

Saving Nature in Maidstone



Bee orchid in Allington Open Space

Executive Summary

- Looking after the habitats and species in our local area is an important job for everyone in the borough, especially Maidstone Borough Council. Nature is vital to the quality of our lives and the functioning of our society and economy. We depend on it for clean air, food, climate regulation and flood prevention. Access to nature is key to our physical and mental health and wellbeing. How we care for our environment has both local and global consequences. Through this strategy, we hope to trigger action, guide decisions and support people to make a difference. This strategy determines our vision for 2020-2025 and identifies pressures on the environment, our goals and some target projects.
- This strategy outlines the need for local biodiversity action to counter the continued loss of biodiversity at global and local scales.
- The strategy identifies and describes the current pressures on wildlife in the borough. These include development, pollution, the climate crisis, intensive agriculture and invasive non-native species.
- The strategy highlights ways in which people can help to protect nature in Maidstone. This advice includes actions for Maidstone Borough Council, as well as local people and organisations. The latter takes the form of a Biodiversity Pledge. Local individuals, businesses, schools and groups can sign up to show their support for nature and commit to taking action. Information is provided as to where to go for advice and seek funding for biodiversity and conservation projects. To encourage landscape-level working, a list of potential partnership groups is available to support partnership working and applying for joint bids from funders.
- Maidstone has a range of habitats and species of note which are discussed in sections 7 and 8. Priority species (as identified in the Kent Biodiversity Strategy) are also discussed in section 7.4.
- Habitats have been split into four overarching groups: woodland, grassland and agriculture, water and wetlands, and urban habitats. Details on these (including information on current threats and actions) can be found in the Habitat sections 8.1-8.4.
- Key projects for the borough are identified. Following the publication of this strategy, Maidstone Borough Council will be responsible for identifying how they can implement the strategy's recommendations.
- Biodiversity in the Planning Process, a guidance note for planners and developers, can be found in Appendix A. This provides information for planners, developers submitting planning applications and parish councils writing a Neighbourhood Plan.



Orange tip butterfly



Beautiful demoiselle damselfly

Take action now!

1. Wild is good!

Less mowing and less tidying leads to more habitat. Less chemical control (pesticides and fertilisers) leads to more wildlife.

2. Create micro-habitats

Create glades and rides in woodland and aim for mosaics of different habitats not monocultures.

3. Prioritise native species

Use native species when planting, help tackle invasive non-native species on your land and reduce the spread of non-natives through biosecurity measures.

4. Large-scale habitat recreation

Convert low-diversity areas into thriving areas of woodland, wetland or wildlife-rich grassland.

5. Increase access to the countryside

The more people who value nature, the more it will be protected.

6. Reduce habitat fragmentation

Create and maintain corridors or stepping-stone sites. A small garden managed for wildlife can provide a stopping place between larger sites.

7. Consider climate

Increase resilience by promoting connectivity and creating microhabitats. Include climate resilience in all management plans for sites. Mitigate negative effects through green measures. Reduce contributions to climate change.

8. Reduce pressure in wider environment.

Sympathetically manage land which is not primarily managed for wildlife. Make behavioural changes to reduce harm.

9. Create buffers

Soften boundaries between land management types. Buffer wildlife sites by managing surrounding area in ways to reduce adverse effects on site.

10. Spend time outdoors

The more you get to know your local patch, the more you will protect it.

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Orange boxes contain definitions.

Blue boxes show how a concept is relevant to Maidstone.

Purple boxes contain political or technical detail.

Green boxes quote other sources.

Red Signposts direct to other parts of the document or other sources.

1. Why do we need a biodiversity strategy?

Biodiversity:

Formally defined as the variability among living organisms and the interwoven ecological whole of which they are a part, including diversity within species, between species and of ecosystems. Simply, you can think of biodiversity as the diversity of wildlife, including species and habitats.



1.1 Biodiversity is in decline at global and local scales.

It is now widely acknowledged in the media that we have entered a sixth mass extinction - the first such event caused by human actions. The Making Space for Nature review (Lawton, et al., 2010) concluded that England's ecological network is neither resilient nor coherent. The State of Nature report found that 13% of Red List species found in Great Britain are at risk of extinction here (The State of Nature partnership, 2016). The drivers of biodiversity loss are increasing globally. (IPBES, 2019) We need to not only support our nature directly but also reduce the pressure we are putting on it.

Without a step-change in how we treat the environment, this decline will continue.

Our survival and quality of life is dependent on healthy ecosystems. The benefits we get from nature (known as ecosystem services) have been found to be in decline (UNEP-WCMC, 2014).

Nature in crisis

A recent United Nations assessment described unprecedented losses of biodiversity, with an estimated "1 million species at risk of extinction, many within decades." "The biosphere, upon which humanity as a whole depends, is being altered to an unparalleled degree across all spatial scales... Biodiversity ... is declining faster than at any time in human history." (IPBES, 2019)

These benefits are explained in further detail and with local examples in section 3.

1.2 To prevent this loss, we need significant change across sectors.

This is not just a task for environmentalists, but for all of society. Tackling the declines in nature will also help us to tackle inequality and meet the Sustainable Development Goals (IPBES, 2019). Reducing our negative footprint on the environment can both benefit the residents of Maidstone and people in the least developed countries – “nature underpins achievement of [Sustainable Development Goals] on poverty, hunger, health, wellbeing, clean water” (IPBES, 2019). Natural England’s conservation strategy for the 21st Century (Conservation 21, (Natural England, 2016)) also stressed need for a fundamental change in mindset – to make the natural environment a central part of health, wealth and prosperity.

Need for a step-change

As the Making Space for Nature report says, “To turn the tide of biodiversity loss, we need to embrace a new visionary restorative phase of nature conservation. Without a step change, wildlife loss will continue.” (Lawton, et al., 2010).

1.3 The loss of diverse wildlife and healthy ecosystems are driven by two main factors.

1. **Habitat loss:** For example, in Kent over two thirds of the orchards and hops present in 1961 were lost by 2008. The loss of suitable wildlife habitat in Kent can be partly attributed to the increase in development from 10% to 17% over this time period. (ARCH, 2012)
2. **Decline in habitat quality:** This is often due to direct changes in management, as well as other factors such as pollution and climate change.

To achieve the change required, we need better habitat management, bigger areas managed for nature, increased connectivity and more areas for nature. (Lawton, et al., 2010).

But it is not just about improving designated nature areas. Defra’s 25 Year Plan includes the creation or restoration of 500,000 hectares¹ of wildlife rich habitat outside protected areas (Defra, 2018). Were this to be equally spread across all counties and districts, this would be in the realm of 820 ha in Maidstone borough. We need to work across sectors to “soften the matrix” (Lawton, et al., 2010) to make land, air and water outside of protected areas more habitable for wildlife. As pointed out in the recent United Nations report, we need a more integrated cross-sectoral approach and to consider biodiversity across sectors: “Sectoral policies often fail to account for indirect, distant and accumulative impacts” (IPBES, 2019).

Although this is a local strategy, the impacts of our behaviour in Maidstone have knock-on effects around the globe. Litter dropped in town centre can be carried out to sea by the Medway and cause harm to marine life. Pollutants entering the atmosphere have impacts on weather patterns around the world. Emissions from cars on the A229 contribute to global warming and therefore rising sea-levels. It is vital that we better understand the interconnectivity of the world and how we are a part of the system.

“This is not a luxury. Establishing a coherent and resilient ecological network to help conserve the biodiversity that we still have will enhance our options and improve our chances of achieving a prosperous and healthy future for ourselves and our children.” (Lawton, et al., 2010).

¹ A hectare is a unit of an area equal in size to a square with sides of 100m, or 10,000m² total.

1.4 How does this strategy relate to other policies?

Global policy:

Since the last Maidstone Biodiversity Strategy (2008), there has been a Convention on Biological Diversity in 2010 which set out key targets for biodiversity. This local Maidstone strategy has been written to align with the targets of the Convention. New Convention on Biological Diversity targets will be written following the 2020 convention, and these should be considered when planning large-scale land use change. United Nations Sustainable Development Goal 15: Recover sustainable use of terrestrial ecosystems, halt and reverse land degradation and halt biodiversity loss.

European policy:

EU Biodiversity Strategy:

- Halt loss of biodiversity and degradation of ecosystem services by 2020.
- Conserve and restore nature; maintain and enhance ecosystem services; ensure sustainable agriculture, forestry and fisheries; combat invasive non-native species and address global biodiversity crisis. (Defra, 2011)

There are two key environmental policy changes that are likely to result from a departure from the European Union:

1. A new countryside stewardship policy will be adopted as the UK will not have to follow the Common Agricultural Policy (CAP) scheme. This will be called the Environmental Land Management Scheme ('ELMS'). The Department for Environment, Food and Rural Affairs (Defra) are expected to announce the methodology in 2020. The scheme should reward land managers for good environmental practice.
2. An Office for Environmental Protection may be created to ensure sufficient environmental enforcement and governance for when the UK is no longer covered by European Commission governance. (Environmental Audit Committee, 2018) (Defra, 2019). The extent of the powers of such a committee are yet to be determined and there are concerns that this new watchdog may not have sufficient power or independency to protect the environment.

Nationally and regionally:

Defra's 25 Year Plan: Sets out the ambition to become first generation to leave the environment in a better state than we found it. There are Biodiversity Strategies for England (Defra, 2011) and Kent (Kent Nature Partnership, 2015) (with a 2019 Kent Biodiversity Strategy under consultation) and this document sits beneath those. Biodiversity strategies replace Local Biodiversity Action Plans – known as LBAPs (Lawton, et al., 2010). It also sits under the Kent Tree Strategy (Butfoy, et al., 2019).

Locally:

This strategy provides more detail on how to achieve some of the environmental aims from the Maidstone Local Plan (Maidstone Borough Council, 2017) including DM1 6.4: "All new development protects and enhances any on-site biodiversity". It also correlates with the Maidstone Green and Blue Infrastructure Strategy. It is designed to be applicable and usable by local people (businesses, schools, community groups, parish councils and individuals,) as well as by Maidstone Borough Council.

2. What are the aims of this strategy?

Aims	Reasoning
1. Maintaining and enhancing richness and evenness of biodiversity in Maidstone Borough to ensure provision of ecosystem services.	Biodiversity is essential for provision of services critical to our survival.
2. Raise awareness of the benefits of biodiversity.	Better understanding will lead to better decision-making and change behaviour to result in benefits to biodiversity.
3. Promote the integration of biodiversity into decision-making process across sectors.	Large-scale change is required to make all land more amenable to wildlife and reduce negative impacts.
4. Guide the planning process towards biodiversity-friendly decisions.	Help people understand how to achieve biodiversity gains and prevent harm when planning development.

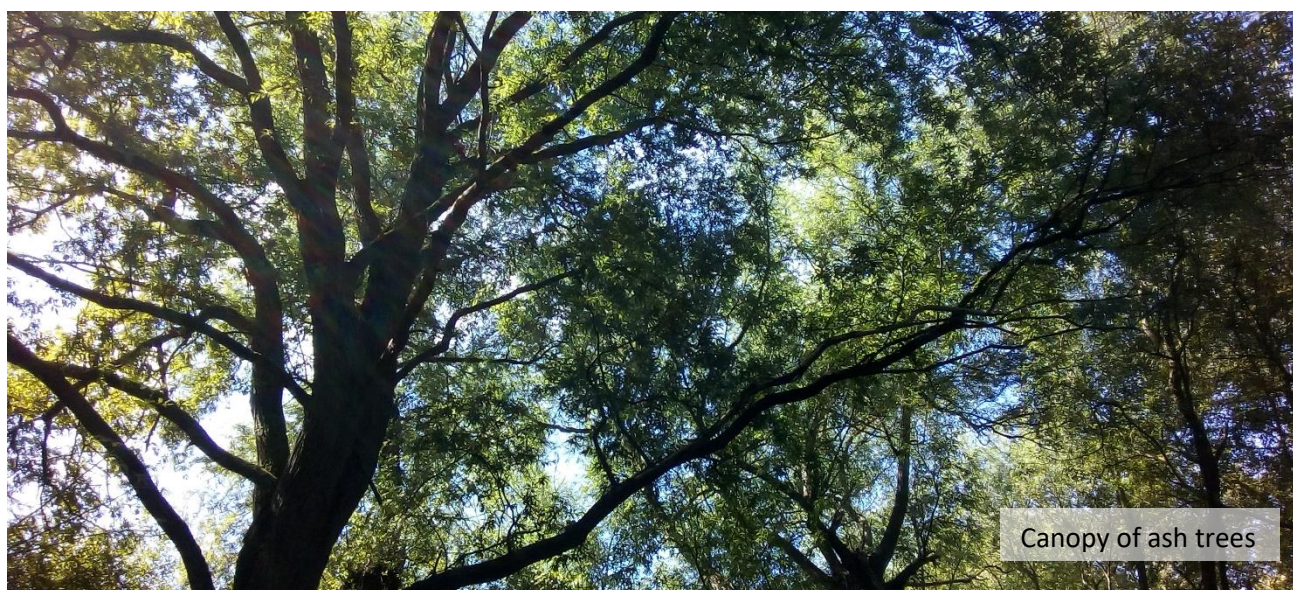
3. What are ecosystem services?

Ecosystem services are a key concept to biodiversity management because they show how vital it is to society to keep our ecosystems functioning. Biodiversity underpins ecosystem services (Lawton, et al., 2010) as it contributes to ecosystem health and resilience. It is due to these benefits that both biodiversity and ecosystem services are fundamental to our wellbeing and economy.

Increasing awareness of the importance of nature for society is shown by the focusses on ecosystem services in the Government's Natural Choice White Paper¹ (Defra, 2011), 'Conservation 21' (Natural England' plan for the 21st Century (Natural England, 2016)), and the ThinkBIG report (England Biodiversity Group, 2011).

Ecosystem services:

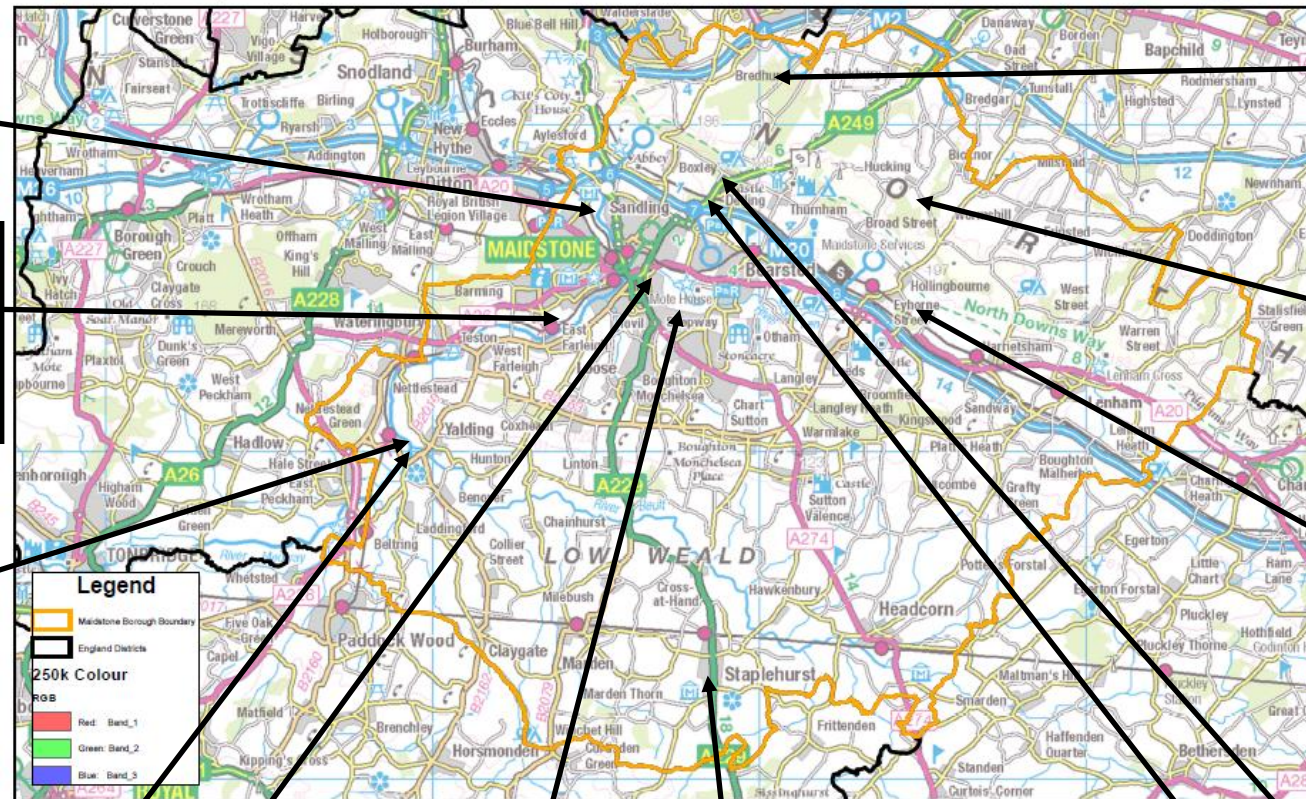
the benefits that humans gain from nature. This includes supporting services (such as soil formation and pollination), provisioning services (such as food and water supply), regulating services (such as improving air quality, flood prevention) and cultural services (such as recreation, education and wellbeing).



Canopy of ash trees

¹ White papers are policy documents produced by the Government that set out their proposals for future legislation. (UK Parliament, 2019)

Examples of Ecosystem Services in Maidstone Borough



3.1 Declining ecosystem services:

An assessment of the UK's ecosystems was carried out in 2011 and found that 30% of services were in decline (UNEP-WCMC, 2014). They also highlighted that pressure on these services will increase due to increased population size and climate change (UNEP-WCMC, 2014). One of the Convention on Biological Diversity Aichi targets is to restore ecosystem services (Convention on Biological Diversity, 2010). The UN's IPBES report highlights how it is imperative to conserve biodiversity in order to maintain human quality of life and survival, and to meet the UN's Sustainable Development Goals. Whilst there can be artificial substitutes for these services, e.g. engineered water retention/treatment facilities, these often are costly, requiring more costly management and usually fulfil just a single purpose – a woodland provides many benefits all at once. (IPBES, 2019). The Kent Natural Capital Assessment found significant decreases in ecosystem service provision in all categories between 1961 and 2008 (except increase extent of urban areas and enclosed farmland and stable condition in urban areas) (AECOM, 2015).

3.2 Nature and Human Health

Thriving nature has been shown to have positive impacts on health (both physical and mental). The Natural Choice White Paper references to mental and physical health benefits of contact with nature (Defra, 2011) and the Marmot review further demonstrates the link between healthy humans and healthy environments (Marmot, et al., 2010). Nature contributes to human health in various ways: nutritious food, medicines, clean water, regulating disease, reducing air pollutants and improving health through access to natural spaces (IPBES, 2019).

3.3 Natural Capital

Natural capital:

“the components of nature that provide people and the economy with essential goods and services” (The State of Nature partnership, 2016)

Increasingly, the benefits provided by nature are being incorporated into our economic systems by acknowledging the value of natural capital. By thinking of biodiversity in terms of the financial value we derive from these services, we are more able to incorporate biodiversity management into our economic system. Existing economic systems favour economic activity at a cost to environmental condition (IPBES, 2019) because the financial value of the environment is not accounted for. The contribution of the natural environment to other sectors needs to be acknowledged so that we can begin to protect nature sufficiently. Ecosystem management needs an integrated rather than a sectoral approach (UK NEA (UNEP-WCMC, 2014)).

