Havant
BOROUGH COUNCIL

ethos
Environmental Planning

Biodiversity Strategy

January 2025

Contents

GLOSSARY

Biodiversity	Biodiversity (biological diversity) is the natural environment and wildlife we see around us: the plants, animals, soils and water.
BNG	Biodiversity Net Gain. A new mandatory system of addressing biodiversity impacts from development. All new developments in England must, unless exempt, provide a minimum 10% increase in biodiversity.
CIL	Community Infrastructure Levy. The Community Infrastructure Levy allows local authorities in England and Wales to raise funds from developers. The money can be used to fund a wide range of infrastructure that is needed as a result of development, including new or safer road schemes, flood defences, schools, hospitals and other health and social care facilities, park improvements, green spaces, and leisure centres.
GI	Green Infrastructure. Green infrastructure is a network of multi-functional green space and other green features, urban and rural, which can deliver quality of life and environmental benefits for communities.
Habitats Regulations	The Habitats Regulations are the UK Government's response to the EU Habitats Directive. The Habitats Regulations provide a legal framework for protecting sites and species of international importance.
HBC	Havant Borough Council
HBIC	Hampshire Biodiversity Information Centre. HBIC carries out habitat surveys and collates data from various species recording groups across Hampshire. HBIC also manages the Sites of Importance for Nature Conservation (SINCs) system in Hampshire on behalf of the local planning authorities.
HCC	Hampshire County Council

HRA	Habitats Regulations Assessment. HRA is an assessment carried out under the Habitats Regulations, to test if a plan or project proposal could significantly harm the features of an internationally designated nature site.
JNCC	Joint Nature Conservation Committee. The JNCC is a public body that advises the UK Government on UK-wide and international nature conservation. The JNCC monitors biodiversity, evaluates options and provides advice to ensure that the natural environment is protected in an effective way.
LNR	Local Nature Reserve. Local Nature Reserves are a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities.
LNRS	Local Nature Recovery Strategy. Introduced by the Environment Act 2021, Local Nature Recovery Strategies (LNRS) are a new system of spatial plans for nature recovery for the whole of England.
LPA	Local Planning Authority
NE	Natural England. Natural England is the Government's adviser for the natural environment in England. Its purpose is to help conserve, enhance and manage the natural environment for the benefit of present and future generations.
NGO	Non-governmental Organisation. A body, independent of government or other governing authority, that carries out work for public benefit. Examples would include wildlife charities.
Ramsar	A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention 1971 also known as "The Convention on Wetlands'. Ramsar sites are afforded the same legal protection as Special Protection Areas (SPAs).

River Basin District	A river basin is the area of land from which all surface water run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth or estuary. A river basin district includes the area of land and sea made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters (covering one nautical mile from the coast). Each river basin district has a river basin management plan which describes how waters are managed.
RSPB	Royal Society for the Protection of Birds. The RSPB is a charity for the conservation of birds and nature. It carries out conservation on a large scale to protect and restore habitats.
RVEI	Road Verge of Ecological Importance. Road verges supporting notable plant species, and which require managing in a particular way; usually by avoiding cutting between April and September each year.
SAC	Special Area of Conservation. SACs are designated under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). They protect habitats of international importance.
SINC	Site of Importance for Nature Conservation. A local protected site.
SPA	Special Protection Area. SPAs are designated under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). They protect bird species of international importance.
SRMS	Solent Recreation Mitigation Strategy. A Solent-wide system for managing the impacts on coastal recreation on bird populations. Delivered by Bird Aware Solent.
SSSI	Site of Special Scientific Interest. SSSIs are nationally protected areas that represent the best examples for certain habitats, species or geological features.
SWBGS	Solent Waders and Brent Goose Strategy. A Solent-wide system for identifying and protecting terrestrial habitat for wintering bird species.

INTRODUCTION

Havant Borough contains some of the most important habitats and species in the south of the United Kingdom. Despite being one of the most densely developed parts of the southern UK and with a landscape that has undergone profound changes in the last century, there is much to celebrate.

Havant's coastline is of international importance and contains some of the finest examples of coastal habitats in England, supporting a wealth of scarce plants and animals. Every winter, tens of thousands of migratory birds arrive in the Borough, providing one of the best wildlife spectacles to be seen in the UK. Our coast also provides nesting sites for hundreds of seabirds, and staging posts for birds from across the globe. Our ancient woodlands, trees and hedgerows support rare mammals such as Hazel Dormice and bats. There are areas of species-rich grassland, and clear chalk streams.

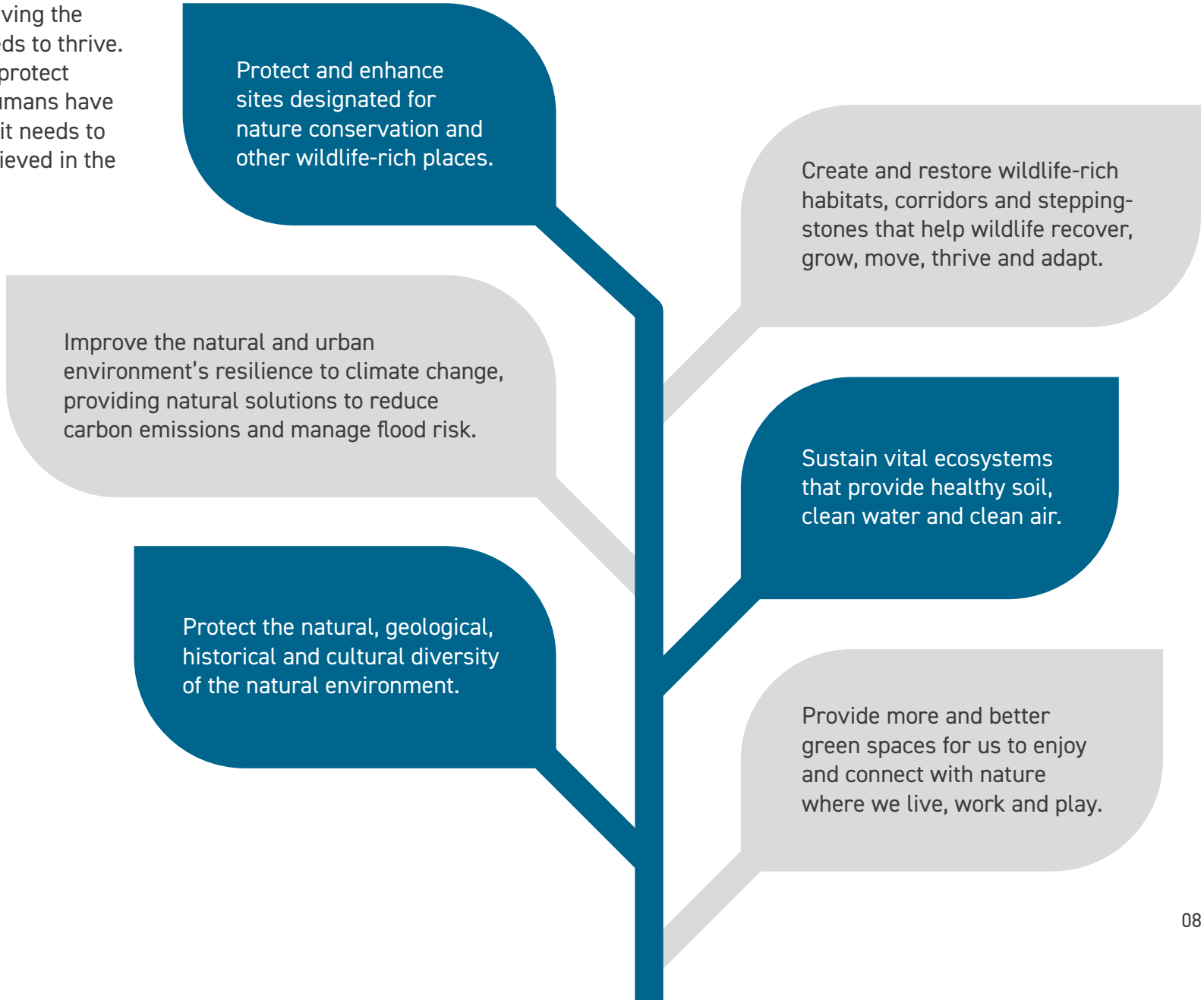
However, Havant's natural environment is under pressure. The effects of increasing urbanisation over the last century or more have led to habitats being lost, fragmented and damaged, and populations of once common and widespread species have declined. The impacts of agriculture, industry, transport, housing and recreation on natural habitats have been profound, and are continuing. These losses and changes have been incremental, and it is not always obvious to us today just how much our natural environment has been impacted by human activity and how much has been lost.

There is a raft of scientific evidence to show that the UK's biodiversity is in trouble, despite over a century of concerted effort to protect it. Many species are in serious decline and the overall abundance of wildlife in the UK has been reduced. Our natural environment is not being sufficiently protected, and a change in approach is needed.

In recognition of the Borough's special natural heritage and the many challenges facing it, Havant Borough Council has developed this Biodiversity Strategy to provide a framework for action towards nature recovery. The Biodiversity Strategy – alongside the Council's Climate Strategy – will be used by the Council to shape its own actions and to help guide others in protecting biodiversity and encouraging nature recovery.

What is nature recovery?

The term nature recovery means giving the natural environment the help it needs to thrive. We recognise that simply trying to protect nature from harm is not enough: humans have the ability to give nature the space it needs to repair and recover. This can be achieved in the following ways:



Objectives

The Biodiversity Strategy has been produced by Havant Borough Council (The Council) in conjunction with Ethos Environmental Planning (Ethos). The strategy provides a summary of the Borough's natural environment, explores some of the challenges facing biodiversity, and provides a framework for the Council to protect and enhance the Borough's biodiversity where it is able to do so.

The strategy will have force. It will underpin planning policy within the Councils' emerging local plan – Building a Better Future. As well as measures which can be enacted through the planning system, it also considers the range of actions that can be undertaken by the Council itself, its partners, businesses and communities to protect and enhance biodiversity and promote and achieve nature recovery. It draws on a wide range of up-to-date evidence and information to provide a robust evidence base and identify key opportunities for action.

The strategy will assist the Council in meeting the strengthened duty to conserve and enhance biodiversity under the Environment Act 2021. The Council is committed to exploring how it can meet the challenges of the biodiversity crisis across all its functions and operations, and it is recognised that this will require a step change in the way that it operates. The strategy provides the framework for more detailed biodiversity targets and actions which will be developed by the Council.

The Strategy is guided by other aspects of the Environment Act 2021. The Local Nature Recovery Strategy (LNRS) for Hampshire will shape biodiversity conservation in the county for decades to come. In addition, Biodiversity Net Gain (BNG) is a new mandatory requirement for development, meaning that new development proposals must provide a measurable 10% gain in biodiversity units. The LNRS will help guide where BNG measures will be delivered.

The new Local Plan acknowledges the role of the LNRS and includes specific BNG policy, and this Biodiversity Strategy seeks to provide a coherent framework of Council policy and guidance to complement the LNRS and the roll-out of BNG.

The most recent State of Nature Report (2023) provides evidence that nature is still seriously declining across the UK, a country that is already one of the most nature-depleted in the world. However, it also recognises that:

"We have never had a better understanding of the State of Nature and what is needed to fix it."

What is biodiversity and why is it important?

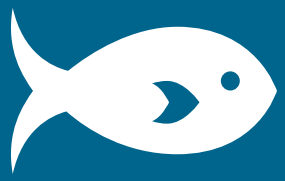
Biodiversity is most commonly used to describe the variety of life in a particular area, but it also refers to how those different species interact with each other in these areas, or ecosystems[1]. In everyday language, biodiversity refers to the natural environment and wildlife we see around us: the plants, animals, soils and water.

Ecosystems can vary in size and complexity from a garden pond to a woodland, but it is the biodiversity of each area – that variety of species and genes – and the environment in which they exist, that determines what happens in the ecosystem. How each species interacts with others, and the environment in which they exist, determines how each survives and grows.

Biodiversity is essential for the processes that support all life on Earth, including human society. Biodiversity underpins healthy ecosystems, which provide us with a range of benefits (also known as ecosystem services). We rely on these for our survival and well-being (see Figure 1 on the following page). Some examples are provided to the right.

Pollinators such as birds, insects and other animals are estimated to be responsible for a third of the world's crop production.

Agriculture is reliant upon invertebrates and microbes which maintain the health of the soil that crops grow in. Soil is teeming with microbes that are vital for releasing nutrients that plants need to grow, which are then also passed to us when we eat them.



Life from the oceans provides the main source of animal protein for many people. The oceans are also the world's largest carbon sink, helping to regulate our climate.

Trees, bushes, wetlands and wild grasslands naturally slow down water and help soil to absorb rainfall. When they are removed it can increase flooding.

Trees and other plants clean the air we breathe and help us tackle the global challenge of climate change by absorbing carbon dioxide.

Many medicines, along with other chemicals that we use in our daily lives such as latex and rubber, also originate from plants.

Spending time in nature is increasingly understood to lead to improvements in people's physical and mental health. Simply having green spaces and trees in cities has been shown to decrease hospital admissions, reduce stress and lower blood pressure. The most recent People and Nature Survey for England (between April 2022 and March 2023) found that at least 91% of adults who had visited a green and natural space in the previous 14 days agreed that spending time outdoors was good for their physical health and mental health, and 81% agreed that being in nature makes them very happy.

1 https://royalsociety.org/topics-policy/projects/biodiversity/why-is-biodiversity-important/

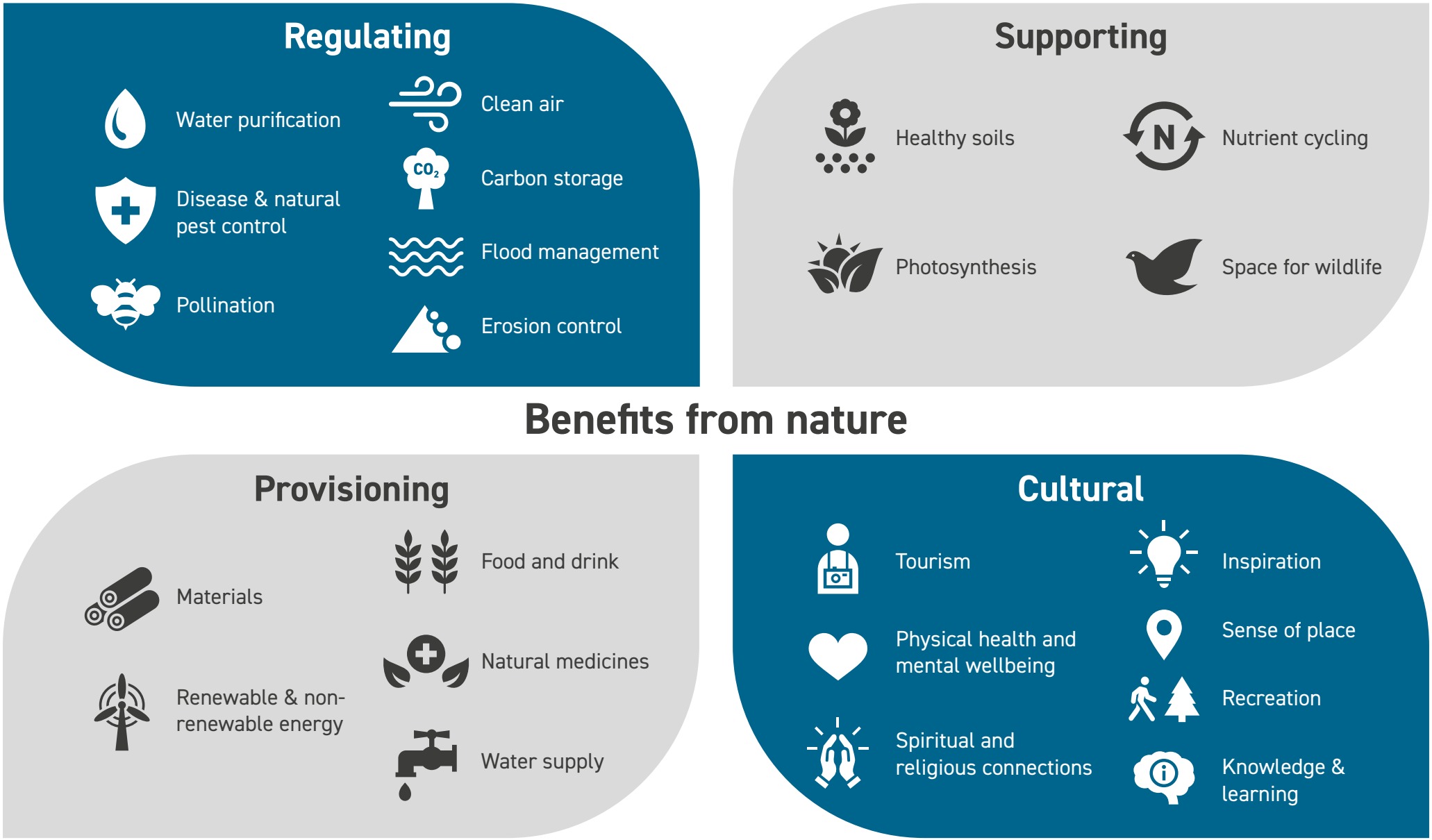


Figure 1: Range of ecosystem services provided by nature to humans (Source: Adapted from NatureScot)

Risks and challenges to biodiversity

The global picture

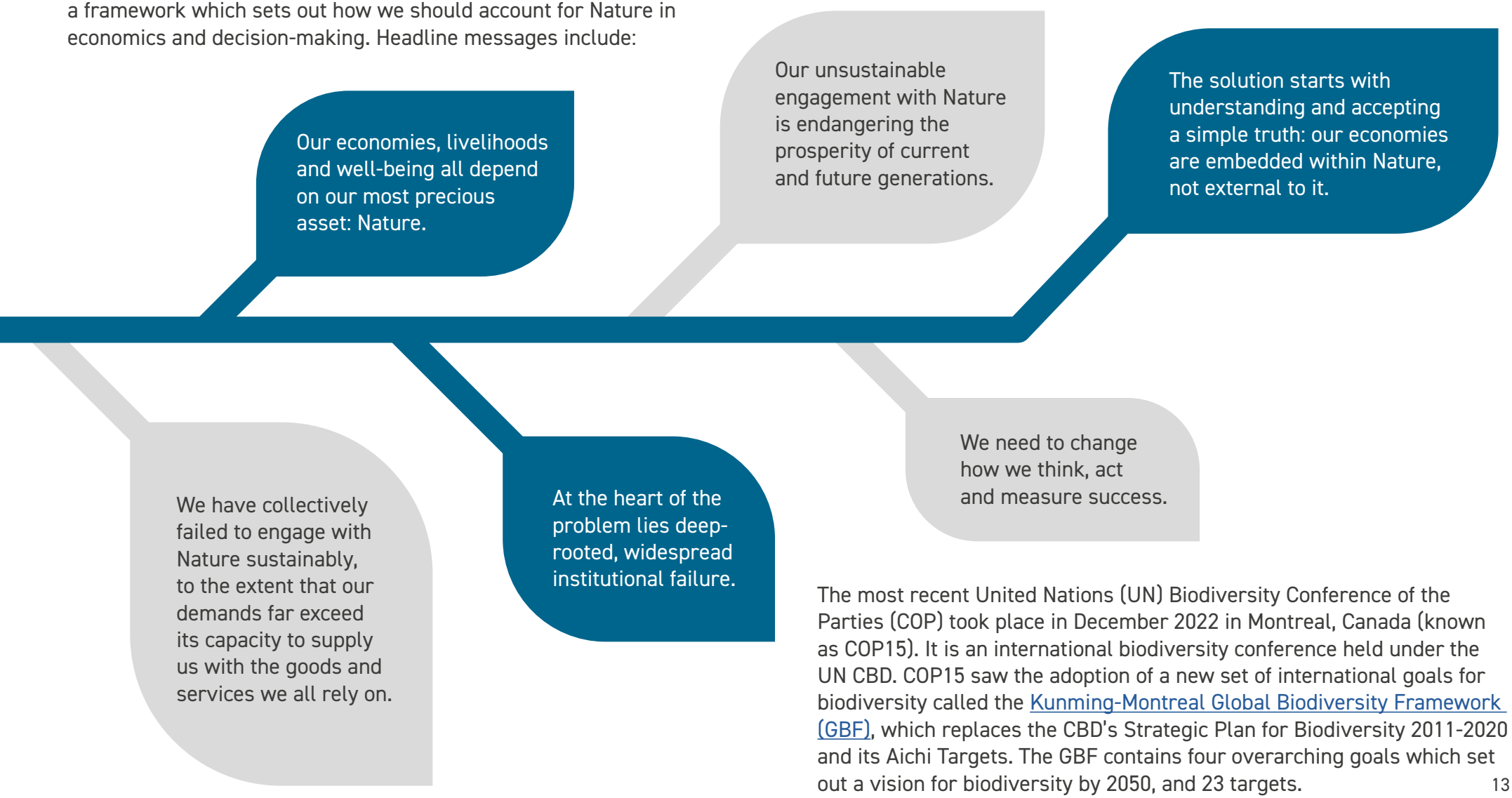
The Global Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Report (May 2019) shows the global deterioration of natural environments and ecosystems on which all life depends, the loss of biodiversity and the knock-on impact on human societies. It found that, globally, land-use change is the direct driver of change, with the largest relative impact on terrestrial and freshwater ecosystems, while direct exploitation of fish and seafood has the largest relative impact in the oceans. Climate change, pollution and invasive alien species have had a lower relative impact to date but are accelerating.

These findings were supported in the biannual Living Planet Report 2022 published by the World Wildlife Fund (WWF) and the Zoological Society of London Institute of Zoology, which states that the planet is in the middle of a 'biodiversity and climate crisis'. It found that land-use change remained the largest current threat to nature, with the loss of natural habitats for many plants and animal species both on land, in freshwater and at sea. The report said that climate change would likely become the dominant cause of biodiversity loss in the coming decades.

International obligations set out in the United Nations (UN) Convention on Biological Diversity (CBD)[2] Strategic Plan for Biodiversity (2011–2020) included 20 targets known as the Aichi biodiversity targets. According to the Global Biodiversity Outlook 5 report published by the UN in 2020, none of the Aichi biodiversity targets have been achieved at a global level.

2 The CBD is an international treaty for the conservation of biological diversity. The CBD was agreed in 1992 and has seen nearly every country in the world become a party to it. The UK brought the CBD into force in 1993. This put the UK government under a legal obligation to protect biodiversity in its territories.

The Dasgupta Review (2021), an independent, global review on the Economics of Biodiversity led by Professor Sir Partha Dasgupta, calls for changes in how we think, act and measure economic success to protect and enhance our prosperity and the natural world. It presents a framework which sets out how we should account for Nature in economics and decision-making. Headline messages include:



The most recent United Nations (UN) Biodiversity Conference of the Parties (COP) took place in December 2022 in Montreal, Canada (known as COP15). It is an international biodiversity conference held under the UN CBD. COP15 saw the adoption of a new set of international goals for biodiversity called the Kunming-Montreal Global Biodiversity Framework (GBF), which replaces the CBD's Strategic Plan for Biodiversity 2011-2020 and its Aichi Targets. The GBF contains four overarching goals which set out a vision for biodiversity by 2050, and 23 targets.

The UK picture

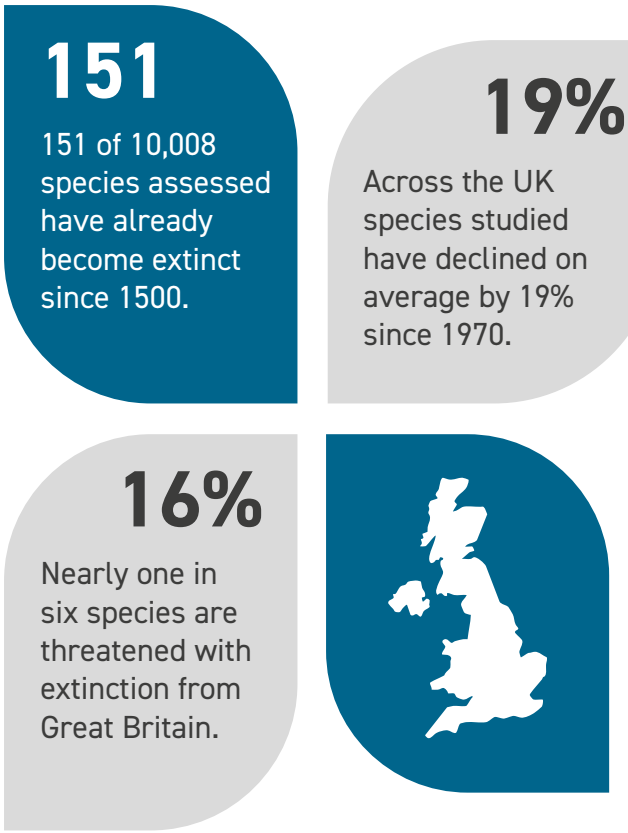


Figure 2 : Some of the key headlines from the UK State of Nature Report (2023)

This global picture is reflected in the UK, one of the most nature depleted countries in the world. The UK has more than 70,000 known species of animals, plants, fungi and microorganisms, but the majority of assessments indicate that the abundance of its wildlife is declining.

The Biodiversity Intactness Index (BII) is an international index which can be used to compare countries on how nature has fared under pressures from humanity in terms of land use changes[3]. The UK is currently placed in the lowest 12% of global countries and territories for biodiversity intactness.

In 2011, the Department for Environment, Food and Rural Affairs (DEFRA) published a strategy for England called 'Biodiversity 2020'. This sought to reverse the decline of habitats and species in England. The strategy aligned with international obligations set out in the CBD strategic plan for biodiversity 2011–2020. The UK has failed to meet 14 of the 19 Aichi biodiversity targets[4].

The most recent UK State of Nature report (2023) finds continued decline in the UK's wildlife, with one in six species at risk of being lost, and a 19% decline in the average abundance of wildlife in the UK since the 1970s. Changes in land use and changes in the distribution of habitat types have seen changes in biodiversity with an overall picture of ongoing species decline. However, it is important to note that the report also highlights that action to halt and reverse these declines through nature conservation and recovery can, and does, work. Examples and case studies are included throughout the Strategy.

The UK government declared an environment and climate emergency in May 2019 in recognition of these interlinked crises and the need for urgent action. At the 2022 Biodiversity Conference of the Parties (COP 15) the Government joined the international commitment to protecting 30 per cent of land and sea for nature by 2030 (the '30 by 30' target). The protected sites network and emerging Local Nature Recovery Strategies (LNRS) (a requirement under the Environment Act 2021) are key to achieving this ambitious target.

