland interest, but can often support bird species of high conservation value and the ditches can be rich in plants and invertebrates; those connected to chalk stream systems can be useful habitat for fish. Fens are wetlands that occur on peat and mineral soils, and that can receive water from various sources such as groundwater, surface run-off and river flooding as well as rainfall, unlike bogs. Often found in mosaics with other habitat types, such as floodplain meadow, they are complex and dynamic systems.



↑ Eddington Marsh SSSI © Corinna Woodall

The Kennet and Lambourn floodplain¹⁵ supports the greatest area of fen, swamp and marshy grassland in the North Wessex Downs AONB. Parts of these floodplains are a Site of Special Scientific Interest in six widely separated areas in the floodplains of the Kennet and Lambourn rivers in

Berkshire and Wiltshire. They form the Kennet and Lambourn Floodplain Special Area of Conservation. These six areas all have fen or swamp with large numbers of Desmoulin's whorl snail, which was listed in the British Red Data Book as it is a nationally rare and declining species. One of the areas, Eddington Marsh, also has unimproved species-rich grassland with several nationally scarce invertebrates; it is one of the largest surviving examples of agriculturally unimproved pasture in the Kennet Valley supporting speciesrich grassland. The grassland type occurring at this site is particularly rare and is confined to calcareous river valleys in southern England. Uncommon



↑ Desmoulin's whorl snail © Dr Roger Key

species include marsh valerian, water avens, fairy flax and marsh marigold. This area is also notable in supporting an outstanding assemblage of wetland invertebrates. Rack Marsh supports a number of locally uncommon plants, including marsh arrow-grass and southern marsh orchid. Wetland species such as these are now very rare in the Kennet and Lambourn floodplain due to river engineering and agricultural intensification. Extensive cricket bat willow planting has damaged the ecological and visual integrity of some of these floodplain marshes.

The Loddon lily, a Red Data Book species, survives in seasonally flooded sites along the Rivers Kennet and Thames. Floodplain grazing marsh is found in the AONB often in association with alder-carr and damp scrubby habitats, attracting birds such as nightingale which is now more a specialist of damp valley scrub.

Priority species - Floodplain grazing marsh and lowland fen

Desmoulin's whorl snail; curlew; Loddon lily; redshank; snipe; water rail; nightingale; black poplar

¹⁵ Kennet and Lambourn Floodplain SSSI citation

Action for Floodplain Grazing Marsh and Lowland Fen	2024	2030	2042
Maintain and restore the existing extent of 823 ha of lowland grazing marsh and 88ha of fen			•
Ensure appropriate management to achieve favourable or recovering condition to 90% of lowland grazing marsh and fen			•
Increase the extent of lowland grazing marsh by 470 ha and fen by 88 ha, restoring, re-creating or establishing these habitats		135ha of marsh & 25ha of fen	•
Identify the best opportunities to connect and extend existing core areas of floodplain grazing marsh & lowland fen, working with developing Local Nature Recovery Strategies, Local Nature Partnerships, West Berkshire Natural Solutions, landowners & other partnerships			
Work with farmer groups/clusters to extend floodplain grazing marsh and lowland fen			

Key: To be started 📥 Underway 🛑 Completed 🔶

SENSITIVITY TO CLIMATE CHANGE

LOW 🗸

) нібн

MEDIUM () H

Climate Change Adaptation for Floodplain Grazing Marsh & Lowland Fen: Medium sensitivity to climate change

- Actions that ensure the continued supply of water and control over water levels
- Plan & take action to achieve desirable water levels including: reduction of water loss, provision of water storage services, secure additional water, enable ability to move water round sites.
- Minimise over and under-grazing through flexible management, eg adjusting stocking densities and timing of grazing regimes according to growing conditions/seasonal variations. Consider mob grazing where appropriate
- Expand areas of lowland grazing marsh and fen by linking isolated sites where possible to facilitate functioning floodplains

Key opportunities for floodplain grazing marsh and lowland fen

- Continue to work in partnership with Hungerford Town and Manor to restore Undy's Meadow
- Encourage targeted Natural Flood Management projects to be funded through Farming in Protected Landscapes, Mend the Gap, Countryside Stewardship and Environmental Land Management Schemes

6.6 LOWLAND HEATH AND ACID GRASSLAND

Lowland heath evolved following the clearance of prehistoric woodland and been kept open due to centuries of grazing, burning and cutting. Mainly following the end of the Second World War, much of the traditional and economic uses have been lost through agricultural improvement, built development, forestry, mineral working and abandonment. Usually described as 'a broadly open landscape on impoverished, acidic mineral and shallow peat soil, characterized by heathers and gorses at a cover of at least 25%.' This definition covers both wet and dry heaths below 250m.

Acid grassland usually occurs on nutrient poor, free draining soils with a Ph of between 4-5.5, and in the case of the North Wessex Downs AONB generally overlying deposits of gravels, often managed as pasture, but also occurring in conjunction with lowland heath and parklands.

Acid soils on the plateaux can support heathland and acid grassland. Bucklebury Common and Snelsmore Common SSSIs support the largest extent of heathland in the AONB. Common land in West Berkshire often supports small heathland areas. Dry heath, humid and wet heath are all found, often with areas of encroaching scrub or woodland, ponds and acid grassland. Heather, gorses and grasses characterise dry heaths, whilst wet heath includes cross-leaved heath, willows, mosses and purple moor grass; humid heath includes cross-leaved heath and heath rush. Acid grassland is less species rich than neutral grassland but supports species of restricted distributions and is often found in association with heath. Woodland on former heathland areas and common land is often set in a mosaic with fragments of open heathland and grassland.

In Berkshire, lowland heathland can be associated with coniferous plantation, such sites retaining some remnant heathland flora and fauna that survives along rides, in clearings and in recently felled areas. These areas can respond very well to restoration to open heathland and thus coniferous plantation is an important associated habitat.

Internationally important bird species such as nightjar and woodlark can be found on the Berkshire heathlands. The territory of Dartford warbler is likely to expand further in the face of climate change into the AONB heaths if habitat conditions are appropriate. Many of the other species found on our heathlands are uncommon or absent outside of this habitat. Such species include adder, common lizard, round and long-leaved sundews, silver-studded blue butterfly, bog bush-cricket, small red damselfly, woodcock, tree pipit and stonechat.