Nature in crisis = people in crisis

“Nature is essential for human existence and good quality of life.” (IPBES, 2019)

“Natural world, its biodiversity, and its constituent ecosystems are critically important to our wellbeing and economic prosperity but consistently undervalued in conventional economic analyses and decision-making” UK NEA (UNEP-WCMC, 2014)

Natural Capital Policy

Defra's Natural Choice white paper calls for the inclusion of natural capital in national accounts. The Biodiversity 2020 (England's Biodiversity Strategy) also sets out their plans for a Nature Markets Taskforce and New Natural Capital Committee. The report 'Enabling the Green Economy' highlights the economic advantages of being environmentally sustainable (Defra, 2011). An online tool for natural capital and sustainable management of natural resources is under development by the University of Exeter, (Natural Environment Valuation of Exeter, 2018)). For more detail please see the Kent Natural Capital Asset Check

4. What are the pressures on wildlife in Maidstone Borough?

The Kent Habitat Survey highlights the key negative drivers for biodiversity: pressure on land use (due to proximity to London and transport links to Europe), direct loss of habitats to development or mineral extraction, intensive management, inappropriate management, habitat fragmentation, invasive non-native species and climate change (ARCH, 2012). These correlate with the drivers at a global scale addressed in the recent UN report on biodiversity (IPBES, 2019). Pressures on individual habitats and areas are discussed in section 8.

4.1 Development

Maidstone borough has strong pressure to meet housing targets. The Local Plan suggests a need to create 883 dwellings/year until 2031 (Maidstone Borough Council, 2017). The provision of housing to meet demand is necessary but needs to be done in a way that does not cost us our nature.

For more guidance on writing a neighbourhood plan, submitting a planning application or if you are a planner, please see Appendix A.

Erosion of biodiversity

“Small losses of habitat at a development scale add up to significant rates of biodiversity loss overall.” (Defra, 2018).

New development is the main cause of woodland loss (Butfoy, et al., 2019) in Kent. Development (domestic, industrial and infrastructure) is also a key cause of habitat fragmentation. Isolated habitats support less wildlife due to limited dispersal opportunities and edge effects. Fragmentation is a key issue at Maidstone borough sites such as Horish Wood and Chilston Ponds which are isolated due to HS1, M20 and other roads.

There is a strong need for integration of conservation into all stages of the development process – including architects, builders, planners, town planners and homeowners. Doing so can improve outcomes for all – and make our lives healthier, more sustainable, and improve quality of life. Marmot calls for integration of planning, transport, housing, environmental and health systems to address social determiners of health (Marmot, et al., 2010). In the Natural Choice white paper, Defra also call for factoring of urban greenspace into development of all communities and acknowledges the health benefits from contact with nature.

There are increasing numbers of case studies of developers and conservation working together.

- A recent example is of the Kingsbrook development where developers, RSPB and the local council have worked together to provide wildlife-friendly housing. More information can be found here: <https://www.rspb.org.uk/our-work/conservation/projects/kingsbrook-housing/> (RSPB, 2019)
- The Exeter City Council’s nationally acclaimed Residential Design Guide includes a section of the provision of biodiversity in new development. See Appendix 2: <https://drive.google.com/file/d/0B4CpCORTOQdTRTNySENnUXdoNTQ/view> (Exeter City Council, 2010)
- Oxford City Council have produced a Technical Advice Note on Biodiversity to guide developers, planning applicants and planners on how to make space for nature within developments: [https://www.oxford.gov.uk/downloads/file/5730/grs4 - _technical_advice_note_-_biodiversity](https://www.oxford.gov.uk/downloads/file/5730/grs4_-_technical_advice_note_-_biodiversity) (Oxford City Council, 2019)

Net Biodiversity Gain

Defra¹ underwent a consultation in 2018 on Net Biodiversity Gain in development. Introducing a net gain principle will mean that new development will have to result in an overall increase in biodiversity, as measured by a metric developed by Defra. The consultation document suggests that the current planning system protects the best sites for nature but is less good at reducing “gradual erosion of lower value habitats” (Defra, 2018). The biodiversity net gain principle will be mandated through the upcoming Environment Bill, due to be published in 2019 (draft Bill is available, (Defra, 2019)). The England Biodiversity Group’s report ThinkBIG also supports this view (England Biodiversity Group, 2011).

Maidstone Local Plan statements on biodiversity and development

The Maidstone Local Plan says “Development schemes will be expected to contribute towards improved connectivity through the provision of space for nature that contributes to the large landscape-scale pattern of connected habitat”

- Biodiversity: 6.20:
 - Council will work in partnership with landowners, land managers and developers to encourage better soil handling practices to avoid the degradation of soil and ensure soil functions are maintained as appropriate
 - Development proposals need initial survey of on-site assets at appropriate time of year for the relevant habitats / species / flora and fauna
 - Developers must ensure suitable mitigation measures are implemented if harm unavoidable
 - Proposals should seek to avoid damaging and fragmenting existing habitats
 - Maximise opportunities to contribute to priority habitats and species
 - Development likely to lead to negative effect of international important nature conservation sites unlikely to meet requirements of habitats directive

(Maidstone Borough Council, 2017)



Field of orchids

4.2 Pollution

Pollution affects the quality of air, water and soil, and thereby can interfere with ecosystem services and reduce biodiversity. Changes can be diffuse and wide-reaching, and difficult to tackle.

Upper Stone Street in Maidstone town was found to be the 5th worst site (outside London) for breaching the Air Quality Objective for Nitrogen Dioxide, with 79.3 ug/m³ compared to the objective of below 40ug/m³ (Friends of the Earth, 2019).

The Catchment Sensitive Farming scheme works on reducing water and air pollution and offers free support to those in high priority areas. In Maidstone borough, this is along the M20 and near Boxley. (Natural England, 2018)

Biodiversity suffers from pollution but can also be part of the solution. Biodiverse systems can help to reduce damage through phytoremediation (the process of plants and associated micro-organisms removing hazardous contaminants from soil, air and water).

Pollution:

The presence or introduction of a harmful substance into the environment.

To find out where the high priority areas are, visit this webpage (Natural England, Defra and Environment Agency, 2019):
<https://www.gov.uk/guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution#find-out-if-your-lands-in-a-high-priority-area>

Pollution in Policy

The government's Water White Paper highlights the issue of diffuse pollution (Defra, 2011). The Convention on Biological Diversity Aichi target 8 is Reducing pollution to levels not detrimental to ecosystem functions and biodiversity (Convention on Biological Diversity, 2010). The Maidstone Local Plan includes controlling pollution for the benefit of biodiversity in DM3 The Natural Environment, and in relation to Air Quality in DM6 which recommends the use of soft measures such as tree planting to mitigate against emissions from new developments (Maidstone Borough Council, 2017).

4.3 Climate crisis

The current climate crisis is a series of human-caused changes in our environment which are having large-scale negative consequences for the planet and for society. Humans are estimated to have caused an observed warming of approximately 1.0°C between pre-industrial levels and 2017. For global temperature increases of 1.5°C to 2°C, most terrestrial species are projected to shrink profoundly (IPBES, 2019). Biodiversity is at threat from the climate crisis so we need to manage biodiversity with climate resilience in mind (see Recommendation 13 of (Lawton, et al., 2010)).

Rapid changes to the climate affect wildlife in lots of ways – it affects their habitat availability, their geographical ranges, the timing of biological events and the ecosystem processes upon which biodiversity depends. (Lawton, et al., 2010). These effects exacerbate the other threats to biodiversity. The way in which it affects human society is comparable – loss of homes, suitable land, food availability.

At a global level, the Convention on Biological Diversity Aichi targets include increasing ecosystem resilience to mitigate against climate change. (Convention on Biological Diversity, 2010). Similarly, the UN's IPBES report highlights the importance of taking climate change into account in actions to reduce the loss of biodiversity. The Kent Habitat Survey identifies climate change as a key negative driver (ARCH, 2012).

Working across sectors can produce synergistic outcomes: reduced climate change, increased biodiversity, stable economy and increased human health and wellbeing. The Marmot review investigated Health Inequalities in England and suggested prioritising policies and interventions that mitigate climate change alongside reducing health inequalities, such as increasing availability of good quality green space across social gradients (Marmot, et al., 2010).

The management plans of wildlife sites rarely include managing for climate resilience. The Making Space for Nature report recommends that conservation objectives of wildlife sites are revised to respond to climate change (through measures such as increased microhabitat diversity, focus on connectivity and supporting ecological processes) (Lawton, et al., 2010).

In the Habitat sections below, these negative climate changes are not listed as threats under *each* habitat type as the effects are likely to be across *all* habitats and often there are no or inadequate predictions of how the habitats will be affected.

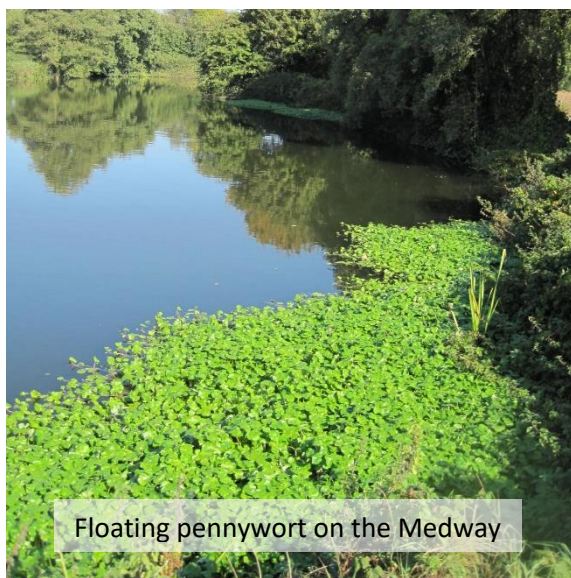
Biodiversity is also part of the solution – ecosystem services include climate regulation and biosequestration. Plants take in carbon dioxide from the air and use the carbon in the production of more plant material. This natural process of carbon sequestration can help to mitigate global temperature increases. The Kent Tree Strategy which explains how trees can counter urban heat island effect and climate-proof built-up areas (Butfoy, et al., 2019). At a local level, the Maidstone Local Plan calls for greening of the town centre to mitigate against impacts of climate change. (Maidstone Borough Council, 2017).

4.4 Invasive Non-Native Species (INNS)

As well as being problematic to us directly, invasive non-native species are a key threat to biodiversity by altering habitats or competing for resources and land, resulting in decreased native biodiversity. Globally, there has been an estimated 70% increase in the number of INNS since 1970 (IPBES, 2019).

Invasive Non-Native Species:

Species which have been introduced from outside their original distribution and have the ability to spread and cause damage to the environment, economy, our health or the way we live (Griffiths & Loos, 2018).



The global biodiversity targets (from the Convention on Biological Diversity) include identifying and prioritising invasive non-native species and pathways, controlling or eradicating those priority species and putting measures in place to prevent their introduction and establishment (Convention on Biological Diversity, 2010).

Invasive Non-Native Species in Maidstone borough

The South East's Regional Invasive Alien Species Management Plan shows the regional pathways of introduction, hotspots, areas of high conservation value and key stakeholders. It provides recommendations on prevention, early warning, rapid response, eradication and control of INNS. (Griffiths & Loos, 2018). The hotspots and key species of relevance to Maidstone borough are highlighted below.

	Area	Species of concern
Regional Sites of High Conservation:	River Beult	Water Fern, Floating Pennywort, Giant Hogweed, Himalayan balsam
	Kent Downs	Various
	High Weald	Various
Regional High Risk Areas:	River Medway Navigation and Canoe Trail	Various
	Yalding/River Medway	Floating Pennywort
Regional Hotspots:	River Medway through Yalding	Giant Hogweed, Himalayan balsam and floating pennywort

Table 1: Regions of concern in Maidstone borough (Griffiths & Loos, 2018)

Species in Freshwater Medway area	Non-aquatic species in Medway area
Alpine Newt	Asian hornet
Curly waterweed	Asian long-horn beetle
Pickerel-weed	Few Flowered Leek
Piri-piri burr	Indian House Crow
Prickly heath	Monk parakeet
Quagga mussel	Invasive Garden Ant
Red swamp crayfish	New Zealand Flatworm
Spiny-cheek crayfish	Prickly heath
Virile crayfish	

Table 2: Black list species: high concern, not currently present (Griffiths & Loos, 2018)

Invasive Non-Native Species in Maidstone borough

Species in Freshwater

Medway area

American skunk cabbage

Caspian Mud Shrimp

Water primrose

Table 3: Red list species: early detection – present but not well established (Griffiths & Loos, 2018)

Species in Freshwater Medway area	Non-aquatic species in Medway area
American mink	Goat's-rue
Water fern	
Zebra mussel	
Chinese mitten crab	
Signal crayfish	
Floating pennywort	
Goat's-rue	
Giant hogweed	
Giant rhubarb	
Himalayan balsam	
Japanese knotweed	
Marsh frog	
Turkish crayfish	
New Zealand pigmyweed	
Nuttall's and Canadian waterweed	
Orange balsam	
Parrot's feather	

Table 4: Yellow red list: long term management - eradication not feasible



Non-aquatic species in Medway area
<i>Buddleia davidii</i>
Ring necked parakeets
Rhododendron
Russian vine
Sika deer
Turkey oak
Reeves Mutjac
Montbresia/Crocosmia
Japanese rose
Cotoneaster sp.
Evergreen oak
Grey squirrel
False acacia

Table 5: Green list species: lower impact species, often where very long-term management required (Griffiths & Loos, 2018)

4.5 Intensive Agriculture

Modern intensive farming methods have a profound effect on the landscape – impacting the appearance, character and ecological condition of the countryside. Intensive agriculture can include increasing output by farming larger fields with the same crop and methods, using large-scale application of fertilisers and pesticides, changing natural water flows (through drainage ditches, extraction of water from rivers), and a reduction in the diversity of crops, livestock breeds, and techniques. The increase in agriculture and its intensification has led to decreases in other ecosystem services, such as regulation of air and water quality, climate regulation and habitat provision. (IPBES, 2019)

In England, 60% of nitrates and 40% of phosphates within water are due to agriculture which compromises important habitats and thus species richness (Natural England, 2009). Within the south east, water usage within agriculture may become an increasingly pressing issue as the area is already ‘water stressed’ as a result of reduced rainfall and increased consumer need. 87% of ammonia emissions in the UK are from farming, in particular livestock farms, through intensive farming this increases and adversely affects air and water quality (Natural England, 2019).

Loss of local varieties of crops and breeds of livestock threaten global food security as we come to rely on less species and on genetically diverse species. This reduces the resilience of our food systems to pests, disease and climate change. (IPBES, 2019)

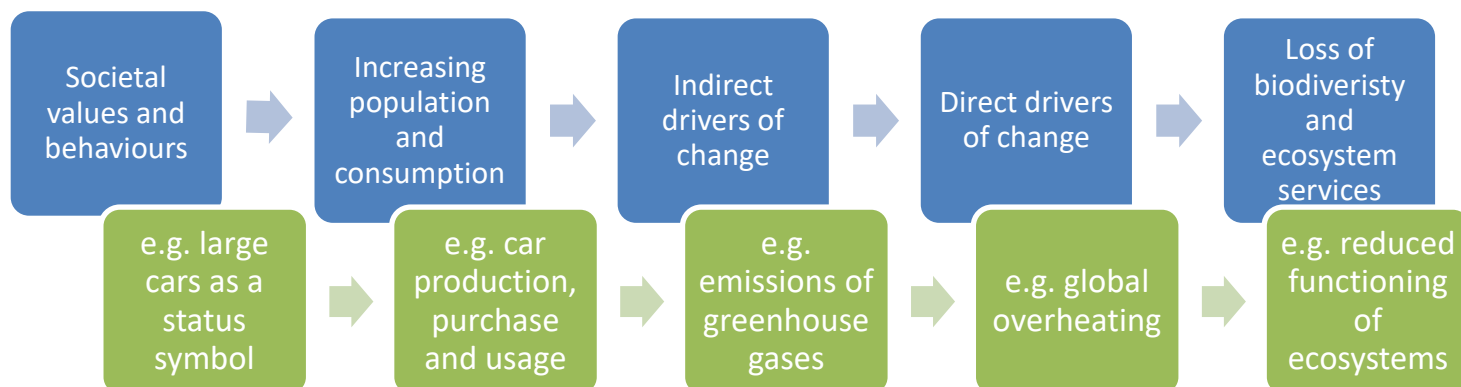
Defra’s Natural Choice white paper sets out the aim to deliver sustainable management of England’s soils, and tackle key threats, which will be delivered through stewardship schemes and cross compliance. (Defra, 2011). The full extent of the impacts of agriculture on biodiversity, and the work being done to tackle this, is beyond the scope of this strategy, especially as it largely falls out of the responsibility of Maidstone Borough Council, however it’s worth noting the importance of agricultural practices for biodiversity management, especially as the majority of land in Maidstone Borough is agricultural (73% arable and horticulture and improved grassland).

Several projects exist to support environmentally friendly farming, including Back from the Brink's Colour in the Margins project which protects arable habitats and species, with the Kent Downs as a focus area for the project. LEAF (Linking Environment and Farming) are also working on increasing the environmental suitability of farmland. LEAF promotes integrated farm management, certifies sustainably farmed products and provides education. Further information can be found on environmentally friendly practices such as soil management, pollution control and nature conservation on the LEAF website, especially on their resources page: <https://leafuk.org/farming/resources>. The Catchment Sensitive Farming initiative focuses on water and air quality in the farmed environment – please see section 4.2 for more detail.

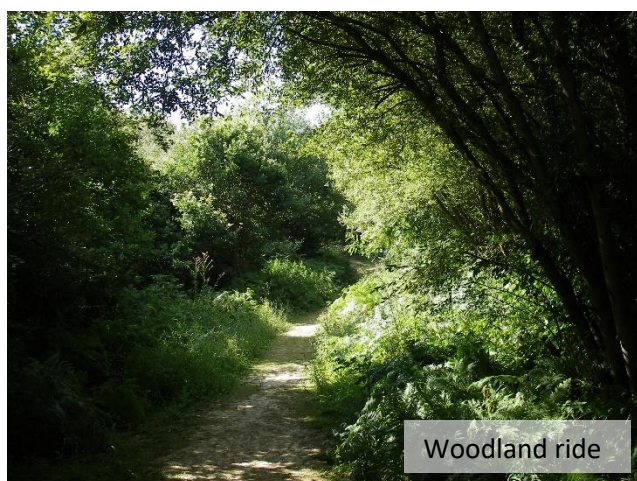
Find out more about Colour in the Margins here: <https://naturebftb.co.uk/the-projects/colour-in-the-margins/>
Or for information on LEAF, visit: <https://leafuk.org/>

4.6 Underlying drivers

The factors above are all underpinned by increasing population and increasing consumption patterns. Human population has doubled since 1950 and global economy has grown nearly 4-fold. (IPBES, 2019). The quantity of resources extracted from the environment has nearly doubled since 1980 due to increases in per person consumption and increasing population. (IPBES, 2019)



The UN biodiversity report stresses the need to decouple idea of a good and meaningful life from ever-increasing material consumption. (IPBES, 2019). To achieve the large-scale changes in our environment that are required, our societal values and behaviours need to change.