3 The BII and its methodology have been adopted by the UN Convention of Biological Diversity (CBD) and used as a core indicator for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). This index for comparing biodiversity intactness was also incorporated in the Dasgupta review.

4 https://publications.parliament.uk/pa/cm5802/cmselect/cmenvaud/136/136-summary.html

The Key pressures on the UK's biodiversity are summarised in the table below.

Agricultural management Agricultural land covers approximately 75% of the UK's land area. The steady increase in agricultural productivity has had many documented impacts on farmland wildlife. For example, populations of farmland birds have more than halved on average since 1970, and similar declines have been seen in many other species groups. Fertiliser use and conversion to arable have contributed to the loss of 97% of wildflower meadows and other species-rich grasslands in the past century.	**Climate change** There is growing evidence that climate change is driving widespread changes in the abundance, distribution and ecology of the UK's wildlife. Biodiversity underpins healthy ecosystems. As biodiversity is lost and ecosystems become degraded, stored carbon is released, compounding the impacts of climate change – the climate and biodiversity crises cannot be separated.	**Pollution** Pollution presents a wide range of threats to the environment and the species that inhabit it, as well as to human health and well-being. Pollutants come in a diverse range of forms, including but not limited to plastic waste; chemicals in water, soil, and air; noise and light emitted from cities and transport; and nutrient enrichment of sensitive habitats.	**Urbanisation** Infrastructure developments as a result of the UK's rising population have had direct consequences for wildlife in terms of land use and land cover changes, and also fragmenting landscapes, resulting in isolated populations. The biodiversity value of existing urban green spaces can also be impacted through increases in air, light and noise pollution, human disturbance, and predation by and faeces from domestic animals. Over-tidiness can also reduce the biodiversity value of gardens and green spaces.
Woodland management Nature in woodland is under pressure from a lack of management, overgrazing by deer, increasing levels of recreational disturbance, invasive species, and nitrogen pollution. Without some form of management many woodlands become over shaded and dominated by mature trees without any variation in age, structure, or cover, thus reducing the abundance and diversity of wildlife.	**Hydrological change** Historical land drainage, field drainage, loss of ponds, modification of watercourses and over abstraction of freshwater are some of the key pressures affecting the distribution and quality of freshwater habitats. Species reliant on the range of wet habitats affected by these changes have seen long-term declines and face ongoing pressures of unsustainable water abstraction and the continuing drainage and conversion of wetlands to other land uses.	**Invasive and non-native species** The number of non-native species colonizing or becoming established in the UK continues to grow. Around 12% of established non-native species cause adverse economic, environmental, or societal impacts and are therefore classed as invasive non-native species (INNS).	**Marine environment** Key pressures include climate change and ocean acidification - rising sea temperatures are affecting currents, mixing and salinity as well as increased acidification of the seas. This is impacting marine ecosystems, with direct and indirect effects on the distribution and abundance of species groups, and on entire habitats. Sea level rise is resulting in the loss of intertidal habitats e.g., saltmarsh. Unsustainable fishing activity directly affects fish populations and also has wider impacts on fish populations and habitats, including physical damage to the seabed, bycatch (the catching of non-target species) and plastic pollution. Invasive and non-native species also impact marine environments.

Table 1: Key pressures on the UK's biodiversity

ACTION 1: The Council recognises the biodiversity crisis that has developed over the last century and is committed to nature recovery. The Council will embed consideration of biodiversity throughout all of its functions and activities in line with the Biodiversity Duty, recognising that this requires a step change in the way the Council operates.

Summary of Havant biodiversity

70.5%
Non-developed land use accounts for 70.5% of all Havant land.

20.4%
Agriculture accounts for 20.4% of non-developed land use.

14.1%
Forest, open land and water accounts for 14.1% of non-developed land use.

23.6%
Residential gardens account for 23.6% of non-developed land use.

European designations

2 RAMSARs

1 Special Areas of Conservation (SACs)

2 Special Protection Area (SPA)

2 Hampshire biodiversity opportunity areas within Havant:
- Chichester / Langstone Harbours and Hayling Island
- Portsdown Hill

17 17 priority habitats

4 Sites of Special Scientific Interest (SSSIs - European), in the following conditions (hectares):

Favourable	57
Unfavourable declining	919
Unfavourable no change	50
Unfavourable recovering	1513

Local designations

8 Local Wildlife Sites (LWSs - local)

110 Sites of Importance for Nature Conservation (SINCs - local)

2,328 Local Ecological Network (hectares)

Protected species in Havant include:


Fig 3: Bats (inc. Bechstein's)


Fig 4: Dormouse


Fig 5: Brent Goose

Figure 3 source: Dietmar Nill, CC BY 2.5 <https://creativecommons.org/licenses/by/2.5>, via Wikimedia Commons

OVERVIEW OF HAVANT'S BIODIVERSITY

Havant Borough is situated in the south-east corner of Hampshire between the cities of Portsmouth and Chichester, and despite being one of the most densely populated areas in England, the Borough is incredibly important in terms of the biodiversity it supports. The Borough contains significant areas of countryside and coast, including nearly 50km of internationally important coastline, and lies adjacent to the South Downs National Park. Defining features include the surrounding Langstone and Chichester harbours and coastline, the chalk streams and river valleys of the Ems and Westbourne, and the pasture land and woodland heritage associated with the former Forest of Bere.

Figure 6: Saltmarsh at Nore Barn

The rich natural heritage of Havant Borough – and some of the threats to that heritage - is best understood by briefly looking at the recent history of the local landscape.

Havant's landscape

Havant Borough shows a varied and complex landscape. Whilst the Borough has been significantly affected by post-1945 development, with many areas of habitat lost, it still retains elements of the former historic landscape and differences in land use history and underlying geology mean that there is still a rich natural heritage.

The Borough can be divided into four broad landscape character areas: the Forest of Bere East to the north, Portsdown Hill in the centre, and the Havant and Emsworth Coastal Plain and the Hayling Island Coastal Plain to the south.

The northern part of the Borough is characterised by gently undulating land with surviving remnants of the former Forest of Bere wooded landscape such as The Queen's Inclosure in Cowplain and Hollybank Wood near Westbourne. The soils here are largely silty clays, are often waterlogged and slightly acidic. This area also contains some of the last remaining fragments of former open heathland and common land.

The prominent chalk ridge of Portsdown Hill just edges into the west of the Borough near Widley. The geology here is freely draining and supports the Borough's only extensive area of species-rich chalk downland. The Borough's chalk streams emerge at the base of this ridge and flow south into Chichester and Langstone Harbours.

The southern part of the mainland Borough forms a broad, flat coastal plain with soils derived from ancient river deposit sands, silts and clays. The area contains the best agricultural soils in the Borough, and despite the substantial urban development of the late 20th century, productive farmland still persists between Havant and Emsworth. The Borough's chalk streams – the Brockhampton and Hermitage Streams, the Lavant Brook, River Ems and various unnamed streams - cross the plain before entering the harbours.

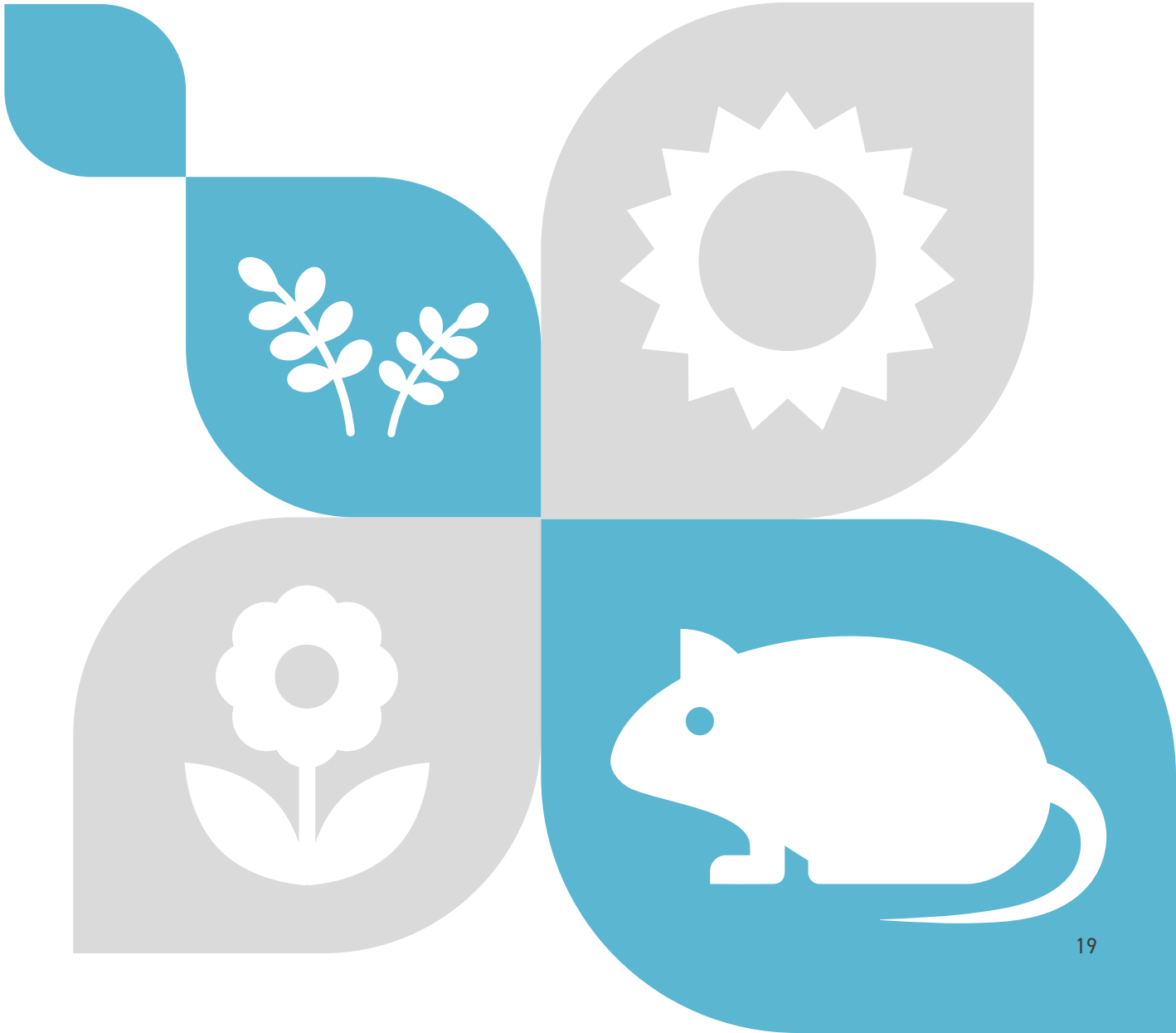
Hayling Island is a true island, separated from the mainland by a narrow tidal channel, and is surrounded by Chichester and Langstone Harbours. The Island is still predominantly rural in character despite the growth of residential and recreational development in the 20th century and contains an extensive network of small arable and pasture fields, hedgerows and some woodland. The underlying geology is predominantly chalk in the north and sandy and silty clays in the south. Hayling Island contains a remarkable variety of important coastal habitats.

Havant's ecological network

The complex landscape and social history of the Borough has led to today's patchwork of natural, semi-natural and highly modified habitats. This patchwork of habitats forms an ecological network.

The Borough's natural heritage – its ecological network – is made up of formally protected sites, habitats and species as well as areas that are not afforded legal protection, but which nonetheless contribute to the overall network. This section provides an overview of the Borough's key protected sites, habitats and species:

- Protected sites – international, national and local.
- Priority habitats.
- Protected and notable species.
- Other habitats.



An overview of Havant's key habitats and species

The Borough is particularly important for coastal habitats such as saltmarsh, mudflats, seagrass beds, vegetated shingle and coastal and floodplain grazing marsh, and contains the best examples of coastal heathland and the only sand dune system in Hampshire. Other important habitats include lowland meadows, lowland mixed deciduous woodland (which includes ancient woodland), hedgerows, and rivers.

These habitats support a wide range of species including mammals, birds, insects, plants, fungi, reptiles and amphibians. Some of the most well-known protected species present in the Borough include Hazel Dormouse, Water Vole, many species of bat, including the rare Bechstein's Bat, and coastal birds such as the Dark-bellied Brent Goose and various wader species. These habitats are afforded protection through a network of designated sites, ranging from international to local importance.

Figure 8: Dark-bellied Brent Geese

Figure 7: Water Vole

Figure 9: Hazel Dormouse

Figure 7 source: Caroline Legg, CC BY 2.0 <https://creativecommons.org/licenses/by/2.0>, via Wikimedia Commons
Figure 9 source: Danielle Schwarz, CC BY-SA 3.0 <https://creativecommons.org/licenses/by-sa/3.0>, via Wikimedia Commons

Nature designations in Havant

Havant has a range of designated wildlife sites from local to international importance, as summarised in the table and paragraphs below. These designations highlight the biodiversity importance of the Borough.

Statutory Designations	Status	Name	Area (ha)
Special Protection Area (SPA)	International	Chichester & Langstone Harbours	2556
Special Area of Conservation (SAC)	International	Solent Maritime	2269
Ramsar	International	Chichester & Langstone Harbours	2430
Site of Special Scientific Interest (SSSI)	National	Chichester Harbour, Langstone Harbour, Sinah Common and Warblington Meadow	2677
Local Nature Reserve (LNR)	Local	8 in total – Brook Meadow, Farlington Marshes, Gutner Point, Hayling Billy, Hazleton Common, Sandy Point, The Kench, West Hayling	218
Total of statutory sites combined			**2724**

Non-statutory Designations	Status	Number	Area (ha)
Sites of Importance for Nature Conservation (SINC)	Local	110 sites	551
Road Verges of Ecological Importance (RVEI)	Local	1 site	0.05

Table 2: Statutory and non – statutory designated sites in Havant as of August 2024
(Source: HBIC Annual Biodiversity Monitoring Report 2022/23)

International sites

The majority of the Borough's coastline is part of the internationally designated Solent Maritime Special Area of Conservation (SAC) due to the importance of the marine and estuarine habitats present.

Chichester and Langstone Harbours are both designated as Special Protection Areas (SPA) and Ramsar sites because of the significance of the waterbird assemblages supported, including internationally important numbers of migratory bird species such as Dark-bellied Brent Geese, wader species and other wildfowl. The Harbours also support the south coast's most important breeding colonies of various gull and tern species. They contain extensive intertidal mudflats and sandflats with areas of seagrass beds, saltmarsh, shallow coastal waters, coastal lagoons, coastal grazing marsh and shingle ridges and islands.

National sites

Sites of Special Scientific Interest (SSSIs) are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features. The Borough is home to four SSSIs which include the extensive Chichester Harbour SSSI and Langstone Harbour SSSI (components of the SPA, SAC and Ramsar designations). Sinah Common SSSI on the south-west coast of Hayling Island is designated for its complex of maritime and terrestrial habitats, including pioneer shingle vegetation and maritime shingle grassland, vegetated dunes, and saltmarsh. The site is also notified for its outstanding assemblage of nationally scarce plants. Warblington Meadow SSSI is designated for its unimproved grazing marsh adjoining Chichester Harbour and its gradation from freshwater marsh to old, reclaimed saltmarsh, and for its rich associated flora.

Fig 10: Little Robin, a nationally rare plant found on Hayling's coast

The hierarchy of designated sites

Many of the Borough's most important designated sites – its international and national sites – overlap. Particularly around Havant's coastline, habitats are often protected by several different layers of designation – Special Areas of Conservation, Special Protection Areas, Ramsar sites, and Sites of Special Scientific Interest.

Special Areas of Conservation (SAC)

SACs are protected under the Habitats Regulations 2017. Their purpose is to establish a network of important high-quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II of the Habitats Directive. The listed habitat types and species are those considered to be most in need of conservation at a European level. Much of the Borough's coastline is within the Solent Maritime SAC.

Special Protection Areas (SPA)

SPAs are designed to protect areas for bird species listed under the Birds Directive. SPAs are chosen due to their importance in protecting populations of certain bird species – either resident or migratory – that are important at the European level. Most of the Solent coast is designated as SPAs, and within the Borough the key sites are the Chichester and Langstone Harbours SPA and the Solent and Dorset Coast SPA. Our two SPAs are designated for their populations of breeding seabirds and overwintering wildfowl and wader species.

Ramsar sites

Ramsar Sites are wetlands of international importance designated under the 1971 Ramsar Convention. Ramsar sites are designed to protect wetland habitats used by breeding and migratory waterbirds. The UK has the largest number of Ramsar sites, and within the Borough we have the Chichester and Langstone Harbours Ramsar site: this overlaps with the Chichester and Langstone Harbours SPA.

Sites of Special Scientific Interest (SSSI)

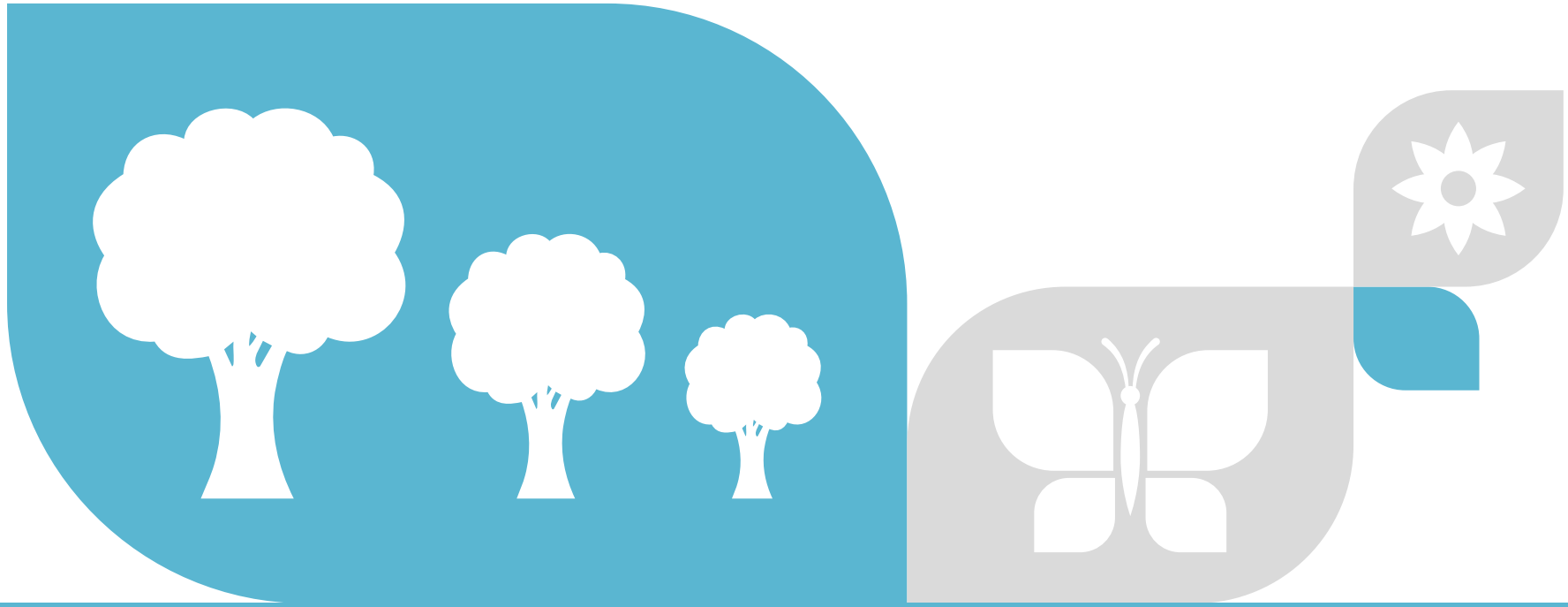
SSSIs are designated under the Wildlife and Countryside Act 1981 and are designed to protect a representative sample of the best examples of habitats across the UK. There are four SSSIs within the Borough, the largest of which are Langstone Harbour and Chichester Harbour and which are contiguous with the SAC, SPA and Ramsar.

Local sites

There are also eight sites designated as Local Nature Reserves (LNR), and an additional 110 non statutory Sites of Importance for Nature Conservation (SINCs) which are locally important sites for biodiversity. SINCs represent a legacy of good management and rely upon continued stewardship by landowners (they are often in private ownership).

This variety of statutory and non-statutory designated sites reflects the importance of the Borough for wildlife and provides the backbone of nature conservation in the Borough, protecting the best areas for wildlife. However, these sites are often small and fragmented in the landscape, and on their own are not sufficient for nature recovery.

The requirement for Local Nature Recovery Strategies (LNRS) to be produced by a Responsible Authority (mandated through the Environment Act 2021), aims to deliver landscape scale nature recovery, in accordance with the principles set out within Sir John Lawton's Making Space for Nature Report, known as the Lawton Report. LNRS are a key mechanism for planning and will feed into the national Nature Recovery Network (NRN).



Sites of Importance for Nature Conservation (SINCs)

SINCs are locally designated sites for nature conservation, identifying and conserving some of the best wildlife sites in the county. Of more than 4000 SINCs in Hampshire, 110 are within Havant Borough. SINCs can be designated for certain habitats or for populations of certain protected species.

The network of SINCs is administered by the Hampshire Biodiversity Information Centre (HBIC) and SINCs are surveyed by expert botanists on a regular basis. The designation of new SINCs is based on key criteria[5] and potential SINCs are assessed by an Advisory Panel comprising Natural England, Hampshire County Council, and the Hampshire & Isle of Wight Wildlife Trust.

Designating a SINC raises awareness of its importance for wildlife particularly with regard to planning and land management decisions. Many SINCs are in private ownership and their wildlife interest relies on continued good management by landowners.

The Borough's network of SINCs – alongside other protected sites - is critical in protecting some of the best habitats for wildlife in the county.

Hampshire's Local Nature Recovery Strategy

Introduced by the Environment Act 2021, Local Nature Recovery Strategies (LNRS) are a new system of spatial plans for nature recovery covering the whole of England. They are a key mechanism for planning and delivering the National Nature Recovery Network and will consist of:

- A map of the most valuable areas for wildlife.
- Opportunities to improve nature in the future.
- Local priorities.

Hampshire County Council has been appointed as the Responsible Authority for producing the LNRS for the Hampshire area. The LNRS will be used to:

- Guide investment into local priorities for protection and enhancement.
- Help shape how future funding for farming and land management such as the Environment Land Management schemes will be used.
- Map areas of opportunity for the use of 'nature-based solutions' to wider environmental problems like flooding, climate change mitigation and adaptation or poor water quality.
- Guide mandatory Biodiversity Net Gain (BNG) investments.
- Provide a source of evidence for local planning authorities, helping to understand locations important for conserving and restoring biodiversity.

5 https://documents.hants.gov.uk/biodiversity/SINCCriteria.pdf

Priority habitats and priority species

The terms Priority Habitats and Priority Species means habitats and species listed under Section 41 of the Natural Environment & Rural Communities Act 2006. Also called Habitats or Species of Principal Importance, these are considered to be the most important habitat types and species in England and require explicit protection in law.

Priority Habitats and Species require specific conservation action, and all public bodies (including Local Planning Authorities) must consider these to help them meet their duty to conserve and enhance biodiversity. Priority Habitats and Species lists are used to inform planning policy and decision-making.

Notable species

Notable species are those which are not explicitly protected through legislation or inclusion on the Priority Species list, but which are nevertheless considered to be 'notable' at the local level. For example, some relatively common species on a national scale may have the majority of their UK population within Hampshire, or indeed Havant Borough, and therefore there is a responsibility at the local level to protect these species.

Planning policy will play a fundamental role in this, including through Biodiversity Net Gain (BNG) and the adoption of the emerging Local Nature Recovery Strategy (LNRS). The Council will continue to support HBIC and the SINC system through continued support for SINC survey and designation.

Figure 11: Saltmarsh creek at Southmoor

The Council's partnership projects

Partnership working is vital to delivering local and landscape scale nature recovery, and some of the Council's key partnerships are summarised below.

Partnership	Overview
The Partnership for South Hampshire (PfSH)	PfSH is a partnership of twelve local authorities around the Solent that aims to improve the environmental, cultural and economic performance of the South Hampshire area. PfSH is involved with other key partnerships such as Bird Aware Solent. PfSH has increasingly coordinated cross-boundary work of the South Hampshire authorities in responding to environmental workstreams, in particular nutrient neutrality. Since 2021, all new housing in the Solent area has had to be nutrient neutral in order to ensure that further harm to SPAs, SACs and Ramsar sites due to eutrophication is avoided. PfSH has promoted a market in nutrient mitigation and overseen work to bring several key sites to the market. Most recently, the Partnership was awarded £9.6 million through the Local Nutrient Mitigation Fund. This will deliver a capital programme to deliver mitigation schemes that will ensure a perpetual supply of mitigation across the various catchments of the Solent. This will enable the delivery of the homes the area needs alongside secured, necessary environmental protections.
Bird Aware Solent	Bird Aware Solent is a partnership of local authorities which helps safeguard the future of internationally protected wildfowl and wading birds. The initiative is run by the Solent Recreation Mitigation Partnership (SRMP) through the Solent Recreation Mitigation Strategy. This sets out mitigation measures by which new residential dwellings within 5.6km of the SPAs must contribute towards strategic level measures to reduce the impact of recreational disturbance on bird populations. Developer contributions are collected by the Council to fund the work of the Bird Aware Solent team. Bird Aware staff undertake regular engagement with coastal visitors and provide advice and guidance on how to enjoy the coastline responsibly.
Hampshire Biodiversity Information Centre (HBIC)	HBIC carries out habitat surveys and brings together data from a number of key species recording groups, which supports the work of partner organisations. Data held by HBIC informs environmental assessment, land management and research by developers, utilities, landowners, students, local groups and the public. HBIC also manages the Sites of Importance for Nature Conservation (SINCs) system in Hampshire on behalf of the local planning authorities. Havant Borough Council provides financial support to HBIC and works with HBIC to organise surveys of the Borough's SINCs and other habitats.
Solent Waders and Brent Geese Strategy and Steering Group	The Solent Waders and Brent Goose Strategy (2020) and Steering Group is a conservation partnership project, which aims to conserve the internationally important waterfowl and wading bird populations within and around the Solent coast. The strategy identifies the network of non-designated terrestrial sites in the Borough that support bird populations and protect them from the impacts of land use changes associated with new development. The SWBGS Steering Group includes members from local authorities, Natural England, the RSPB, and the Hampshire & Isle of Wight Wildlife Trust.