The main lowland heath sites within the North Wessex Downs AONB are generally accessible to the general public, as most of the key sites are also commons, and/or are also in public or charitable ownership. The largest expanse of heathland within 5kms of the AONB boundary is Greenham Common SSSI, together with other historic sites of Pamber Heath and Silchester Commons. The potential to restore, expand and create heath in the AONB is important in the face of climate change. The aforementioned sites are to the south and as temperatures warm, some species will need to find suitable habitat to the north.

There are small fragments of heath/acid grassland in Savernake Forest and West Woods in Wiltshire, creating valuable open space within the more densely wooded areas.

Priority species - Lowland Heath:

Nightjar; woodlark; adder; Dartford warbler; woodcock; heath tiger beetle

Action for Lowland Heath and Acid Grassland	2024	2030	2042
Maintain and restore the existing extent of 64 ha of lowland heath and acid grassland	$\square >$	•	
Ensure appropriate management to achieve favourable or recovering condition to 90% of lowland heath and acid grassland		•	
Increase the extent of lowland heath and acid grassland by restoring, re-creating or establishing 50 ha.		10 ha heath 5 ha acid grassland	•
Identify the best opportunities to connect and extend existing core areas of lowland heath and acid grassland working with developing Local Nature Recovery Strategies, Local Nature Partnerships, landowners and other partnerships. Explore potential for new sites such as pine plantations on the right soils but with no or little remnant heath.			

Key: To be started 📥 Underway 🛑 Completed 🔶

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Lowland Heath and Acid Grassland : Medium sensitivity to climate change

• Lowland heaths are vulnerable to other non-climate change pressures, such as fragmentation, high access and recreational activities and inappropriate management – reducing these pressures will make heathlands more resilient

LOW

MEDIUM

HIGH

- Target heathland restoration works to address historic habitat loss and improve resilience of heathland networks
- Proactive and detailed heathland management through a combination of grazing, cutting and/ or burning of heath to achieve a diverse vegetation structure as appropriate
- Ensure fire contingency plans are established, reviewing design and management of heathland areas and associated habitats to reduce fire risk, such as fire breaks, fire ponds and closure at times of high fire risk
- Increase area of dry acid grassland by restoring semi-improved grasslands and re-creating habitat on improved grassland and arable land to ensure the expansion and buffering of existing heath and acid grassland sites/mosaics
- Within acidic sites, identify areas that might act as potential refugia from climate change, such as north facing slopes, complex micro-topography, low nitrogen levels, species rich pockets and ensure these are in optimal management



↑ Bucklebury Common © Katherine Cook

Key opportunities for lowland heath and acid grassland

- Commission TVERC to review the current status of heathland and acid grassland in the AONB and identify opportunities to restore and extend these habitats, working in conjunction with BBOWT, West Berkshire Council and landowners
- Follow up recommendations arising out of the above lowland heath review
- Support BBOWT and other landowners of key sites such as Snelsmore, Bucklebury and Ashamstead Commons to restore and extend areas of heathland and acid grassland
- Explore the possibility of introducing heath tiger beetle, to Berkshire sites



(Map 6) Heathland restoration potential 🛧

6.7 LOWLAND MEADOWS

The definition of lowland meadows covers a range of grassland types and management, but mainly includes agriculturally unimproved grassland on neutral soils across lowland England.

To maintain their richness, these sites require traditional management, with no application of pesticides or artificial fertilisers and no ploughing or other disturbance of the turf. The meadows may be managed by taking a hay crop, usually with grazing of the aftermath, or by grazing as permanent pasture.

Lowland meadows are not especially known for the rarities, but rather for the diversity of grasses and flowering species found occurring together. Unfortunately these flower-rich meadows have declined by 97% since the second world war, making this habitat extremely rare. The main unimproved lowland grassland type would have been that of the crested dogstail-common knotweed community; formerly widespread, it has been agriculturally 'improved,' through heavy inputs of artificial fertilisers, cutting for silage, over-grazing etc. This has resulted in these meadows only surviving as isolated and fragmented small sites.

Lowland meadows also include the now scarce flood-meadows found in central England and eastern Wales, which rely on seasonal flooding in winter. They support tall, moisture-loving species such as great burnet, meadowsweet and pepper-saxifrage.

There is very little unimproved or semi-natural species rich grassland remaining in the North Wessex Downs AONB, due to modern farming practices, with just a few meadows hanging on to the north of Thatcham and west of Tilehurst and some wetter neutral meadows associated with watercourses, tall fen vegetation and scrub just into Wiltshire.

Priority species - Lowland Meadows:

Snakeshead fritillary; yellow wagtail; redshank; snipe; barn owl

Action for Lowland Meadows	2024	2030	2042
Maintain and restore the existing extent of 403 ha of lowland meadow		•	
Ensure appropriate management to achieve favourable or recovering condition of lowland meadow to 90%		•	
Increase the extent of lowland meadow re-creating or establishing 500 ha		145 ha	
Identify the best opportunities to connect and extend existing core areas lowland meadow working with developing Local Nature Recovery Strategies, Local Nature Partnerships, West Berkshire Solutions, landowners & other partnerships		•	
Work with farmer groups/clusters to extend and create flower-rich lowland meadows			

Key: To be started 📥 Underway 🛑 Completed 🔶



↑ Wildflower meadow © NWDAONB

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Lowland Meadows: Medium sensitivity wet meadows; low sensitivity to climate change dry meadows

LOW

HIGH

- Actively managed through grazing or cutting, or combination of both, there will be a need for increased flexibility in both the date and extent of these management options in response to long term changes and seasonal variability in growing conditions
- Wet grasslands will need an adequate supply, temporal variation and quality of water to adapt to changes in climate
- Longer term, catchment planning will be required to restore the capacity of catchments to hold, retain and maintain flows under both wet and dry conditions
- Adaptation will need both site-based and catchment solutions to be carried out to enhance individual meadows and pastures, but also to ensure resilience at a landscape scale

Key opportunities for Lowland Meadows

- Potentially working with the Floodplain Meadows Partnership, Environment Agency and landowners explore the possibility of re-creating wet lowland meadows alongside the Thames in the Mend the Gap area
- Support and help develop wet meadows and pasture creation, restoration and enhancement together with the Earth Trust and the Yellow Wagtail Trust
- Work with the Natural Solutions Partnership, Trust for Oxfordshire's Environment (TOE), Mend the Gap and other funders to help establish species-rich lowland meadows on private land

6.8 FARMED LAND

Including priority habitats of ancient and species-rich hedgerows and arable field margins

The North Wessex Downs Area of Outstanding Natural Beauty is a predominantly agricultural landscape with the influences of farming strongly evident across the entire AONB. Statistics suggest that 85% of the land area of the AONB is farmed. Many conventional farming approaches have negatively impacted this protected landscape, with major losses of biodiversity, degradation of soils and practices significantly contributing to greenhouse gasses, both on farm and through supply chains. There are, however, new opportunities to be grasped, involving more environmentally sympathetic techniques that could redress some of the damage done to date; and result in substantial improvement for wildlife, mitigate for climate change at a landscape-scale and produce the food that we need as a nation. The aspiration in the EIP 23 is for 70% of agricultural land and 70% of farm holdings to be in the new farming schemes by 2028.