Woodland ride



Field and hedgerow

5. How can I help?

Biodiversity 2020 (England's Biodiversity Strategy) prioritises putting people at the heart of biodiversity policy, including increasing awareness and increasing the number of people taking positive actions (Defra, 2011). As discussed in Section 2, not only is it important to look after protected areas where nature is the priority, but also to "soften the matrix" and make the wider landscape more hospitable to nature. This requires people across sectors to get involved and take responsibility for their impacts on nature. Everyone can contribute in some way – in fact, it's vital that we can get as many people taking positive actions as possible.

Role for everyone

As the ThinkBIG report points out, "irrespective of ability, everyone can do something, whether as an individual community, organisation or business" (England Biodiversity Group, 2011).

5.1 Maidstone Biodiversity Pledge

To encourage local people and organisations in Maidstone to get involved, we have developed the Maidstone Biodiversity Pledge. To sign up to the pledge, you are saying that you support the Maidstone Biodiversity Strategy and will take action to help biodiversity. You can sign up via a webpage on the Maidstone Borough Council website.

This will help people to know which businesses and organisations support nature and we hope it will foster intersectional partnership working.

If you are interested in what Maidstone Borough Council will do, please see Section 6.

You can sign up at one of three levels: as a Nature Ally, Nature Supporter or Nature Guardian depending on your scope to instigate change. Saving nature requires everyone to take responsibility for their impacts on the environment and take steps to change – there are actions that everyone can take.

There are three areas of action which we encourage people to take: considering biodiversity in decision-making, increasing awareness, and giving wildlife a home – the table below gives examples of how these actions can be done.

This pledge should be taken as an opportunity to examine your opportunities to help nature and make a commitment, not an opportunity for greenwashing. Changing to a more environmentally friendly supplier of cleaning products may not help your reputation as much putting up a window box with insect friendly flowers but may make a greater difference to your impact on nature and the environment.

Greenwash:

To make people believe your company is doing more to protect the environment than it really is. (Cambridge Dictionary)

If you are putting in a planning application, work in the built environment sector (architecture, development, building and planning) or are a planner please see the Biodiversity in the Planning Process guidance document, found in Appendix A, which looks in more detail about how development and nature can be balanced, including details of legal requirements and advice on best practice.

If you are involved with a parish council that is working on a Neighbourhood Plan, please incorporate the advice and information given in this strategy and Appendix A.

Maidstone Biodiversity Pledge – levels and actions		3 Levels of Commitment		
		Nature Ally e.g. individuals, local businesses	Nature Supporter e.g. parish councils, local community organisations	Nature Guardian e.g. environmental organisations, MBC councillors
3 Areas of Action	Think about biodiversity in decision-making	e.g. consider the impact of food shopping	e.g. include biodiversity in your business plan	e.g. having a dedicated biodiversity policy
	Engagement and education	e.g. attending a talk or event, take part in a campaign	e.g. promote or support events	e.g. run events, educating staff
	Giving wildlife a home	e.g. putting up a bird-box, window box with bee-friendly flowers	e.g. make an office wildlife garden	e.g. manage protected areas



Children at a wildlife event



Insect hotel

5.2 Funding Sources

Funding is often a big challenge for those wanting to help nature. Whilst the financial value of nature is increasingly recognised, and systems to incorporate nature into the economic system are built, there is still a way to go. Consultations with local conservation groups have shown that identifying funding sources are a key challenge so the following

It may be beneficial for smaller organisations to group together in order to tap into funding from larger grant-making bodies. See Section 5.3 for other local groups interested in partnership working.

information has been compiled. This is not an exhaustive list as funding sources come and go and are often time limited.

5.3 Partnership Working

There are many brilliant individuals and organisations in the borough working on conservation projects in their area. Working in partnership will allow increased potential for habitat connectivity across the borough.

The following organisations have expressed an interest in partnership working:

- Bredhurst Woodland Action Group
- Boughton Monchelsea Amenity Trust
- Detling Parish Council
- Fant Wildlife Group
- Friends of Whatman Park
- Harrietsham Parish Council
- Hollingbourne Meadows Trust
- Kent Wildlife Trust
- Maidstone Green Drinks group
- Medway Valley Countryside Partnership
- Woodland Trust
- Yalding Parish Council

6. What will Maidstone Borough Council do?

To meet the council's commitments to biodiversity, as set out in the Local Plan and here, the Council will do the following:

- Follow up planning permissions granted with environmental conditions to ensure mitigation is done properly and managed for the long term.
- No longer permit greenfield residential developments that do not meet Local Plan/ANGSt standards. Brownfield residential development will have to meet financial contributions to provide off-site provision and maintenance of natural open space.
- Enforce Maidstone Borough Council Local Plan's DM3 6.20 in planning decision (see planners' guidance note).
- Make habitat connectivity and ecosystem function a primary factor when allocating land for development.
- Reject plans that do not deliver net gain for biodiversity. Government will enforce a net gain for biodiversity and subsequently also a net gain for environment (incorporating biodiversity, air quality etc). Guidance on measuring net gain can be found here: <http://nepubprod.appspot.com/publication/5850908674228224>
- Prioritise ecological solutions (soft measures such as tree planting and Sustainable Urban Drainage Schemes - SUDS) as the primary mechanism to deal with problems such as climate and/or flood mitigation, or preventing run-off pollution events, as these are more likely to provide multiple benefits.
- Prohibit all development on ancient woodland or any tier 1 or 2 wildlife designated sites.
- Implement Hedgerow Regulations to protect hedgerows
- Manage its land with biodiversity and ecosystem services as the priority and follow principles set out through-out this document including:
 - Reduce use of rodenticide
 - Retain ivy unless where a safety concern
 - Reducing mowing and increase diversity on monoculture amenity grassland
- Consider biodiversity and ecosystem services in other plans within other Maidstone Borough Council departments – e.g. health, air quality, education, economy etc.
- Permanent investment (i.e. beyond the Go Green Go Wild project) in supporting regions' biodiversity and community environmental groups.

- Implementation plan yearly to demonstrate how the council will enact the recommendations of this strategy. Yearly monitoring and reporting to MBC committee.
- Ensure that canals, railways, roads, cycle ways and other linear features in the landscape should better achieve their potential to be wildlife corridors (Lawton, et al., 2010)
- The Maidstone Infrastructure Delivery Plan has a section on health infrastructure which currently is focused on provision of GP surgeries and local care services – future iterations of the Infrastructure Delivery Plan should include the provision of greenspace to the communities that need it most. (Maidstone Borough Council, 2016)

7. What have we got in Maidstone?

England has species and habitats of international importance (Lawton, et al., 2010).

Those present in Maidstone include:

- More chalk rivers than any other country in Europe
- Globally important populations of bats and oceanic lichens
- More than half mainland Europe's species of mosses
- 10% of the world's bumblebee species!
- Highest representation of veteran oaks in Europe
- Hay meadows and chalk grassland of international importance

7.1 Designated sites

As highlighted throughout this strategy, saving nature requires not just focusing on protected areas, but ensuring the wider environment is more habitable for nature. Sympathetic management of all land is critical to reducing drivers of biodiversity loss. Both 'Conservation 21' (Natural England, 2016) and 'Think BIG' (England Biodiversity Group, 2011) stressed the need for large scale change at the landscape level, not just focussing on individual sites.

Nonetheless, well-managed designated sites are key areas that provide space for wildlife. Globally, protected areas cover 15% of terrestrial and freshwater environments (IPBES, 2019)

There are many types of designation (and associated acronyms!). These can be sorted into three levels (as done in the Making Space for Nature review (Lawton, et al., 2010)). To make our ecological network more coherent and resilient, we need to particularly improve the management of the Tier 2 and 3 sites (Lawton, et al., 2010). In Maidstone, 0.1% of the borough is designated as Sites of Specific Scientific Interest, 6.1% are designated as Local Wildlife Sites² and 27.6% falls within the Kent Downs Area of Outstanding Natural Beauty.



Tier	Type of Site		Number of sites in borough	Total area in borough (to nearest whole hectare)
1	Sites with nature conservation as the primary purpose ³	Sites of Specific Scientific Interest - SSSIs	11	270
		Ramsar	0	0
		Special Areas for Conservation - SACs	1	137
		Special Protection Areas - SPAs	0	0
		National Nature Reserves - NNRs	0	0
		Local Nature Reserves - LNRs ⁴	3	117
2	Sites designated for high biodiversity but without full statutory protection	Local Wildlife Sites - LWSs	63	2398
		Ancient Woodland (Sansum, et al., 2012)	564 woodland parcels	2828
3	Sites where wildlife is included in statutory purpose	Areas of Outstanding Natural Beauty – AONBs	1 – Kent Downs ⁵	10,725
		National Parks	0	0



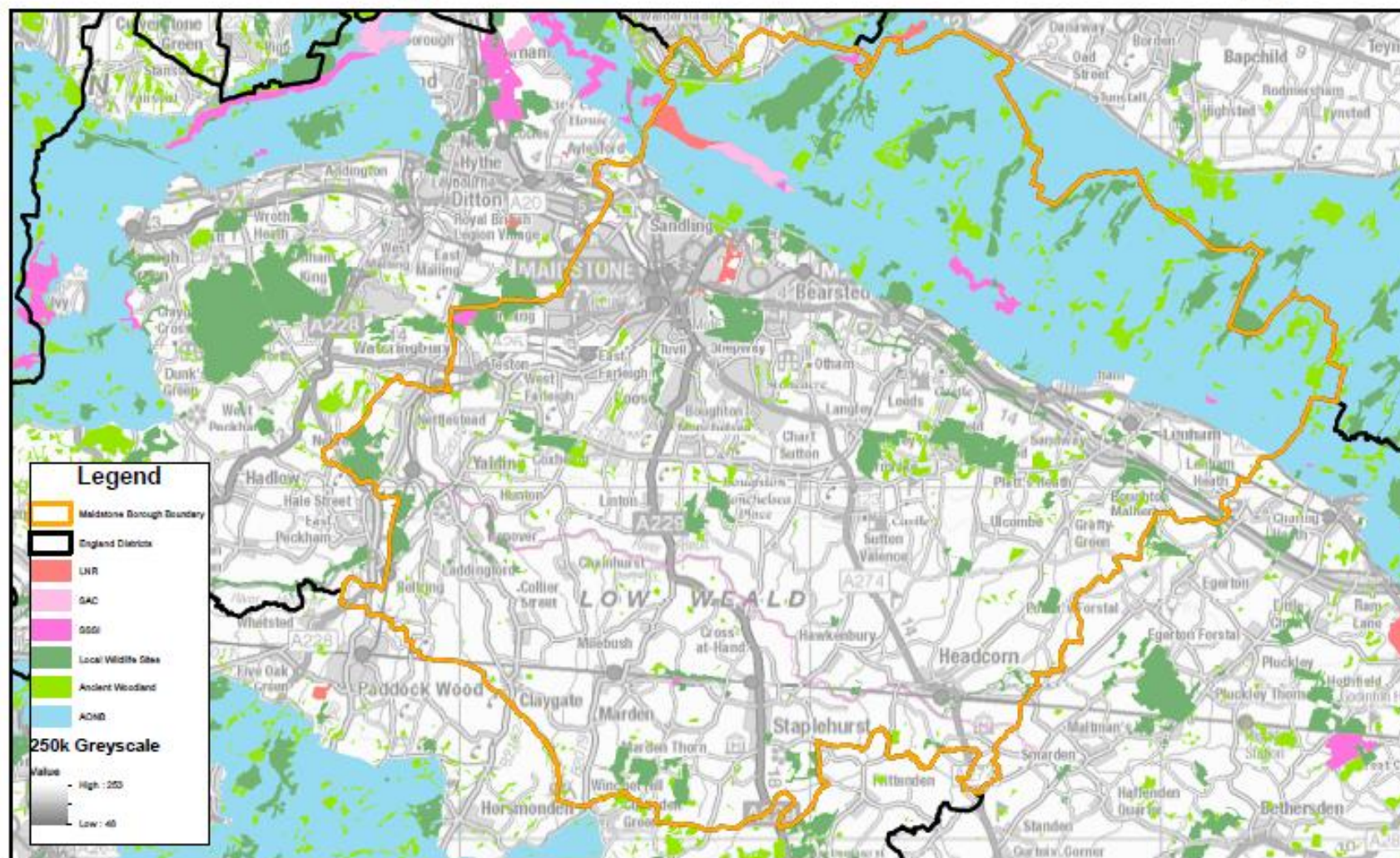
³ Excludes NGO-owned sites such as RSPB reserves, National Trust reserves, Woodland Trust sites and Wildlife Trust sites. These are included in Tier 1 in the Lawton review but excluded here due to data availability.

⁴ Currently, investigations are being undertaken into designating more sites as Local Nature Reserves. This is due to be announced in October, by Maidstone Borough Council.

⁵ A government review into the UK's AONBs is currently in progress – due for publication this year, this may make the Greensand Ridge into a further AONB. (Maidstone Borough Council, 2018)

<https://www.gov.uk/government/publications/designated-landscapes-national-parks-and-aonbs-2018-review#history>

Sites Designated for Nature in Maidstone Borough



Sites Designated for Nature:

Tier One sites: SSSI (fuschia), SAC (light pink), LNR (coral).

Tier Two sites: LWS (dark green) and Ancient Woodland (light green).

Tier Three sites: AONB (light blue)

7.2 Natural Open Space Provision in Maidstone Borough

The quantity of natural open space, split by ward, can be found in the Open Space Audit (Maidstone Borough Council, 2014) including provision per 1000 people. The provision per 1000 people is very unequal. Boxley ward has 537,380m² natural open space per 1000 people whereas High Street Ward has 895m² per 1000 people. This is largely understandable due to the differences in land pressure between urban and rural locations. However, an issue is that new developments can avoid contributing to the area of publicly accessible open space available, instead paying a contribution to the maintenance and quality of existing open space. Whilst it is beneficial to fund maintenance of existing sites, this can lead to a continual erosion of the availability of open space.

The Maidstone Infrastructure Delivery Plan outlines in greater detail the works to be done on Green and Blue infrastructure which includes provision of natural and semi-natural open space in the borough. This includes ~34ha of new open space, as well as the requirements for residential developments to provide on-site open space (or pay financial compensation for improvements to quality of off-site open space if on-site provision not possible) (Maidstone Borough Council, 2016). There is a significant risk of natural habitat becoming more fragmented and isolated because increasing urbanisation reduces suitability of intermediary areas.

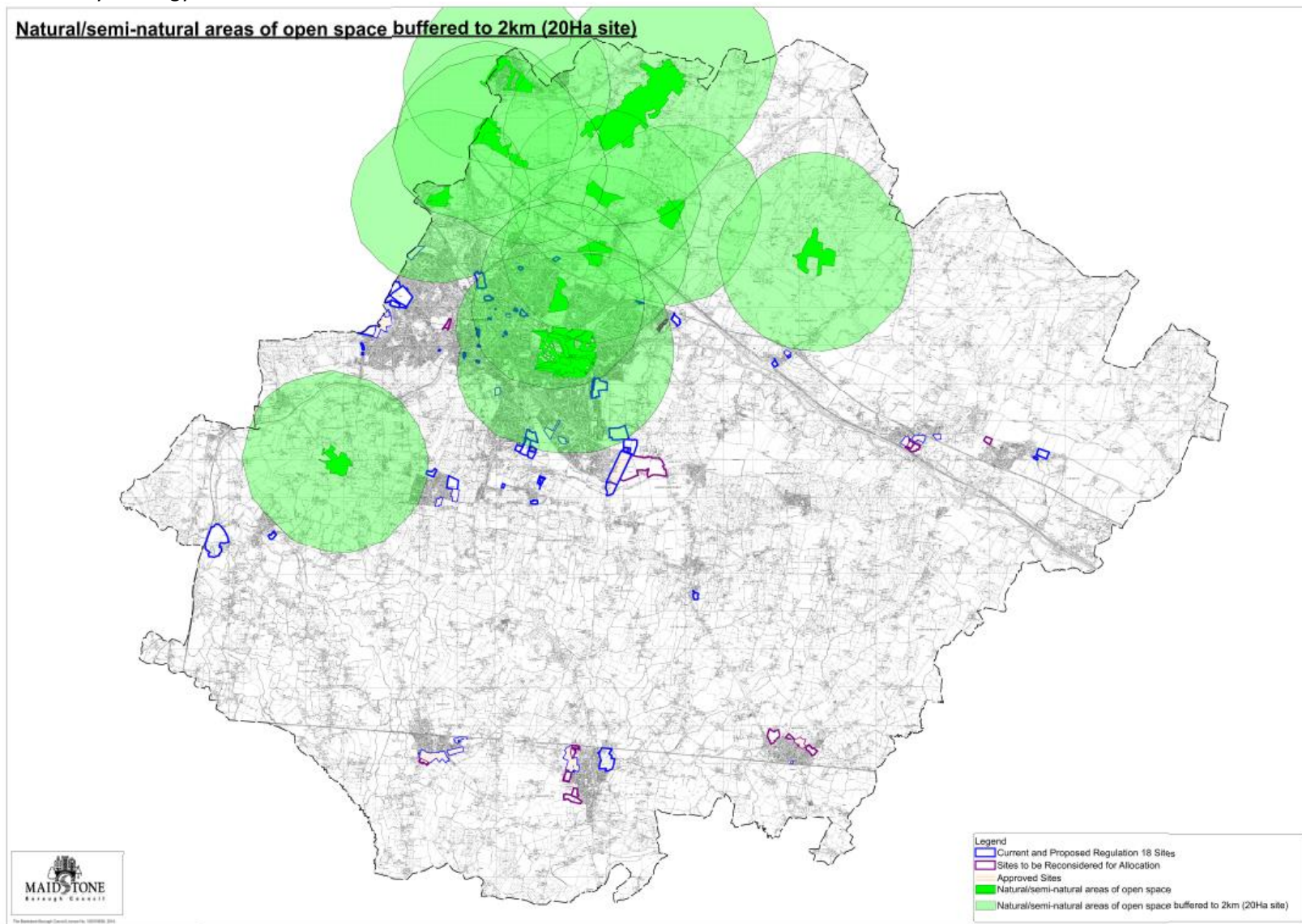
For more detail, please see the Development Section 4.1

The quality of the open space was also assessed, and you can look up your local open spaces here: <http://www.maidstone.gov.uk/home/primary-services/planning-and-building/primary-areas/local-plan-information/tier-3-primary-areas/planning-payments> (ENV 007 Quality Audit 2015) (Maidstone Borough Council, 2015).