Partnership	Overview
Hampshire Forest Partnership	Launched by Hampshire County Council in 2022, the Hampshire Forest Partnership has been set up so communities can get involved in caring for Hampshire's woodlands and planting more trees. The goal is to plant one million trees by 2050.
Hampshire and Isle of Wight Local Nature Partnership	The Hampshire and Isle of Wight Local Nature Partnership (LNP) was established in 2012 and is one of 48 strategic local nature partnerships formed in England following publication of the 2011 Natural Environment White Paper. Their overarching aim is to protect and improve the natural environment on land and at sea – creating bigger, better and more joined up places for nature – in line with the vision and recommendations of Sir John Lawton's Making Space for Nature report.
Solent Forum	The Solent Forum is an independent organisation that provides advice on strategic issues which have implications for the Solent area. It acts as a source of advice and contact for local authorities and other organisations. Havant Borough Council is a member of the Forum's Natural Environment Group and Solent European Marine Sites group.
Langstone Harbour Board	The Langstone Harbour Board is the statutory Harbour authority, local lighthouse authority, and pilotage authority for Langstone Harbour. Primarily responsible for safety and navigation, it also has responsibilities for the conservation of the natural environment. HBC councillors and officers sit on the Board.
Three Harbours Partnership	The Three Harbours is a partnership of organisations working together to restore the landscape across the Three Harbours of Langstone, Chichester and Pagham focussing on water quality, biodiversity and carbon capture. The Partnership is working towards an integrated plan with partners, broader stakeholders and the public, that captures all the activity that is taking place and what we will do to accelerate nature restoration across the three harbours.
RSPB	The Council works in partnership with the RSPB at our Oyster Beds site on Hayling. The site is subject to a management agreement between the Council and the RSPB, allowing them to carry out works to protect and enhance seabird nesting habitat.
Tree Council	Havant Borough Council is a member of the Tree Council which promotes the planting, care, conservation and value of trees. The Council supports to work of the Havant Tree Wardens, a network of around 35 Tree Wardens throughout the Borough. The network is involved in the following activities: tree trails and publishing tree trail booklets, putting on tree exhibitions, guided tree walks, presentations, tree planting, seed collecting and planting projects with local primary schools, warning of threats to trees, and supporting the establishment of Tree Preservation Orders.

Table 3: The Council's partnership projects

SOLENT WADERS & BRENT GOOSE STRATEGY

Focus on: Solent Waders and Brent Goose Strategy

The Solent Waders and Brent Goose Strategy (SWBGS) is an initiative that aims to identify and protect the Solent-wide network of terrestrial sites used for feeding and resting by wintering bird species associated with the Solent Special Protection Areas (SPAs) and Ramsar sites. The SWBGS is used to inform land management decisions such as development planning, ensuring that impacts to terrestrial bird habitat are considered properly.

Most terrestrial sites are within farmland (pasture or cereal crops) or on recreational grassland (sports pitches, parks). Particularly on farmland, there is no guarantee that suitable habitat will be available to birds each year (not all crop types are suitable). On recreational grassland, levels of human disturbance can change too. Both these factors mean that the extent of habitat available to birds each winter can vary widely.

Bird survey data are used to identify and categorise sites for their importance to wintering birds. Sites can vary in importance, from the most important Core Sites (which regularly support very large numbers of birds) through to Low Use Sites (which may only be used infrequently by low numbers).

In a planning context SWBGS sites are treated the same as internationally designated sites. Development proposals with the potential to impact SWBGS sites must carry out detailed assessment of those impacts before planning permission is granted. Where impacts are identified, mitigation action must be taken.

Impacts can take the form of direct loss of habitat, noise and visual disturbance (e.g. from development construction activity), or the effects of increased recreational pressure. These impacts can result in disturbance to birds, meaning that they must expend energy finding undisturbed places to feed and rest.

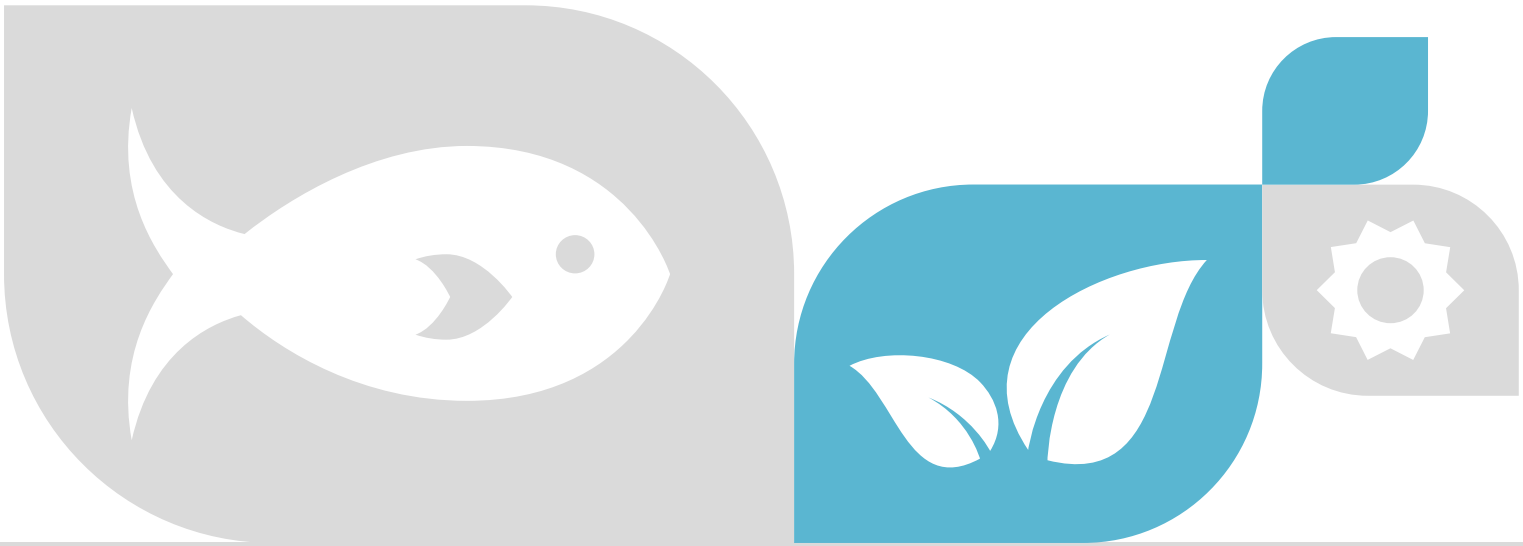
In some cases, alternative habitat can be provided. Permanent refuge habitat for birds - where secure habitat is created and maintained - can be secured through the planning process, meaning that suitable habitat can be guaranteed every year.

Fig 12: Dark-bellied Brent Geese

ACTION 2: The Council will ensure that the presence of statutory and non-statutory designated sites, priority habitats, and protected and notable species is acknowledged within planning policy, and across the all the Council's functions and activities.

ACTION 3: The Council will continue to support HBIC in mapping and monitoring priority and other habitats, and protected and notable species, to ensure that decision making and land management are based on the best available evidence.

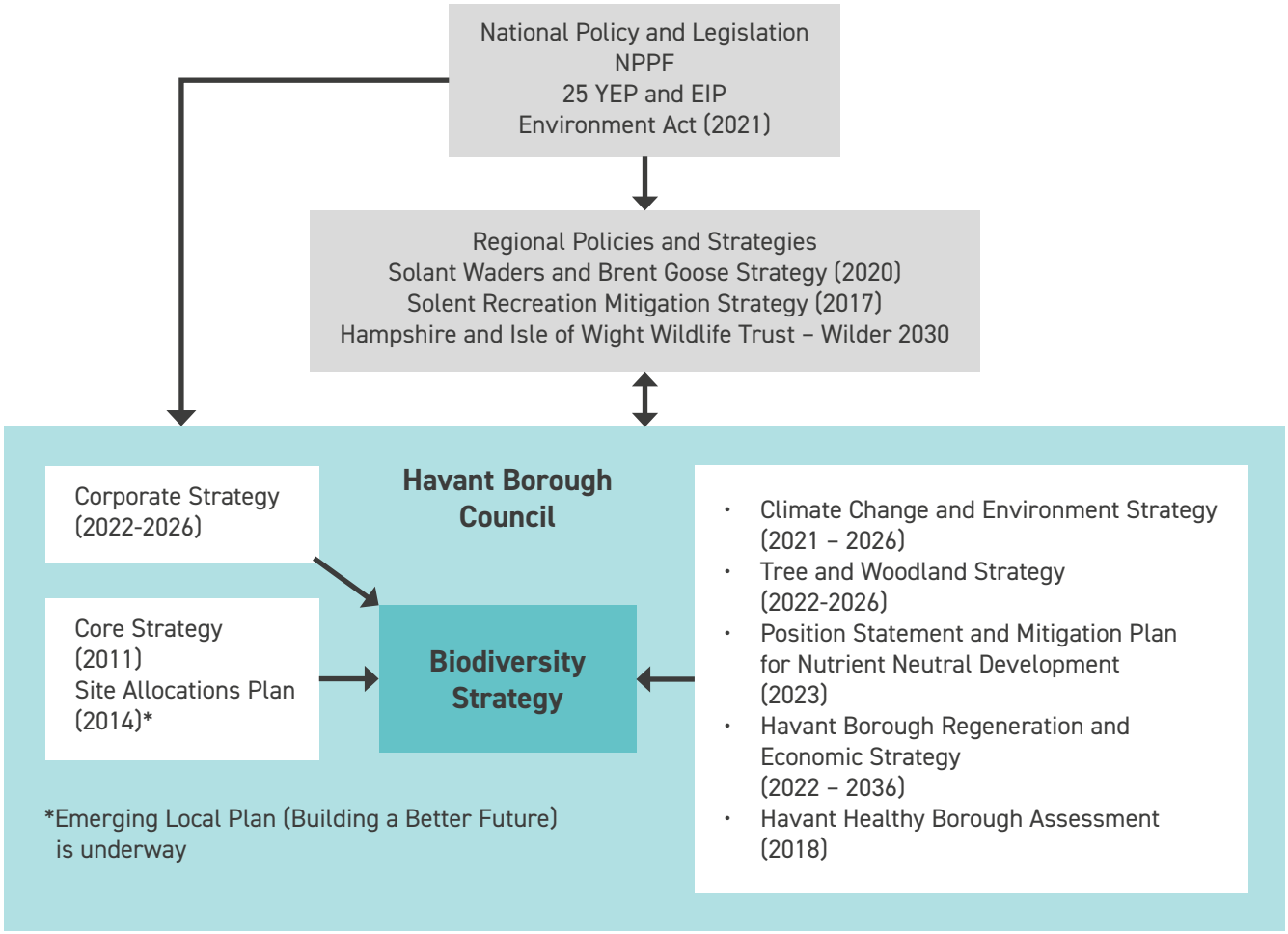
ACTION 4: The Council will maintain its support for existing partnerships and strategic initiatives relating to the conservation and restoration of biodiversity and will seek new opportunities to expand its network of partners and projects.



POLICY & LEGISLATIVE CONTEXT

Key legislation, strategies and policies of relevance to this strategy at the national regional and local level have been reviewed. This has highlighted the vital importance of conserving, restoring and creating biodiversity and the synergies with other priorities such as the climate emergency and health and wellbeing. It also highlights the importance and need for partnership working to deliver a landscape scale approach.

One of the key pieces of legislation underpinning the strategy is the Environment Act (2021). This makes provision for strengthening the Biodiversity Duty (under The Natural Environment and Rural Communities Act 2006) for Local Authorities – public authorities who operate in England must consider what they can do to conserve and enhance biodiversity in England. It also makes provision for a mandatory requirement for biodiversity net gain in the planning system, requiring development to deliver a 10% improvement in biodiversity value from 2024, and it introduces a statutory requirement for Local Nature Recovery Strategies (LNRS) to be produced by a responsible authority.



ACTION 5: The Council's Local Plan will include policy consistent with the Hampshire Local Nature Recovery Strategy and mandatory Biodiversity Net Gain.

KEY THEMES & OPPORTUNITIES

Overview

This section presents the key themes of the Biodiversity Strategy. The following themes focus on habitats (woodland and trees; grassland; freshwater and wetland; coastal; urban; agricultural land) as well as major strategic-level challenges (air and water quality). It includes a summary of the key risks to these habitats and identifies the key opportunities for protecting and enhancing biodiversity within Havant Borough.

For each habitat theme, a description of the habitat is provided followed by a description of relevant Priority Habitats and representative species. Some examples of each habitat type within the Borough are given, alongside specific challenges and opportunities related to each habitat.

Opportunities identified for biodiversity enhancement are based on the principles set out by Sir John Lawton in his Making Space for Nature report, which proposes that wildlife recovery requires more, bigger, better and more joined up habitats (these principles underpin the development of the emerging Local Nature Recovery Strategy:

More spaces for nature – core sites and restoration areas of high wildlife/ biodiversity value.

Bigger areas for nature – expanding the size of these core sites/restoration areas for nature such as designated sites.

Joined Up wildlife areas – a connected network of core/ restoration sites for nature across the landscape, through the use of wildlife corridors and stepping stones. A key part of delivering this will be the emerging Local Nature Recovery Strategy (LNRS). Restoring connectivity across the landscape allows species to migrate and adapt and increases the resilience of habitats and species to pressures from climate change.

Better management of core/ restoration nature areas to optimize biodiversity e.g. ensuring that all SSSIs are in favorable condition. These high-quality protected areas can act as biodiversity reservoirs.

In order to address the biodiversity and climate emergencies, and for effective nature recovery in Havant Borough, the Council will need to implement a step change in its approach to nature conservation, embedding this into every function of the authority (see Action 1).

The key delivery mechanisms for the Council to protect and enhance biodiversity are centered around the following:

Planning and development

Planning policy shapes the way in which development can occur and sets out the expected standards development should achieve. Local planning policy should comply with the National Planning Policy Framework and UK legislation, which requires that biodiversity is conserved and enhanced. The presence of Priority Habitats and Species is a key driver for ensuring that planning policy and planning more generally takes account of impacts to biodiversity. For example, the presence of Priority Habitats and Species often provides justification for requesting biodiversity surveys for new development.

Key delivery mechanisms through new development include developer contributions for open space (CIL and S106), Biodiversity Net Gain, Nutrient Neutrality and potential Green Infrastructure Policy such as the Urban Greening Factor. The Natural England GI Standards Framework sets out recommended standards for what good Green Infrastructure looks like, a key part of which is optimising biodiversity/nature recovery.

Planning policy has an important role to play in shaping expectations, standards and behaviours in the development sector.

Land management

The management of Council-owned or -controlled land such as some designated sites, parks and open spaces, allotments and cemeteries, has potential to enhance biodiversity within the Borough. Other sectors also have the potential to make a significant contribution to biodiversity e.g., the use of nature-based solutions in flood management, sustainable and regenerative agriculture, management of private or commercial land, school grounds, residential gardens and social care settings.

Funding and resources for the management and creation of wildlife habitat can come from a variety of sources such as the voluntary sector and charitable trusts, fundraising, external grants including government land management schemes, and new development. Private sector investment in climate adaptation and nature recovery (green finance) e.g. through the Natural Environment Investment Readiness Fund is also a growing area. When it comes to the management of Council owned land, there may be opportunities to increase biodiversity through adapting existing management regimes at no or little extra cost, but with many knock-on benefits to society more widely.

Partnership working and community involvement

Partnerships are essential in delivering landscape scale/catchment scale enhancements, which is essential for nature recovery, alongside the small actions that individuals and community groups can achieve e.g., within their gardens and local green spaces. Havant Borough Council has a key role to play in developing and nurturing community participation in nature recovery.

There is a significant amount of land in the Borough owned by Portsmouth City Council (PCC) and Hampshire County Council (HCC), who are also required to meet the enhanced Biodiversity Duty under the Environment Act (2021). The Council will continue to work with partners to ensure that opportunities are taken for nature recovery across the Borough.

WOODLAND & TREES

Summary

There are over 245 hectares (ha) of woodland habitat in the Borough, much of which is ancient fragments of the medieval Forest of Bere.

Woodland in the Borough supports a variety of protected and notable species including bats (such as the rare Bechstein's bat), Hazel Dormouse, woodland birds, Stag Beetle, and Small-leaved Lime.

Key opportunities for protection and recovery/enhancement include improving connectivity of existing habitat e.g. through the LNRS and improving woodland management.

Key woodlands in the Borough include Havant Thicket, The Holt, Bells Copse, and The Queen's Inclosure.

Key threats to woodland and trees in Havant include lack of management, recreational pressure, non-native invasive species, climate change, pests and disease (e.g. ash dieback), and nutrient enrichment from dog faeces.

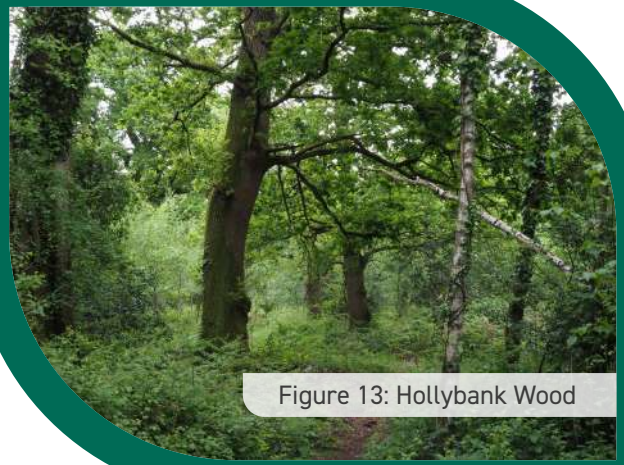


Figure 13: Hollybank Wood

Overview

Havant is home to over 245 ha of woodland habitat which includes ancient woodland[6] and replanted ancient woodland[7]. Ancient woodlands are our richest land-based habitat for wildlife, being complex communities of trees, plants, fungi, micro-organisms, and various animals. For this reason, ancient woodland is an irreplaceable habitat. The woodland within Havant Borough supports many priority species such as Hazel Dormouse, bats, Stag Beetle and Nightingale. Woodlands in the Borough are especially important for bat species, and Havant is home to the majority of the UK's species including rare species such as Bechstein's Bat, Barbastelle and Alcathoe Bat.

Many of the Borough's woodlands are fragments of the medieval Forest of Bere, an extensive area of woodland, wood pasture, open heath and grassland lying between the River Meon and the Hampshire/Sussex border. Large tracts of old woodland have been cleared to make room for new housing developments: woodlands around Leigh Park and Waterlooville were cleared between the 1940s and 1970s and further woodland losses occurred between Bedhampton and Blendworth during the construction of the A3 (M) in the 1970s and subsequent residential and commercial development. Fragments of the formerly wooded landscape still remain, including The Queen's Inclosure, parts of Havant Thicket, Hollybank Wood and the various woodland blocks along the A3(M) corridor at Dunsbury.

Much of this remaining woodland in the Borough is situated within a densely developed landscape and survives as isolated blocks or tree lines within areas of housing (Figure 14). These surviving fragments are impacted by recreational disturbance, noise and light pollution, nutrient enrichment and invasive plant species: their fragmented nature makes them more susceptible to these pressures than larger woodlands.

Figure 14: Example of historic woodland losses around Stakes and Waterlooville.

Figure 14 Left: Ordnance Survey Six Inch series 1888-1915; Right: ESRI World Image.
Figure 14 source: Crown Copyright and database rights Ordnance Survey.
Licence No. 100019217 (2023). Havant Borough Council

6 Woodlands known to date back to at least 1600AD.

7 Sites that were once ancient woodland but have been converted to planted forests are known as plantations on ancient woodland sites (PAWS). Many PAWS retain at least some characteristics or remnants of native woodland, which give them the potential to be restored to native woodland.

As well as woodland, Havant also supports other 'woody' habitats of high biodiversity value including individual mature and veteran trees, hedgerows, and scrub, which are vital for birds, butterflies, moths, bats, and Dormice. These habitats can form corridors and stepping stones in the landscape, linking up fragmented woodland patches and forming links with other habitat types such as grasslands and wetlands. Traditional orchards are also found within the Borough: these are hotspots for biodiversity including birds, mammals, insects, and fungi. Street trees and trees within green spaces and gardens also provide habitat within urban areas.

Trees and woodlands not only provide havens for wildlife, but they also provide a wide range of interrelated benefits such as reducing soil erosion, help to minimise water run-off, reducing flood risk, absorbing noise, filtering air pollution, and moderating temperature.

Tree canopy cover within the Borough is approximately 11% (i-tree 2016) which is lower than the national average (estimates range from around 13% to 16%).

Some of the Borough's open spaces retain individual trees of significant size and biodiversity value. For example, Jubilee Park in Waterlooville contains many very large Oak trees, some of which are likely to be of veteran[8] status. These trees exhibit cracks, holes and cavities likely to be used by bats and nesting birds.

Figure 15: Mature Oak tree at Jubilee Park, Waterlooville

8 Veteran trees are not necessarily very old, but often show a range of features that are also found on truly ancient trees: cavities, holes, decay, deadwood and fungi. Veteran trees are almost always of high value to wildlife.

Parts of the Borough still retain networks of hedgerow habitat: some of these are of relatively modern origin but many are remnants of very old field boundary systems (Figure 16) and may be many hundreds of years old. Hedgerows, whether in rural or more urban locations, are critical features of the landscape providing feeding, resting and breeding sites for many different species and making connections between habitat patches.

Figure 16: Example of extensive hedgerow network at Warblington Farm

Woodland priority habitat types

Figure 17: Wet Woodland at The Warren, Leigh Park

The following section describes the range of Priority Habitats associated with woodland and trees.

Lowland mixed deciduous woodland

This broad habitat is found on a range of soil types and takes in most of the semi-natural woodland in Havant, including ancient woodland[9]. There is great variety in the species composition of the canopy layer and the ground flora. Dominant canopy trees include Oak and Ash, which may occur with virtually all combinations of other locally native tree species. Ground-level flora can be very rich, containing some of our most well-known spring wildflowers such as Bluebells, Primroses and Wood Anemones. Areas of Lowland Mixed Deciduous Woodland are located on both the mainland and Hayling Island, for example at Queens's Inclosure, Southleigh Park and Tournerbury.

Wet woodland

Wet woodland occurs on poorly drained or seasonally wet soils, usually with Alder, Birch and Willow as the dominant tree species. The ground flora tends to be dominated by wetland grasses, sedges and herbaceous species such as Flag Iris. There is one large area of wet woodland within Hollybank Woods where drainage is poor and some small patches either side of the A3(M), as well as at Bells Copse and Nore Barn Woods. Other small areas of wet woodland occur in various locations by stream valleys e.g. The Warren, Leigh Park.

9 Ongoing work is being undertaken to identify areas of Lowland Beech and Yew Woodland Priority habitat which has currently been recorded as Lowland Mixed Deciduous Woodland.

Wood-pasture and parkland

Wood-pasture and parkland is the product of historic land management and typically consists of widely spaced, large trees, interspersed with grazed grassland or heathland. There is only one example of this habitat type in the Borough in the area around Staunton Country Park/ Thicket Lawn.

Traditional orchards

Trees in traditional orchards are, or were, grown for fruit and nut production. The trees are long-lived, planted at low densities and cultivated using low-intensity methods. The wildlife of orchard sites depends on the mosaic of habitats they encompass e.g., fruit and non-fruit trees, scrub, hedgerows, hedgerow trees, grassland, fallen dead wood, ponds and streams. A feature of the biodiversity of traditional orchards is the great variety of fruit cultivars that they contain.

Figure 18: Wood anemone

Hedgerows

A hedgerow is a 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 than 20m wide. Any bank, wall, ditch or tree, and herbaceous vegetation within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat. All hedgerows consisting predominantly (i.e., 80% or more cover) of at least one woody UK native species are classed as priority habitat. Hedgerows within Havant have been mapped as linear features (km), although there is no comprehensive information for Priority hedgerows.

Scrub

Scrub is often described as a 'successional habitat', meaning that it is temporary and in transition between one habitat (more open areas such as grassland) and another (generally closed woodland). Scrub is dominated by woody bushes/shrubs (e.g. Blackthorn and Hawthorn) and can be a few scattered bushes, a patch of bramble, a dense thicket next to a woodland, or gorse bushes on heathland. There are many rare and threatened species of plants, mammals, insects and birds associated with this habitat, including the Hazel Dormouse. Scrub habitat is widespread, common and occurs in association with a variety of habitats. Some scrub types are priority habitat, but there is none recorded in Havant.

Risks to woodland and trees

Lack of management

Lack of management is a threat to Havant's woodlands - without some form of management many woodlands become over shaded and dominated by mature trees without any variation in age, structure, or cover, reducing the abundance and diversity of wildlife. Additional pressure comes from excessive deer browsing which contributes to changes in woodland ground flora, in turn affecting invertebrates, mammals and birds: deer browsing is an increasing threat to the UK's woodland habitats.

Fig 19: Woodland management area at Hollybank Wood, showing different ages of trees and shrubs

Climate change

Other threats include climate change, with hotter summers and warmer wetter winters decreasing the suitability for different tree species and increasing the likelihood of damage or loss from drought (particularly in urban areas), wildfire, flooding, storms and pests and diseases. Ash dieback is already impacting the Borough, and other pests and diseases continue to threaten our native tree species.

Trees in urban areas are also susceptible to urban stress factors such as heat, pollution, soil compaction, recreational pressure, deliberate fires, litter and nutrient enrichment by dog fouling. Woodlands in urban and suburban areas are also at risk from the introduction of invasive plant species, whether deliberately or accidentally introduced: the plant species can outcompete native flora. The average life expectancy of urban trees can be relatively low and depends on factors such as the specific location, proper care and community involvement, among others.

Focus on: Invasive non-native plant species

Many urban woodlands are adjacent to residential gardens, with garden waste thrown into the woodlands being an obvious source of non-native plant species. Illegal waste dumping is another source of invasive plant species.