Priority Habitat	Area of priority habitat in the NWDAONB (hectares)	% of priority habitat occurring across the NWDAONB	Required increase in habitat by 2030 to achieve 30% (hectares)
Area under Agri-environment Schemes	40,599	23.47	11,297
Area under AES minus priority habitats in AES	35,334	20.4	

Over the last 30 years a range of plants, previously considered weed species, have undergone significant decline in the AONB. together with many dependent bird species and mammals associated with lowland farmland. This decline has been brought about by agricultural intensification, driven principally by the Common Agricultural Policy, which encouraged a number of changes in farming practices including an increase in the use of chemical inputs, a switch from spring to autumn cropping, the loss of non-cropped habitats, and traditional rotations.

The legacy of Brexit, global conflicts and the climate change emergency are affecting food productivity and supply which are growing challenges for Britain. There are pressures on farmers to maximise productivity, which if done conventionally will cost the environment. The current policy framework is going through review and should encourage more regenerative and agro-ecological approaches. There is a need to demonstrate that these systems are productive and profit-making.

Energy & biofuel crops may also offer significant challenges in the AONB. These crops are used as a substitute for fossil fuels, so they can contribute to a reduction in greenhouse gas emissions and help to combat climate change. However, some crops, such as miscanthus and short rotation coppice, are likely to affect arable flora and birds due to enclosure of open space and lack annual cultivation. Others such as maize are detrimental to soil health and water quality whilst offering very little for wildlife, and are difficult to manage alongside companion cropping.

Within such an intensively arable and farmed landscape, there maybe pockets of good quality, species-rich habitat, there is a huge opportunity to do more. Not just improving connectivity by gapping up or planting hedgerows, creating flower-rich verges and field margins, or planting spinneys and expanding woodland, but by extending nature friendly practices in-field and across whole farms. These may include: improving soil organic matter (and sequestering carbon too), creating herbal leys, introduction of mob grazing, reducing inputs, cover cropping, adjusting timing and duration of management to let certain species set seed etc. Mixing and matching traditional practices with modern regenerative practices should help more of our specialist species to thrive and move across our farmed landscape.

The North Wessex Downs supports a wide range of nationally and regionally important species associated with arable farmland and adapted to colonise land disturbed through tillage. This includes: rare arable plants such as corn buttercup and shepherd's needle, mammals such as brown hare and harvest mouse and farmland birds such as stone-curlew and tree sparrow. Many of these species are listed as 'Species of Priority Importance' under Section 41 of the Natural Environment and Rural Communities Act 2006 and were targets for the Government's 'Biodiversity 2020' strategy to implement commitments under the global Convention on Biological Diversity.



↑ Field near Poughley © Corinna Woodall

There is a growing movement of regenerative and agro-ecological approaches in farming. Various high-profile individuals and organizations are gaining momentum and the recognition of the importance of taking account of the environment in farming is growing. The issues arising from farming are part of the zeitgeist; food production is firmly in the national debate. Farmers and organisations need to be supported to demonstrate their positive environmental impacts whilst delivering their productivity and business success.

According to Buglife¹⁶, one out of every three mouthfuls of food depends on pollinators. This is because many plants rely on insects to pollinate their flowers and complete the reproductive cycle; most plants are unable to set seed without receiving pollen, usually from another flower. It is estimated that 84% of EU crops (valued at £12.6 billion) and 80% of wildflowers rely on pollination. Wild pollinators include bumblebees and other bees (250 species), butterflies and moths (2,200 species), flies (6,700) and various other insects. Integrating practices into farm management that will support and enable pollinators to thrive is vital, otherwise there may not be enough pollinators to enable us to produce the food we will need for our growing population. Practices that provide shelter, nesting and overwintering sites, that ensure a rich diversity of flowering plants through the growing season and integrated approaches to pest management and reduction of chemical applications (especially on arable headlands), will all help to promote and support pollinators. With such a high proportion of arable land in the North Wessex Downs AONB, if a greater take-up of these techniques can be adopted, this will make a significant difference, both to the wildlife, but also to the production of our food.

Since 2012 and the first farmer-led Nature Improvement Area (NIA) in the Marlborough Downs, there is now an exceptional network of farmer-led groups, many of them established with support and funding from the North Wessex Downs AONB. These groups will be instrumental in helping to deliver nature recovery across the whole of the protected landscape. Currently an estimated 65% of the North Wessex Downs AONB is covered by one of these groups.

Priority species - Farmland

Skylark, brown hare, harvest mouse, farmland birds, arable plants, ground nesting birds, pollinators

Action for Farmland	2024	2030	2042
Support a landscape-scale & environmentally friendly approach to managing, buffering, extending and connecting currently fragmented priority habitats			•
Promote and encourage regenerative farming practices that improve and restore soil health and increase biodiversity			
Extend land under agri-environment schemes by at least 11,297 by 2042 from today's baseline		3228 ha	
Support the implementation of Catchment Sensitive Farming			
Promote agri-environment grant schemes to farmers and landowners			
Deliver £1.7m of Farming in Protected Landscape FiPL) grants to North Wessex Downs Farmers			
Provide practical support to the existing farmer-led groups and encourage the establishment of new groups. Map all groups & undertake gap analysis			
Provide the latest information, guidance, training and support to farmers and landowners through regular events such as webinars, field visits, workshops and discussion forums			
Review and update Arable Biodiversity Strategy			

Key: To be started 📥 Underway 🛑 Completed 🔶



(Map 7) Farmer-led groups in the North Wessex Downs AONB 🛧

Key opportunities for Farmland

- The roll-out of Farming in Protected Landscape Programme grants until 2025
- Emerging markets and platforms for Biodiversity Net Gain, Carbon Credits and Nutrient Neutrality. The AONB to help target schemes for maximum biodiversity benefit
- Potential to develop projects with existing and new farmer groups
- The new Environmental Land Management Schemes
- Development of an AONB advice service for farmers and landowners, providing integrated advice and assistance and establish central role as convener



↑ Discussing the regenerative farming approach of 'pasture cropping. © Corinna Woodall

KEY PRIORITY HABITATS FOUND WITHIN FARMED LAND

ANCIENT AND SPECIES-RICH HEDGEROWS

Hedgerows form much of the familiar tapestry and pattern of the landscape that makes up the North Wessex Downs AONB. A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less that 20m wide¹⁷. Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow¹⁸. Species-rich hedgerows contain five or more native woody species on average in a 30m length. The original Biodiversity Action Plan (BAP) definition was confined to 'ancient and/or species-rich' hedges; however it has been expanded to include all hedgerows consisting predominantly (at least 80%) of at least one native woody species of tree or shrub.