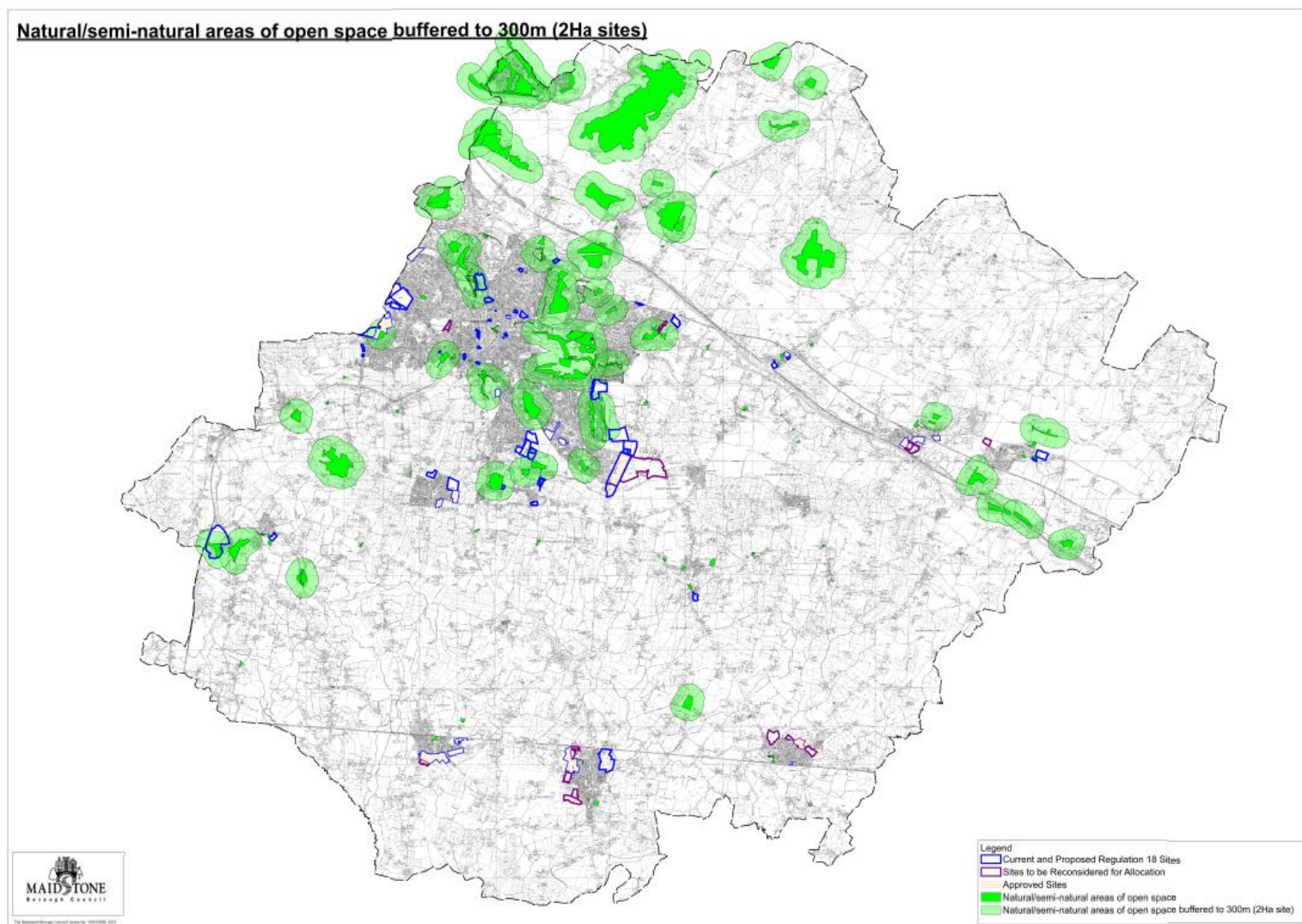
A survey was conducted on local public opinion on open space. Natural space was valued as very important or important by 94% of 401 people surveyed – this is higher than any other type of open space. 49% use natural and semi natural space once a week or more, 59% use it at least once a fortnight. Nature features was the top answer for most important aspect of open space. (Lake Market Research for Maidstone Borough Council, 2015).



Wildflower meadow



Map of 20ha+ natural or semi-natural areas in Maidstone borough, with 2km buffers drawn around them. (Maidstone Borough Council, 2015)

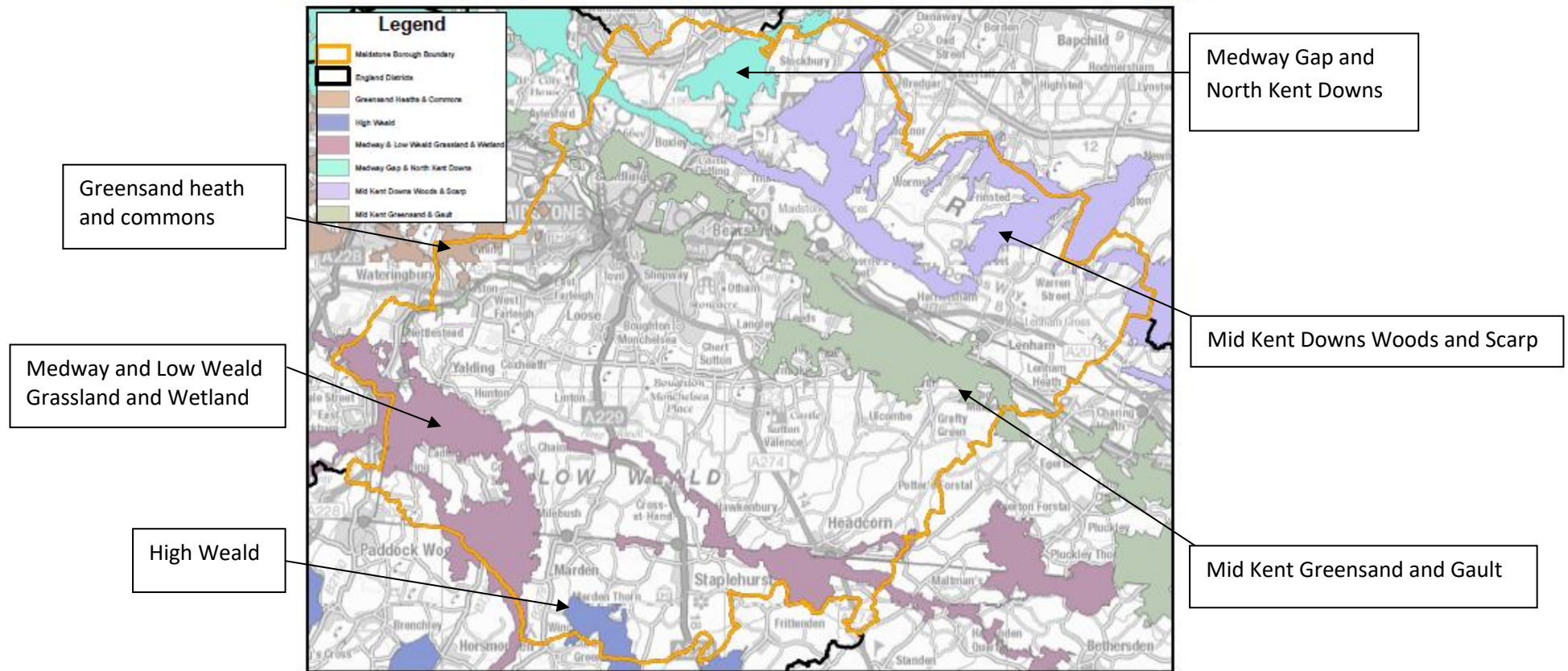


Map of 2ha+ natural or semi-natural areas in Maidstone borough, with 300m buffers drawn around them. (Maidstone Borough Council, 2015)

7.3 Biodiversity Opportunity Areas in Maidstone

Biodiversity Opportunity Areas are where the best opportunities are for establishing large habitat areas or a network of habitats. (Kent Nature Partnership, 2015)

Biodiversity Opportunity Areas in Maidstone Borough



Six Biodiversity Opportunity Areas have been identified within Maidstone Borough.

Biodiversity Opportunity Areas found in Maidstone borough (Kent Nature Partnership, 2015)	
Key habitats and species	Targets
Mid Kent Downs Woods and Scarp:	
Dense belts of wood, agricultural land at foot of scarp, important chalk grassland and woodland. Many Local Wildlife Sites and Sites of Specific Scientific Interest. Bechstein's bat, brown hares, roman snail.	Protect existing habitat. Restore, recreate and reconnect chalk grassland. Enhance neutral grassland to create lowland meadow. Increase woodland management – buffer dip slope woods with semi-natural habitats.
Greensand Heath and Commons:	
Areas of heathy vegetation and acid grassland. Wood pasture. Rare acid woodland. Provides good habitat for bats, adders and a variety of birds.	Create acid grassland and heathland. Improve woodland management to reduce fragmentation. Enhancement of neutral grassland into lowland meadow. Restore quarries. Engage communities by increasing awareness.
Medway Gap and North Kent Downs:	
Woodlands, historical parks and chalk grassland. Tidal Medway with saltmarsh and intertidal mudflat – marsh, reedbeds, fen. Fragments of chalk grassland. Important brownfield sites such as disused quarries. Important arable weeds.	Enhance, create and restore chalk grassland. Increase woodland management. Enhance marsh reedbed and fen along Medway. Improve brownfield site and arable weed management. Creation of neutral grassland. Increase public access.
Mid Kent Greensand and Gault:	
Farmed landscape following scarp foot of the Downs. Heathland, parkland and woodland, wood pasture. Rivers and wetland. Nationally important acid grassland and heathland. Lots of LWSs and SSSIs. Water vole, white-clawed crayfish and Desmoulins's whorl snail, shill carder bee, keeled skimmer dragonfly	Recreate and restore acid grassland and heathland. Enhance woodland management. Increase ecological status of water bodies. Wetland restoration and recreation.
High Weald:	
Dispersed area of wood, heath and acid grassland, neutral grassland, streams and ponds, over sandstones and clays. Ancient wood. Unique assemblage of acidic freshwater habitats including furnace and hammer ponds. Notable populations of Bechstein's bat, birds, insects and bryophytes.	Actively conserve wood especially gill wood, heathy wood and wood pasture. Conserve lowland meadow. Restore or create heathland, acid grassland and natural grassland. Restore water to good ecological status.
Medway and Low Weald Grassland and Wetland:	
Wetland habitats including rivers, ponds, fen and wet woodland. Area contains the floodplain and tributaries of Medway, Beult and Teise. Provides habitat for river mussel, white-clawed crayfish, river lamprey and potentially otter.	Increase ecological status of water. Create wider river floodplains with riparian corridors. Catchment improvement (fen, wet wood, reed, wet grassland). Create neutral grassland. Increase management of woodland, lowland meadows, hedgerows and invasive non-native species.

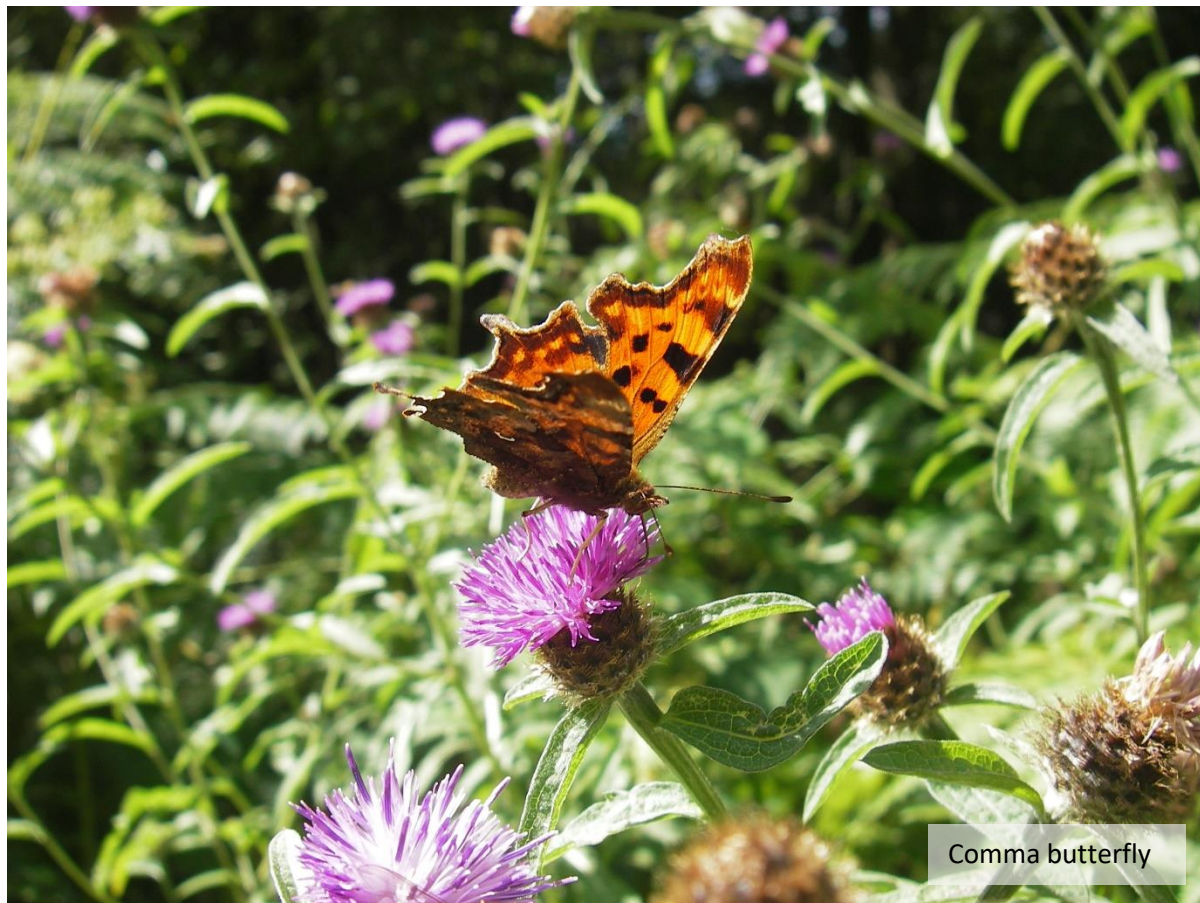
7.4 Species of Note

Whilst it is important to think about the bigger picture of large-scale habitat restoration and reducing negative pressures, considering individual species are important for two key reasons:

- Some species need specific help or have niche environmental needs that will not be met by delivering habitat level work. Without targeted action, these species are likely to decline further.
- Focussing on species can help to generate interest in conservation work and to engage different audiences. Some people will be more inspired and energised by projects focussing on helping hedgehogs than of naturalising urban greenspace.

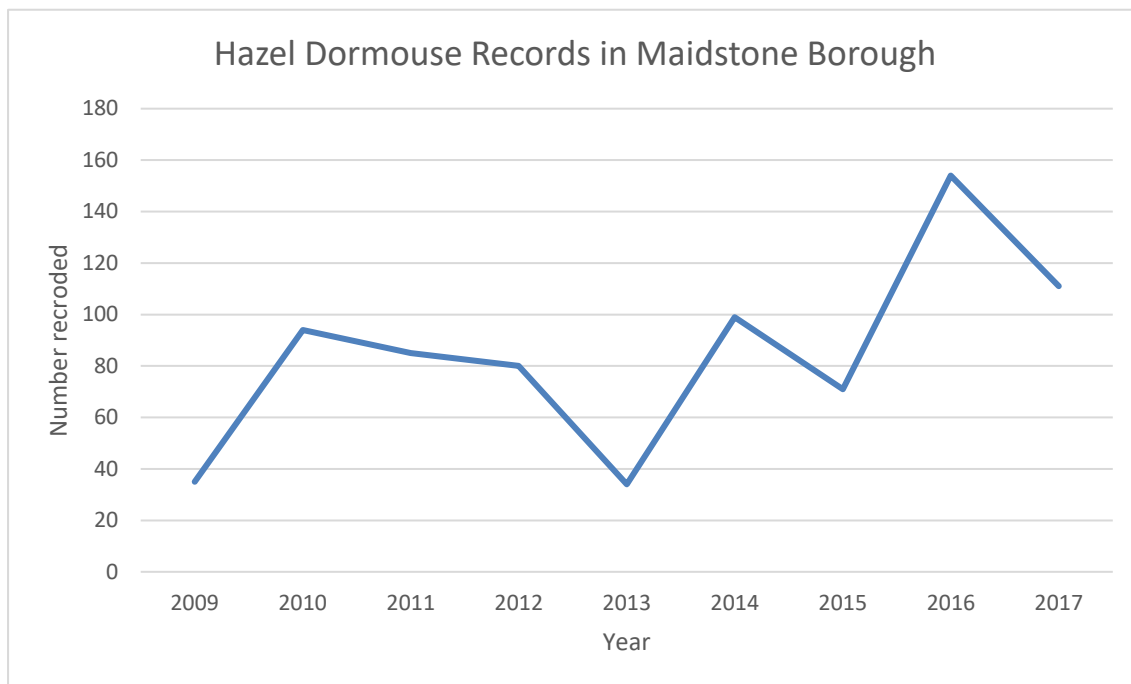
The Kent Biodiversity Strategy (Kent Nature Partnership, 2015) identified 9 priority species and 2 species groups. Of these, all are found in Maidstone borough except the Shrill carder bee which can be found along the Thames Gateway in Kent. Data on records from these species or groups is shown below, focussing on the time period since the last Maidstone Biodiversity Strategy in 2008.

Insufficient data was available for mayflies or serotine bats so these are not shown below. All data is sourced from the Kent and Medway Biological Records Centre. For further detail on each species, including its threats and requirements, please see the Kent Biodiversity Strategy (Kent Nature Partnership, 2015). Please note – the following data and charts only show the number of records the Kent and Medway Biological Records Centre holds for each of the species or species groups. This data is not only affected by changes in abundance of the species, but also in changes in recorder effort. Improving and sustaining wildlife recording is key to understanding the natural world and being able to protect it sufficiently.