Some non-native plant species can be extremely damaging to woodland habitats. These plants grow and spread rapidly and easily out-compete and smother native vegetation. Some of the most invasive and damaging species in woodland habitats are:

- Japanese Knotweed
- Himalayan Balsam
- Variegated Yellow Archangel

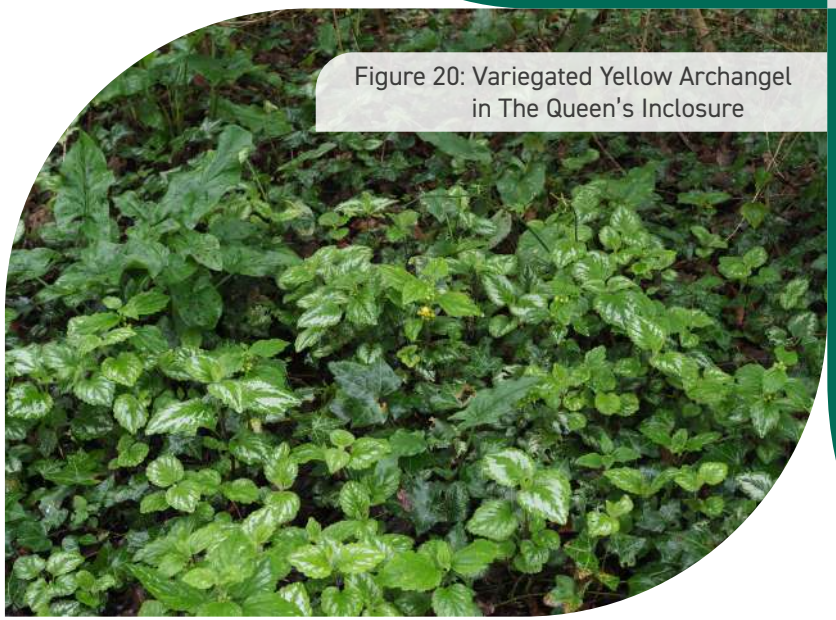


Figure 20: Variegated Yellow Archangel in The Queen's Inclosure

Opportunities for biodiversity enhancement

Enhancing woodland connectivity

There are undoubtedly opportunities for improving the connectivity of woodland habitats. This could include ensuring that development landscaping schemes prioritize woodland connectivity or undertaking new tree and shrub planting on Council land. Many of the Borough's older woodlands are severely fragmented: linking these up through targeted new plantings or natural regeneration is one way of increasing habitat connectivity.

Natural regeneration of woodland

Natural regeneration is an alternative or complimentary method to deliberate tree planting. Most natural regeneration takes place within close proximity to existing trees, with seed dispersal aided by wind or animals. It can help with woodland creation especially when tree nurseries are unable to supply enough bio-secure tree stock to meet demand.

Woodlands created from natural regeneration are more complex therefore increasing biodiversity, more adaptable and thus more climate resilient, and more effective at absorbing and storing carbon. Success depends on many factors such as soil condition, levels of existing vegetation, ground disturbance and natural protection of seedlings.

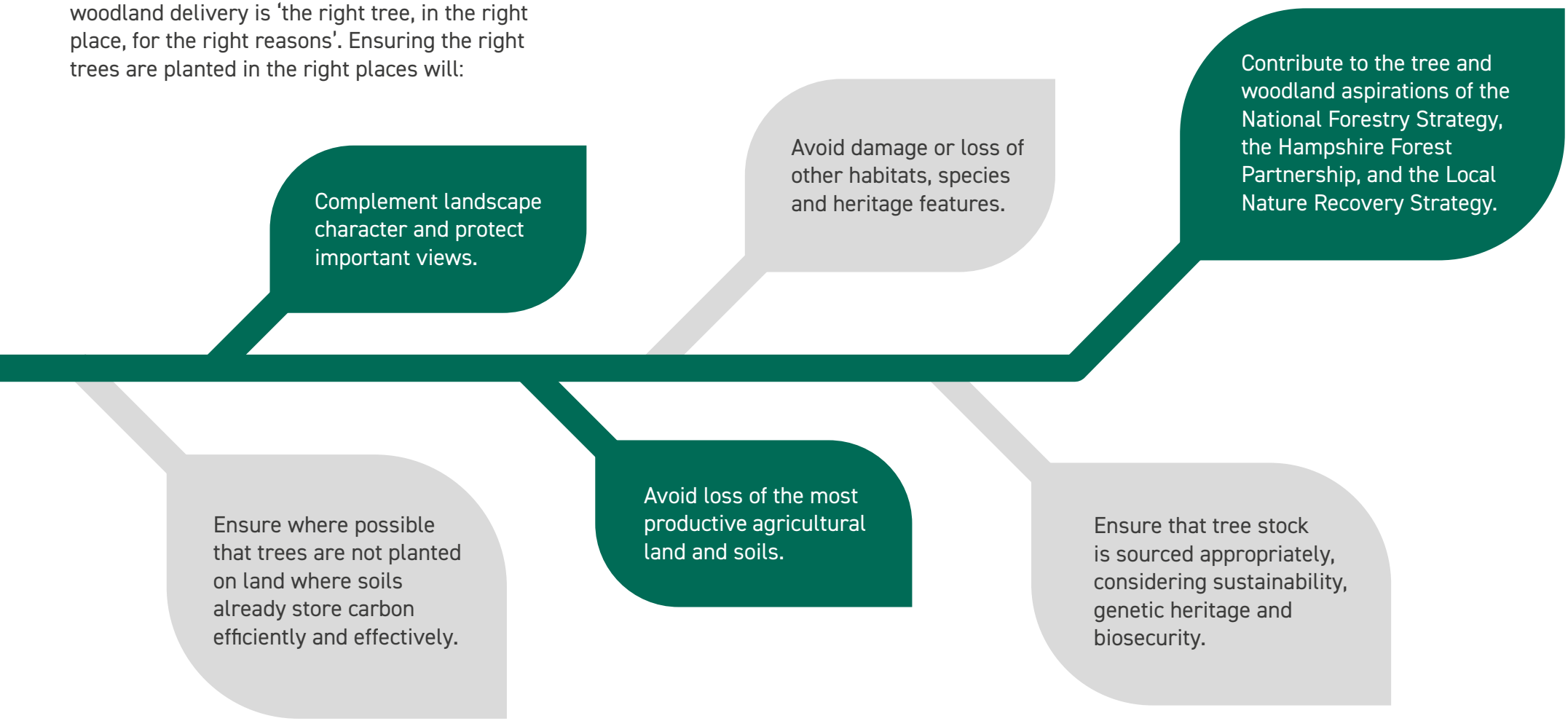
There are many benefits of natural regeneration, which include:

- Cost-effective – cheaper for landowners with no need to buy established trees and materials.
- Reduces disease risk – allowing trees to naturally regenerate reduces demand for importing trees and therefore reduces the disease and pest risk.
- Eliminates the need for plastic tree guards.
- Creates healthier woodlands.
- Diverse ecosystems – can create more natural landscapes and species mixes which benefit wildlife.

However, there are also many challenges which prevent the use of natural regeneration for woodland creation:

- The pace and process of natural regeneration is complex and unpredictable.
- Financial support in the UK for expanding woodland favours tree planting over natural regeneration.
- Securing land tenure and property rights to set aside areas for natural regeneration.
- Natural regeneration can only take place adjacent to a tree seed source.
- A perception that employing natural regeneration is in some way neglect.

The underpinning principle for tree and woodland delivery is 'the right tree, in the right place, for the right reasons'. Ensuring the right trees are planted in the right places will:



ACTION 6: The Council will investigate opportunities for managing its land to improve woodland connectivity and quality, working alongside existing community stakeholders as necessary. The Council will review and update its Tree Strategy.

Opportunities to enhance woodland quality

Woodland management

Woodland management often involves a mix of approaches that mimic natural processes such wind and storm damage and grazing by large herbivores i.e. periodical removal of some vegetation to allow in more light and space for younger trees, shrubs and other plants to establish. Without some form of management many woodlands become over shaded and dominated by mature trees without any variation in age, structure, or cover, thus reducing the abundance and diversity of wildlife.

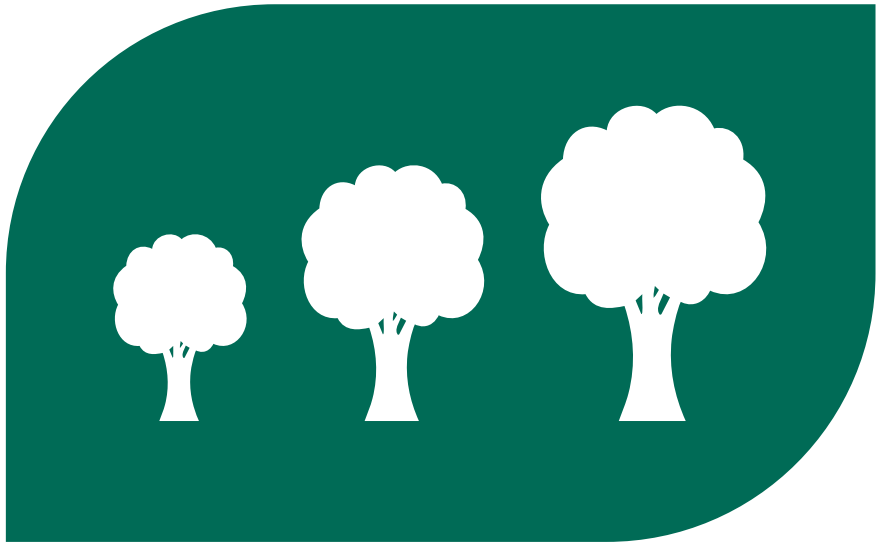
Sites that were once ancient woodland but have been converted to planted forests are known as plantations on ancient woodland sites (PAWS). Many PAWS retain at least some characteristics or remnants of native ancient woodland, which give them the potential to be restored. The Borough contains several PAWS, such as The Queen's Inclosure and Bells Copse.

Management plans are essential in managing high quality woodland habitat that optimises biodiversity. An essential part of management is monitoring and remedial action if required. Identifying funding opportunities and budgets for long term management are key considerations and often limit what can be achieved; however external funding opportunities are increasingly becoming available in the fight to tackle the nature and climate crisis[10].

10 https://www.gov.uk/government/collections/tree-planting-and-woodland-creation-funding-and-advice

SSSI data[11]

Lowland and mixed deciduous woodland is an interest feature within Chichester Harbour SSSI, and part of the SSSI contains the ancient Tournerbury Wood on Hayling. The condition of the woodland SSSI is assessed as unfavourable – recovering (approx. 40ha) or favourable (approx. 26ha)[12]. There is therefore the potential to improve this woodland habitat through continued management.



Best practice

The UK Forestry Standard (UKFS) is the reference standard for sustainable forest management across the UK, and applies to all woodland, regardless of who owns or manages it. The standard ensures that international agreements and conventions on areas such as sustainable forest management, climate change, biodiversity and the protection of water resources are applied in the UK. The Forestry Commission is responsible for implementing the UKFS in England.

The Forestry Commission and Forest Research have a wealth of good practice guidance relating to woodland management for biodiversity.

11 It should be noted that the condition assessments for the majority of SSSIs are over 10 years old, however available data on habitat condition/quality is hard to find.

12 https://designatedsites.naturalengland.org.uk/SiteFeatureCondition.aspx?SiteCode=S1003245&SiteName=Chichester%20Harbour%20SSSI

GRASSLAND

Summary

Fig 21: Sinah Common. Species rich dune grassland with Green-winged Orchids

There is approximately 67ha of priority grassland habitat within the Borough, one of our scarcest and most fragmented habitats.

Grassland in the Borough supports a variety of priority species including rare plants, pollinating insects, birds such as Skylark and wintering wildfowl and waders, and mammals.

Key grassland sites in the Borough include Portsdown Hill, Sinah Common and the south Hayling coast, Conigar Point Meadow, Brook Meadow, Pyecroft's Meadow, West Lane fields, and Warblington Farm Meadow.

Key opportunities for protection and recovery/enhancement include ensuring appropriate management and improving habitat connectivity.

Key threats to grassland in Havant include urbanisation, agricultural intensification, climate change, lack of appropriate management, nutrient enrichment, and recreational pressure.

Overview

Grasslands are areas dominated by grass species and generally lack any significant tree or shrub cover. Grasslands are usually managed by grazing or cutting but may also occur where conditions are naturally unsuitable for tree growth. There are many types of grassland, differing in factors such as age, soils, plant species, and management. Grasslands found on different soil types – from wet to dray, acid to chalky - support very different communities of plant and animal species.

The most valuable grasslands for biodiversity tend to be older grasslands that have not been 'improved' by the application of fertilisers and which have not been cultivated. These ancient grasslands are usually very rich in plant species and associated wildlife and are important cultural heritage features. Grasslands are exceptional carbon stores, and their protection can greatly assist in tackling the consequences of a changing climate.

Fig 22: Pyecroft's Meadow SINC, Hayling Island: an area of rich coastal grassland

Havant supports approximately 67ha of Priority Habitat grassland (heathland has been included within this, of which there are two small areas in the Borough). These are some of the most scarce and fragmented habitats within the Borough. Priority grassland habitats support a huge diversity of wildlife. This includes an abundance of flowering plants including scarce species such as orchids, a huge diversity of insects and pollinators including bees, hoverflies, beetles, ants, grasshoppers and butterflies, and birds such as Skylark and wintering wildfowl and waders. Much of the grassland habitat within the Borough is agricultural pasture and/or species-poor, due to agricultural intensification including ploughing and fertiliser use.

Ancient grasslands (a semi-natural plant community maintained as grassland since at least 1840[13]) include meadows and grazing pastures. There is no national inventory for ancient grasslands, but they are incredibly rare e.g. in the UK it is estimated that over 97% of our wildflower meadows have been lost since the 1930s.

13 https://insideecology.com/2018/04/23/ancient-grasslands-in-england-a-summary/

Pollinators reliant on grassland are essential for biodiversity and our wider environment. They maintain the diversity of wildflowers and support healthy ecosystems, particularly by helping plants to produce fruits and seeds which birds and other animals rely on. They are not only of enormous value to crop production (and therefore vital to the UK economy) but are also valued and appreciated by the public, and, as part of our natural and cultural environment, contribute to our health and well-being.

Grass road verges and other grasslands managed for amenity purposes are often overlooked but can support a huge diversity of plants and animals – many are home to remnant populations of once widespread plants found in meadows, fenlands, and farmland. While some road verges – particularly at junctions, certain bends or on busy roads – need to be cut for driver and pedestrian safety, many could be left to grow and remain uncut until late summer when seeds have set, and insects have benefitted from the nectar and pollen. Our insect species make use of all parts of plants – flowers, stems, seeds, leaves and roots – so making sure some grassland is left uncut can provide critical support to declining insect populations.

Grassland categories

Unimproved

‘Unimproved’ grasslands – sometimes also called ancient grasslands - are the most species rich. The term unimproved refers to the fact that these meadows have not been degraded through agricultural improvement e.g., subject to ploughing, reseeding and the use of herbicides and fertiliser. These grasslands have usually seen a consistency of low-density or seasonal grazing over many centuries: chalk downland is one example. Such grasslands are extremely rare, and within Havant Borough ancient grasslands usually only survive in locations such as churchyards, some farm holdings, and surviving downland fragments.

Semi improved

‘Semi improved’ refers to those grasslands that have been subject to some form of artificial improvement, but still contain a good number of grasses and wildflowers. They are not as botanically diverse as unimproved grasslands, but with appropriate management they can be restored over time. Restoration of these grasslands by natural regeneration from the seed bank, the use of local green hay or colonisation from plants in adjacent areas are the most effective and ecologically robust methods for improving plant diversity for the long-term.

Improved

‘Improved’ grassland (much of the short-mown amenity grassland we find in parks and open spaces and roadside verges) is species poor due to agricultural improvement e.g. through ploughing and fertiliser use and is widespread across the UK. Where it is mown short it supports little biodiversity, however it can be managed to improve its biodiversity value. This can be done through management to provide tall grass and/or tussocky grass areas which allow existing wildflowers such as dandelions and clovers to flower - providing nectar and also shelter and nesting areas for invertebrates. If soil fertility can be reduced over time, then species richness can be increased. The use of plug planting and the introduction of seed mixes (ideally locally sourced native seed) can help to improve biodiversity in urban areas.

Grassland priority habitat types

Lowland calcareous grassland

Famous for its huge floral diversity, including rare orchids, and its rare and beautiful butterflies, this habitat is found on nutrient poor calcareous (chalk) soils. Traditionally sheep grazed, the typically short and open turf, well-drained conditions and warm climate also make it suitable for invertebrates, and there are hundreds of rare species associated with this habitat.

There are scattered areas of lowland calcareous grassland in the Borough on Portsdown Hill at Fort Purbrook and surrounding the former Farlington Redoubt, but they form the eastern end of a larger corridor of habitat along the Portsdown ridge north of Portsmouth. There is also chalk grassland along the northern section of the former Billy Line on Hayling, the result of chalk imported in the 1860s to help construct the railway and from chalk imported during the M27 construction in the 1970s to cap old landfills.

Figure 23: Chalk deposited in the 1860s creates an area of lowland calcareous grassland along the former Hayling Billy railway

Lowland dry acid grassland

Occurs on nutrient-poor, generally free-draining acidic, often sandy soils, normally managed as pasture or subject to grazing by rabbits. Species richness can vary from relatively species-poor to species-rich. Extensive areas of dry acid grassland – often very species-rich - can be found at Sinah Common, Sandy Point and at various locations along the south of Hayling Island such as at Beachlands. These coastal grasslands are mixed with vegetated shingle, sand dune grassland and scrub. Lowland dry acid grassland can also be found on the mainland in the north, around Blendworth Common and Havant Thicket.

Lowland meadows

Includes most forms of unimproved neutral (neither acidic nor chalky) grassland across the lowland landscapes of the UK. They are typically cut for hay but can also be grazed. Depending on location and underlying geology, these grasslands range from very dry to very wet. They are often very rich in plant species and can support large numbers of invertebrates. There are examples of this habitat type scattered across the Borough; areas include Waterlooville Golf Course, Dunsbury Farm, Neville's Park, Conigar Point Meadows, Brook Meadow and Chichester Road Meadow. At coastal locations such as Conigar Point Meadows and Warblington Meadow, the incursion of seawater creates interesting mixes of typical lowland meadow with saltmarsh species.

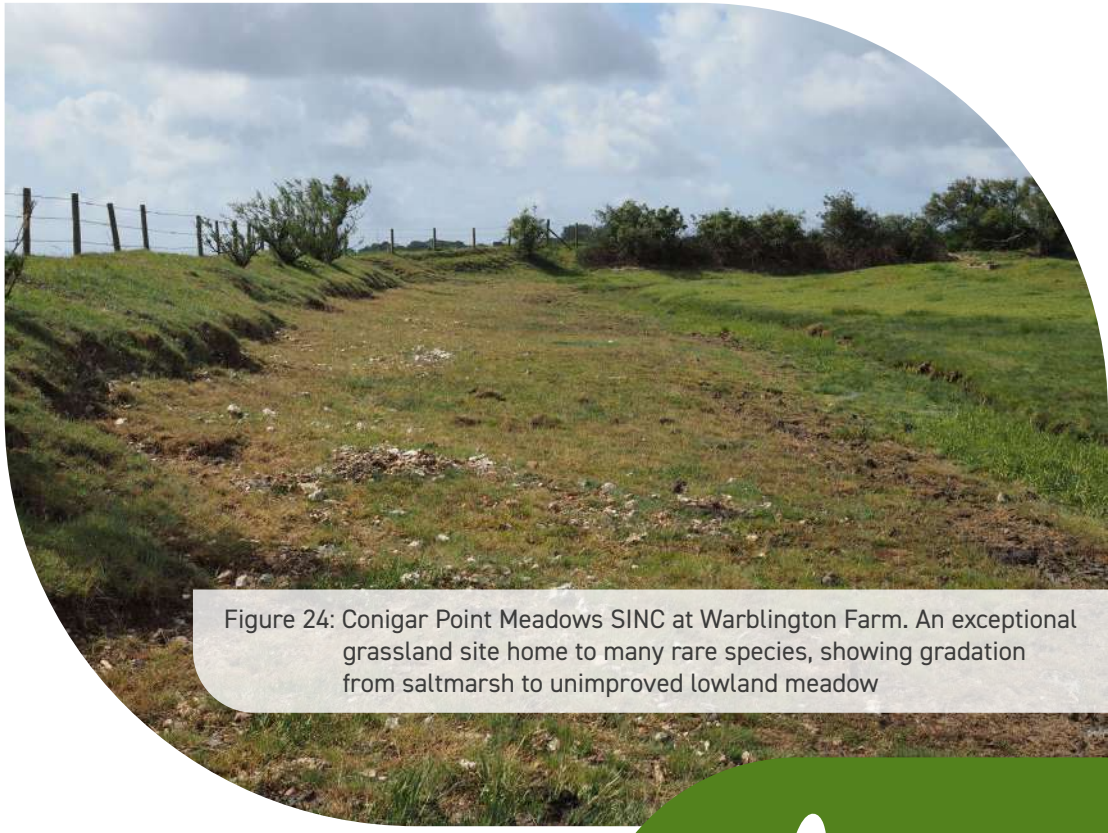


Figure 24: Conigar Point Meadows SINC at Warblington Farm. An exceptional grassland site home to many rare species, showing gradation from saltmarsh to unimproved lowland meadow

Purple moor grass and rush pastures

These marshy grasslands occur on poorly drained, usually acidic soils in lowland areas. Purple Moor Grass itself, and various rush species, are usually abundant and often occur together with patches of wet heath, dry grassland, swamp, wet woodland and scrub. Grazing and mowing are important to maintain plant species richness. Areas of Purple Moor Grass and Rush Pasture can be found at Southmoor, around Neville's Park and at Waterlooville Golf Club.

Lowland heathland

A broadly open landscape on impoverished, acidic mineral and shallow peat soil, which is characterised by the presence of low woody shrubs such as heathers and gorse. It is generally found below 300 metres altitude in the UK. It is often mixed with other habitats such as scattered trees and scrub, bracken, bare ground, acid grassland, bogs and open water. There is one very small area of rare coastal heath at Sandy Point on Hayling Island where coastal heathland mixes with sand dunes, coastal grassland, and shingle plant communities.

Non-priority grasslands

The vast majority of grassland within the Borough comprises rather species-poor amenity grassland found on road verges and in urban greenspaces. Much of this grassland will be of relatively recent origin and is managed regularly by mowing. Although these grassland areas are generally lacking in plant species diversity, they usually support common and widespread species that provide vital food sources for pollinating insects.

Focus on: Sandy Point

Sandy Point, situated at the south-eastern corner of Hayling Island, is one of Hampshire's most important wildlife sites. Now a Local Nature Reserve and also within a Site of Special Scientific Interest, Sandy Point is a remnant of formerly extensive coastal grassland and heathland that would have covered most of coastal southern Hayling Island.

The site is remarkable for the variety of habitats contained within a relatively small area (just 17Ha): acid grassland, saline grassland, coastal heathland, dunes, shingle, scrub and open water. This diversity of habitat types supports an impressive number of species. Springtime specialties include tiny species like Spring Vetch and a variety of clovers, and as summer appears the grassland is filled with colourful plants such as Lady's Bedstraw and Pyramidal Orchids: unusually, the presence of ground-up marine mollusc shells (which are rich in calcium) allows chalk-loving plants like these to grow alongside typical heathland species including Lousewort and the three commoner native heathers: Ling, Bell Heather and Cross-leaved Heath.

Relic saltmarsh creeks within the reserve retain interesting plant species such as the nationally scarce Dotted Sedge and Parsley Water-dropwort. Sandy Point has the only population of the impressively large Sharp Rush on the south coast of the UK.

All this diversity in plants attracts numerous insect species, and Sandy Point is an excellent area for butterflies in particular. Birdlife is also rich, with the mix of grassland, heathland and scrub attracting resident and migrant breeders. One of the star birds is the scarce Dartford Warbler. Sandy Point is owned and managed by Hampshire County Council.

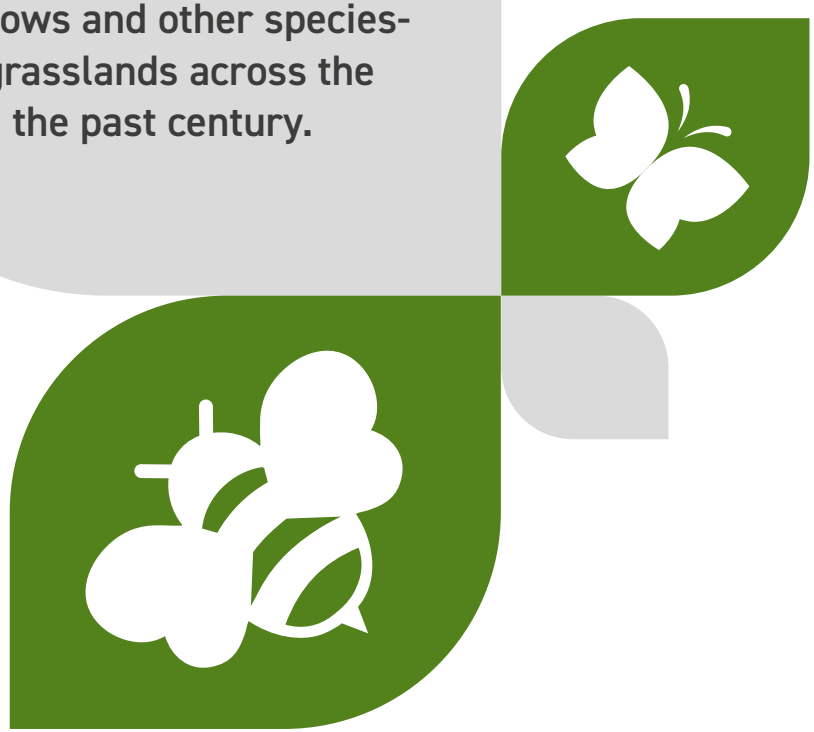
Figure 25: Bell heather

Figure 26: Sharp rush

Risks to grassland

The global picture

Agricultural intensification, which includes fertiliser use and conversion to arable, has contributed to the loss of c.97% of wildflower meadows and other species-rich grasslands across the UK in the past century.



Agricultural management continues to threaten these habitats and there is also growing concern about declines in pollinators, largely related to the use of pesticides.

Although agri-environment schemes have incentivised wildlife-friendly farming, including funding the creation of new grasslands, and conservation efforts have delivered restoration successes, the fragmentation of remaining grasslands is isolating habitats and species. This is worsened by temperature and rainfall changes from climate change, resulting in an increased risk that vulnerable plants and animals will become extinct, locally and nationally.

A lack of suitable grassland management is also a threat e.g. hay cutting and grazing. Changes in grazing regimes are particularly relevant to coastal grazing marsh in Havant. The best sites for grassland in the Borough are usually within nature reserves where specific management is undertaken to maintain their importance.

The demand for tidiness, particularly in urban areas e.g. along roadside verges and within public parks and greenspaces, can often limit management that optimizes biodiversity (alongside budgetary constraints). More often than not, the biodiversity value of grassland in urban areas such as in parks and green spaces is completely diminished, where vast amounts of it are managed as short mown amenity grass.

Pressure from recreation is also a significant issue in Havant, particularly in relation to coastal grasslands. South Hayling has many areas of important grassland, but these are often subject to high levels of trampling, compaction and dog fouling which can cause localised damage to sensitive habitat.