In the thirteenth Century prior to the Black Death, there was a population explosion and demand for land for food. This resulted in the clearance of forest wastes or encroachment onto heathland, resulting in the numerous small, irregular shaped fields or assarts, found predominantly in the east of the AONB¹⁹. The rectangular, regular patterns of field systems seen in most areas today were the result of later Parliamentary enclosures dating mainly between 1770 and 1883. This would have been a major change in the landscape. Open fields, (particularly dominant in the north of the county), common lands and manorial wastes were replaced by small fields bounded by hedgerow²⁰.

Hedgerows have become integral to the fabric of our countryside. The Campaign for Rural England (CPRE) has recently stated that:

'In its expanse, the hedgerow network is our largest, most connected 'nature reserve'. Healthy hedgerows are teeming with life and vital for nature. One in nine of all vulnerable species in the UK are associated with hedgerows. These include the hazel dormouse, the much-loved hedgehog, whose decline has been closely associated with hedgerow loss, and the brown hairstreak butterfly, which lays its eggs on blackthorn, and is particularly common in hedgerows.'

CPRE also points out that alarmingly, we have lost around half of our hedgerows since the Second World War and they are still in decline. If we continue to lose hedgerows at this rate, the loss of these species will also accelerate - however, increasing the hedgerow network across the landscape will help nature to recover²¹. It is calling for an increase in the hedgerow network by 40% by 2050, which is the number recommended by the Independent Climate Change Committee.

There has also been a loss of mature hedgerow trees (individual trees in a hedge that are allowed to grow to their full form and are not trimmed or flailed), which are invaluable for nesting and roosting for a range of species, from bats to birds and small mammals. Many have been lost due to flailing management and lack of trees being promoted as replacements. Often key hedgerow trees may be ash and thus the familiar sight of an ash tree on the horizon is also threatened due to 'ash dieback.' Hedge trees need to be promoted and considered as part of hedgerow restoration plans. Native species with disease resistant hybrids may need to be planted to replace those being lost by disease. Hedge trees need to be promoted and considered as part of hedgerow restoration plans.

¹⁷ Bickmore 2022

¹⁸ UK Biodiversity Action Plan; Priority Habitat Descriptions. BRIG (ed. Ant Maddock) 2008

¹⁹ New Landscapes Enclosures in Berkshire website Berkshire Record Office

²⁰ North Wessex Downs AONB Integrated Landscape Character Assessment Technical Report March 2002

²¹ Hedge Fund:investing in hedgerows for climate, nature and the economy CPRE September 2021

↑ Hedges emerging from a misty dawn, near Wilcot Pewsey Vale © Dave Gray

Priority Species - Hedgerows:

Turtle dove; barberry carpet moth; hazel dormouse; tree sparrow; brown hairstreak butterfly; soprano pipistrelle, greater and lesser horseshoe bats

Action for Ancient & Species-rich Hedgerows	2024	2030	2042
Maintain the current extent and positive management of the hedge network	$\square >$	•	
90% of hedgerows in favourable or favourable recovering condition		•	
Establish the current extent of hedges across the AONB		•	
Increase the length of hedges by 40%, increasing habitat connectivity		11.5% increase	•
Double the number of hedgerow trees, providing additional habitat			•
Identify the best opportunities to connect and extend hedgerow networks working with developing Local Nature Recovery Strategies, Local Nature Partnerships, West Berkshire Solutions, landowners & other partnerships			•
Work with farmer groups/clusters to extend & create species rich hedges			•

Key: To be started \Longrightarrow Underway \Longrightarrow Completed \blacklozenge

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Ancient & Species-rich Hedgerows: Low sensitivity to climate change

• When planting, restocking or filling gaps in hedges, consider using a diverse range of species, particularly those adapted to a wide range of climatic conditions; or those that will also help to support flora and fauna of threatened tree species, ie Ash, to help fill the ecological gap

LOW

MEDIUM

HIGH

- Protect hedgerow trees
- Accepting and encouraging changes in the composition and structure of hedges will be increasingly important for maintaining a network of resilient hedges
- Protecting hedges from the impact of adjacent or more intensive practices, by establishing or managing for uncultivated or low intensity field margins, and fencing off livestock
- When establishing new hedges, aim to provide links to the existing hedgerow network and patches of semi-natural habitat in order to promote the movement of some species through the landscape

Key Opportunities for Hedgerows

- The roll-out of Farming in Protected Landscape Programme grants until 2025
- Pursue opportunities of producing woodfuel and compost from hedges, building on work carried out through Cordiale²² and TWECOM²³ projects
- Emerging markets and platforms for Biodiversity Net Gain, Carbon Credits and Nutrient Neutrality
- The new Environmental Land Management Schemes
- Potential to develop hedge networks across farmer clusters/groups
- Contribute to initiatives such as the PTES Healthy Hedgerows app and the Great British Hedgerow Survey
- Complete the recommended mitigation planting identified in the Mend the Gap Project
- Establish new hedgerows and promote hedgerow trees as part of regenerative farming practices and opportunity to extend canopy cover

²² Wolton RJ Woodfuel from hedges. Devon County Council, Tamar Valley AONB & the Devon Hedge Group

²³ A Guide to Harvesting Woodfuel from Hedges, Organic Research Centre, Elm Farm 2019

ARABLE FIELD MARGINS

Arable field margins²⁴ are herbaceous strips or blocks around arable fields that are managed specifically to provide benefits for wildlife or to reduce water and soil run-off into water courses. Where they are managed for wildlife they are regarded as priority habitat²⁵. Field margins have an important role in increasing the permeability of an otherwise hostile environment, aiding the movement of species through the landscape. The arable field must be in a crop rotation which includes an arable crop, even if in certain years the field is in temporary grass, set-aside or fallow. Arable field margins are usually sited on the outer 2–12m margin of the arable field. In general terms, the physical limits of the arable field margin priority habitat are defined by the extent of any management undertaken specifically to benefit wildlife.