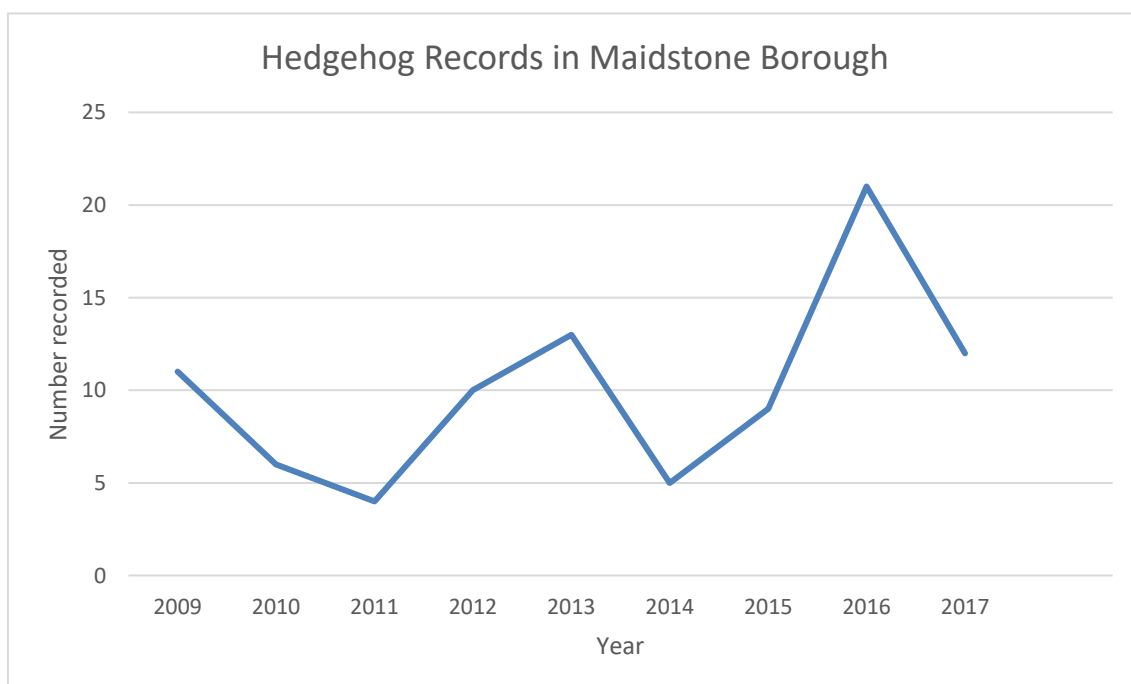
Hazel dormouse

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of records	35	94	85	80	34	99	71	154	111



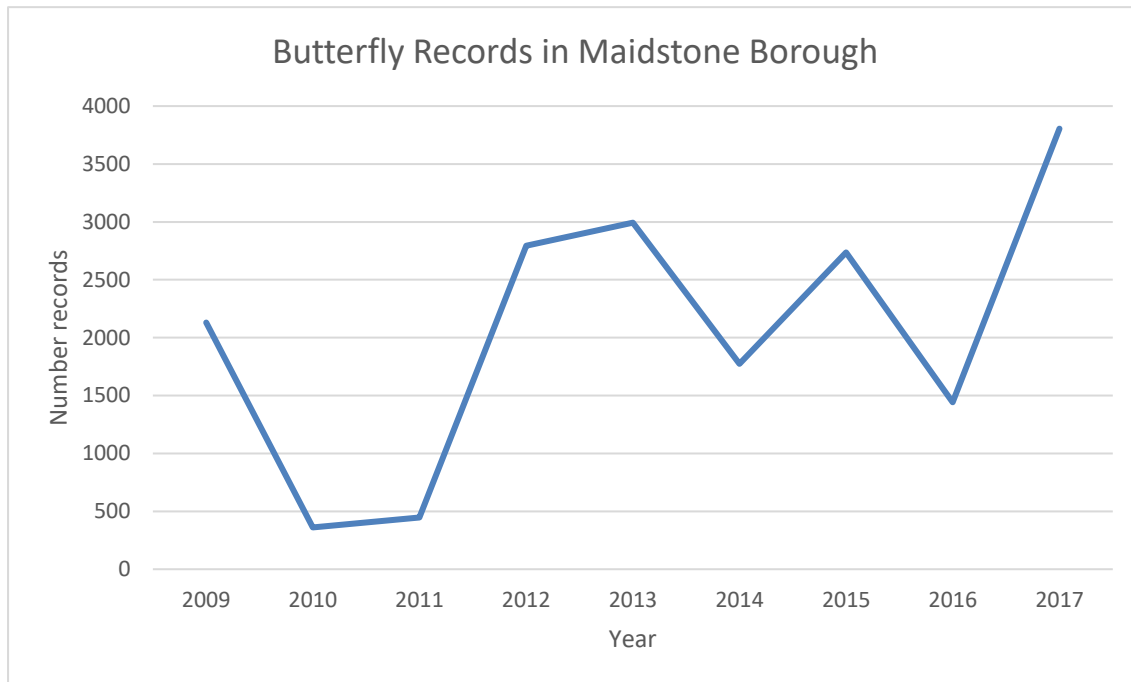
Hedgehog

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of records	11	6	4	10	13	5	9	21	12



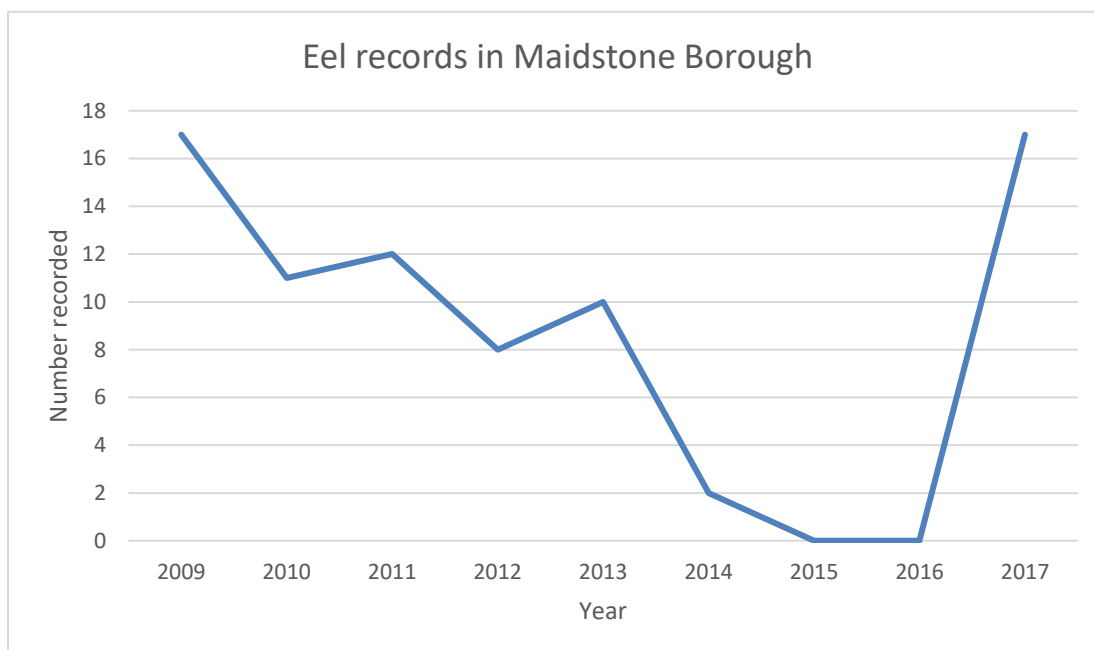
Butterflies

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of records	2131	361	446	2795	2994	1775	2736	1443	3805



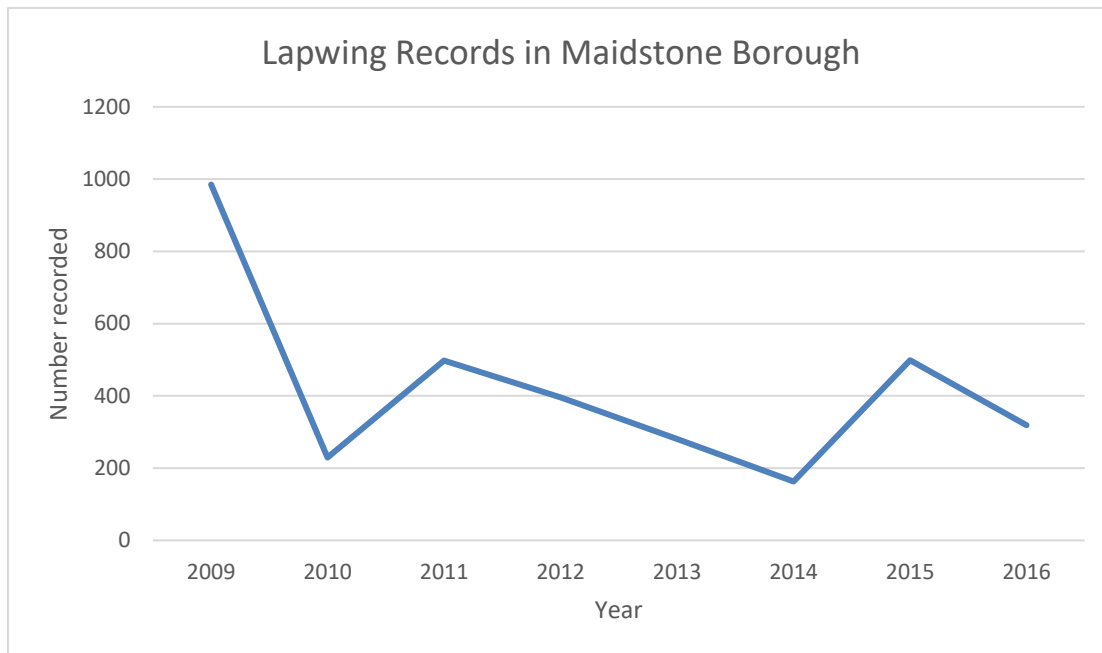
European Eel

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of records	17	11	12	8	10	2	0	0	17



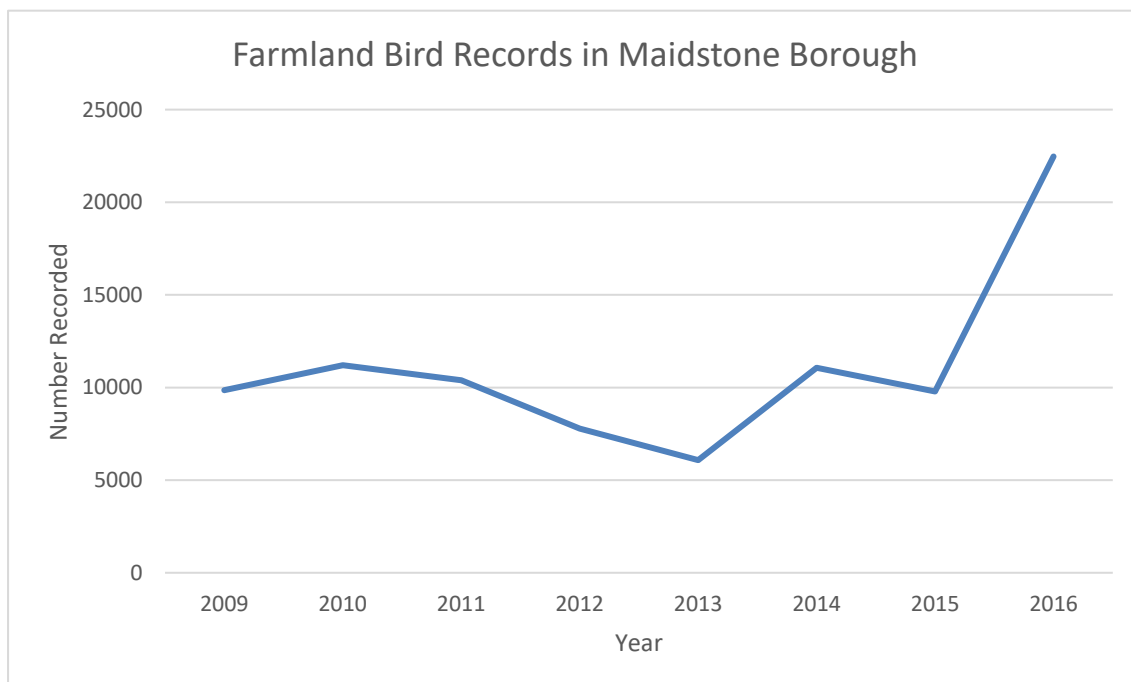
Lapwing

Year	2009	2010	2011	2012	2013	2014	2015	2016
Number of records	985	229	498	396	281	163	499	319



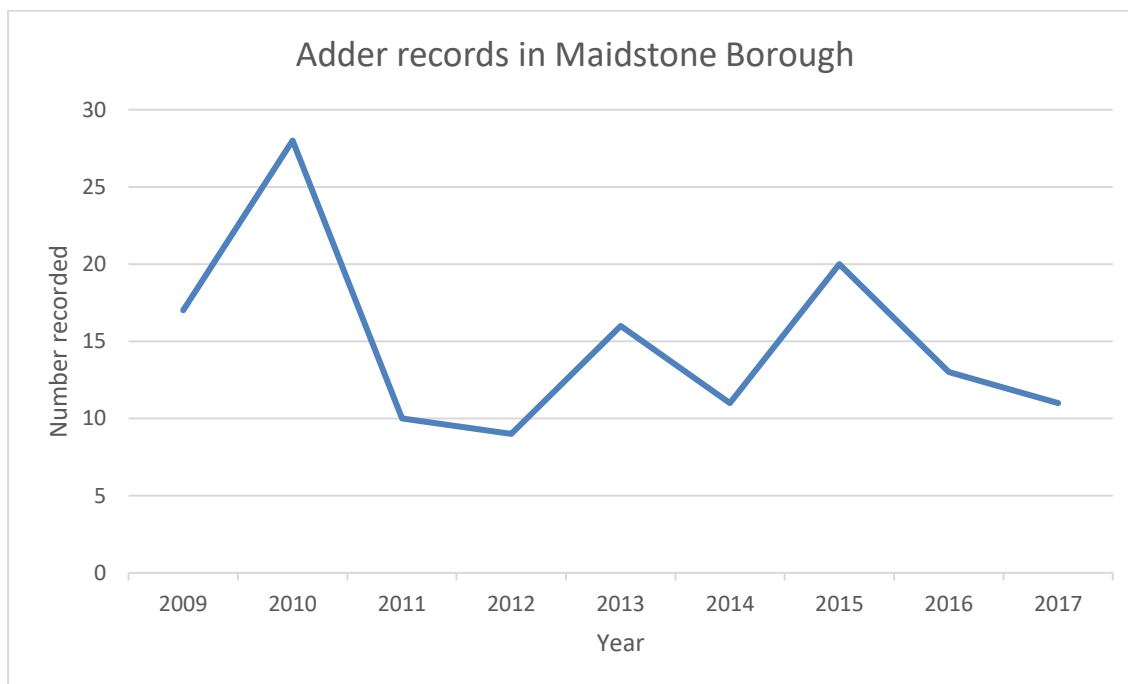
Farmland birds

Year		2009	2010	2011	2012	2013	2014	2015	2016
Number of records		9862	11211	10385	7778	6079	11059	9779	22470



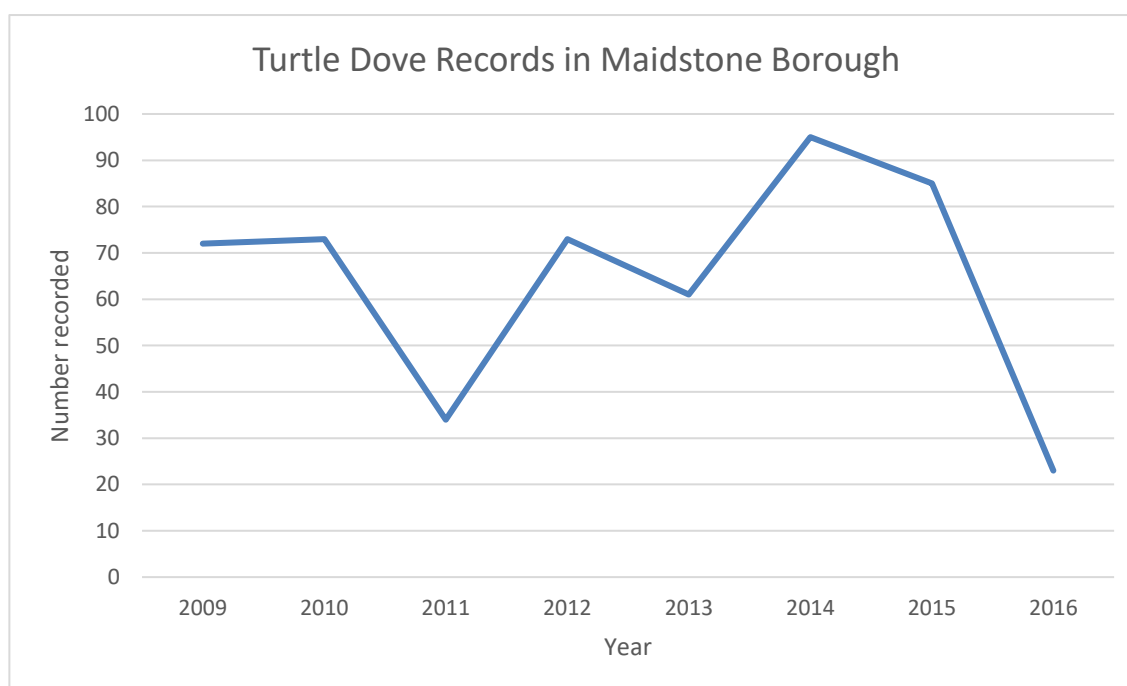
Adder

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of records	2131	361	446	2795	2994	1775	2736	1443	3805



Turtle dove

Year	2009	2010	2011	2012	2013	2014	2015	2016
Number of records	72	73	34	73	61	95	85	23

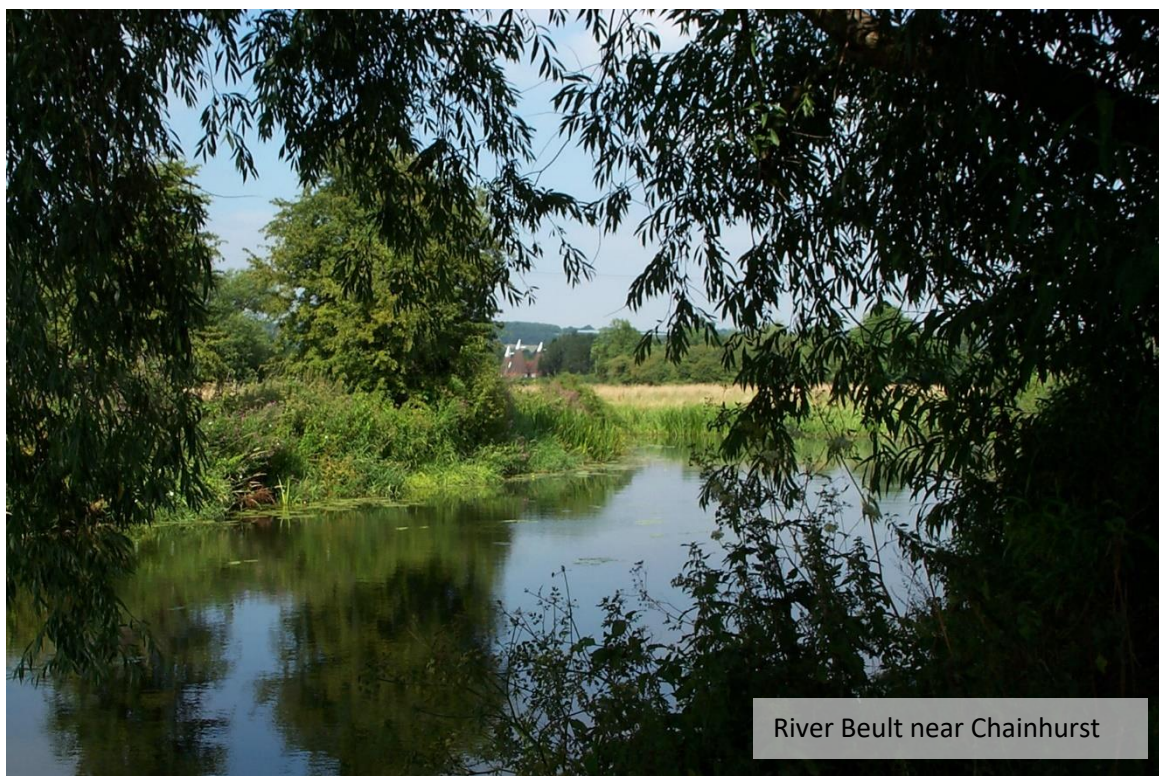


8. Habitats

The following sections look at the biodiversity opportunities, risks and actions for 4 habitat groups⁶. Each category relates to the Kent Habitat Survey categories in the following way:

Maidstone Borough Biodiversity Strategy Habitat Category	Kent Habitat Survey Classification
Woodland	Broadleaved, mixed, and yew woodland
	Coniferous woodland
Urban	Built-up areas
	Boundary and linear features
Water and wetland	Fen, marsh and swamp
	Rivers and Streams
	Standing open water and canals
Grassland ----- Agriculture	Acid grassland
	Bracken
	Calcareous grassland
	European dry heaths
	Inland rock/Quarry
	Neutral grassland
	Arable and horticulture
	Improved grassland
	Traditional orchard

You can find out what sort of habitats are near you on the Kent Landscape Information Service website: <https://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/ViewMap.aspx> Select the Kent Habitat Survey 2012 from the Habitat Survey drop down list.