Opportunities for biodiversity enhancement

Grassland management

Grazing and/or mowing (including the removal of cuttings) are important in maintaining and restoring the species richness of grassland habitats. The removal of grass – either by grazing or mowing-and-collecting – removes nutrients and reduces soil fertility over time. Lowering soil fertility reduces the dominance of more 'aggressive' grasses and vigorous herbaceous species such as nettles and docks, allowing finer grasses and a greater diversity of wild flower species to establish. Grazing in particular helps to open-up grasslands, with poaching by grazing animals' feet creating patches of bare soils essential for plant germination and for certain invertebrates. Reducing soil fertility is the single most important factor in enhancing grasslands for biodiversity.

Maintaining a diversity of grassland heights is also important. Besides the value of flowers for pollinating insects, the leaves, stems, roots and seeds of plants are essential for supporting insect populations as well as birds and small mammals. Grassland management should ideally aim for maximum variability in vegetation height, creating a rich mosaic of structure throughout the seasons.

Within Havant there are over 40 volunteer groups that are working to improve their local environment for biodiversity. This represents a huge opportunity to encourage and maintain community involvement, and indeed many of these groups have already taken on the management of grassland sites with the aim of improving their biodiversity value.

Fig 27: Cattle at Warblington Meadow SSSI. Continued grazing is essential for maintaining biodiversity

Opportunities to enhance grassland connectivity

Given the often-fragmented nature of much of our grassland habitats, improving connectivity between patches of good habitat is critical for nature recovery. The Local Nature Recovery Strategy will identify opportunities for habitat creation and enhancement measures that will contribute to improving grassland connectivity. There is a role for the Council to play in ensuring that planning policy and decisions take account of the LNRS, especially in the context of mandatory Biodiversity Net Gain.

There is huge potential for urban and suburban amenity grasslands to contribute by providing stepping stones and linkages between patches of good quality grassland habitat. There is an obligation on the Council to consider how the management of its amenity grasslands can help with improving connectivity.

SSSI data

Habitats within SSSIs are monitored by Natural England, and updates are given on the condition of these habitats. Where habitat condition is unfavourable, causes are identified and remedies suggested. Priority grassland habitat occurs within Sinah Common, Chichester Harbour and Langstone Harbour SSSIs, some areas of which are in unfavourable or unfavourable recovering condition, suggesting that there are opportunities for improvement. The Council continues to work with Natural England in addressing management challenges on SSSI sites it has responsibility for.

Best practice

Plantlife is a British conservation charity working nationally and internationally to save threatened wild flowers, plants and fungi. Plantlife publish a series of best practice guidelines, including Managing Grassland Road Verges, a best practice guide (September 2019), and The Good Verge Guide, which provide practical advice on how local authorities can fulfil their biodiversity duties whilst reducing management burdens over time. They also have a wealth of information on meadow management through their 'meadows hub'.

Fig 28: The Good Verge Guide

Figure 28 source: From plantlife.org.uk

ACTION 7: The Council to trial changes to amenity grassland management within its control, working alongside community groups to deliver biodiversity benefits where possible. The Council will also continue to engage with partners to explore opportunities on grassland habitats that are not under its direct control.

ACTION 8: The Council to review the management of protected sites under its ownership or control and ensure that opportunities for grassland enhancement are pursued.

Focus on: Brook Meadow

Located in Emsworth, Brook Meadow consists of five acres of grassland, surrounded by woodlands and flanked by two streams. The site supports a great variety of plants, including at least three orchid species, plus scarce species such as Water Vole.

The site is owned by the Council, and there is an active community group called the Brook Meadow Conservation Group (formed in 2000 by local residents). Their aim is to restore, protect and conserve the natural environment of the meadow and its wildlife for the benefit and quiet enjoyment of the people of Emsworth. Since 2000 it has been designated as a Site of Importance for Nature Conservation and a Local Nature Reserve.

Fig 29: Interpretation signage at Brook Meadow

The Council supports the work of the conservation group through providing funding for the cutting of the meadow. Conservation work sessions take place at the meadow twice a month.

Figure 29 source: Produced by local artist Marian Foster

FRESHWATER & WETLAND

Summary

The Lavant Stream, River Ems and Hermitage Stream flow through Havant, and there are a number of other important chalk streams within the Borough. These rivers and streams support a range of protected species including Water Vole and Otter.

Other important wetland habitats in the Borough include reedbeds, ponds, ditches, and streams.

Key opportunities for protection and recovery/enhancement include addressing waterborne pollution and improving the connectivity and quality of wetland habitat through habitat restoration and creation at a range of scales e.g. through the LNRS.

Coastal floodplain grazing marsh is an important priority wetland habitat in the Borough, supporting internationally important populations of coastal birds.

Key risks to freshwater and wetland habitat in the Borough include agricultural intensification, pollution, physical modifications to river and stream channels, lack of management and invasive non-native species.

Overview

Figure 30: Lambourne Stream

Wetland habitats (which include rivers, streams, floodplains, lakes, ponds, ditches, wet grasslands, marshes, bogs, fens, wet woodlands and reedbeds) are some of the most important habitats for people and wildlife, yet they are also some of the most threatened habitats. They provide natural corridors and stepping stones for wildlife that intersect and connect many landscapes.

The Lavant Stream, River Ems and Hermitage Stream flow through Havant, and there are a number of other important chalk streams within the Borough such as the Lambourne Stream and Nore Barn Stream.

Chalk streams contain pure, clear water that originates in underground chalk aquifers and springs emerging at the boundary between the chalk and clay below the Portsdown ridge. They are unique, with most found in southern England, and they support a wide range of wildlife, including iconic species such as Kingfisher, Otter, Water Vole, Brown Trout and Salmon.

Havant falls within the South East River Basin District[14]. The South East River Basin District Management Plan provides a framework for protecting and enhancing the benefits provided by the water environment.

14 https://www.gov.uk/guidance/south-east-river-basin-district-river-basin-management-plan-updated-2022

Freshwater & Wetland priority habitat types

Coastal and floodplain grazing marsh

Coastal and floodplain grazing marsh is found on low-lying coasts and along slow-flowing rivers and estuaries. It is a grassland defined by its management and its proximity to water rather than the underlying soils or the vegetation. Most grazing marshes are used for cattle grazing; some are cut for hay or silage. In the winter, extensive and shallow flooding can attract huge numbers of wildfowl such as Brent Goose, Wigeon and Teal and waders such as Lapwing, Redshank and Snipe. The most extensive areas of grazing marsh are found on the east coast of Hayling Island, however there are some smaller areas on the coast of the mainland such as at Conigar Point. Warblington Farm is an excellent example of floodplain grazing marsh in Havant.

Reedbeds

Reedbeds are wetlands dominated by stands of Common Reed, where the water table is at or above ground level for most of the year. They tend to incorporate areas of open water and ditches, and small areas of wet grassland and wet woodland may be associated with them. Reedbeds are amongst the most important habitats for birds and invertebrates in the UK. Our largest areas of reedbed are found at Langstone Mill Pond and Warblington Meadow SSSI.

Rivers

This habitat type includes a very wide range of types, encompassing all natural and near-natural running waters in the UK (i.e. with features and processes that resemble those in 'natural' systems). Watercourses officially classed as rivers in Havant are the Lavant Stream, Hermitage Stream and River Ems. There is incomplete data for priority river habitat in Havant.

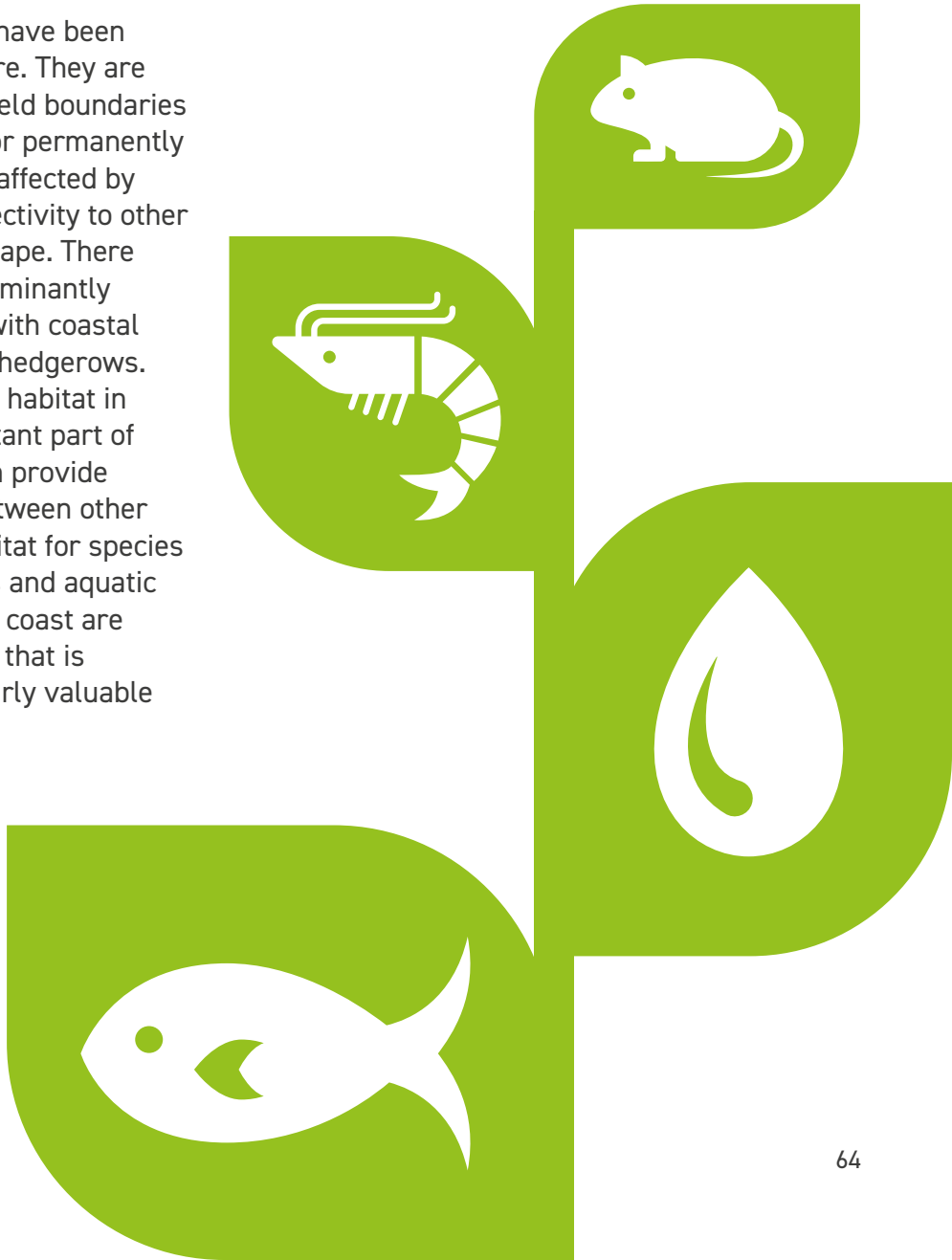
There are also non-priority stream habitats which have biodiversity value in Havant such as the Lambourne Stream, Nore Barn Stream and various other unnamed watercourses.

Ponds

Priority ponds are defined as permanent or seasonal standing water bodies up to 2ha in size which support priority species or have a limited geographic distribution. There are no priority habitat ponds recorded in Havant (although this does not mean they do not exist – they have just not been mapped), however there are ponds scattered throughout the Borough which will have value for biodiversity (this will vary depending on their management/ location). Research by the Freshwater Habitats Trust shows that, at the landscape scale, ponds support more biodiversity than larger waterbodies, including rivers and lakes.

Ditches

Ditches are narrow channels that have been created to drain land for agriculture. They are usually straight, following linear field boundaries or roads. They can be seasonally or permanently wet. The biodiversity of ditches is affected by their management and their connectivity to other wetland habitats within the landscape. There are many ditches in Havant, predominantly field drainage ditches associated with coastal and floodplain grazing marsh and hedgerows. Although ditches are not a priority habitat in their own right, they are an important part of other priority habitats. Ditches can provide critical freshwater connections between other wetland habitats, and provide habitat for species such as Water Vole, aquatic plants and aquatic invertebrates. Ditches close to the coast are often brackish (they contain water that is slightly salty) and can be particularly valuable for biodiversity.



Risks to freshwater and wetland

Many of the key issues affecting the water environment are outside the control of the Council: it is not the regulator of the water industry or the agricultural sector and is not responsible for the management of our rivers and streams. As such, opportunities for the Council to influence strategic-level matters such as these are limited. However, the Council will continue to use the influence it has to bring about improvements in water quality and wetland management, especially through the planning system and its presence in various stakeholder groups and initiatives. Where the Council has ownership or control over wetland habitats or those nearby, it will ensure that its decisions and activities do not result in harm to those habitats.

Habitat loss

The UK has lost a significant percentage of its freshwater and wetland habitats in the last 100 years, largely due to drainage of agricultural land and flood alleviation measures. Remaining habitats can suffer from a lack of management e.g. ponds and ditches becoming overgrown and over shaded, or poor management e.g. grazing marshes that are subject to heavy grazing or early cutting regimes that are not compatible with populations of ground nesting wading birds.

Water quality

Water quality is a significant and topical issue across the UK, with many of our rivers, streams, lakes and ponds suffering from unacceptable levels of pollution from agriculture, industry, roads and the public sewerage system. In freshwater habitats and estuaries, increased levels of nutrients such as nitrogen and phosphorus encourages the growth of certain plants, disrupting natural processes and impacting wildlife. This process is called eutrophication and damages these wetland sites and harms the plants and wildlife supported by them. Pollutants from agriculture, industry and roads can lead to profound effects on aquatic wildlife.

Physical changes

Many of our rivers and streams have been physically modified for the purposes of land drainage and flood protection. Some river and stream channels have been straightened and contained and have become disconnected from their floodplains, while others have been modified by barriers. These changes impact water flow, and profoundly affect the biology of waterbodies.

Invasive species

Invasive non-native species (INNS) have a particularly negative impact on freshwater habitats e.g. 40% of freshwater non-native species established in the UK have a negative impact (in comparison to 10% across all habitats in the UK)[15]. Several plant species, as well as introduced species of fish, freshwater mollusc and crustacean are serious threats to native aquatic wildlife.

The South East River Basin District Management Plan sets out the significant water management issues for the catchment area. These include physical modifications (including of chalk streams, although there are unaffected stretches as well), pollution from wastewater, road run-off, industry and agriculture. Under the Water Framework Directive (WFD) 2019, rivers within the Borough have been assessed as being of poor (the River Lavant and River Ems) or moderate (Hermitage Stream) quality. There are also ongoing pressures of unsustainable water abstraction, which can particularly impact vulnerable chalk streams, and the continuing drainage and conversion of wetlands to other land uses.

Figure 31: The Hermitage Stream in Leigh Park. The channel has been heavily modified, disconnecting the stream from its floodplain and creating barriers to fish movement. Such engineered watercourses severely limit opportunities for wildlife

15 Invasive non-native species: challenges for the water environment (Environment Agency, October 2021).

Opportunities for biodiversity enhancement

Wetland management

Maintaining and restoring healthy wetland habitats involves a range of actions, including controlling pollution (largely from agriculture and waste water/sewerage) and abstraction, controlling non-native invasive species, removing physical modifications, understanding the impacts of land management, and re-establishing natural vegetation. Such restoration generates high quality aquatic and wetland habitat for our native wildlife. It also brings benefits for people, including improvements to downstream water quality, resilience of water supplies, and reduced flood risk, along with recreation opportunities, and increased health and well-being[16].

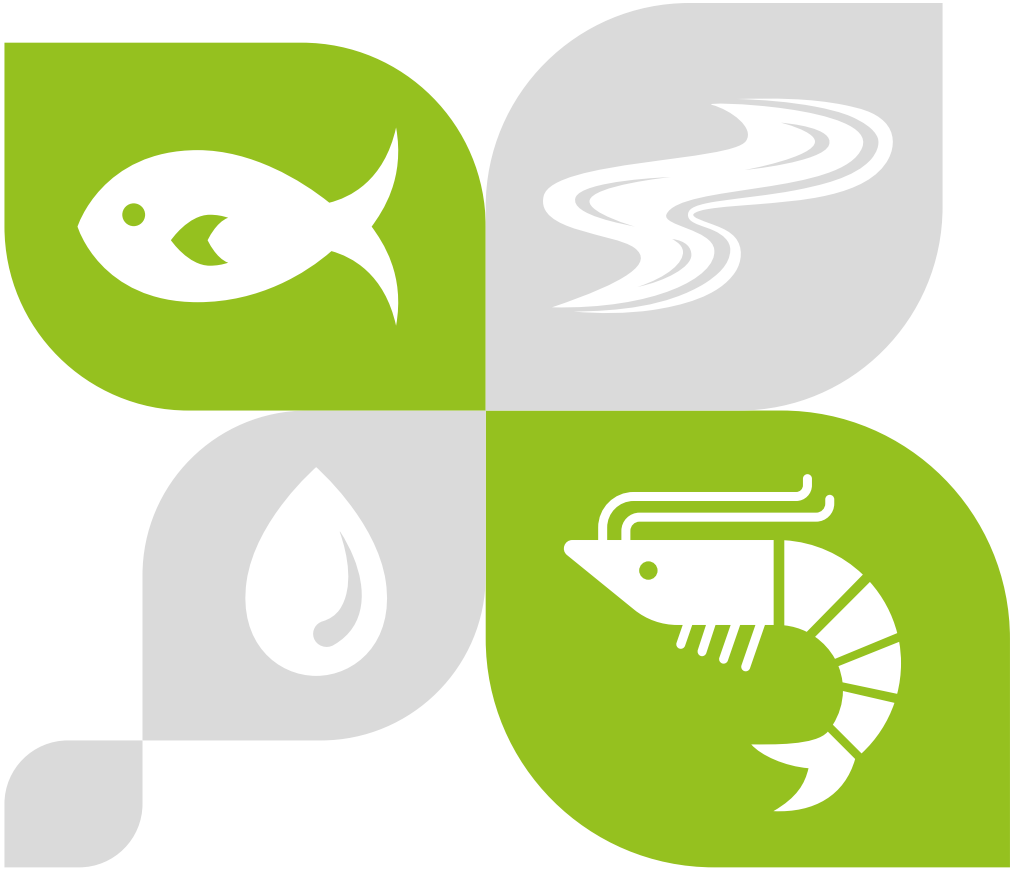
Restoration of wetland habitats is usually possible, even where they have been adversely affected by drainage, pollution or overgrazing. Tackling the indirect impacts of water quality from pollution (particularly from agriculture and waste water/sewerage) are instrumental in restoring these ecosystems, alongside direct management such as reconnecting water courses with their floodplains and restoration of rivers (re-naturalising water courses) e.g., through the removal of physical modifications or creating natural features. There is wealth of guidance for landowners and farmers on nature friendly land management, and also incentives to manage land sustainably e.g., through the Environment Land Management System (also see Section 5.7). The River Restoration Centre publishes guidance on the practicalities of, and science behind, wetland restoration measures.

16 Environment Agency Report – Biodiversity: Challenges for the water environment (October 2021)

Water quality and SSSI data

Under the Water Framework Directive (WFD) 2019, rivers within the Borough have been assessed as being of poor (the River Lavant and River Ems) or moderate (Hermitage Stream) quality. Reasons for not achieving good status include physical modification, barriers/ecological discontinuity and point source pollution.

Priority wetland habitat occurs within Warblington Meadow, Sinah Common, Chichester Harbour and Langstone Harbour SSSI's, some areas of which are in unfavourable, unfavourable declining or unfavourable recovering condition, therefore providing opportunities for improving the existing management of these habitats.



ACTION 9: The Council will investigate opportunities for managing its land to improve wetland quality and connectivity.

ACTION 10: The Council will continue to engage with national guidance and advice on nutrient mitigation and ensure that planning policy is in accordance with the latest guidance.

Case study: Warblington Farm

Lying on the shores of Chichester Harbour between Havant and Emsworth, Warblington Farm is a small dairy farm owned by Havant Borough Council and managed under a tenancy. The site has been a working farm since at least Saxon times and represents are very rare pocket of undeveloped coastal farmland on the south-east Hampshire coast.

In recent years a phased shift in land use has commenced for nutrient mitigation purposes. The first phase has entailed a move from arable to permanent pasture, managed by low intensity cattle grazing. Due to its long history of low intensity management the farm supports a large number of priority habitats including coastal and floodplain grazing marsh, coastal saltmarsh, saline lagoons, lowland meadows and wet woodlands. These are contained within two shallow valleys separated by arable fields and improved grassland. These two valleys also contain freshwater springs and clear-water streams running down to the sea, including areas designated as sites of national and local biodiversity importance. There is an extensive network of mixed-structure hedgerows. The farm includes the 3.9ha Warblington Meadows SSSI as well as the Conigar Point and Church Path Meadow SINCs. The SSSI and SINCs comprise unimproved coastal grassland and support an exceptional diversity of plant species associated with conditions ranging from saline to freshwater. Rare plant species such as Sea Clover, Stiff Saltmarsh-grass and Slender Hare's-ear thrive at this site. The farm also attracts large numbers of wintering bird species such as Dark-bellied Brent Geese and Curlews.

Figure 32: Cattle at Warblington Meadow SSSI. Light grazing is crucial for the biodiversity of this rich coastal grassland site

COASTAL HABITATS

Summary

Overview

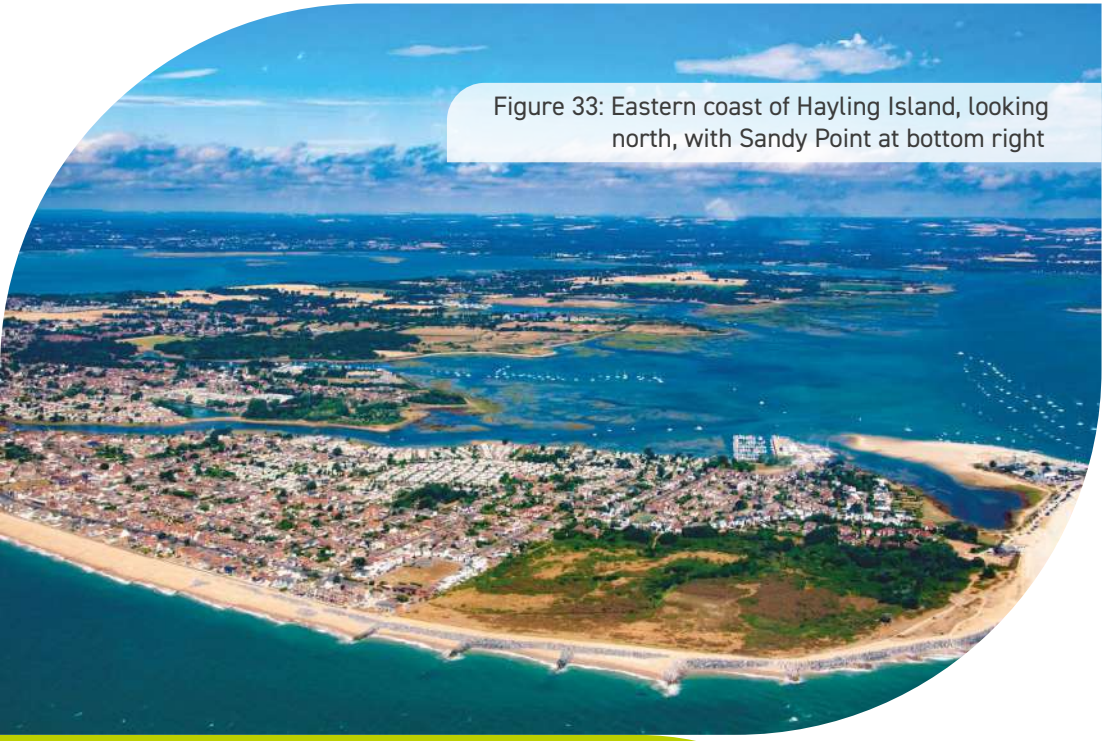


Figure 33: Eastern coast of Hayling Island, looking north, with Sandy Point at bottom right

The southern edge of the Borough is dominated by the extensive Chichester and Langstone Harbours. These two large harbours are shallow marine basins intersected by numerous small creeks and channels and are of international importance for wildlife.

Coastal habitats are complex, transitioning between terrestrial and marine. Good quality coastal sites will have the full range of coastal habitats from coastal meadow, through the various saltmarsh types, to mudflats and seagrass beds. Gutner Point on Hayling Island is a good example of this and is probably unique in Hampshire now in displaying the full range of saltmarsh habitat types in one site. Hayling Island supports probably the best array of coastal and maritime habitats in Hampshire. The Borough's coastline is one of the best places to witness wildlife spectacles such as thousands of wintering bird species.

The two harbours have supported human activities for millennia, and today the harbours are bordered by dense residential and industrial development, farmland, and are a highly attractive destination for recreation including water sports.

Havant Borough benefits from its position on the Solent coast which is internationally designated for the significant numbers of wildfowl and wader species it supports (designated as a Special Protection Area (SPA) and Ramsar site), and its various coastal habitats of international importance (designated as a Special Area of Conservation (SAC)).
The Solent's intertidal habitats, mudflats, shingle and saltmarsh as well as inland fields provide vital feeding and roosting grounds for these birds, which come during the winter (October – March).

Focus on: Breeding and wintering birds

Every autumn, tens of thousands of birds – waders, ducks and geese - migrate from their Arctic and European breeding grounds to spend the winter months in the Solent. In recognition of the Solent's importance, the majority of the coast is designated at the international level. The presence of these birds is one of the wildlife spectacles of the Hampshire coast.

Havant Borough's coastline is almost entirely covered by the Chichester & Langstone Harbours Special Protection Area (SPA) and Ramsar site. These sites provide legal protection for the following bird species:

Wintering

- Bar-tailed Godwit
- Common Redshank
- Eurasian Curlew
- Dunlin
- Grey Plover
- Ringed Plover
- Ruddy Turnstone
- Sanderling
- Dark-bellied Brent Goose
- Common Shelduck
- Eurasian Teal
- Northern Shoveler
- Northern Pintail
- Eurasian Wigeon
- Red-breasted Merganser

Breeding

- Common Tern
- Sandwich Tern
- Little Tern

Figure 34: Common Tern landing on a branch

Figure 34 source: Alexis LOURS, CC BY 2.0 <https://creativecommons.org/licenses/by/2.0>, via Wikimedia Commons

Figure 35: Hayling Oyster Beds, an internationally important site for breeding and wintering birds

As well as the species listed on the previous page, Havant Borough supports nationally important numbers of other coastal bird species. For example, 95% of the entire UK breeding population of Mediterranean Gulls nest within Langstone Harbour and the West Hayling Local Nature Reserve (the Oyster Beds), and the pre-breeding gathering of Mediterranean Gulls at Hayling Oyster Beds is the largest in the UK. These birds then move on to breed elsewhere in the UK and throughout Europe: the site is a true international biodiversity hub. The Oyster Beds site is owned by the Council, and we work alongside the RSPB to protect and enhance coastal habitats here.