Arable field margins include cultivated, low input margins; margins sown to provide seed for wild birds; margins sown with a diversity of wild-flowers or agricultural legumes and managed to provide pollen and nectar resources for invertebrates; and margins providing permanent grass strips with mixtures of tussocky and fine-leaved grasses. Strips of grassland created by sowing or natural regeneration, such as field margins or beetle banks, are included. The North Wessex Downs AONB is important for its arable plant flora, many of which will benefit from arable field margins.

Priority Species - Arable Margins:

Stone curlew; corn buttercup; shepherd's needle; wild candytuft; red hemp nettle; corn bunting; lapwing; grey partridge; annual knawel

Action for Arable Field Margins	2024	2030	2042
Maintain existing and expand the area of land available for arable field margins by 70%		•	
Encourage location of margins to provide variety of aspect, soil type and shading			
Promote the diversity of margins to provide a range of habitats for species			
Maximise the most appropriate management options to reflect local priorities. Eg uncropped cultivated margins are the most suitable option for arable plants ²⁶		•	
Protect margins from chemical inputs from adjacent cropped areas			

Key: To be started 二 Underway 🛑 Completed 🔶

²⁴ UKBAP Priority Habitat Description Arable Field Margins 2008 (Revised 2011)

²⁵ NE751 Natural England & RSPB, Edition 2 (2020)- Climate Change Adaptation Manual , Evidence to support nature conservation in a changing climate; 9. Arable Field Margins.

²⁶ Still K and Byefield A (2007). New priorities for Arable Plant Conservation pp24 Plantlife International Salisbury, Wiltshire.

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Arable Field Margins: Low sensitivity to climate change

- Maximise the diversity of margins to provide a range of habitats and to assist in the movement of species through the landscape
- In planted margins, tailor the diversity of flowering species to ensure the continued provision of pollen and nectar throughout the extended season

LOW () MEDIUM (

HIGH

- Include species and cultivars in planted margins that are able to tolerate and flower under hotter and drier summers
- Encourage the instigation of uncropped cultivated margins to benefit the rare arable plant flora of the North Wessex Downs
- Encourage the establishment of wild bird mixes for greatest benefit of farmland birds

Opportunities for Arable Margins

- Review and update the Arable Strategy. Seek mechanisms and funding to implement strategic priorities
- Opportunity to contribute to Buglife's B-Lines initiative across the AONB
- Promote uptake of margins according to local priorities among the respective farmerled groups
- Investigate decision-making tools with bodies such as the UK Centre for Ecology and Hydrology and other research institutions

↑ Newly planted hedge and wildflower margin © Church Farms Partnership

6.9 DECIDUOUS WOODLAND

Mixed deciduous woodland is characterized by trees that are more than 5m high when mature, and which form a distinct, although sometimes open canopy with a canopy cover of greater than 20%. It includes stands of both native and non-native broadleaved tree species, where the percentage cover of these trees exceeds 80% of total tree cover. Deciduous woodland may be of ancient or recent origin and can be either semi-natural arising from natural regeneration or planted.

At least 12%, or 21.099 hectares, of the North Wessex Downs AONB is woodland and of this only 14.474 hectares are identified as being priority habitat; the remaining woodland not being in management or classed as ancient woodland. ²⁷ The AONB's Woodland Strategy (2005) and the Management Plan (2014) highlight the importance of responsible active management of woodland to conserving and enhancing the natural beauty of this nationally protected landscape. There is an aspiration to review and update the Woodland Strategy by 2025.

The Woodland Trust identifies the North Wessex Downs AONB as containing nationally important 'major concentrations' of ancient semi-natural woodland (ASNW), centred on the Berkshire and Marlborough Downs, the Hampshire Downs; and areas of forest such as Savernake.

There are certain Landscape Character Types that have an existing high percentage of woodland and tree cover and could in principle absorb more trees without affecting the AONB's special qualities. These include the Wooded Plateau, Lowland Mosaic, Downland with Woodland and River Valleys. This is a generalisation and new woodlands and trees outside woodlands (TOWs) still require individual site assessment. It may also be acceptable to plant trees elsewhere in the AONB, but particular care must be taken not to plant on chalk downland, or where there is potential to restore the rarer chalk grassland habitats. The AONB is producing more detailed guidance on woodland and tree planting.

The woodlands within the Savernake Forest and Ewhurst Park landscape character areas appear to be the most valuable for wildlife, with over 70% designated and around 60% of the woodland being ASNW. Ancient woodlands in the Pang Valley are recognised for their nature conservation value. Wet woodlands associated with minor streams flowing down gullies off the plateaux and in the Kennet Valley support rare plants. Other landscape character areas with high concentrations of designated woodlands and a high percentage of ASNW are:

- Pang Valley Hermitage Lowlands and Heath
- Clyffe Pypard Badbury Wooded Scarp
- Hannington Downs
- Ashampstead Downs

Key priority species rely on woodland environments in this area, and it is of key importance to ensure biodiversity is a paramount objective in future management decisions. The extent of woodland cover in the AONB is currently at least 12% (with 8.4% being regarded as priority habitat); however as a family of AONBs we have pledged to increase woodland cover nationally. The target suggested will increase woodland cover to 16.6% of woodland cover, which is now established as a goal in the EIP23. Where trees have been planted, or secondary scrub and woodland has established on former chalk grassland or heathland sites, or are adjacent to existing sites, the higher priority would be to reestablish those other priority habitats. Standing deadwood and dead wood on living trees, provides valuable habitat for species such as lesser woodpecker.

²⁷ State of the North Wessex Downs, 2012

Data Sources:

Woodland: Based upon Land Cover Map 2021 © UKCEH 2022. Contains Ordnance Survey data © Crown Copyright 2007, Licence number 100017572.

Traditional Orchards & Ancient Woodland: \circledcirc Natural England copyright. Contains Ordnance Survey data \circledcirc Crown copyright and database right 2023.

(Map 8) Woodland in the North Wessex Downs AONB 🛧

↑ Woodland at Upper Bucklebury © David Hill.