River Beult near Chainhurst

⁶ This grouping is based on feedback from community consultation which strongly recommended keeping habitat sections simple.

8.1 Woodland

8.1.1 Maidstone Borough Woodland

Maidstone has much broadleaved woodland, with limited areas of coniferous woodland in the north-east of the borough. More than two-fifths (44.3%) of Kent's yew woods are in Maidstone borough, which is also home to 15.6% of the County's woodlands on alluvial soils dominated by alder and ash. (ARCH, 2012)

Several key woodland sites are owned or managed by Kent Wildlife Trust. These include:

- Kiln Wood (ancient woodland which support dormice and orchids),
- Stockbury Hill (Kent Wildlife Trust's first reserve, ancient woodland which supports white-letter hairstreaks, various ancient woodland flowers)
- Quarry Wood (ancient woodland Local Wildlife Site, which supports populations of water shrew, bats, nightingale, kingfisher, goldcrest, badger and a variety of fungi)

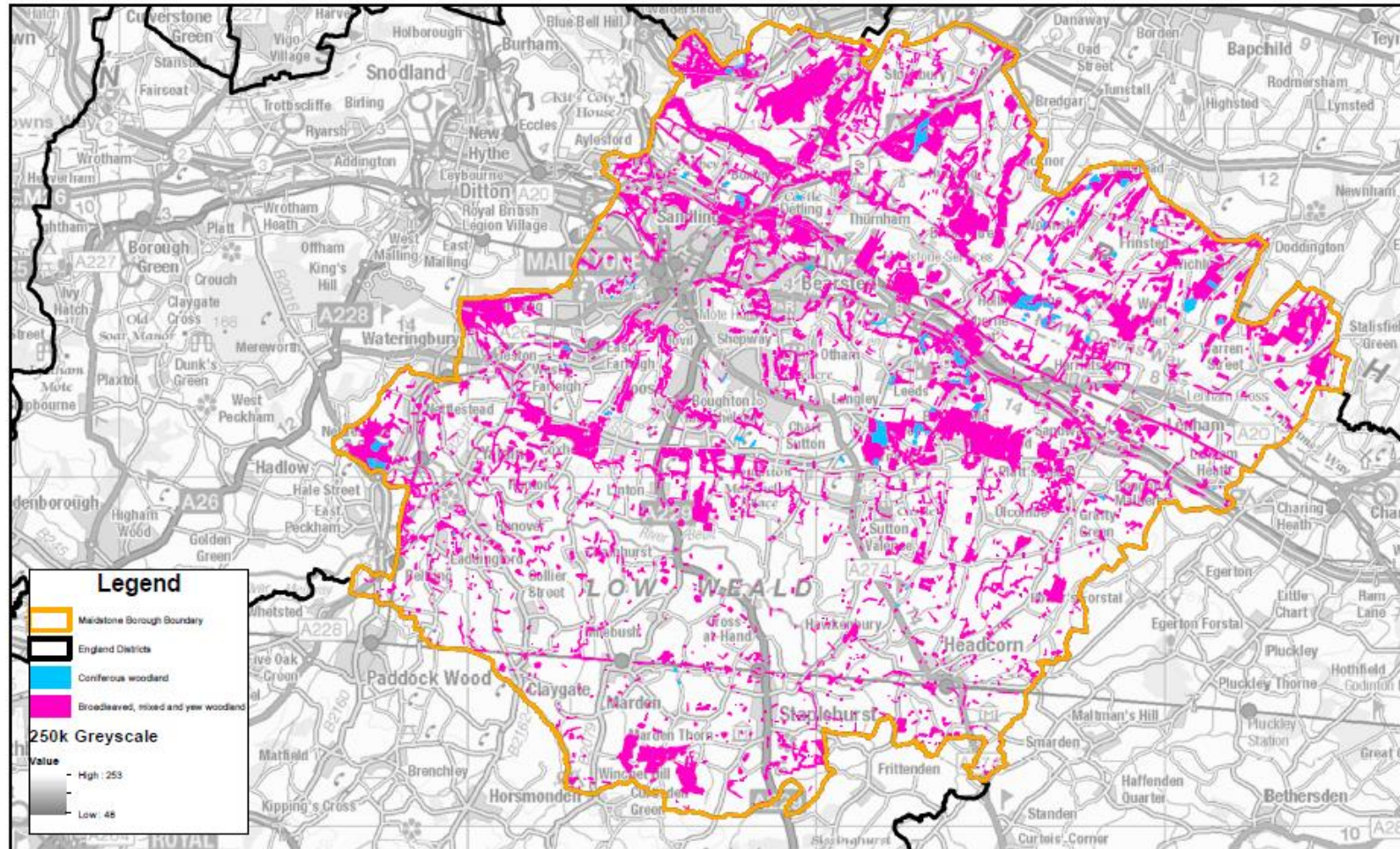
Various local bodies manage other important areas of woodland in the borough, such as the Bredhurst Woodland Action Group, a volunteer led group managing ancient woodland which supports over 50 ancient woodland indicator species of ground flora. These woodlands provide important services such as climate mitigation, recreation, air quality, aesthetics and flood management.

The Woodland Trust also manage a key site, the Hucking estate, which is one of their top ten bluebell woods. The Woodland Trust wants to work with local landowners who can increase woodland coverage to deliver large scale woodland creation to link isolated ancient woods.



Woodland floor with blanket of wood anemone

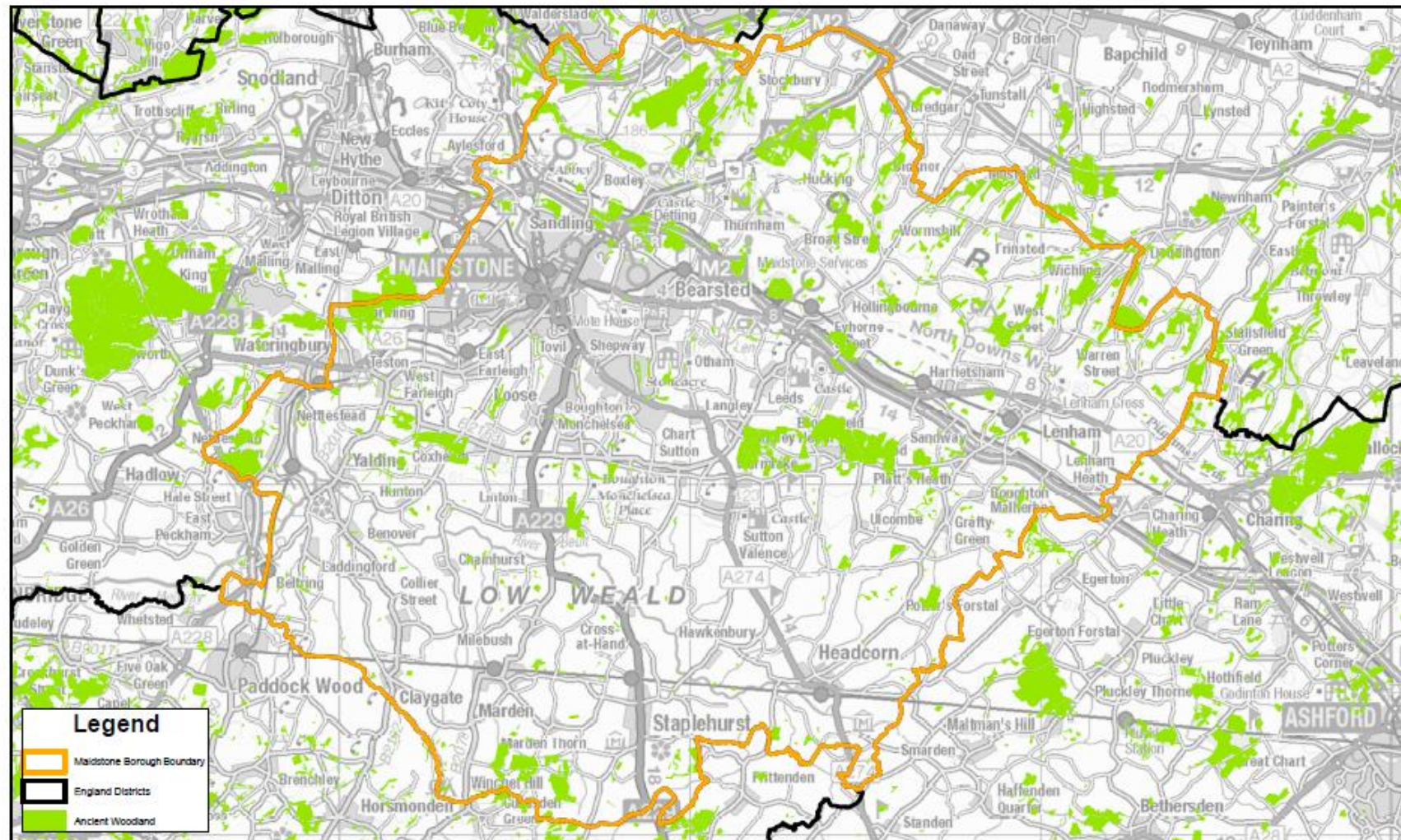
Woodland Habitat in Maidstone Borough



Data from Kent Habitat Survey 2012.

The map shows coniferous woodland in blue and broadleaved, mixed and yew woodland in pink.

Ancient Woodland in Maidstone Borough



Ancient woodland is shown in lime green.
7% of the borough is woodland, of which 85% is ancient (Sansum et al., 2012).

8.1.2 Key Challenges

Kent has more ancient wood than any other county (Butfoy, et al., 2019) and it is vital that Maidstone borough plays its part in protecting this valuable resource. A key challenge is retaining the function and extent of this woodland, in the light of development pressures, with high targets for increasing housing and infrastructure.

Ancient wood:

land that has been wooded since 1600AD. This includes ancient replanted woodland where original native tree cover has been felled and replaced by planted stock. (Sansum, et al., 2012)

Fragmentation is a big threat, particularly in the North Downs area, because ancient semi-natural woodland is often surrounded by intensive arable land. For example, Horish Wood near Detling is isolated by M20, A249 and the HS1 train line. These infrastructure developments, have in all probability made the site drier, where it was wet woodland previously.

Maintaining high biodiversity in woodlands is also dependent on suitable management. In some cases, this will require more extensive action than others – such as the management of traditional coppice woodland. Undermanaged woodland can lead to lower biodiversity due to a lack of light reaching the ground, reducing the diversity of ground flora.

Tree diseases such as ash dieback are also a key threat. The transport links through Kent to the continent made the area particularly at risk from the introduction of new diseases.

8.1.3 Wider Policy Objectives

The Kent Tree Strategy includes several objectives for woodland in Kent which can be applied to Maidstone borough. The Kent Tree Strategy Vision includes increasing woodland cover from 13% to 24% by 2100 and to 15% by 2044. For Maidstone Borough, tree cover was 7% of the borough in 2012 (Sansum, et al., 2012), so to achieve 24% by 2100, an additional 6295ha would need to be created (and an additional 2754ha to achieve 15% by 2044). (Butfoy, et al., 2019)

The Kent Tree Strategy (Butfoy, et al., 2019) provides further objectives on new and secondary wood:

- Plant 11.4million trees by 2044
- Plant and maintain at least 4579ha of new native woodland cover in the Weald as part of the Wealden Wildwood project

8.1.4 Objectives

- In addition to the level of woodland creation referred to above, a key action is to prevent overgrowth into dense woodland by increasing traditional management and creating glades, rides and coppiced areas. Preference for a liveable forested landscape.
- Creation of buffers or ecotones at the woodland edge (instead of a sudden change from dense woodland to built-environment, agricultural land or amenity grassland) will help to reduce edge effects and will create valuable habitats in its own right.
- Dead wood will be retained in situ as this provides valuable habitat for many insects, fungi and more.
- Only native tree species should be planted – see Kent Tree Strategy (Butfoy, et al., 2019) for further advice.

- The risk of spreading tree diseases should be minimised by using local stock from local nurseries wherever possible and using strict biosecurity procedures.
- Landowners and managers of woodland should sign up to Woodland Trust's Tree Charter (Charter for Trees, Woods and People, 2019).
- Ivy severance should only be conducted when necessary for public safety, assessed on a case-by-case basis. This is because ivy (through its nectar, pollen and berries) is an important food plant for various species including the holly blue butterfly. (Woodland Trust, 2019)
- Anyone working on large-scale land management or planning that will affect woodland in the borough is advised to read the Kent Tree Strategy (Butfoy, et al., 2019) and incorporate the targets into their work.

8.1.5 Relevant bodies

- Woodland Trust
- Maidstone Borough Council and Parish Councils
- Kent Wildlife Trust
- Private landowners



8.2.1 Maidstone Borough Urban Habitat

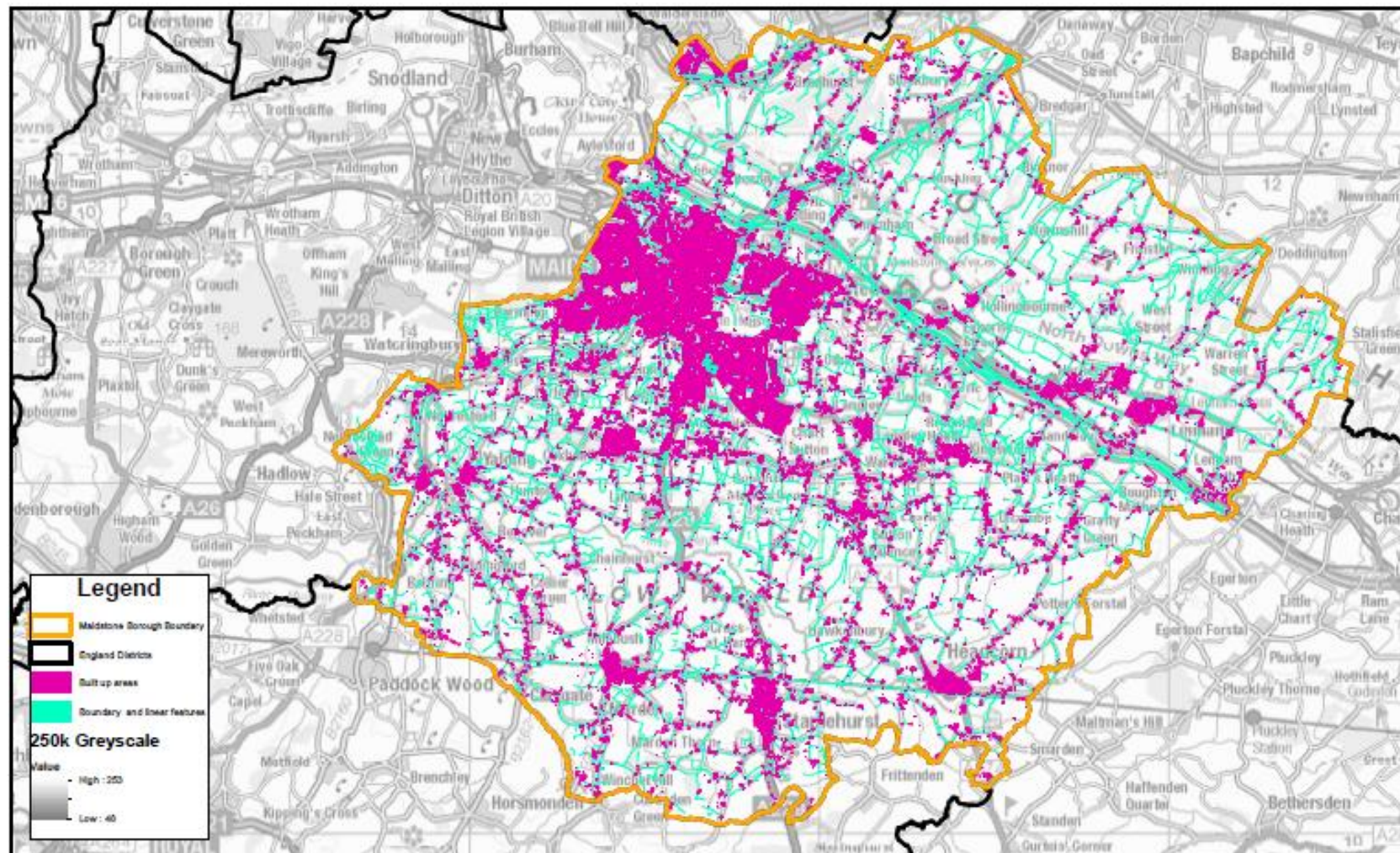
The Maidstone Infrastructure Delivery Plan outlines in greater detail the works to be done on Green and Blue infrastructure which includes provision of natural and semi-natural open space in the borough. This includes ~34ha of open space, as well as the requirements for residential developments to provide on-site open space (or pay financial compensation for improvements to quality of off-site open space if on-site provision not possible). (Maidstone Borough Council, 2016)

Several parks in urban areas are managed to provide habitat for wildlife and benefits to people, such as Whatman Park, the River Len Nature Reserve and Mote Park. Other groups working to protect the local environment can be found on the Go Green Go Wild pages:

[https://self.maidstone.gov.uk/service/Go Green Go Wild Find a Group Near You](https://self.maidstone.gov.uk/service/Go_Green_Go_Wild_Find_a_Group_Near_You)



Urban Habitat in Maidstone Borough



Data from Kent Habitat Survey 2012.

The map shows urban areas in the borough, including built-up areas in fuschia and linear features such as roads in turquoise.

8.2.2 Key Challenges

70% of the population live in the urban areas of the borough (Maidstone Borough Council, 2017). Access to nature is key to wellbeing and inhabitants of urban areas are less likely to have sufficient access.

Due to changes in building materials and techniques, the built environment is increasingly unsuitable for wildlife to cohabit alongside people – for example changes in building techniques and renovations of older buildings is thought to have reduced suitable swift nesting habitat leading to declines in their population.

8.2.3 Wider Policy Objectives

Biodiversity needs to be enhanced in urban areas including outside wildlife sites (Lawton, et al., 2010). Responsible authorities should take greater steps to reconnect people to nature by enhancing ecological networks within urban environments, including wildlife-friendly management of green spaces, and by embedding biodiversity considerations in the need to adapt to climate change. (Lawton, et al., 2010).