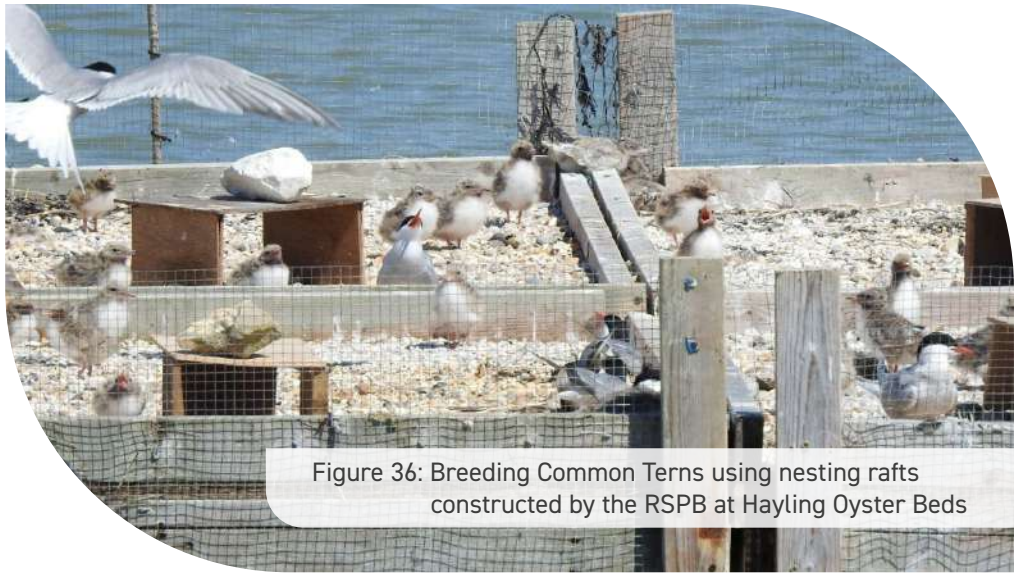


Figure 36: Breeding Common Terns using nesting rafts constructed by the RSPB at Hayling Oyster Beds

Figure 35 & 36 sources: Wez Smith

Coastal priority habitat types

Coastal saltmarsh

Coastal saltmarshes comprise the upper, vegetated portions of intertidal mudflats. They are usually restricted to comparatively sheltered locations where sediment can settle and accumulate and vegetation is able to establish and persist. Saltmarsh vegetation consists of a limited number of salt tolerant species adapted to regular immersion by the tides. The plant species found in saltmarsh depends to a large degree on the extent and duration of immersion over the tidal cycle, which is itself dependent on height above mean sea level.

Saltmarsh vegetation zoning usually follows a standard pattern. Pioneering species such as Glassworts and Cord-grasses occur in the lowest areas, replaced by taller species such as Sea Aster in the mid-saltmarsh zone, and finally by species such as Sea-lavenders, grasses and sedges in the upper saltmarsh zone.

Saltmarshes have an incredibly important role in regulating tidal flooding and preventing shoreline erosion by buffering wave action and trapping sediments, and they also play a role in filtering run-off from land and in the capture and storage of atmospheric carbon.

Studies have shown that there have been significant losses of saltmarsh in the last eighty years, with c.85% lost in Langstone Harbour and c. 56% lost in Chichester Harbour since 1946 (Natural England, 2022). Saltmarsh losses have been driven by land reclamation as well as coastal squeeze, a process whereby coastal defence structures such as sea walls prevent the natural movement of saltmarsh inland in response to sea level rise. Unable to move inland, saltmarshes are eventually eroded by the sea.

Figure 37: Saltmarsh at Northney

Saltmarshes are hotspots of coastal and marine biodiversity, providing food, shelter and safety for fish species and other marine animals and roosting opportunities for bird species during high tide periods.

Examples of coastal saltmarsh can be found in both Langstone Harbour, to the east of Farlington Marshes, and in Chichester Harbour, to the south of Emsworth e.g. Nore Rythe, and along the south and east coast of Hayling Island e.g. The Kench and north of Sinah, and at Northney on the north coast of Hayling Island. Gutner Point on the east coast of Hayling Island is probably Hampshire's best remaining example of coastal saltmarsh, showing the full range of saltmarsh types in one site. Some saltmarsh vegetation also occurs along our coastal defences such as sea walls and adjacent footpaths. The nationally rare Golden-samphire and Slender Hare's-ear are two plant species found alongside our coastal paths.

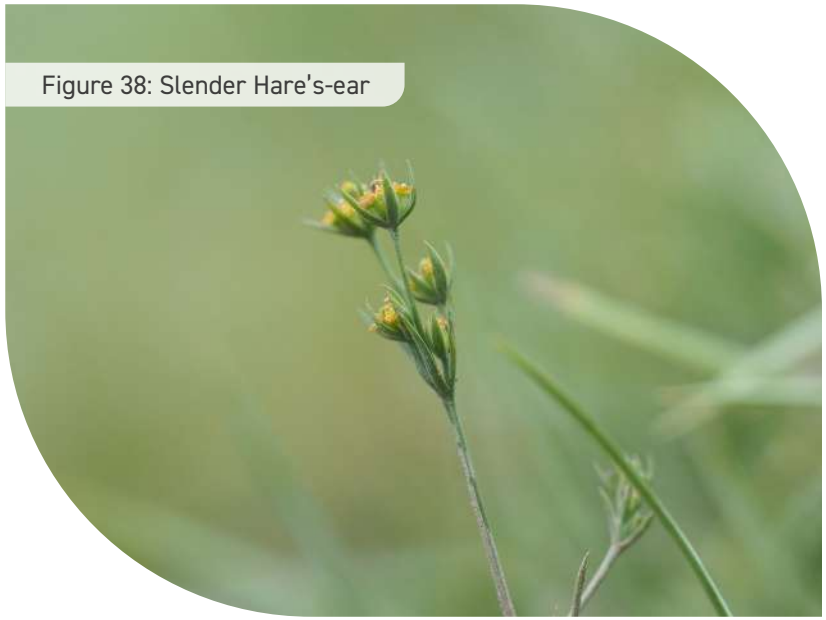


Figure 38: Slender Hare's-ear

Figure 40: Golden-samphire

Figure 39: Saltmarsh vegetation on sea defences, Broadmarsh

Coastal sand dunes

Sand dune vegetation forms a number of zones, which are related to the time elapsed since the sand was deposited, the degree of stability which it has attained and the local hydrological conditions. Newly formed, mobile dunes support very few plant species. Semi-fixed dunes occur where the rate of sand accumulation has slowed but the surface is still predominantly bare sand; there is also an increasing number of species found. Fixed dune grassland forms largely closed swards – mostly of the tall and sturdy Marram Grass and Lyme Grass - where sand accumulation is no longer significant, the surface is stabilised, and some soil development has taken place.

Dunes can be found on Hayling Island at Sinah Common and Sandy Point. These are the only dunes in Hampshire and probably the largest on the south coast of England. They support an extremely rich flora, with Sandy Point containing Hampshire's only population of Sharp Rush, and also containing well-developed coastal grassland and dune-heath supporting a wealth of scarce plant species. The fixed dunes at Sinah Common support a large population of the elegant Nottingham Catchfly as well as thousands of Green-winged Orchids in early summer.

Figure 41: Vegetated dunes, Sinah Common

Fig 42: Vegetated shingle, Sinah Common

Coastal vegetated shingle

Shingle beaches are widely distributed around the coast of the UK, where they develop in high energy environments with strong winds and crashing waves. The vegetation communities of shingle depend on the amounts of finer nutrient-containing materials mixed in with the shingle and on the availability of water. Coastal shingle plant species are adapted to this harsh environment, often having deep tap roots to access water and to anchor themselves in a dynamic habitat.

Characteristic vegetation of shingle includes Sea Kale, Sea Radish, Rock Samphire, Sea Beet and Sea Holly. Hampshire's largest population of the scarce plant Little-Robin occurs on shingle at Sinah Common. Viper's Bugloss, a characteristic plant of the shingle and dunes at Sinah Common, supports a population of the rare Starry Pearl moth. Flocks of larks, pipits and finches feed on seeds from shingle vegetation. Many wintering birds take shelter and rest on shingle during poor weather.

Vegetated shingle is found in several locations in the Borough including at Sinah Common, Sandy Point and the islands in Langstone Harbour. South Hayling contains probably the best examples of Coastal Vegetated Shingle in Hampshire.

Gunner Point on Sinah Common supports a breeding population of Ringed Plover, which is the subject of a project (The Hayling Plovers project) to protect nesting habitat. Other locations on Hayling are potentially suitable for nesting Ringed Plover and other species such as Oystercatcher and Little Tern, but are very heavily disturbed by recreational pressure.

Vegetated Shingle usually occurs in association with coastal grassland and coastal dunes. Much of the southern coastal fringe of Hayling is characterised by a complex mix of vegetated shingle and species-rich grassland, with patches of scrub (Figure 43).

Figure 43: Vegetated shingle and coastal grassland mosaic at Beachlands, Hayling Island

Intertidal mudflats

Mudflats are intertidal habitats created by deposition of sediment in coastal environments, particularly estuaries and other sheltered areas. Their sediment consists mostly of silts and clays with a high organic content. They are intimately linked by physical processes to other coastal habitats such as saltmarshes.

Vast areas of intertidal mudflats can be found in both Langstone and Chichester Harbour. The two harbours are unusual in that their shallow form means there is great fluctuation in the extent of exposed mud and sand during the tidal cycle, ranging from near zero exposed sediment at high tide to c.90% exposure at low tide. The daily exposure of mudflats – and the invertebrates they contain – at low tides dictates the lives of the many thousands of shorebirds that spend the winter months around the Solent coastline.

Figure 44: Mudflats at Mengham

Saline lagoons

Lagoons are natural or artificial bodies of saline water wholly or partially separated from the sea. They retain a proportion of their seawater at low tide and may develop as brackish, fully saline or hyper-saline water bodies (where salt is concentrated). Lagoons can contain a variety of substrates and may support plants such as Tasselweeds and Stoneworts as well as filamentous green and brown algae. In addition, lagoons contain rare marine invertebrates such as the Lagoon Sand Shrimp and Starlet Sea Anemone.

There are several small areas of saline lagoon around the coast of the Borough, with notable areas found at Emsworth Millpond, Selsmore Boating Lake, and the Oyster Beds on the north-west of Hayling Island.

Seagrass beds

Seagrass beds develop in intertidal and shallow subtidal areas on sands and muds. They may be found in marine inlets and bays but also in other areas such as lagoons and channels, which are sheltered from significant wave action. Seagrass species - some of the very few true flowering plants able to exist in our seas - are divided into Tassleweeds (*Ruppia* species) and Eelgrass (*Zostera* species). Four species occur in the UK, and all are considered to be scarce. Seagrass beds are incredibly important nursery areas for fish species, including Seahorses, and marine molluscs and invertebrates. Seagrass beds are particularly valuable as carbon stores, helping to mitigate the impacts of a changing climate.

Despite substantial losses in recent decades, significant beds of seagrass are present off Hayling Island, with the largest situated off Gutner and Verner Common on the east coast. Other large beds occur off the central west coast of Hayling.

Other habitats

Other important coastal habitats include sandy beaches and strand line vegetation, areas of which are scattered along the Borough's coastline. These habitats are characterised by plant species adapted to mobile sands and other coastal sediments and are usually mixed with vegetated shingle and fixed grassland habitats. The sandy beach at Sandy Point on Hayling supports nationally rare plant species such as Sea Knotgrass and Sea Spurge.

Figure 45: Damage to mudflats from swing moorings

Recreational pressure

The coast is understandably a major attraction for residents and visitors alike and provides significant recreational opportunities. Recreation in coastal areas can cause issues on sensitive coastal habitats. For example, fragile habitats can be trampled and eroded by footfall, dog fouling can create increases in nutrients, and the continual presence of people and dogs threatens the ability of bird species to effectively breed, feed or rest.

Water-based recreation can have a lasting impact on coastal and marine habitats. Swing moorings have damaged seagrass beds through scouring of the sea bed (Figure 45), and the activities such as paddle-boarding, kayaking and jet skiing can cause disturbance to breeding, feeding and roosting birds and damage to sensitive habitats. Marine debris, and the accidental introduction of pollutants such as oils, fuels and anti-fouling paints can result in permanent damage to the marine and coastal environment.

Focus on: Bird Aware Solent

The risks arising from coastal recreation pressure are addressed at a strategic level through the Solent Recreation Mitigation Strategy (SRMS), known as Bird Aware Solent.

Bird Aware Solent is a partnership of local authorities which helps safeguard the future of internationally protected wildfowl and wading birds. The initiative is run by the Solent Recreation Mitigation Partnership (SRMP) through the Solent Recreation Mitigation Strategy. This sets out mitigation measures by which new residential dwellings within 5.6km of the SPAs must contribute towards strategic level measures to reduce the impact of recreational disturbance on bird populations. Developer contributions are collected by the Council to fund the work of the Bird Aware Solent team. Bird Aware staff undertake regular engagement with coastal visitors and provide advice and guidance on how to enjoy the coastline responsibly.

Pollution

Pollution from industry, roads and agriculture is impacting our coastal and marine habitats. Plastic pollution is also widespread across the coastal and marine environment and is a potential major threat to marine wildlife.

Nutrients

New development necessitates the provision of connections to the foul water drainage network. This can increase the amount of nutrients entering the marine environment, adversely effecting water quality and adding to the high nutrient levels resulting from decades of agricultural fertiliser use. New housing schemes and other proposals which include a net gain in overnight accommodation or development which has a high volume of water use need to prevent any increase in nutrients into the harbour in order for them to be 'nutrient neutral'. Further information on the Council's approach to nutrient neutrality can be found in chapter "Air & Water Quality".

Climate change

Climate change is impacting intertidal habitats, particularly due to sea level rise and coastal squeeze – as the sea levels rise, intertidal habitats are lost when there is no space for them to retreat due to manmade structures such as sea walls. The Council are working with Coastal Partners to enhance sea defences across the Borough, in order to mitigate and adapt to the impacts of climate change.

In September 2023, the Council passed the 'Motion for the Ocean'[17] declaration, which highlights the urgent need for ocean recovery and recognises its importance in tackling climate change. Pledges range from embedding the sea into its decision and policymaking as part of its Climate Change Strategy, to embedding interventions in the Local Plan to support ocean recovery, where possible.

17 The Motion for the Ocean was developed by marine experts supported by the Local Government Association Coastal Special Interest Group in recognition that the ocean and climate are in a state of emergency.

Focus on: Solent Forum

The Solent Forum was established in 1992, in order to develop a greater understanding among the authorities and agencies involved in planning and management in the Solent area, and to assist and influence them in carrying out their functions. The Forum has been set up to consider and provide advice on strategic issues which have implications for a wide area. Havant Borough Council is a member of the Solent Forum.

The Forum runs two special interest stakeholder groups: the Solent European Marine Sites (SEMS) group and the Natural Environment Group (NEG). The SEMS group undertakes monitoring of issues affecting the Solent's international protected sites and disseminates that information to key stakeholders, including local planning authorities. The NEG takes forward issues and actions identified by the SEMS annual monitoring scheme. Together, these groups help to collate and share information related to the Solent's international sites, helping stakeholders to identify and address issues.

Opportunities to improve connectivity and quality of coastal habitats

Strategic measures to protect coastal habitats and the species they support include Bird Aware Solent and the SWBGS (of which the Council are key partners) and the Council's Nutrient Neutrality work including the Havant Nutrient Strategy (A Better Future For All), and the Council Position Statement and Mitigation Plan for Nutrient Neutral Development. The Council is committed to strategic level mitigation solutions and continues to support these through funding, data and officer involvement.

Opportunities to improve the quality and connectivity of coastal habitat will be largely through the management of existing land to maintain the extent and diversity of habitats, and where possible enhance the quality and extent of these habitats, including through managing recreational pressure. Whilst the Council has control over some sections of coastal habitat, its ability to affect large-scale change are limited. However, the Council works closely with various partners to promote nature recovery in our coastal areas and will continue to develop these partnerships.

Examples of actions to protect and enhance the coastal environment include:

- Reducing agricultural run-off through better land management.
- Exploring opportunities for coastal habitat creation through realignment.
- Enhancing coastal habitats such as shingle for nesting seabirds.
- Providing bird nesting platforms.
- Managing coastal access provision such as paths, boardwalks and signage.
- Enhancing of a variety of coastal habitats including saltmarsh, saline lagoons, coastal vegetated shingle.
- Exploring potential for enhancement/management of habitats at Warblington Farm.
- Consideration of dog access restrictions on coastal habitats.
- Continuing partnership working to protect and enhance coastal habitats e.g. with Coastal Partners, Langstone Harbour Board, the Three Harbours Project, RSPB.
- Continuing support of the Solent Waders and Brent Goose Strategy.

ACTION 11: The Council to continue to work with and support existing partners and seek to expand partnerships in order to restore and enhance coastal habitats and species.

ACTION 12: The Council will continue to embed the protection of coastal habitats and species within its planning policies and will continue its support of strategic mitigation measures such as Bird Aware Solent, the Solent Waders and Brent Goose Strategy and nutrient mitigation measures.

Case Study: Solent Seagrass Restoration Project

Seagrasses are the only flowering plants able to live in seawater and pollinate while submerged. They often grow in large groups, forming an underwater meadow. There are four species of seagrass in the UK: two species of *Ruppia* Tasselweeds and two *Zostera* species, commonly known as Eelgrass.

Seagrasses are known as ecosystem engineers because they can profoundly change the environment in which they are found, providing food and shelter and creating unique habitats which become biodiversity hotspots for a wide range of marine wildlife. They also filter pollutants and reduce coastal erosion by reducing the force of waves. They also have the potential to sequester and store huge amounts of carbon dissolved in our seas and therefore play an important role in mitigating the effects of a changing climate.

In the UK it is estimated that we have lost 92% of our seagrass beds in the last century. In the 1930s a significant proportion of seagrass in the UK died from a wasting disease, and continuing pressures include physical disturbances e.g. from storms, but more commonly from manmade disturbances such as dredging, anchoring and boating activities.

Hampshire & Isle of Wight Wildlife Trust are leading the Solent Seagrass Restoration Project which aims to see seagrass habitats in the Solent restored towards their historical levels and for seagrass to be present in all locations that could support it. The first phase of the project is to identify the best methodology for restoring this habitat, whilst also monitoring the habitat as a provider of carbon sequestration. Project partners include Boskalis Westminster, The Fat Face Foundation and the University of Portsmouth. The project has also trained volunteer Solent Seagrass Champions, who assist with the monitoring, surveying and planting of seagrass across the Solent.

The project involves surveying and mapping existing seagrass beds, collecting, sorting and storing seeds, replanting these on mudflats (trialing different planting methods), and monitoring the success of newly planted areas. The project page enables members of the public to support the project through sponsoring a seagrass pod, donations and signing up to the project newsletter.

Figure 46: Seagrass in the Solent

Figure 46 source: Kate Garnham

Coastal Partners

Partnership working in the Eastern Solent: Coastal Partners

Coastal Partners is an organisation managing coastal flood and erosion risk across five Local Planning Authorities in the eastern Solent area. Coastal Partners deliver a 'fully combined, efficient and comprehensive coastal management service' that aims to 'reduce the risk of coastal flooding and erosion to people and the environment through the provision of innovative, economic and sustainable coastal defences'. Havant Borough Council hosts the Coastal Partners team of engineers, surveyors, project managers, environment and research experts at its Civic Plaza site.

Other Council departments and teams work closely with Coastal Partners on schemes including coastal defence improvements, flood risk and coastal habitat creation and enhancement.

Coastal Partners works at a strategic level to deliver Shoreline Management Plans and Coastal Flood and Erosion Risk Management (CFERM) Strategies. Other work includes:

- Designing and implementing CFERM engineering schemes that improves the standard of flood and erosion protection.
- Carrying out coastal monitoring and research to ensure we have the most accurate and up to date information to undertake our work.
- Undertaking regular management, inspection and maintenance of sea defences to ensure a safe standard of protection for our communities.
- Engaging with local communities, organisations and business on all aspects of our work to ensure local people help to shape coastal management decisions.

URBAN HABITATS

Summary

Urban greenspaces provide a range of habitats, including grassland, woodland and wetland, and often contain important remnants of historic grassland, hedgerows and trees. Residential gardens are also a key resource, covering 23% of Havant's non-developed land area.

Key pressures on theses habitats include urbanisation and habitat fragmentation (and associated impacts such as human disturbance, pollution and nutrient enrichment), climate change, and the public demand for tidiness when it comes to managing public spaces and residential gardens.

Havant's urban areas play a vital role in nature recovery and engaging local communities. Urban and suburban greenspaces can provide communities with cherished contact with wildlife: encounters with wildlife around the home can shape our attitudes to nature for a lifetime.

So-called 'brownfield' sites can often be better for biodiversity than areas in the open countryside.

Opportunities for improving biodiversity in the urban areas of Havant include 'greening the grey' – retro-fitting Green Infrastructure (GI) to provide a multifunctional and connected GI network, and planning policy which requires that new development embeds GI at its core. The management of existing open space, council land and residential gardens to optimise biodiversity also represents a huge opportunity for nature recovery.

Overview

Havant is one of the most densely populated areas in England[18] and approximately 30% of the Borough's land area is developed use[19]. The Borough's settlements have continued to grow, and development pressure remains high.

The urban and suburban environment can be incredibly important for biodiversity. For example, plants growing on pavements and walls – so-called 'street weeds' or 'spontaneous flora'– provide patches of habitat for insects and birds; our gardens often provide excellent habitats such as flowering plants, trees and shrubs, and ponds; and our parks and street trees provide food and shelter to many different species. The flora of urban and suburban areas is often a very interesting mix of native species, garden escapes and accidental introductions. As our climate warms, many exotic species from the wider world are able to persist in our villages, towns and cities.

As our climate warms, many exotic species from the wider world are able to persist in our villages, towns and cities.

Figure 47: Urban flora on a Havant street. Our urban areas can support a surprising amount of biodiversity. Street 'weeds' such as these will provide habitat for a wide range of animals

18 Havant's population density of 2,248 people per km2 is 1,813 people per km2 higher than England's 435 people per km2. Havant is the 23rd Non-metropolitan District in England (of 181 total) when ordered by population density.

19 https://www.gov.uk/government/statistics/land-use-in-england-2022/land-use-statistics-england-2022

What is Green Infrastructure?

Green Infrastructure (GI) is a network of multi-functional green space and other green features, urban and rural, which can deliver environmental and social benefits for communities.

GI is not just 'open space': it is much more. When designed well, GI can provide the following benefits:

- Increase access to nature-rich spaces for all.
- Support our mental and physical wellbeing.
- Encourage active travel (walking, running, cycling).
- Creates a sense of place and ownership.
- Help places adapt to a changing climate.
- Improve air quality.
- Attract investment by making an area more appealing.
- Reduce flood risk through sustainable drainage.
- Carbon storage.
- Protect and enhance biodiversity.
- Protect and enhance cultural heritage.

Natural England have developed a 'Green Infrastructure Framework', providing information on the principles, standards and design and that should guide quality and sustainable GI.

Urban green infrastructure in Havant ranges from parks and open spaces, river corridors, railway embankments, allotments, and private gardens, to hedgerows and trees, green roofs and walls. These spaces and features support a diversity of habitats and species and can often contain important remnants of old/historic habitats such as grassland, hedgerows and trees. These areas are critical to biodiversity recovery in Havant Borough, and particularly in engaging local communities in biodiversity recovery. There are a wide range of local community groups which protect and care for green spaces in the Borough, such as 'Friends Of' groups.

Havant Borough contains many parks and green spaces. These include recreation grounds, playing fields, golf courses, allotments, churchyards and cemeteries. Many form important wildlife corridors and buffers and provide sanctuaries for wildlife in more urban areas. Residential gardens are also a significant resource, covering approximately 23% of the non-developed land area in Havant.

The built environment can also provide important shelter and food for wildlife. For example, birds such as House Sparrow, Starling, House Martin and Common Swift depend on buildings for nesting sites, whilst gull species make use of large, flat-roofed buildings. Various species of bats also roost within built structures. Plants, mosses and lichens can be found growing on our buildings, walls and gravestones. New buildings in urban areas also provide the opportunity to incorporate features such as green roofs and walls, providing habitat for pollinators and birds for example. Mature trees, including street trees in the urban environment, can provide excellent habitat for birds and insects. Mature trees can support over 300 species of insects and are therefore good habitats for insect-eating birds.