Priority Species - Woodland:

Lesser spotted woodpecker; nightingale; hawfinch; marsh tit; willow tit; pine marten

Action for Woodlands	2024	2030	2042
Maintain the current extent of ancient woodland (currently estimated as a minimum of 8646 ha)		•	
Achieve favourable condition or recovering condition of 21,099 ha of native woodland			•
Restore 2000 ha ²⁸ of Plantations on Ancient Woodland (PAWs)			
Inform and increase woodland and tree cover by publishing the Trees and the Landscape Guidance			
Develop initiatives to help stimulate markets to get woodlands back into management			
Encourage woodland owners and managers to access Countryside Stewardship and the Environmental Land Management Schemes			
Promote and support deer management groups, to help reduce damage in woodlands and encourage natural regeneration			

Key: To be started \Longrightarrow Underway \Longrightarrow Completed \blacklozenge

28 There is 2,960 ha of conifer woodland based on the NFI, it is not known how much is PAWs

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Deciduous Woodland: Low sensitivity to climate change

LOW

() MEDIUM (

HIGH

- Focus on the reduction of non-climatic pressures such as pests and diseases, increasing species and genetic diversity, reduce the abundance of single species, encourage natural regeneration to make woods more resilient
- Take measures to reduce the impact of drought and ensure the availability of water
- For new woodland planting and restocking, species and provenance selection will increasingly need to reflect projected future climatic conditions
- Consider continuous cover forestry approaches, accept and encourage a greater mix of native trees and shrubs through active management, eg accept more oak in 'beech woods'

Key opportunities for Woodland

- Continue to support Andover Trees and seek opportunities to expand the model, which involves planting community woodlands combined with engaging communities and young people
- Develop further early discussions with the Woodland Trust about future opportunities for a 'woodlands into management' project for the North Wessex Downs
- Promote the emerging woodland and tree planting guidance to encourage sympathetic planting by landowners and communities
- Explore the possibility of 'Woodland Clusters' either based on existing farmer clusters/groups or the establishment of geographical groups that may wish to explore a 'Ward Forester' approach. Seek to connect farmers and foresters to foster greater integration of woody habitat into the landscape
- Work with the Forestry Commission to agree a protocol for dealing with applications for tree and woodland planting, particularly along the Kennet Valley and its floodplains, to encourage, if planting is acceptable, native species such as alder and aspen

↑ West Woods © Sharyn Ladds

6.10 WOOD PASTURE, PARKLAND AND ANCIENT TREES

Products of historic land management practices and designed landscapes, wood pastures and parklands are a vegetation structure, rather than a particular plant community. Usually demonstrated by large, open-grown or high forest trees, (many of which maybe pollarded) at various densities, in a matrix of grazed grassland, heathland and/or woodland floras. They are often found to be the most important sites in England for old-growth features and dead-wood, supporting a variety of specialist fungi and dead-wood invertebrate species.

There is very little survey information covering the extent of the North Wessex Downs that can conclusively reveal the importance of the AONB for wood pasture, parkland and ancient trees. However, at the heart of the AONB is found Savernake Forest which, as the Land Management plan published in Spring 2022 states:

'Savernake comprises one of the most important remnants of wood pasture in Great Britain. Its high density of veteran trees dating from before 1750AD is comparable with only a handful of other sites across the country. The unique plant and invertebrate assemblages associated with these trees are equally interesting and important.'

Furthermore:

'When Savernake's veteran and ancient trees were surveyed between 2014-2018, over 4,000 trees of significance were surveyed, scored, and mapped. This work indicated that large numbers of the oak, beech, and sweet chestnut were associated with rides and plantation dating from the 18th Century.

The traditional land use over much of Savernake would have been extensive grazing in wood pasture. Individual trees would have been pollarded. This form of management would almost certainly have been practiced from the early Saxon period until modern history. Throughout the medieval period, areas of woodland and coppice would have been periodically enclosed to establish trees and provide timber, firewood, and shelter for deer. Other areas were em-parked to provide habitat for deer. This long history of management through recurrent pollarding and grazing has given rise to Savernake's particular diversity.'

Our Shared Forest; Savernake Forest Land Management Plan; Spring 22; Forestry England

English Nature Parkland and Wood Pasture veteran tree surveys in 2005 showed that Berkshire also has some important sites for ancient trees, in particular Hamstead Marshall Park, Englefield Park and Highclere Parks have a significant number of veteran trees. The North Wessex Downs AONB includes 15 Registered Parks and Gardens, but there is also a significant resource of designed parks and gardens not on the register, which could also be important for veteran and ancient trees and associated dead-wood invertebrates, fungi and non-vascular plants.

A review of the Ancient Tree Inventory identifies Berkshire as having the greatest number of records and Wiltshire as the county with the third highest number. This may be recording effort, but is likely to have been a function of being close to London and the number of historic Royal Hunting Forests.

Priority Species - Wood pasture, Parkland and Ancient Trees:

Barbastelle bat; lesser spotted woodpecker; eagle's claws lichen; spotted flycatcher

 \blacklozenge White Road Oak and AONB Team Savernake Forest © Corinna Woodall

Action for Wood Pasture, Parkland & Ancient Trees	2024	2030	2042
Achieve favourable condition or recovering condition of more than 2000 has of wood pasture, parkland and ancient trees			•
Carry out a desktop survey to understand the resource and current condition of parkland trees across the AONB		•	
Promote the value and importance of ancient and veteran trees, encourage the appropriate management and planting to promote the next generation			

Key: To be started \Longrightarrow Underway \Longrightarrow Completed \blacklozenge

SENSITIVITY TO CLIMATE CHANGE

Climate Change Adaptation for Wood Pasture, Parkland & Ancient Trees: Low sensitivity to climate change

HIGH

- Management decisions need to be made, considering landscape and cultural values, especially for historic parklands and designed landscapes. Key will be providing ecological continuity of veteran trees, ensuring supply of dead and decaying wood
- Promote longevity of existing mature and veteran trees, ensuring new generations of appropriate species and genotypes are planted to replace trees as they are lost (preferably before they are lost)
- Management of younger trees to encourage the development of dead and decaying wood to fill the gap between veteran and younger trees
- Flexibility of grazing and development of effective contingency plans to respond to increased climatic variation and increase in extreme events

Key opportunities for wood pasture, parkland and ancient trees

- Provide advice and support to developing pilot projects through the West Berkshire Natural Solutions Partnership to create wood pasture in conjunction with the Wood Meadow Trust. Seek other opportunities to restore and create wood pasture.
- Provide support and advice to Forestry England and the emerging Savernake Forest Land Management Plan – 'Our shared Forest' and investigate the potential for restoring the surrounding landscape; formerly part of the historic extent of the hunting forest and strengthening habitat networks

↑ Saddle Oak, Savernake Forest © Corinna Woodall

6.11 TRADITIONAL ORCHARDS

Traditional orchards²⁹ have long been a feature of the English countryside and are characterised by groups of fruit and/or nut tress planted on vigorous rootstocks at low densities in permanent grassland, usually in a low intensity management regime. Habitat structure rather than the vegetation type, topography or soils is the defining feature of orchards.