8.2.4 Objectives

- Promoting urban gardens
- Design for ecological connectivity
- Combining grey and green infrastructure
- Enhance green spaces restoration and expansion

More information on incorporating space for wildlife into the built environment, including recommendations and relevant bodies can be found in the 'Biodiversity in the Planning Process' document appendix to this strategy.



Stretch of River Medway in central Maidstone

8.3 Water and Wetlands

8.3.1 Maidstone Borough Water and Wetlands

River Len

The River Len and the River Len Local Nature Reserve provides a natural corridor between town centre, Mote Park and the countryside. It contains a variety of wetland habitat including open water, wet woodland, damp grassland, spring-line seepages, and a sedge and reed-mace lined river channel. It is home to urban populations of Desmoulin's whorl snail, river snail, white-legged damselfly, water rail, with white-clawed crayfish recorded in its tributaries at Hollingbourne and Fairbourne. The surrounding habitat supports populations of bats (including pipistrelles, noctules and Daubenton's) and grassland butterflies and aquatic habitats support amphibian populations. The Nature Reserve acts as source population from which slow worms, butterflies and birds spread to other areas. The area provides many ecosystem services including an important role in flood storage, as well as carbon sequestration, phytoremediation, noise barrier and local climate regulation. Key issues are artificial modifications, diffuse pollution, pollution, trade exploitation and overfishing, domestic cesspit overflows and fragmentation by roads and hard development. To improve the area, surrounding land needs to be managed sympathetically and corridors need to be created to connect the Local Nature Reserve to other natural spaces.

River Beult

The River Beult is home to nationally scarce insects, including the hairy dragonfly and water beetle species. Emergent vegetation from the river provides habitat for white-legged damselflies and ruddy darter dragonflies, breeding sites for reed warblers and buntings, and hunting ground for kingfishers. Plant diversity is high where there are low wet ledges in the river (berms). The river provides many ecosystem services including recreation, flood control and a water source for agriculture. A 25km stretch between Smarden and Yalding is designated as a Site of Specific Scientific Interest. The river faces threats from pollution, artificial barriers and loss of habitat, resulting in poor ecological condition. The Environment Agency's report highlights the opportunities to improve the ecological condition of the river, and how it can provide greater benefits to people. The report sets out how this can be achieved through further re-naturalisation of the river, through the creation of berms, meanders, graded banks and gravels. (Environment Agency and Natural England, 2018)

River Medway

The River Medway is a key feature in the borough, providing recreational benefits to many people. Its tributaries are more biodiverse than the main river which faces many challenges including invasive non-native species, artificial modifications and obstructions, pollution from leaking septic tanks, litter and agricultural and road run-off. There are many stakeholders involved with work on the river that need to come together to re-naturalise the river. Improvements could be made by creating micro-habitats along the river, as well as larger scale projects to recreate floodplain meadows and meanders. Urban development in the vicinity of the river needs sufficient green infrastructure plans, with funding for maintenance and management, and suitable flood mitigation – buffer zones with reed beds and ponds.

Pond restoration and creations:

A new scheme run by Natural England has been launched called District Level Licencing, designed to mitigate loss of ponds to development and create habitat for Great Crested Newts, a European

Protected Species. Under this new scheme, ponds will be created in strategically chosen, well-connected locations that should result in more suitable habitat for Great Crested Newts (Natural England, 2019). The scheme is run by Natural England (contact gcndll@naturalengland.org.uk) and habitat creation is delivered in the area by Medway Valley Countryside Partnership (contact medwayvalley@kent.gov.uk).



Hammer stream



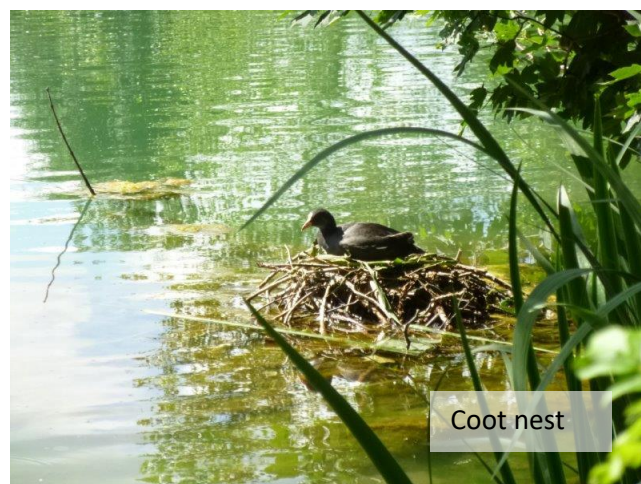
Water vole



Common seal at Allington Lock

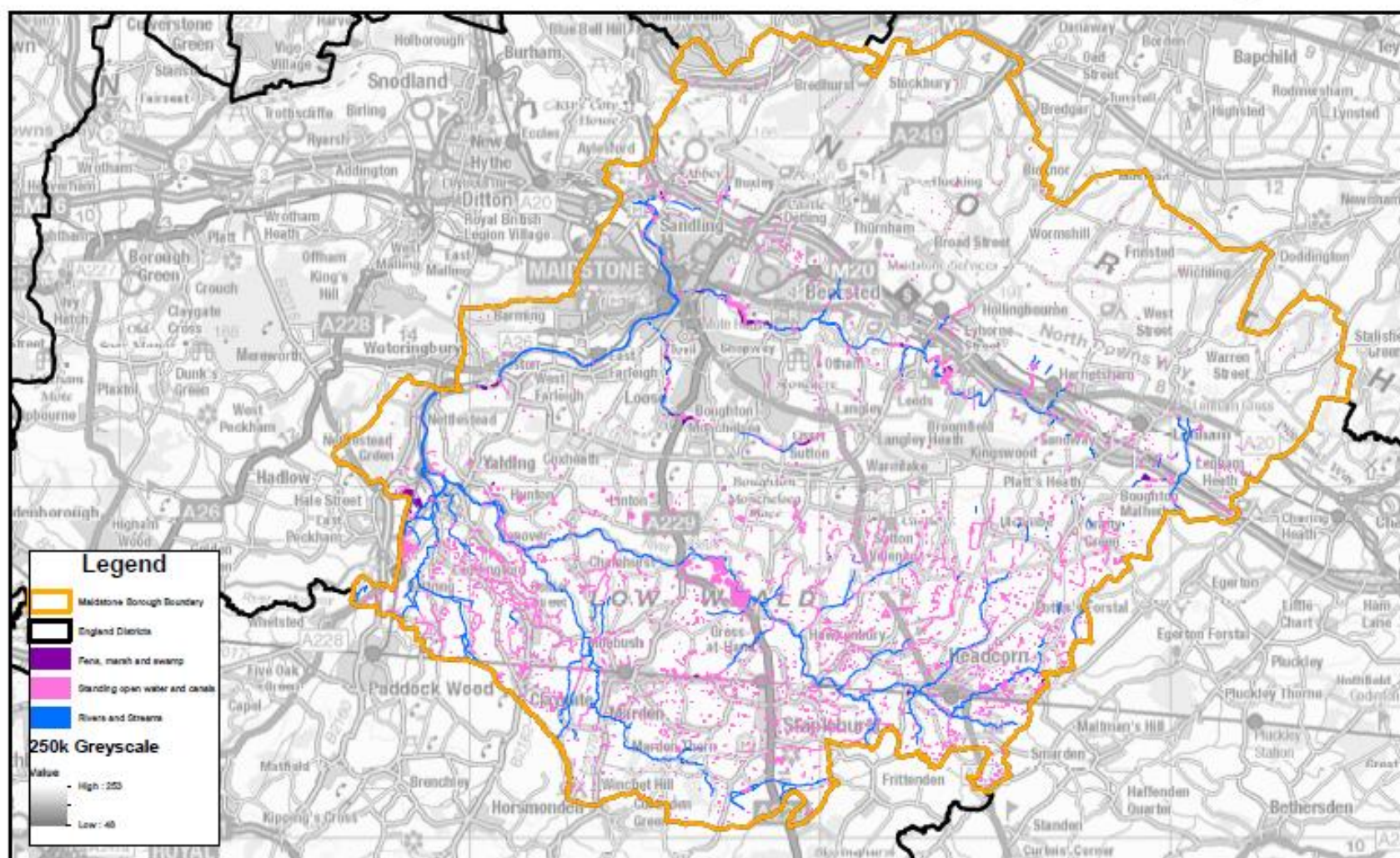


Marsh frog, an invasive species



Coot nest

Water and Wetland Habitat in Maidstone Borough



Data from Kent Habitat Survey 2012.

The map shows ponds and canals in pink, marsh in purple and rivers in blue.

8.3.2 Key Challenges

At a global level, the habitat type showing the highest rates of decline are the inland waters and freshwater ecosystems (IPBES, 2019). Rivers are the worst performing habitat type of all Sites of Specific Scientific Interest, and only 22% have 'good' ecological status under Water Framework Directive criteria (Lawton, et al., 2010) data from 2009). The Water White Paper (Defra 2011) found that only ¼ of rivers and lakes are fully functioning ecosystems. The UK has more chalk rivers than any other country in Europe (Lawton, et al., 2010) however 50% of the UK's ponds were lost in the 20th Century and 4 out of every 5 that remain are in a poor state. (Freshwater Habitats Trust, 2019).

The Thames River Basin Management Plan (into which the Medway area fits) highlights significant management issues for rivers in the South East:

- Physical modifications affect 44% of water bodies
- Pollution from wastewater affects 45% of water bodies
- Pollution from rural areas affects 27% of water bodies
- Pollution from towns, cities and transport affects 17% of water bodies
- Changes to natural flow and water level (abstraction and reduced rainfall) affects 12% of water bodies
- Invasive Non-Native Species affects 3% of water bodies

Invasive non-native species are a major challenge for the biodiversity of rivers and wetlands in Maidstone borough. See section 4.4 for more details.

8.3.3 Wider Policy Objectives

The Government's Natural Choice White Paper provides the following vision: *"By 2050, water bodies in England will be in excellent health, with reduced pollution (nutrients, sediments, chemicals and bacteria). They will sustain rich and abundant wildlife appropriate to their location and will be as resilient as possible to climate change. Water environments will be safe and attractive, supporting a wide range of sustainable uses, including leisure and recreation....We will reduce the impact of land management on water by ensuring that pollution and flood risk are addressed at source through targeted, risk-based enforcement of existing regulatory instruments and, beyond this, by identifying where land can be managed to deliver multiple benefits, including improving water quality, flood alleviation and biodiversity."* (Defra, 2011)

The recent international report on biodiversity (IPBES, 2019) provides five key objectives:

- Integrate water resource management and landscape planning
- Limiting the expansion of unsustainable agriculture and mining
- Demand practices that reduce erosion, sedimentation and pollution runoff
- Promote decentralised rainwater collection e.g. household based
- Minimise negative impact of dams

8.3.4 Objectives

New development adjacent to a river must demonstrate that they will not impact on the river's ability to function naturally and should enhance green infrastructure and wildlife corridors.

As advised in the Lawton review, public bodies and statutory undertakers planning the management of water resources should:

- Make space for water and wildlife along rivers and around wetland
- Restore natural processes in river catchments
- Accelerate the programme to reduce nutrient overload (Lawton, et al., 2010)

The Thames River Basin Management Plan (Defra and the Environment Agency, 2015) sets out the responsibility for the local government to prevent deterioration in the following ways:

1. Consider impact on water quality and ecology when preparing spatial plans, minerals and waste plans, and local flood risk management plans, determining planning applications and when planning council-owned buildings and infrastructure.
2. Pollution from towns: <ul style="list-style-type: none">• Use planning conditions, legal agreements and enforcement to prevent pollution from developments, roads and infrastructure.• Ensure new developments address potential pollution problems by using SUDS to manage surface water.• Rectify misconnected wastewater pipes and stop water pollution from unauthorised operations.• Work with industry, manufacturing and other business and NGOs to develop joint improvement programmes.
3. Set out local plan policies requiring new homes to meet tighter water efficiency standard of 100L per person per day.
4. Commission water cycle studies to inform spatial planning decision around local water resources
5. Raise awareness of challenge of invasive non-native species and promote bio-secure practices amongst staff working outdoors.
6. Use planning conditions, legal agreements and enforcement powers of Town and Country Planning Act 1990 to prevent rural pollution.

Furthermore, the Maidstone Infrastructure Delivery Plan (Maidstone Borough Council, 2016) includes 'desirable' infrastructure works relating to rivers in the green and blue infrastructure section:

- Removal of fish pass at Yalding
- River restoration of Sherway stream
- River restoration of Upper Loose
- Introduction of a sustainable fish monitoring programme on Medway

8.3.5 Relevant bodies

- Medway Valley Countryside Partnership and South East River Trust are the partnership group hosts for the Medway Catchment and should be consulted in relation to projects on the river, such as removal of structures or installation of fish passes in the borough such as at East Farleigh Lock.
- Environment Agency – Allington Lock Offices

8.4 Grassland and Agriculture

8.4.1 Maidstone Borough Grassland and Agricultural land

The borough of Maidstone has 14.2% of Kent's calcareous grassland and over 20% of Kent's traditional orchards. (ARCH, 2012)

Maidstone borough has a variety of grassland habitats including:

- Calcareous grassland: All the calcareous grassland in the borough falls within the Kent Downs AONB.
- Acid grassland and heath: Limited areas can be found along the Greensand Ridge between Maidstone and Lenham.
- Neutral grassland: Areas can be found across the borough and are more common than calcareous or acid grassland. Maidstone has 15.6% of Kent's lowland meadow (high diversity neutral grasslands). (ARCH, 2012)
- Improved grassland: Very common across the borough – most sheep and cattle farms will graze their animals on improved grassland.

Other agricultural land uses include:

- Horse pasture
- Soft fruit production
- Arable and horticulture



Find out more about the value of calcareous grassland here:

<https://www.wildlifetrusts.org/habitats/grassland/lowland-calcareous-grassland>

Or on the Old Chalk New Downs project webpages:

<https://www.oldchalknewdowns.org.uk/>

Calcareous grassland:

Found on thin alkaline soils found on substrate of chalk or limestone, usually consists of short hardy grasses and flowers. Provides important habitat for butterflies. Usually grazed by sheep. High floristic diversity found on good quality calcareous grassland support diverse invertebrate communities.

Acid grassland and heath:

Found on low-nutrient acid soils, often with sand/gravel deposits. Heathland sites often also include patchy or scattered gorse, acid grassland areas, bare ground scrub and occasional trees, open water and *Sphagnum*-dominated bogs and fens. High floristic diversity found on good quality acid grassland support diverse invertebrate communities.

Neutral grassland:

Found on neutral soils (neither alkaline nor acid), includes grazing marsh and rank grassland. Variable biodiversity value.

Improved grassland:

High nutrient soils result in low diversity grasslands. This includes most agricultural pasture, amenity grassland, urban parks, and a typical garden lawn and are usually of low biodiversity value.

(ARCH, 2012)

Key sites

The Kent Wildlife Trust sites in the Heaths Countryside Corridor - Bull Heath and Chilston Pines Ponds - are uncommon wet heath and acid grasslands found on the Greensand Ridge. They provide rare habitat for solitary and burrowing bees and wasps and support populations of notable beetles, birds and plants.

The Larches, another Kent Wildlife Trust site includes areas of chalk grassland. The Larches is the borough's only site designated as a Special Area of Conservation. It is also a Site of Specific Scientific Interest and falls within the Kent Downs AONB. It provides habitat various important and rare groups for orchids, adonis and chalkhill blue butterflies, adders, dormice and bats. Kent Wildlife Trust have restored traditional habitat management techniques which are needed to restore the site to 'Favourable Condition'.

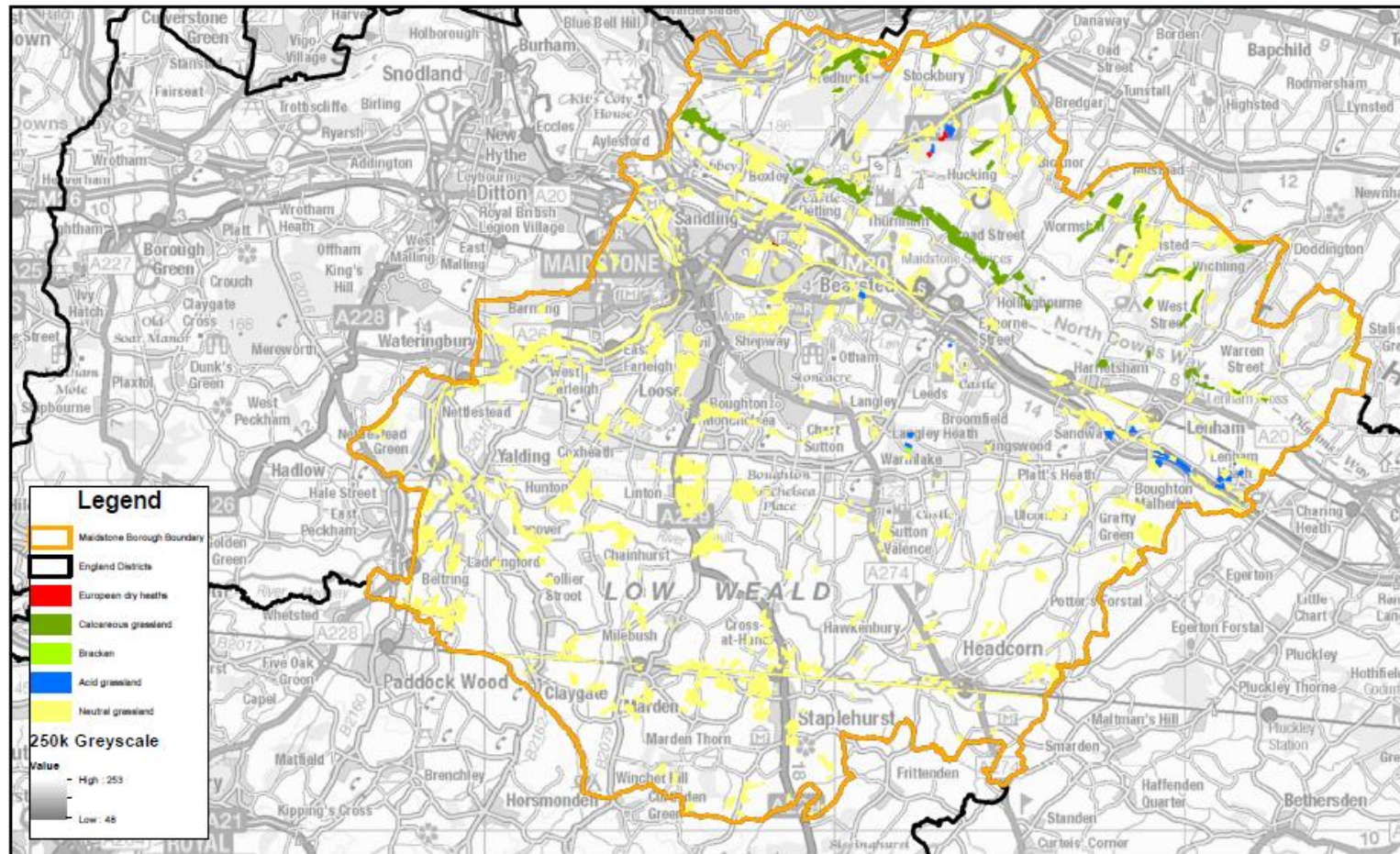
The Bredhurst Woodland managed by Bredhurst Woodland Action Group also includes an of area chalk grassland with high floristic diversity, including 12-13 orchid species.