Figure 48: Allotments in Havant. Allotments can provide surprisingly rich areas for wildlife in our urban and suburban places

Urban priority habitat types

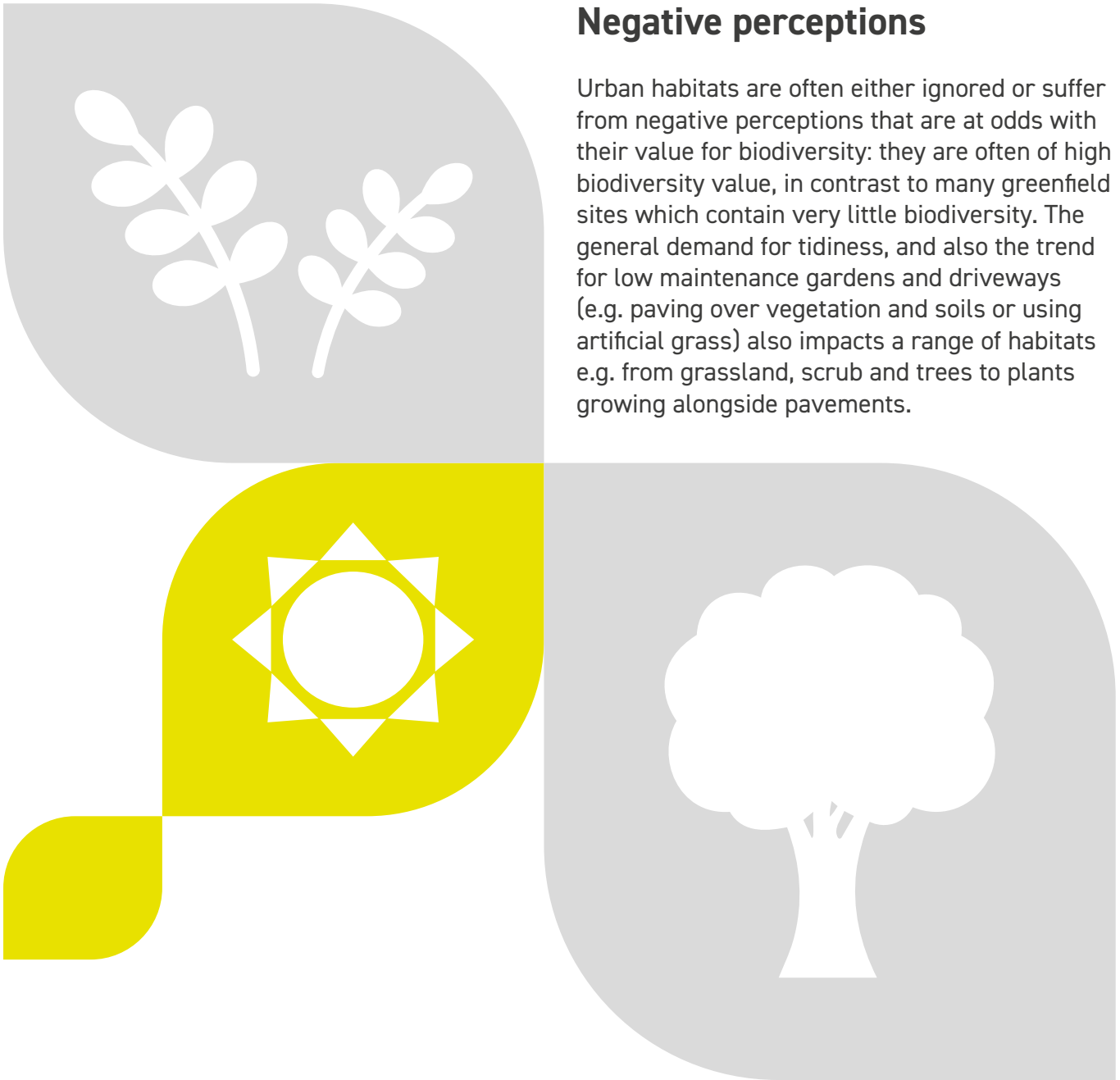
Figure 49: Brownfield site in Havant, showing a typical mix of bare ground, sparse vegetation and scrub. Such areas can be very rich in wildlife

Open mosaic habitats on previously developed land

Open mosaic habitats typify many urban areas and are often described as 'brownfield' sites. These habitats have been disturbed by previous human activity and are usually characterised by sparse vegetation and often contain bare, loose, freely-draining soils. Open mosaic habitats can also contain areas of scrub and wetland features. Classic brownfield sites include abandoned industrial sites, old quarries and railway sidings.

Patterns of disturbance followed by abandonment mean that these sites are always changing, with different species appearing and disappearing over time. As a result, these sites can be extremely diverse, supporting a wide range of terrestrial and aquatic habitats, and are particularly important for rare and scarce invertebrates, as well as plants, birds, reptiles and amphibians of conservation concern. Rare bird species such as the Black Redstart are almost wholly found on brownfield sites in the UK. Further information on the value of brownfield habitats has been created by the charity Buglife.

Brownfield sites are often viewed as preferable for development when compared with 'greenfield' sites in the open countryside, underestimating their value to biodiversity. In fact, brownfield sites are often more valuable for wildlife than many so-called greenfield sites and in urban and suburban areas may be the only area of habitat available to wildlife. Many greenfield sites contain monocultures such as cereal crops or species-poor grassland and are poor wildlife habitats.



Negative perceptions

Urban habitats are often either ignored or suffer from negative perceptions that are at odds with their value for biodiversity: they are often of high biodiversity value, in contrast to many greenfield sites which contain very little biodiversity. The general demand for tidiness, and also the trend for low maintenance gardens and driveways (e.g. paving over vegetation and soils or using artificial grass) also impacts a range of habitats e.g. from grassland, scrub and trees to plants growing alongside pavements.

Development pressure

For good reason, brownfield sites are generally the sites where sustainable development can most readily be achieved and Government recognises this. There is a tension between the need for new development, the 'brownfield first' approach in national and local planning policy, and the often very high biodiversity value of urban and suburban brownfield sites. Whilst there are no simple solutions, it is necessary to highlight the importance of brownfield habitats in discussions around planned development.

Continuing urbanisation results in the fragmentation and loss of habitats, isolating habitats and species. Increases in air, light and noise pollution, human disturbance and predation by domestic animals also particularly affect biodiversity in urbanised areas. Nutrient enrichment caused by pet faeces can also impact habitats within urban and suburban areas. Climate change is resulting in hotter drier summers and wetter winters which is also putting increased pressure on habitats and species within and around urban areas.

Although development provides the opportunity for habitat restoration and creation, there has been a steady loss of habitat to urban development over many decades.

Opportunities for biodiversity enhancement

Opportunities to improve connectivity of urban habitats

Highly urbanised environments where there is little in the way of existing trees, green verges or open space probably present the biggest challenge in terms of encouraging biodiversity. Some examples of innovative ways that green infrastructure has been used in urban areas for the benefit of pollinators other wildlife (and people) include street trees and planters, green roofs and walls, 'pocket parks' and Sustainable Drainage Systems (SuDS).

Sustainable Drainage Systems (SuDS)

SuDS are an approach to urban and suburban drainage that take account of water quantity, water quality, biodiversity and amenity. An alternative to traditional 'hard' drainage solutions such as gulleys and pipes which convey water away as quickly as possible, SuDS are designed to slow the passage of water (runoff) from our built areas and provide a range of benefits in the process. A well-designed SuDS can:

- Manage and slow runoff from hard surfaces, reducing the impact of flooding.
- Reduce pressure on the drainage network.
- Provide opportunities for using runoff where it falls e.g. for watering, wildlife.
- Protect or enhance water quality by reducing/filtering pollution from runoff.
- Protect natural flow regimes in watercourses.
- Provide opportunities for biodiversity.
- Encourage natural groundwater recharge.
- Shape better places to live, work and play by providing attractive locations.

SuDS can provide a wide range of benefits for biodiversity. The presence of open water, seasonally wet grassland and other types of vegetation can provide an array of opportunities for wildlife such as shelter, food and breeding.

A well-designed SuDS should be incorporated within a wider greenspace strategy, ensuring that SuDS features add value for people and wildlife.

Figure 50: Sustainable Urban Drainage in the Netherlands

Figure 50 source: Nanda Sluijsmans from Den Haag, Nederland, CC BY-SA 2.0 <https://creativecommons.org/licenses/by-sa/2.0>, via Wikimedia Commons

Features for wildlife can also be designed into new buildings/developments, or retro fitted into existing buildings, for example bird and bat boxes and bricks and hedgehog 'highways' (providing gaps in walls and fences). Insect hotels and log piles also provide valuable habitat and require little space.

Biodiversity enhancements in urban areas can support other priorities including health and wellbeing and climate change adaptation e.g. as part of 'liveable' or low traffic neighbourhoods. There is increasing evidence that natural environments that are high in biodiversity or species richness provide additional benefits for people's mental well-being compared to natural environments low in biodiversity[20].

The provision of new open space and green infrastructure through new development should be designed to optimise biodiversity, and the requirements will be set out within the Council's Local Plan. The Council will be looking for innovative, native-led development landscaping schemes that optimise biodiversity.

There is justification for the creation of brownfield habitats within new development sites. Brownfield habitats could easily be incorporated within commercial or industrial developments where accessible public greenspace is not required. Similarly, brownfield habitats can be created on flat roofs within new developments.

Figure 51: Common Swift nestlings

Figure 51 source: Tonio Schaub
Some bird species are dependent on buildings for nest sites, such as House Sparrows, Starlings, House Martins and Swifts.
In new builds or extensions, a prefabricated swift brick can be fitted into the fabric of the wall during construction or internal nest/roost boxes can be put behind the facias and soffits.

20 https://www.mentalhealth.org.uk/sites/default/files/2022-06/MHAW21-Nature-research-report.pdf

ACTION 13: Opportunities for 'greening the grey' should be considered and incorporated into relevant projects, plans and strategies, in order to embed biodiversity throughout the urban/suburban environment (which would also have wider benefits such as improving health and well-being and helping to adapt to climate change). Examples include public realm soft landscaping and development landscape design and will include Council-led regeneration schemes.

ACTION 14: Planning policy will require that new development incorporates features for wildlife and recognises green infrastructure as essential infrastructure, such as open space, green roofs, walls, integral bird and bat boxes, and tree planting. Further guidance could be provided e.g. in the form of a Supplementary Planning Document (SPD) on how urban landscaping can help meet nature recovery.

Opportunities to improve the quality of urban habitats

Management of open space

In public open space and recreation spaces there must be a careful balance between the needs of people and wildlife. However, research has suggested that people respond better to more 'biodiverse' green spaces[21], meaning that the two objectives are not mutually exclusive. Simple actions such as the provision and management of wildflower areas, reduced grass cutting regimes, the planting of shrubs and trees, and small semi-natural patches that are left to grow wild can provide space for nature in public spaces without removing their amenity value. Community food growing projects such as community orchards and edible beds within open spaces can also help generate community support, as well as benefit biodiversity.

Any changes to existing management regimes or planting/wildflower meadow creation should involve the community. An important element of engagement will be to manage expectations around tidiness and provide education around the benefits of purposeful and managed 'messy' areas, as part of parks and open space management plans. Allotments may provide potential to set aside dedicated biodiversity areas, for example, pollinator patches/margins and small ponds.

The retention or creation of 'open mosaic' brownfield habitats is desirable if we wish to create truly biodiverse spaces. However, these habitats are perhaps not the most appealing to the public and so work would be needed to ensure that some brownfield habitat was either retained within development sites or deliberately created in suitable locations.

21 Cameron, R.W.F., Brindley, P., Mears, M. et al. Where the wild things are! Do urban greenspaces with greater avian biodiversity promote more positive emotions in humans? Urban Ecosystems 23, 301–317 (2020).

ACTION 15: The Council will consult and engage with local communities to help identify opportunities to improve the biodiversity value of their parks and green spaces. This could include investigating the resources needed and public appetite for changing grass cutting regimes, in line with best practice. In accordance with the UK government's commitment to protect 30% of the UK's land by 2030 for nature and biodiversity, the Council could also aim to manage at least 30% of its land holding for biodiversity.

ACTION 16: The Council to develop management plans for all their sites (where not already in place), following best practice guidance and drawing on local consultation and engagement, and establish a process for implementing, monitoring and updating these.

Management of residential gardens

The UK has an estimated 24 million gardens that could be a network of mini nature reserves. Private gardens can provide important habitat for a range of wildlife, and they have been identified as being particularly rich in their insect pollinator communities, when compared with public parks and amenity greenspaces[22]. Individuals can take actions to help increase biodiversity within their gardens, which also provides opportunity for people to better engage with nature, providing tangible health and wellbeing benefits. One of the biggest actions that people can take to improve biodiversity in their gardens is to build a wildlife pond.

There are numerous sources of guidance on wildlife friendly gardening, from general principles to step by step guidance on creating wildlife friendly features and habitat e.g. from Friends of the Earth, Plantlife, Buglife, The Wildlife Trusts, BLUE campaign, and the RHS (to name a few).

22 Baldock, K.C., Goddard, M.A., Hicks, D.M., Kunin, W.E., Mitschunas, N., Morse, H., Osgathorpe, L.M., Potts, S.G., Robertson, K.M., Scott, A.V. and Staniczenko, P.P., 2019. A systems approach reveals urban pollinator hotspots and conservation opportunities. Nature ecology & evolution, 3(3), p.363.

Figure 52: Even common plants such as dandelions can add valuable biodiversity to urban areas

Pesticide usage

An important aspect of improving biodiversity and habitat for insects and pollinators is reducing pesticide usage[23]. There is growing evidence and awareness of the damage that pesticides (particularly neonicotinoids) can cause to our pollinators. Countries such as France have set ambitious targets for reducing their pesticide usage, and a movement that started there to help change people's perception of weeds is growing, where botanists chalk pavements with the names of the wild plants. Further information on the value of urban flora can be found at More Than Weeds.

Figure 52 source: Marterum, CC0, via Wikimedia Commons

23 Pesticides are substances that are meant to control pests, including weeds (includes herbicides, insecticides, and fungicides).

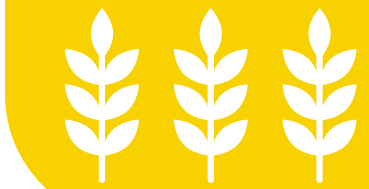
ACTION 17: The Council to investigate minimising its pesticide usage and/or going pesticide free in some areas. This could be done alongside a public consultation to raise awareness and gather residents' views on the matter.

AGRICULTURAL LAND

Summary

Agricultural land covers approximately 20% of Havant's non-developed land area.

Some agricultural practices result in pressures on the terrestrial and freshwater environment, and climate change is exacerbating these e.g. through increased rainfall causing increased soil loss and nutrient run-off.



Although the Council has little direct control over the management of agricultural land (with the exception of its own Warblington Farm), there are opportunities to support nature friendly/ regenerative farming through partnership working and through the Local Nature Recovery Strategy.

Hedgerows, scrub, traditional orchards, ponds and ditches are closely associated with agricultural land in Havant.

Overview

Farmland accounts for approximately 20% of Havant's 70% non-developed land area. Farmland can support a wide range of priority habitats and species. Hedgerows and their associated banks and ditches can support a huge diversity of flowers, birds, butterflies, moths and mammals. Farmland ponds and ditches can attract amphibians, reptiles and insects such as dragonflies. Arable field margins can support a range of threatened plant species, and also provide habitat for birds, mammals and insects such as butterflies and bees.

Hedgerows, scrub and traditional orchards are closely associated with agricultural land in Havant (these have been covered under Trees and Woodland), as well as ponds and ditches (covered under Freshwater and Wetland).

Figure 53: Arable farmland, Hayling Island

Agricultural land priority habitat types

Arable field margins

Arable field margins can offer food and shelter to birds and mammals, while buffering hedgerows, ponds and ditches from farming operations. They can support arable plants, which are the fastest-declining group of plants in the UK. They are also incredibly important areas for pollinating insects such as honeybees, solitary bees, wasps, bumblebees, hoverflies, and butterflies and moths as well as providing foraging resources for farmland bird species. Data on arable field margins within Havant is incomplete – currently only SINCs on arable land that are designated for rare arable plants are included as priority habitat.

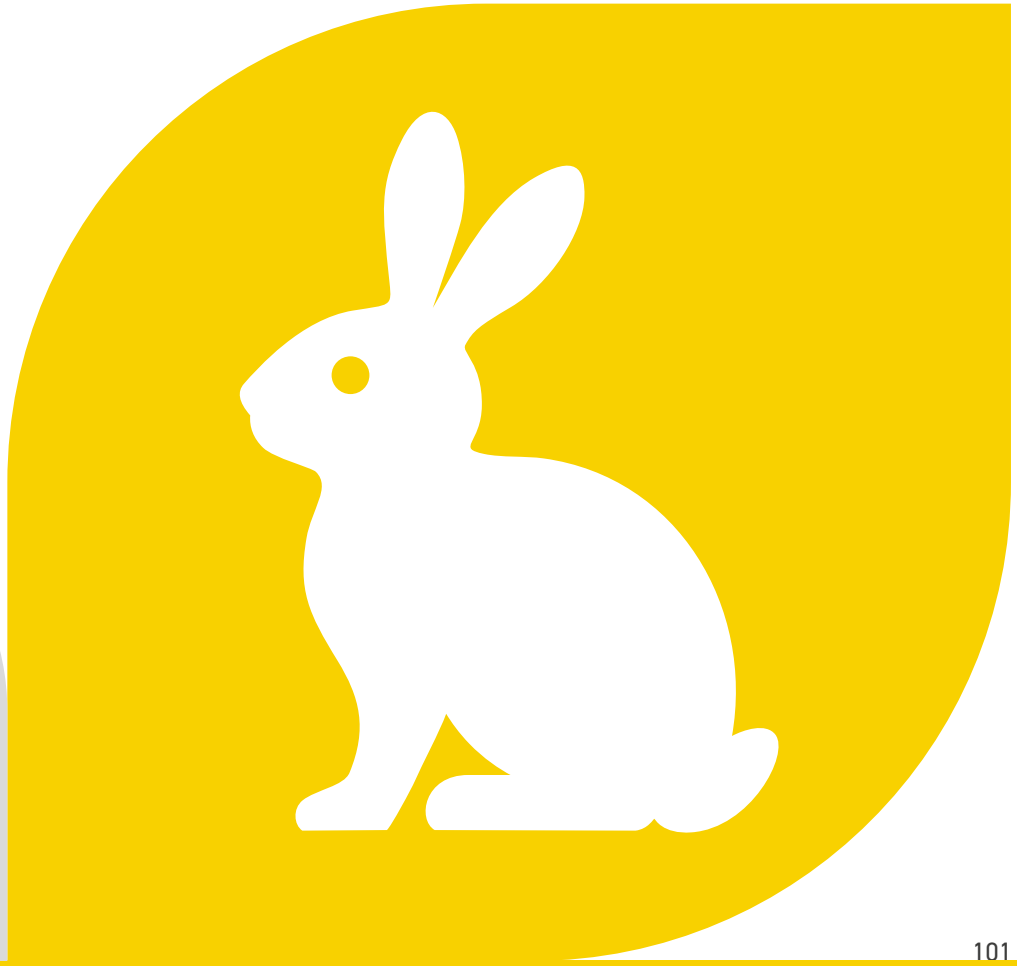


Figure 54: Field Woundwort

Figure 55: Cut-leaved Dead-nettle

Focus on: Arable plants and farmland birds at Warblington Farm

Parts of the Council's Warblington Farm are used for arable crops and these regularly cultivated fields provide habitat for a range of plant species of field margins, some of which are nationally scarce.

Many plants species that were once common and widespread in the British farmed landscape are now very scarce: some have disappeared altogether. Arable plant declines are linked to several factors, including the increase in herbicide use, better seed cleaning, and changes to cultivation times and methods. Arable plant species need regular cultivation, but at the right time.

At Warblington Farm some fields margins and interiors still retain a diverse range of plant species that are scarce elsewhere. Species of note include Field Woundwort, Cut-leaved Dead-nettle, and Sharp-leaved Fluellen. Arable field margins containing wild plants support populations of invertebrates and are critical for farmland bird species. The cultivated fields and associated grassland and hedgerows at Warblington Farm support bird species such as Skylark, Meadow Pipit, House Sparrow and Stock Dove.

Hedgerows

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 than 20m wide. Hedgerows are an integral part of the farmed landscape and are of huge cultural significance in the UK landscape, especially in lowland England.

Risks

Agricultural intensification

Agricultural productivity, linked to the intensification of land management and the decline in farmland nature, is still increasing, and poses one of the most significant pressures on the terrestrial and freshwater environment (State of Nature Report, 2019 and 2023). There is a tension between the need to make the most of productive farmland, the ability of farmers to fund wildlife-friendly management, and the need for more wildlife habitat.

The steady increase in agricultural productivity over the last few centuries has benefitted society hugely but has also had many documented impacts on farmland wildlife. For example, populations of many farmland birds have more than halved since 1970, and similar declines have been seen in many other species groups. Farm habitats such as species-rich meadows and pastures, hedgerows, trees and wetlands have been lost to cultivation or to abandonment. There is also growing concern about pollinators, largely related to the use of pesticides.

Climate change

Changes in the frequency of intense rainfall events as a result of climate change, alongside intensive management of the land, can also contribute to increased soil loss and nutrient runoff, in turn affecting water quality. Healthy soil is not only fundamental for biodiversity, but its protection also helps mitigate climate change, as it is the planet's second largest active store of carbon after the oceans.

Opportunities to improve connectivity and quality of habitat on agricultural land

The biodiversity value of farmland depends on good stewardship. Managing farmland sensitively and setting aside areas for wildlife helps to combat habitat fragmentation, provides vital links between protected sites and creates a more resilient landscape. Organisations such as the Farming and Wildlife Advisory Group (FWAG), the Nature Friendly Farming Network (NFFN) and the Rivers Trust provide support and advice to farmers to help them manage their land in a more sustainable way.

The Agriculture Act (2020) will be vitally important in improving the value of farmland for biodiversity. It will fundamentally change direct payments to farming (through the proposed Environmental Land Management System - ELMS)[24], where farmers will be rewarded for protecting and enhancing the environment i.e. protecting and enhancing natural capital and the resulting public goods/ecosystem services, with particular emphasis on soil health, biodiversity, increased flood resilience and public access (amongst other things).

Soil is the planet's second largest active store of carbon after the oceans. 80% of Carbon in terrestrial ecosystems is found in soil[25]. However, prolonged cultivation accelerates the decomposition of soil organic matter, resulting in the release of stored carbon in the soil, into the atmosphere.

Therefore, sustainable soil management practices and land uses which reduce soil erosion, and therefore retain and improve carbon storage and capture can help tackle climate change, as well as the biodiversity crisis. Research also shows that the restoration of plant diversity greatly increases carbon capture and storage rates[26].

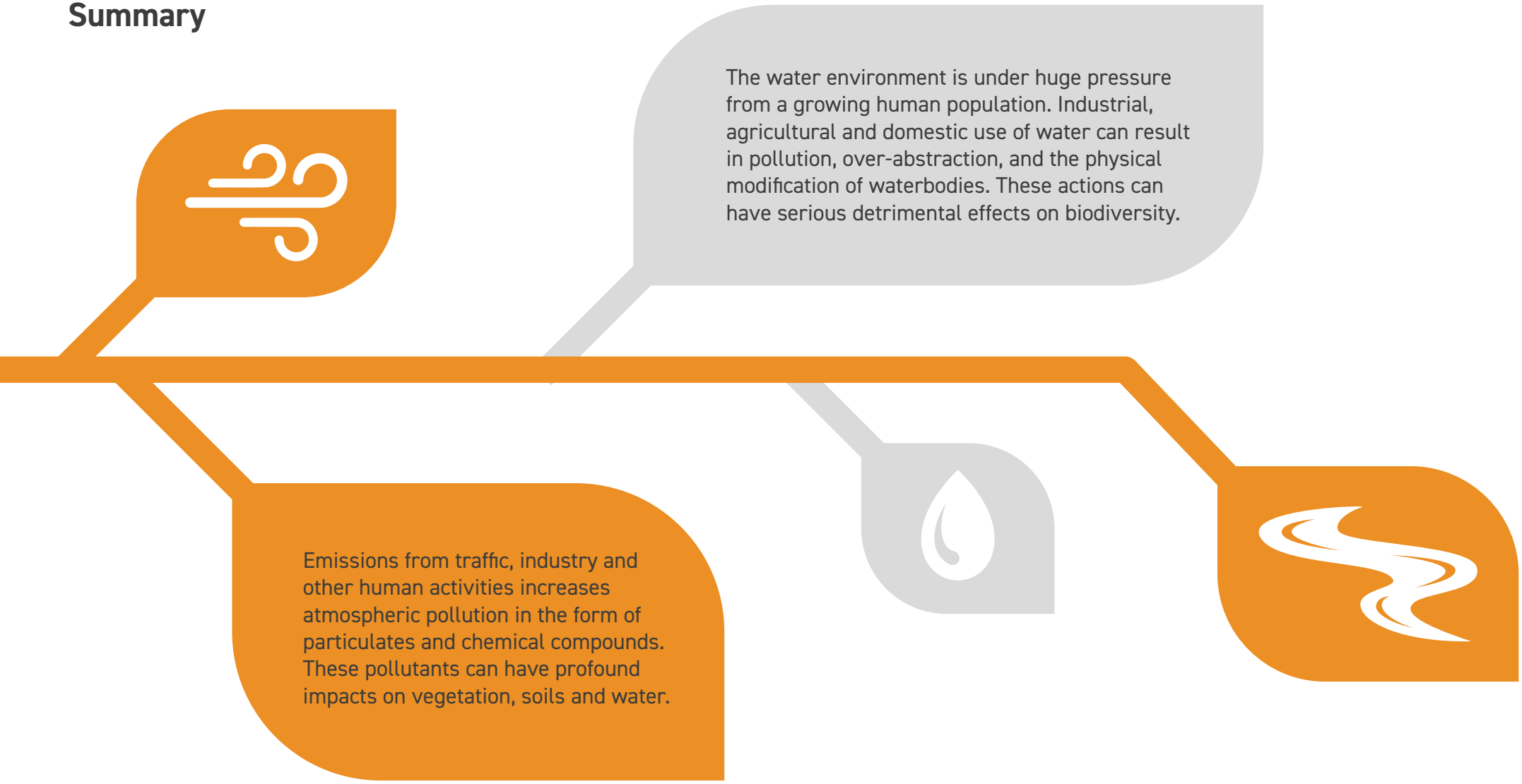
The Environmental Land Management System (ELMS), and the planning system (including requirements for Biodiversity Net Gain and Nitrate/ Phosphate offsetting) represent vital opportunities to halt and reverse the dramatic declines in farmland biodiversity, through incentivising and mainstreaming re-wildling approaches and regenerative agriculture (a conservation and rehabilitation approach to food and farming systems, focusing on soil regeneration, biodiversity and the water cycle) and agroecology (the application of ecological concepts and principals in farming). The Hampshire LNRS includes specific measures for enhancing wildlife within the farmed landscape.

24 The new payments system is called Environmental Land Management System (ELMS).
25 https://www.nature.com/scitable/knowledge/library/soil-carbon-storage-84223790/
26 https://www.pnas.org/doi/10.1073/pnas.1700298114

ACTION 18: The Council will work with its partners to promote and support nature friendly land management, including on its own land.

AIR & WATER QUALITY

Summary



Overview

Water quality and air quality are closely linked with the recovery of biodiversity, as summarised below.

Human activities, such as burning fossil fuels, industrial processes, and transportation, release a range of air pollutants into the atmosphere. These pollutants include particulate matter, nitrogen oxides, sulfur dioxide, and ground-level ozone, all of which can have detrimental effects on ecosystems, including damage to plant life, reduced biodiversity, and changes to the chemistry of soil and water.

For example, nitrogen oxides can acidify the soil, which can impact the ability of plants to absorb nutrients, compromising their growth. Similarly, particulate matter can damage plant leaves, reducing their ability to photosynthesize, and affecting their overall health. Air pollution can also harm animals, affecting their respiratory systems and decreasing their ability to find food and reproduce. Nitrogen accumulation in soils and water can also result in eutrophication, where nitrogen loving plants become dominant, and outcompete more vulnerable plants. According to wildlife conservation charity Plant Life, 63% of sensitive habitats in the UK now have more nitrogen than they can cope with.

The burning of fossil fuels is also a major contributor to climate change, through the release of greenhouse gases such as carbon dioxide. This is warming the planet and resulting in wide ranging impacts on biodiversity and ecosystems, exacerbating existing pressures on biodiversity.