The best orchards for wildlife are those where the grass in the orchards are grazed; with a number of fruit trees of varying age structure, with plentiful standing, fallen and decaying wood. Unlike intensively managed commercial orchards, these will have no or minimal chemical inputs and sprays. The definition of a traditional orchard is regarded as an area with at least five trees with crown edges less than 20m apart. Since 1950, Natural England estimates that the amount of traditional orchards has declined by 63%.

Traditional orchards are structurally and ecologically similar to wood-pasture and parkland with open-grown-trees set in herbaceous vegetation. They are separated from this habitat by the species of tree usually being the family Rosaceae, and generally denser placement of the trees and smaller size of individual habitat patches. Bumblebees and other wild bees are very important for orchards as they pollinate the trees whilst collecting pollen and nectar. Management of the grassland, creating bee banks or providing small patches of bare ground, installing bee boxes and leaving dead wood will provide nest sites for bees.

The North Wessex Downs AONB is not especially known for traditional orchards, however it is identified one of the priority habitats for the area and, in comparison to other AONBs supports a reasonable area of traditional orchard. Mapping the distribution of recorded orchards captured by the People's Trust for Endangered Species, flags up a surprising number of orchard sites. However, these are often very small fragments but quite widely spread across the designated landscape. In the majority of sites the condition and management status of these remnant sites are not known.

Priority Species - Orchards:

Nobel chafer beetle; mistletoe; hedgehog; rare and local heritage fruit tree varieties

↑ Picket Mead Orchard; restoration is underway as cuttings from fallen heritage varieties of fruit trees have been grafted onto new rootstock. © Corinna Woodall

29 People's Trust for Endangered Species Traditional Orchards Webpages May 2022

Data Sources:

Traditional Orchards: @ Natural England copyright. Contains Ordnance Survey data @ Crown copyright and database right 2023.

(Map 9) Orchards in the North Wessex Downs AONB **↑**

Action for Orchards	2024	2030	2042
Maintain the current extent and positive management of traditional orchards		•	
90% of orchards in favourable or favourable recovering condition			
Increase the area of orchards by 50 ha			
Identify the best opportunities to connect and extend hedgerow networks working with developing Local Nature Recovery Strategies, Local Nature Partnerships, West Berkshire Solutions, landowners & other partnerships			•
Establish the current extent of orchards across the AONB			
Work with farmer groups/clusters and community groups to extend & create traditional orchards			

Key: To be started 📥 Underway 🛑 Completed 🔶

SENSITIVITY TO CLIMATE CHANGE

LOW MEDIUM (

) нібн

Climate Change Adaptation for Orchards : Low sensitivity to climate change

- Orchards have a relatively high ability to be adaptable and flexible in the face of climate change. Continuing or reintroducing low input, active management, responding to weather patterns and seasonal variations
- Increase the species and structural diversity of orchards at a site and landscape-scale will reduce vulnerability.
- Selecting appropriate species and cultivars for the site with a view to future-proofing

Key opportunities for Orchards

- Emerging markets and platforms for Biodiversity Net Gain, Carbon Credits and Nutrient Neutrality
- Potential to establish new orchards with community groups, farmers, landowners and developers
- The new Environmental Land Management Schemes, Farming in Protected Landscapes and Sustainable Development Fund Grants
- Support the PTES Orchard Project and develop local initiatives to create new orchards, conserve existing sites and improve management
- Encourage apple juicing and local food and drink activities.

6.12 STANDING OPEN WATERS AND CANALS

Technically five BAP categories are considered within the standing waters habitat type. These are: aquifer-fed naturally fluctuating water bodies, ponds, oligotrophic and dystrophic lakes, mesotrophic lakes, and eutrophic lakes. Ponds are defined as permanent and seasonal standing water bodies up to 2ha in area, they are widespread throughout the UK, but high-quality examples are now highly localised, especially in the lowlands. There are three lake categories greater than 2ha in size and represent a continuous gradient of productivity. Canals are not specifically as a 'structure' or mentioned in any of the BAP plans, although cited as part of the Priority habitat type. Canals do form an important part of blue/green infrastructure.

↑ Pond at Avebury © Corinna Woodall

A significant asset is the historic Kennet and Avon Canal, 47kms of which flows through the North Wessex Downs AONB. Categorised as standing open water, it shares much of the Kennet Valley floor with the River Kennet SSSI and other floodplain habitats, such as marshy grassland, fen and reedbed; together with associated scrub, woodland, and hedges. Some sections of the River Kennet share a channel with the canal; under the Water Framework Directive the canal is classified as a 'highly modified waterbody.' It is, however, identified as having good ecological potential and there are several projects that are actively seeking to improve the water quality, which in turn will have a positive impact on the biodiversity of the canal. Despite issues of water quality and that it is a busy canal with boat traffic with the towpaths being well used for walking, running and cycling, the canal currently supports good populations of water vole; there are records of otter and kingfisher which can be regularly observed. The many bridges and occasional tunnels can be important roosting-places for bats.

Wilton Water is a small reservoir that supplies the summit pound of the Kennet and Avon Canal with water. The neighbouring land has been taken out of arable production. Together with the creation of adjacent wetlands and other natural flood management measures, local efforts are being made to help improve the water quality into the lake and thus improve conditions for wildlife. There is concern however, that *Crassula helmsii* New Zealand pigmy weed has escaped into this waterbody; strenuous efforts are now being made to control any further spread into the canal (and subsequently the River Kennet SSSI and beyond).

Ponds are a valuable freshwater habitat and can play an important role in sustaining and supporting biodiversity within the landscape. A large number of ponds have been lost from the farmed landscape in the AONB and those that remain can be susceptible to environmental degradation. The ponds and woodland habitat at Little Wittenham Wood are home to one to the country's most significant populations of great crested newts and is designated as an SSSI and SAC. The Earth Trust's River of Life projects have re-created many of the smaller backwaters, channels and ponds that really benefit invertebrates, amphibians, birds, fish and aquatic plant life at a landscape scale. The Marlborough Downs Making Space for Nature project between 2012-2015 created or restored 16 ponds, resulting in a necklace of ponds across the downs. The Freshwater Habitats Trust and Naturespace are working to increase the number of ponds across the landscape, through district newt licencing helping to create the opportunity.