Water quality is the measurement of physical and chemical characteristics of water. Water quality can be decreased by pollution from human activities, such as industrial dumping of chemicals, fertiliser run off and other forms of pollution and physical modifications e.g. culverting and canalisation. Water quality has a direct correlation with biodiversity. As water quality decreases, biodiversity also decreases.

Many of our water-dependent habitats like coastal and freshwater wetlands, rivers, lakes and ponds have been lost, isolated, modified and polluted, and species that depend on them are in decline. Many that remain are dependent on having enough good quality water to sustain them. Their existence is threatened by pressures from our use of land and water, either directly or within their wider catchments.

Water and wetland habitats and the species they support are affected by a wide range of natural and human-made pressures. These include:

- **Climate change and other emerging challenges**
- **Physical modification**
- **Pressures from rural land management and agriculture**
- **Pollution from wastewater discharged from water treatment works**
- **Pollution from rural areas and towns, cities and transport**
- **Changes to water levels and flows**
- **Invasive non-native species**
- **Habitat fragmentation**

These can directly affect species or lead to the break up or loss of the habitats that they rely on.

Eutrophication is increased plant growth which reduces the oxygen content in water and occurs when an excessive amount of nutrients within a water body are present. This process makes it difficult for aquatic insects or fish to survive, in turn removing a food source from the food cycle. Nutrients from wastewater treatment works and agriculture are key sources of excess nutrients in the marine and freshwater environment.

Air quality considerations in Havant

Within Havant, and across the UK as a whole, Nitrogen Dioxide (NOX) from transport emissions is the main significant air pollutant of concern. Internationally designated habitats may be adversely affected by increases in airborne pollutants, particularly oxides of nitrogen and ammonia (a form of nitrogen), and the deposition of these pollutants within sensitive habitats. The legislation protecting these sites - the Conservation of Habitats and Species Regulations 2017 (known as the Habitats Regulations) - requires that a Habitats Regulations Assessment (HRA) is carried out to test if a plan or proposal could significantly harm the designated features of a designated site. Due to the presence of internationally designated sites along the Havant coastline, there is a need to ensure that the potential impacts of airborne pollutants are assessed.

An air quality Habitats Regulations Assessment (HRA) of road traffic emissions associated with proposed development within Havant Borough was carried out for the withdrawn Local Plan in 2019. This concluded in 2021 that there was no likelihood of significant effects on the Solent Maritime SAC from the Local Plan alone or in combination. This assessment process will be carried out again to support the emerging Local Plan.

ACTION 19: The Council will undertake a Habitats Regulations Assessment of the Local Plan, including an assessment of the potential impacts of atmospheric pollution on protected sites.

Water quality considerations in Havant

The South East River Basin District Management Plan sets out the significant water management issues for the catchment area in which Havant sits. These include physical modifications (including of chalk streams, although there are unaffected stretches as well), pollution from wastewater and pollution from agriculture. Under the Water Framework Directive (WFD) 2019, rivers within the Borough have been assessed as being of poor (the River Lavant and River Ems) or moderate (Hermitage Stream) quality. There are also ongoing pressures of unsustainable water abstraction, which can particularly impact vulnerable chalk streams, and the continuing drainage and conversion of wetlands to other land uses. The Solent Water Body, Langstone Harbour and Chichester Harbour are all moderate ecological status.

The PfSH Integrated Water Management Study (WMS) (2018) considered the additional loading of nitrate and phosphorus that would be discharged from Wastewater Treatment Works due to housing growth in the area, and the potential impact of these additional nutrient loadings on water quality. For most inland waters phosphorus is the limiting nutrient, and so the IWMS considered phosphorus concentrations in receiving rivers. Only a high-level calculation of the additional nitrate loading to Transitional and Coastal waters (TraCs) was included. It highlighted the need for various measures including physical upgrades to improve wastewater treatment works and sewer networks, catchment measures to reduce nitrate loading to coastal waters, and further investigation and monitoring to ensure housing growth is compliant with legislation.

Since the completion of the IWMS, advice from Natural England, on the basis of European case law, has determined that all housing development (or any development that would involve overnight stays, such as hotels, campsites, B&B etc.) that would result in increased sewage discharges should be nitrate-neutral, meaning that after control at source and mitigation, the development should result in no net increase in nitrate to the site. Wood Environment & Infrastructure Solutions UK Limited were therefore commissioned to provide a more detailed and accurate estimate (in the form of a Technical Note) of the nitrate loading that would be result from projected housing development draining into the Solent (July 2020). The Technical Note acknowledges that this should be updated following monitoring (regular analysis of water samples), to provide a more accurate estimate of total oxides of nitrogen (TON) loading.

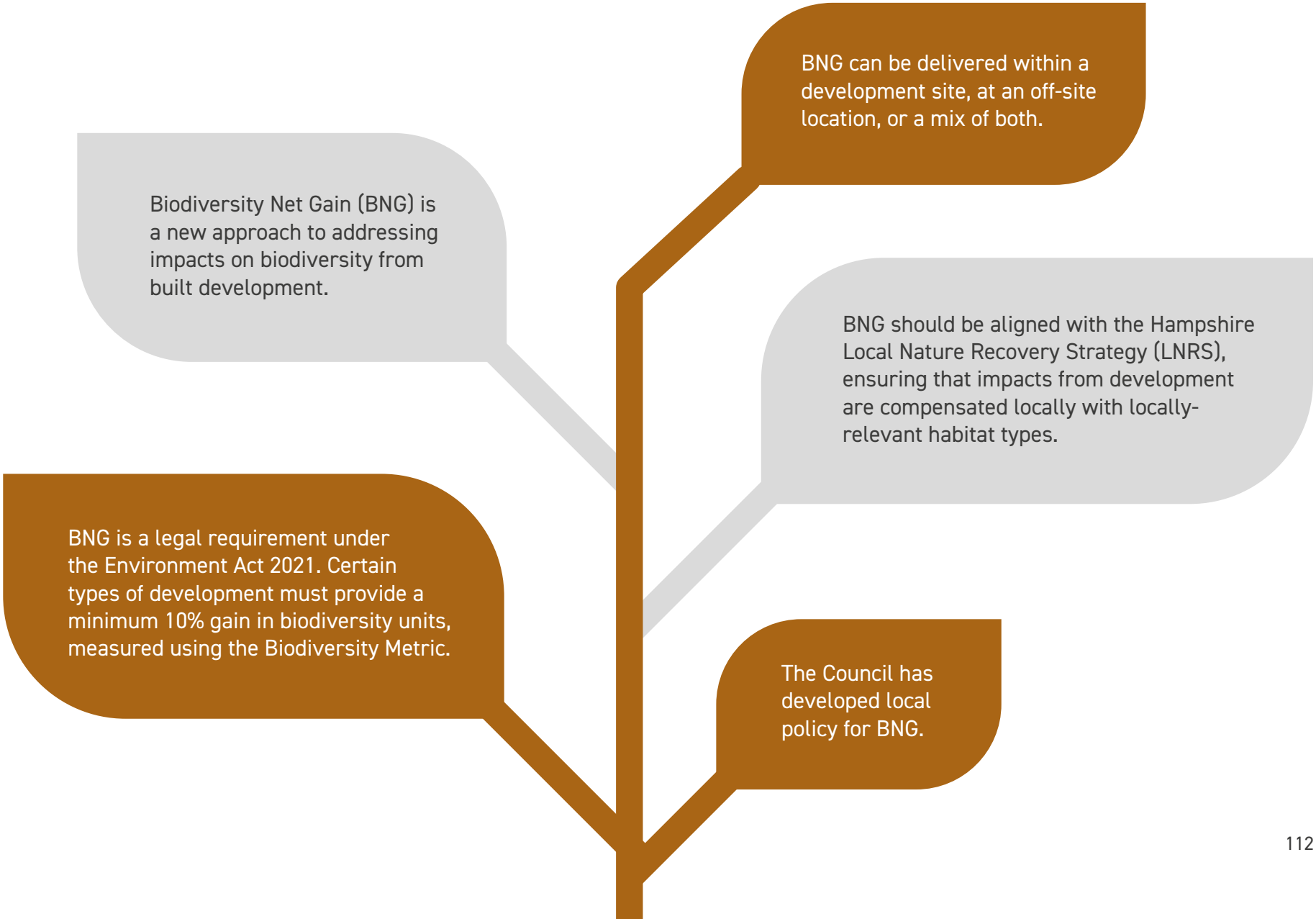
The Council has a Position Statement and Mitigation Plan for Nutrient Neutral Development (January 2024). As a 'competent authority' under the Habitats Regulations, the Council must only approve plans or projects if either there is no likelihood of a significant effect on any European designated nature conservation site or, if such an effect is found, it can be mitigated so as to avoid an adverse effect on the integrity of the conservation site. New development can increase the amount of nutrients entering the Solent European Sites through the foul water drainage network and increased surface water run-off, which could have a detrimental impact on water quality and the conservation objectives of the designated sites.

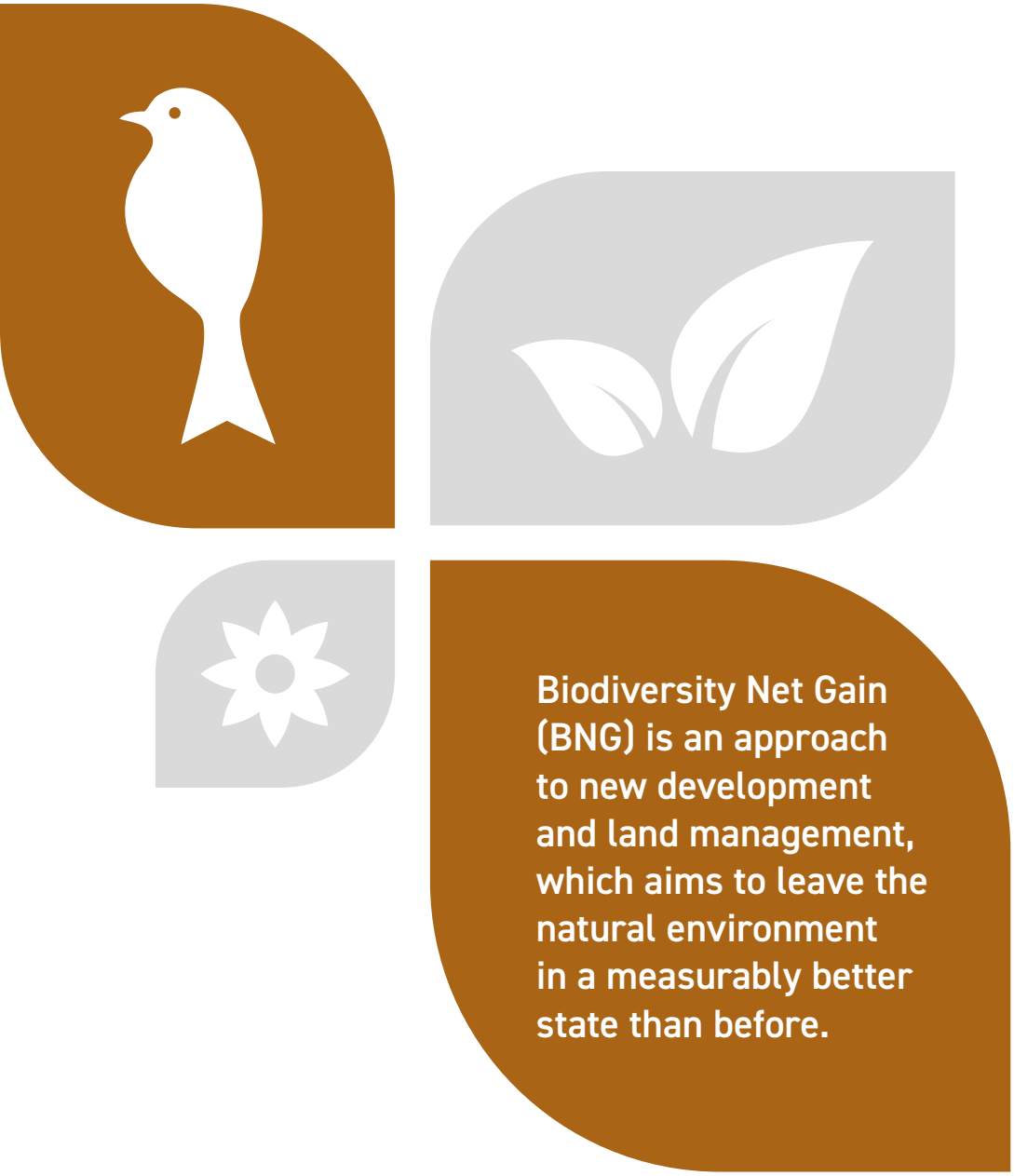
New housing schemes and other proposals which include a net gain in overnight accommodation or development which has a high volume of water use will need to prevent any increase in nutrients into the Solent European Sites in order for them to be 'nutrient neutral'. The Position Statement and Mitigation Plan sets out the mechanisms for development to achieve nutrient neutrality.

ACTION 20: The Council will continue to be guided by the best available evidence and guidance in relation to nutrient mitigation.

BIODIVERSITY NET GAIN (BNG)

Summary





Biodiversity Net Gain (BNG) is an approach to new development and land management, which aims to leave the natural environment in a measurably better state than before.

BNG became mandatory for certain types of development in 2024. BNG is a significant change in our approach to addressing impacts on the natural environment from built development.

The Environment Act (2021) makes BNG a mandatory requirement. All planning permissions granted in England (with a few exemptions) will have to deliver at least 10% biodiversity net gain. It is measured using DEFRA's Biodiversity Metric and habitats need to be secured and managed for at least 30 years.

BNG does not replace existing legislation, policies or obligations related to the natural environment. It is an additional, new mechanism for measuring and addressing biodiversity impacts resulting from new development. Development proposals will still need to assess impacts to biodiversity (sites, habitats, and species) and demonstrate that they have taken all reasonable measures to avoid or lessen those impacts. BNG does not replace the need to take action to avoid impacts to protected and notable species.

BNG is designed to deliver measurable improvements for biodiversity by enhancing or creating habitats in association with development. It has the potential to become a powerful mechanism for nature recovery, and can provide land owners with an alternative, long-term source of income. BNG can be achieved on-site, off-site or through a combination of on-site and off-site measures.

BNG is linked to the Hampshire Local Nature Recovery Strategies (LNRS). The Biodiversity Metric incentivises habitat creation or restoration in areas of strategic significance which will essentially equate to areas identified in the LNRS. BNG measures which lie outside the Borough or outside areas of identified strategic significance are disincentivised: in this way it is expected that BNG will help to deliver meaningful nature recovery within the Borough.

The UK 10 BNG good practice principles for development must be followed when delivering BNG, this will ensure that biodiversity loss is first avoided and then minimised, and that the right biodiversity is delivered in the right places.

The Council are also in the process of developing local guidance and policy in relation to BNG, as well as considering the potential and opportunities for BNG on their own land.

ACTION 21: The Council to adopt BNG planning policy and guidance for minimum 10% biodiversity net gain. This will ensure that eligible development achieves a minimum 10% BNG and that BNG is guided by the LNRS and any local requirements, prioritising locally relevant BNG.

ACTION 22: The Council to continue to investigate opportunities for BNG on its own land holdings.

SUMMARY OF KEY ACTIONS, MONITORING & IMPLEMENTATION

Summary of key actions

This section summaries the key opportunities for action identified in this strategy for biodiversity protection and enhancement. These opportunities will be taken forward by the Council to develop more detailed targets and action plans.

Action 1	The Council recognises the biodiversity crisis that has developed over the last century and is committed to nature recovery. The Council will embed consideration of biodiversity throughout all of its functions and activities in line with the Biodiversity Duty, recognising that this requires a step change in the way the Council operates.
Action 2	The Council will continue to support HBIC in mapping and monitoring priority and other habitats, and protected and notable species, to ensure that decision making and land management are based on the best available evidence.
Action 3	The Council will ensure that the presence of statutory and non-statutory designated sites, priority habitats, and protected and notable species is acknowledged within planning policy and across the all the Council's functions and activities.
Action 4	The Council will maintain its support for existing partnerships and initiatives relating to the conservation and restoration of biodiversity and will seek new opportunities to expand its network of partners and projects.
Action 5	The Council's Local Plan will include policy consistent with the Hampshire Local Nature Recovery Strategy and mandatory Biodiversity Net Gain.
Action 6	The Council will investigate opportunities for managing its land to improve woodland quality and connectivity.

Action 7	The Council to trial changes to amenity grassland management within its control, working alongside community groups to deliver biodiversity benefits where possible. The Council will also continue to engage with partners to explore opportunities on grassland habitats that are not under its direct control.
Action 8	In conjunction with Natural England, the Council to review the management of protected sites under its ownership or control and ensure that opportunities for grassland enhancement are pursued.
Action 9	The Council will investigate opportunities for managing its land to improve wetland quality and connectivity.
Action 10	The Council will continue to engage with national guidance and advice on nutrient mitigation and ensure that planning policy is in accordance with the latest guidance.
Action 11	The Council to continue to work with and support existing partners and seek to expand partnerships in order to restore and enhance coastal habitats and species.
Action 12	The Council will continue to embed the protection of coastal habitats and species within its planning policies and will continue its support of strategic mitigation measures such as Bird Aware Solent, the Solent Waders and Brent Goose Strategy and nutrient mitigation measures.
Action 13	Opportunities for 'greening the grey' should be considered and incorporated into relevant projects, plans and strategies, in order to embed biodiversity throughout the urban/suburban environment (which would also have wider benefits such as improving health and well-being and helping to adapt to climate change). Examples include public realm soft landscaping and development landscape design and will include Council-led regeneration schemes.
Action 14	Planning policy will require that new development incorporates features for wildlife and recognises green infrastructure as essential infrastructure, such as open spaces, green roofs and walls, integral bird and bat boxes, and suitable native-led planting.

Action 15	The Council will consult and engage with local communities to help identify opportunities to improve the biodiversity value of their parks and green spaces. This could include investigating the resources needed and public appetite for changing grass cutting regimes, in line with best practice. In accordance with the UK government's commitment to protect 30% of the UK's land by 2030 for nature and biodiversity, the Council could also aim to manage at least 30% of its land holding for biodiversity.
Action 16	The Council to develop biodiversity-focused management plans for all its sites, following best practice guidance and drawing on local consultation and engagement, and establish a process for implementing, monitoring and updating these.
Action 17	The Council to investigate minimising its pesticide usage and/or going pesticide free in some areas. This could be done alongside a public consultation to raise awareness and gather residents' views on the matter.
Action 18	The Council will work with its partners to promote and support nature friendly land management.
Action 19	The Council will undertake a Habitats Regulations Assessment of the Local Plan, including an assessment of the potential impacts of atmospheric pollution on protected sites.
Action 20	The Council will continue to be guided by the best available evidence and guidance in relation to nutrient mitigation.
Action 21	The Council to adopt BNG planning policy and guidance for minimum 10% biodiversity net gain. This will ensure that eligible development achieves a minimum 10% BNG and that BNG is guided by the LNRS and any local requirements, prioritising locally relevant BNG.
Action 22	The Council to continue to investigate opportunities for BNG on its own land holdings.

Table 4: Summary of key actions

Monitoring and implementation

Monitoring of the strategy delivery will be through a combination of annual monitoring against any action plans and targets developed by the Council and monitoring of habitat and species data and Biodiversity Net Gain.
The objective is to provide an annual report detailing all biodiversity related activities carried out by the Council as well as information on the natural environment published by other parties. This annual reporting will be led by the Council's planning services team and will be published on the Council's website.

There are five broad areas for monitoring and reporting:

- **Protected sites**
- **Priority habitats**
- **Species**
- **Biodiversity Net Gain (BNG)**
- **Other measures**

These different areas pick up on the themes of the strategy and provide simple metrics with which to measure the Council's success in protecting and enhancing biodiversity. Further detail is provided on the following page.

International and national sites

The area and condition of our protected nature conservation sites – international and national – is a measurable metric that can be used to monitor biodiversity in Havant Borough.

International sites

Our international protected sites – Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites – are subject to regular monitoring by the Joint Nature Conservation Committee (JNCC), which includes Natural England. This monitoring includes standard condition monitoring of habitats and species as well as data on threats and risks. Natural England undertakes condition assessments of the Solent's international protected sites on a rolling basis: Chichester and Langstone Harbours SPA are being assessed during 20204/25.

In addition, the Solent European Marine Sites group of the Solent Forum publishes annual data on issues affecting the Solent's international protected sites.

The number, location, and extent of Special Protection Area supporting habitat is monitored constantly by the Solent Waders & Brent Goose Strategy (SWBGS) Steering Group and data are held and maintained by the Hampshire & Isle of Wight Wildlife Trust. Details of SWBGS sites are published on the SWBGS website.

National sites

Natural England, as the Government's statutory advisor on the natural environment, carries out monitoring of all Sites of Special Scientific Interest in England. The monitoring is carried out using a mix of remote observation and site surveys. A site's condition is assessed and published.

SSSI condition is determined by Natural England (NE) using standard condition criteria such as 'Favourable', 'Unfavourable' or 'Unfavourable – recovering'. This allows the condition of each part of a site to be monitored over time, helping to indicate any factors that are contributing to changes in condition. This information is used to address any issues.

REPORTING ACTION: The Council will publish available data on the extent and condition monitoring of international and national protected sites within the Borough annually.

Local sites

Our local protected sites – Sites of Importance for Nature Conservation (SINCs) – are administered by HBIC. Existing SINCs are subject to surveys, usually once every ten years, and new potential SINCs are identified and proposed for survey. Local planning authorities can recommend sites as potential SINCs and, provided a site meets the criteria for SINC designation, these can later be included in the SINC network.

HBIC proves an annual monitoring report detailing the number and extent of SINCs in each local authority area. This includes any changes to SINC boundaries. The condition of SINCs is not measured in a standard way, but SINC survey reports do identify any issues that may be affecting the condition of habitat.

REPORTING ACTION: The Council will publish available data on SINC sites within the Borough annually.

Priority habitat area

A simple metric for the success of the strategy is the area of priority habitat in Havant Borough. There should be no loss of priority habitat in the borough, and the area of each should be maintained and/or increased.

Hampshire Biodiversity Information Centre (HBIC) hold and update a priority habitat dataset for the whole of Hampshire and are able to report on the areas of priority habitats recorded in each local authority area.

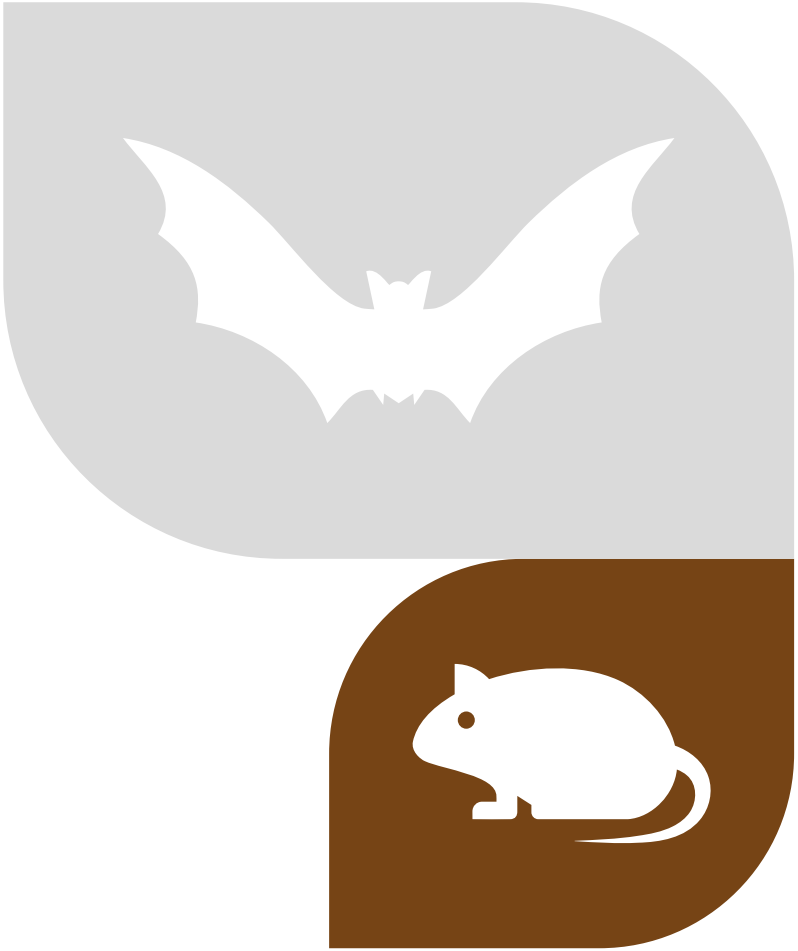
REPORTING ACTION: The Council will publish available data on Priority Habitats within the Borough annually.

Species indicators

Overview

Data on species populations is not as readily available as habitat data. There is no standard method for monitoring population trends of different species across the UK or within particular areas. Species populations are usually surveyed and monitored by various recording groups – often linked to non-governmental organisations (NGOs) such as wildlife charities, or by dedicated individuals or groups - with national, regional or local remits. Some larger organisations do undertake and publish detailed and standardised information on species populations and trends at the national level. However, it is not always possible to gather information at the local level, and meaningful data on populations of certain species within Havant Borough is generally unavailable.

Detailed population data is available for certain species such as those that are qualifying features of our international protected sites. Bird species associated with Chichester and Langstone Harbours SPA are subject to monitoring and population data are used to assess the condition of the SPA.



REPORTING ACTION: The Council to investigate methods to collate and publish data on species population trends within the Borough annually.

Biodiversity Net Gain

Biodiversity Net Gain is a mandatory aspect of the planning system and as such the Council has the ability to monitor BNG.

REPORTING ACTION: The Council will collate and publish annually BNG information submitted with planning applications, to include:

1. The number of development applications to which BNG applies.
2. The number of applications which are exempt from BNG, and the reasons why.
3. The type and area of habitat lost due to development.
4. The type and area of habitat retained and enhanced on-site by development.
5. The type and area of habitat created on-site by development.
6. The type and area of habitat lost, created, retained and enhanced off-site to compensate for on-site development losses.

Summary

Table 5 provides a summary of the metrics and indicators that can be used to monitor biodiversity in Havant Borough, in line with the biodiversity strategy.

Biodiversity feature	Metric	Data	Frequency
International sites	Area and Condition	JNCC/Natural England	Annual
SWBGS sites	Area and Status	Hampshire Wildlife Trust	Annual
National sites	Area and Condition	Natural England	Annual
Local sites	Area and Habitat	HBIC	Annual
Priority habitat	Area and Habitat	HBIC	Annual
Biodiversity Net Gain	Number of applications, exemptions, habitat types and areas	Havant BC	Annual

Table 5: Summary of metrics and indicators that can be used to monitor biodiversity in Havant Borough.

Biodiversity Strategy January 2025