Action for the River Kennet (ARK), a number of farmer clusters, the AONB and others have been promoting the creation of wetlands, as part of natural flood management; slowing down flows, storing storm water and filtering water to improve water quality. These often temporary water bodies are not really captured in any one priority habitat description, but are important in restoring a functioning landscape at a catchment scale; and as they evolve may become more of a wet mosaic of marshy grassland, reedbed, fen and open water.

Priority Species – Open water (canal, ponds and lakes)

Great crested newt; watervole; tubular water dropwort; whorled water milfoil; water violet; reed bunting

↑ Watervole ©Paul Hancock

Action for Open water (Canal, ponds and lakes)	2024	2030	2042
Maintain, restore & enhance the Kennet and Avon Canal and Wilton Water			
Promote a catchment-based approach to canal/ river management, enabling the River Kennet to reach 'good' Water Framework Directive (WFD) status			
Seek opportunities to improve the water quality and biodiversity of the Kennet and Avon Canal & opportunities to enhance associated habitats			•
Identify the best opportunities to enhance the Kennet and Avon Canal for biodiversity, working with the Canal & River Trust and developing Local Nature Recovery Strategies, Local Nature Partnerships, West Berkshire Natural Solutions, landowners & other partnerships		•	
Seek to support or develop initiatives to control the spread and eradicate invasive non-native species though out the canal and river network, such as Crassula helmsii			•
Restore, re-create and enhance the pond network, creating 40% of new/restored ponds by 2050			
Establish the extent of the current pond resource in the AONB			

Key: To be started 📥 Underway 🛑 Completed 🔶

SENSITIVITY TO CLIMATE CHANGE

LOW () MEDIUM / HIGH

Climate Change Adaptation for Standing Open Water: High sensitivity to climate change

- Adaptation within standing waters needs to take place at a range of scales both within the water bodies themselves and within their catchments. Reducing non-climatic sources of harm increases resilience therefore reducing nutrient and sediment loads, reducing water management pressures
- Establishing ecological networks and ensuring hydrological connectivity is maintained between naturally connected sites is important to allow species to migrate, but care must be taken if sites are naturally isolated as it may not be beneficial to connect
- Promote habitat heterogenity, for example, ponds in different stages of succession, with varying depths and permanence of water and lake shorelines with natural process of succession and patterns of species zonation
- Promote good biosecurity to slow the spread of invasive non-native species

Key opportunities for open water - canals, ponds and lakes

- Seek opportunities to support the Canal and Rivers Trust to enhance the River Kennet and its corridor for nature recovery
- Continue to work with the Southern Streams Farmer Group to improve the quality of water reaching Wilton Water and therefore the River Kennet SSSI
- Explore other opportunities to work with existing or new farmer clusters and landowners to improve the quality of water in the Canal and thus the River Kennet. Also to map ponds
- Work together with the Freshwater Habitats Trust to seek opportunities for the whole water environment of the middle Thames, to enhance and protect the floodplains
- Signpost landowners and farmers to the newt licensing schemes, which requires ponds lost due to development to be replaced by additional ponds in suitable locations ((Oxfordshire, West Berkshire and Hampshire)

↑ Algal bloom and weed growth on Wilton Water Summer 2022. © Corinna Woodall

7.0 NEXT STEPS

We are living in a time of mass extinction. Nature has never been so depleted and this is down to the actions of humankind and the unsustainable lifestyles that we live. We want this plan to highlight the extreme and shocking loss of wildlife across this much-loved and valued landscape. Nature deserves a place to thrive and expand and we as humans also have a right to a nature-rich future. If nature can be abundant and spilling over, we should expect this in a protected landscape.

We cannot do this alone and it must involve everyone, from local communities to local authorities. It must involve farmers and landowners, public bodies and the Environmental Non-Governmental Organisations (ENGOs), many of whom are represented on our Council of Partners. The AONB extends into 4 counties, 9 Local Authorities; we want this plan to help forge continuity for wildlife, foster partnership working and to broker imaginative and landscape scale interventions.

This document is not exhaustive, but seeks to pick out the headlines and to highlight the habitats and species that:

- 1. Are valued and distinctive of the North Wessex Downs
- 2. Are rare and for which we have a particular responsibility

3. We can do something to make a difference to enhancing abundance and/or quality

The remaining semi-natural habitats that we have must be protected at all costs. It seems fruitless and poor use of resources trying recreate and expand habitats at the same time as we are still losing them, either due to poor development planning decisions or unsustainable land and water management practices. We need better and more robust planning decisions that fully takes account of the statutory purpose to 'conserve and enhance the natural beauty' of the AONB. There needs to be improved awareness and education; widespread adoption of nature friendly land management approaches; and greater resources to protect what we have, to enable us to deliver more on the ground for the future of our precious environment.

There will be those who will look at these targets and deem them impossible to deliver within the projected timescales. Maybe they are, but we must strive to fulfil them. We are on the edge of a new dawn; tools such as Farming in the Protected Landscapes grant programme are funding invaluable work that will enhance our biodiversity in the AONB. The new Environmental Land Management Scheme should encompass measures to transform the farmed environment for our wildlife and the way that we produce food. There is also the potential to deliver nature, through some of the fledgling markets for Biodiversity Net Gain (linked to built development), Carbon Offsetting and Nutrient Trading. Much of this is untried and not well regulated yet but undoubtedly will become important drivers for delivery.

This document sets out what biodiversity resides in the North Wessex Downs AONB that is of existing importance and what there should be more of to have a healthy, nature-friendly and functioning landscape. We must also ensure what we have is better managed, of better quality and that this is all better connected; enabling the movement of our species and adaptation of our habitats, as we face climate change.

We look forward to working with you, to recover nature in the North Wessex Downs AONB. We have much to do, but wildlife, the landscape and society will all be in a much better place if we succeed.

↓ Enjoying Pewsey Downs National Nature Reserve © Ann Shepley

WWW.NORTHWESSEXDOWNS.ORG.UK

01488 685440 info@northwessexdowns.org.uk

North Wessex Downs AONB Units 3-4 Denford Manor, Lower Denford, Hungerford, Berkshire RG17 0UN

NORTH WESSEX DOWNS One of the AONB Family