The Hollingbourne Meadows Trust managed grasslands also provide high diversity grassland in the region. By creating ecotones and microhabitats through their site management, the site provides a variety of habitats to support a greater range of species.



Grassland scene

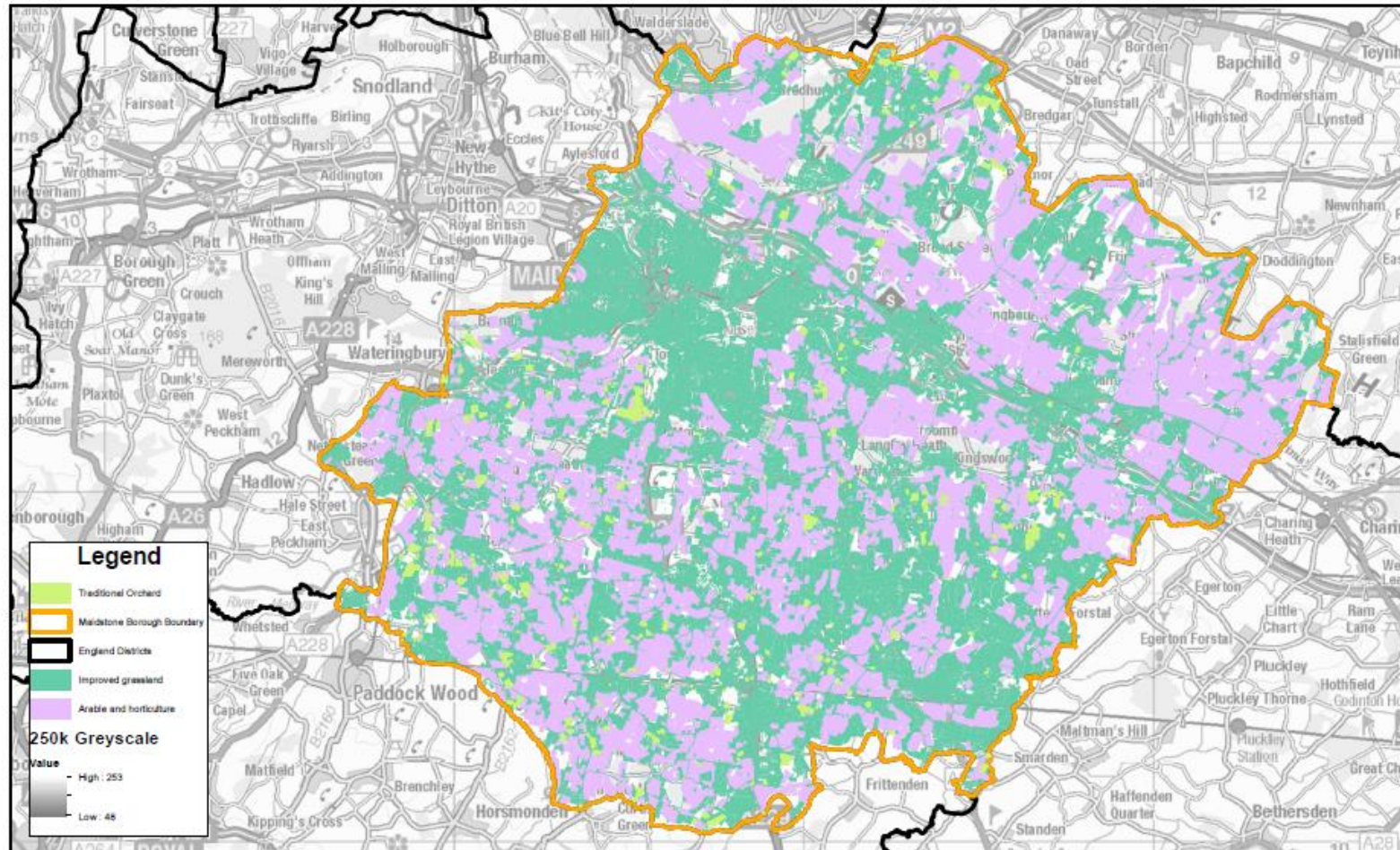
Grassland Habitat in Maidstone Borough



Data from Kent Habitat Survey 2012.

The map shows improved heath in red, calcareous grassland in dark green, bracken in lime, acid grassland in blue and neutral grassland in yellow.

Agricultural Habitat in Maidstone Borough



8.4.2 Key Challenges

England has 10% of the world's bumblebee species and 18% of world's heathland. England's hay meadows and chalk grassland are of international importance (Lawton, et al., 2010). However, over the long term, 60% of grassland and heathland species declined (Hayhow, et al., 2016) Two thirds of Kent's orchards and hops were lost between 1961 and 2008 (ARCH, 2012).

There is a big issue with landscape & habitat fragmentation. This is partly due to the M20 and HS1 which cut through key areas of important grassland in the borough as they run along the Greensand Ridge and North Downs. Plants and insects that live in these habitats may be unable to disperse between fragments.

Agricultural intensification is another key challenge, often due to large scale mono-culture, use of pesticides and fertilisers which reduces on site biodiversity. Run-off and spray drift can also affect neighbouring areas of grassland. Acid and calcareous grasslands risk becoming improved grassland if not managed correctly to keep nutrient levels low.

Lack of appropriate grazing of grassland sites is also threat to biodiversity as it reduces micro-habitat diversity that certain species depend on. 73% of the land is arable, horticulture or improved grassland. (ARCH, 2012) Acid and calcareous grassland, which are low in nutrients, are at risk of becoming improved grassland through inappropriate management. The rarer grassland habitats and traditional orchards are also at risk of conversion to arable.

Grassland is often cut too often and too early in the year. Wildflowers need time to set seed - inappropriate cutting regimes often favour monocultures of more vigorous grasses such as perennial rye grass.

A lack of ride and glade management reduces the opportunities for acid grassland and heath patches within woodland complexes.

8.4.3 Wider Policy Objectives

The IPBES report recommends a reduction in intensive farming in favour of utilising the following management practices: integrated pest and nutrient management, organic farming, agroecological practices, soil and water conservation practices, agroforestry, silvo-pastoral systems and improved irrigation management. It also recommends farmers sign up to voluntary certification standards (IPBES, 2019)

The Lawton review calls for making the farmland matrix more benign for wildlife (Lawton, et al., 2010). Conserving agricultural genetic diversity is a target in Biodiversity2020. (Defra, 2011)

Defra also calls for improvement to soil management: *“By 2030 we want all of England's soils to be managed sustainably and degradation threats tackled successfully, in order to improve the quality of soils and to safeguard their ability to provide essential ecosystem services and functions for future generations.”* – This will be partially delivered through



Monkey orchid

stewardship schemes and cross-compliance conditions (Defra, 2011).

8.4.4 Objectives

- Increase traditional management: using hay cuts, or suitably timed grazing, including intensive periods or 'mob' grazing as appropriate.
- Reversion of improved grassland to calcareous, acid or neutral grassland. This can be achieved over a number of years through removal of nutrients through an appropriate cutting or grazing regime with removal of cuttings.
- Stop regular mowing of verges unless where critical for road safety. Grass areas should not be cut until after flowers have seeded in late summer.
- Public amenity grassland should be left to grow long where not in use for sports, following a late autumn cutting regime as described above. This will increase wildflower diversity, providing habitat for insects including the pollinating insects upon which we rely on for food production.
- Increase diversity of habitats: creation of micro-habitats and ecotones by varying management across the site such as leaving some areas shorter and longer when cutting.
- Restore and maintain structural diversity within areas of lowland calcareous grassland through creation of habitat features including patches of native scrub (incorporating local provenance shrubs grown from cutting and seed such as native box and juniper), bare ground and dew ponds.
- Council to avoid use of herbicides and pesticides except to combat INNS (see INNS section above).
- To tackle fragmentation of grassland habitats along the corridor from Maidstone to Ashford, the neighbouring borough councils and local landowners need to work together to improve the suitability of land between fragments using sympathetic management.

8.4.5 Relevant Bodies

- Hollingbourne Meadows Trust: a community group and charitable trust that owns and manages land to restore wildflower meadows, with public access. Ongoing projects to introduce grazing cattle and create micro-habitats. See their website here: <http://www.hollingbournemeadowstrust.co.uk/>
- Bredhurst Woodland Action Group: a community group that manage chalk grassland with high diversity on North Downs with regular volunteer parties. See their website here: <https://bwag.org.uk/>
- Old Chalk New Downs: a project to restore and improve chalk grassland on the North Downs. <http://www.oldchalknewdowns.org.uk/>
- Maidstone Borough Council, working in partnership with neighbouring borough councils.
- Parish councils and other landowners
- Catchment Sensitive Farming: a project in partnership between Defra, the Environment Agency and Natural England (Natural England, Defra and Environment Agency, 2019). Provides advice, training and grant support for farmers and land managers to reduce water and air pollution from agriculture. Free support is available for those in high priority areas (these can be found on the MAGiC map: <https://magic.Defra.gov.uk/>). High priority areas in Maidstone borough are found along the M20 near Boxley. The Local Catchment Officer for the Medway is James Woodward (james.woodward@naturalengland.org.uk)
- Colour in the Margins: Back from Brink's project to increase arable biodiversity <https://naturebftb.co.uk/the-projects/colour-in-the-margins/>
- Linking Environment and Farming: organisation working on increasing the environmental suitability of farmland <https://leafuk.org/>

9. Projects

The following projects should be implemented by local stakeholders, with Maidstone Borough Council playing a leading role. These provide focusses for Maidstone Borough Council to target effort and resources. These should be delivered in addition to changes in behaviour and land management as a result of advice elsewhere in this strategy. The timescales, partners, locations and funding need to be agreed as part of the Maidstone Borough Council's Implementation Plan (see Project 6).

Projects to Provide Habitat

1. Wealden Wildwood

The Wealden Wildwood, as outlined in the Kent Tree Strategy, aims to plant and maintain at least 4579 hectares of new native woodland, focussed on the confluence of the Greensand Ridge and the Low Weald by 2044. As this area falls largely into Maidstone Borough, the council and local landowners have a key role to play in the instigation and delivery of this project. Potential Partners: Maidstone Borough Council, Woodland Trust, local landowners.

For more detail, please see the Kent Tree Strategy (Butfoy, et al., 2019).

2. Heathland Corridor

A corridor connecting the heathland remnants from Maidstone to Ashford, working in partnership with Ashford Borough Council. This area is highly fragmented due to development, including the M20, A20 and HS1 trainline and so the protection of the remaining remnants, and sympathetic management of intermediate land is vital. Potential Partners: Maidstone Borough Council, Ashford Borough Council, Kent Wildlife Trust.



Projects to Reduce Environmental Damage

3. Medway River Against Plastics

A project focussing on reducing the plastic pollution in the River Medway is in its development stage by Medway Valley Countryside Partnership. The initial phase of the project aims to engage locals with litter collecting events and investigating the litter types, entry points and hotspots of plastic waste in the river Medway. The second phase of the project will include the installation of in-channel litter collectors to remove plastics from the river. This project will benefit people and wildlife locally and reduce harm downstream. Potential Partners: Maidstone Borough Council, Medway Valley Countryside Partnership, South East Rivers Trust, Environment Agency, volunteers, local schools.

4. Climate Resilience through Natural Solutions

Long-term ongoing work to increase the borough's climate resilience must be a priority. By working across sectors and departments, the Council should investigate natural solutions to mitigating against the impacts of the climate crisis and reducing our local contributions to greenhouse gases. A key aspect of this will include large-scale tree planting (which overlaps with Project 1 – Wealden Wildwood) and urban tree planting (utilising the government's Urban Tree Challenge Fund). Potential Partners: Maidstone Brough Council, Kent County Council, Countryside Management Partnerships, Woodland Trust.

Projects to Support Delivery

5. Creation of Interactive Digital Mapping Interface

Several stakeholders showed interest in an interactive online map that land managers could use to guide their land management. Residents, businesses and land managers could use the map to identify local greenspaces, local environmental groups and volunteering opportunities, local habitat types, and where to go for advice on the type of land you are interested in. This would expand upon work being undertaken as part of the Go Green Go Wild project.

6. Maidstone Borough Council Implementation Plan and Yearly Reporting

Maidstone Borough Council will identify resources (including staff and capacity) to implement the strategy and these projects and will publish this in 2020, followed by yearly progress reports against targets and timelines. Consulted stakeholders frequently supported this as a suggested project.



Riverside scene

Summary of Objectives & Aspirations

- Habitats:
- Major Projects
- Annual Plan & Reporting Cycle

(in progress)

10. Acknowledgements

Many thanks to all the local stakeholders who fed into this strategy, especially those groups run by volunteers.

Consulted stakeholders include:

- Andrew Williams, Daniel Pease and Victoria Holloway of Maidstone Borough Council
- Broomfield and Kingswood Parish Council
- Bryn Cornwell of Loose Valley Conservation Strategy
- Chart Sutton Parish Council
- Derek Whitehead of Friends of Whatman Park
- Detling Parish Council
- Harrietsham Parish Council
- John Callahan of Fant Wildlife Trust
- John Harrison of Savills (management of Kirkwood Trust)
- Kent and Medway Biological Records Centre
- Lesley Mason of the Environment Agency
- Louise Butfoy of Kent County Council
- Mark Gallant of North West Kent Countryside Partnership
- Mark Pritchard of Medway Valley Countryside Partnership
- Councillors Tony Harwood, Paul Harper, Bob Hinder and Paul Wilby of Maidstone Borough Council
- Richard Bloor of Kent Wildlife Trust
- Sharon Blackwood of Bearsted Woodland Trust
- Shaun Caudwell and co., Hollingbourne Meadows Trust
- Staplehurst Parish Council
- Steve Mumford of Boughton Monchelsea Amenity Group
- The Green Drinks Maidstone group
- The Woodland Trust
- Ulcombe Parish Council
- Vanessa Jones of Bredhurst Woodland Action Group
- Yalding Parish Council

"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."

Margaret Mead



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Appendix A

Biodiversity in the Planning Process

A Guidance Note for Planners and Developers

This document forms part of the Maidstone Biodiversity Strategy and is designed to primarily advise planners. It may also be of use to those applying for planning permission or working in construction and development. It will also be of use to parish councils who are writing Local Plans for their parish.

Before using this guidance note, readers should be familiar with the concepts of biodiversity, natural capital and ecosystem services (discussed in the first half of the Maidstone Biodiversity Strategy). This document should be used in conjunction with local information on the natural environment (found throughout the second half of the Maidstone Biodiversity Strategy).

Why do planners need to consider biodiversity?

National Policy

- Local Authorities have a duty to conserve biodiversity under Section 40 of the **Natural Environment and Rural Communities Act** which states:
“Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Where conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.” (Parliament of the United Kingdom, 2006)
- The **National Planning Policy Framework** (Ministry of Housing, Communities and Local Government, 2019) requires the planning system to protect and enhance the natural environment. Section 15 ‘Conserving and enhancing the natural environment’ provides further specific guidance including:
“Planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils [...and...] minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;”
- **The Lawton Review** - a government review of the UK’s ecological network (Lawton, et al., 2010) - found that there is a need to increase the knowledge of the biodiversity duty amongst local authorities. This document and the Maidstone Biodiversity Strategy should provide further information on this for planners. The review also stated that planning policy and practice should provide greater protection to priority habitats and features that form part of ecological networks, particularly Local Wildlife Sites and ancient woodland. (Lawton, et al., 2010)
- **Government Circular 06/2005** (Biodiversity and Geological Conservation) places statutory obligations on Local Planning Authorities, detailing how ecological assessments must be considered within the planning process. Paragraph 99 sets out how the presence of protected species must be established before planning permission is granted. (Office of the Deputy Prime Minister and Defra, 2005)
- The **British Standard on Biodiversity** (BS42020) sets standards for assessment of biodiversity within the planning process. All ecological reports submitted as part of planning applications must be prepared to standards set within this code of practice. Accordingly, all planners must be familiar with, and have access to, this document.

Local Policy

The Maidstone Local Plan (Maidstone Borough Council, 2017) provides obligation for planners to consider biodiversity. It states:

- *“Development schemes will be expected to contribute towards improved connectivity through the provision of space for nature that contributes to the large landscape-scale pattern of connected habitat”*
- *“Developers will also be expected to provide detail of how GBI [Green and Blue Infrastructure] elements including sites managed for biodiversity will be managed and maintained over the long term”*

The Kent Tree Strategy (Butfoy, et al., 2019) further supports the need for planners to consider biodiversity and the natural environment throughout the planning process, including responsibilities of the planning authorities such as ensuring the projection of irreplaceable ancient woodland.

Overarching Principles for Considering Biodiversity in Planning:

1. Incorporate biodiversity from the beginning

It is important to consider biodiversity at the earliest possible stage of the development process. This will help to ensure that the impacts of a scheme on biodiversity are fully considered and to put appropriate measures in place. Biodiversity should be incorporated at design stage and considered an asset rather than a constraint, providing valuable spaces for people and wildlife within a high quality development.

2. Incorporate biodiversity into all areas of a development

Space for nature needs to be integrated into the design of all areas, not just designated natural spaces. This is key to providing the scale of habitat creation needed to conserve our wildlife.

3. Use conditions to ensure delivery of biodiversity benefits

In some cases it will be necessary to use planning conditions to enforce delivery of biodiversity benefits and working methods. If conditions are used to secure protection or enhancement of biodiversity, systems must be put in place and will be enforced in a timely manner by the local planning authority to ensure these have been followed, via inspection or reporting.

4. Follow the Lawton principles in the creation of wildlife areas

The Lawton principles state that we need more areas managed for nature, that they need to be large, well connected and well managed (Lawton, et al., 2010). If new wildlife areas are to be created, a management plan should be provided which demonstrates that the land will continue to provide benefits to biodiversity in the future. Wildlife areas created as part of a development or as compensation must be sustainable, and the management plan should demonstrate how the maintenance and long-term management will be funded.

5. Follow the “Mitigation Hierarchy”

The mitigation hierarchy discusses how to minimise harm to biodiversity. It is partially superseded by the need to provide Biodiversity Net Gain, as this creates the need for developments to benefit biodiversity overall, not just to minimise damage. The following hierarchy should be followed: avoid harm, minimise damage if harm unavoidable, restore and compensate for losses, then if necessary, offset at a larger scale than the losses. This allows for uncertainty and time lags inherent in creating compensatory habitat.

The planning process should permit developments which achieve the following:

1. Provide Biodiversity Net Gain

Developments should provide net gain in biodiversity and natural capital on site, with consideration to the ecological context of the site. Proposals should also consider impact on wider environment via changes in ecosystem services as a result of the development. Support shall be given to such proposals. This is supported by National Planning Policy Framework paragraph 109 (Ministry of Housing, Communities and Local Government, 2019). Opportunities for net gain can be found in Section 12 of the Biodiversity Technical Advice Note of Oxford City Council (Oxford City Council, 2019).

2. Provide Natural Capital Net Gain

Large development proposals should include detailed assessment of existing natural capital and scope to provide natural capital net gain. This is supported by National Planning Policy Framework paragraph 109 which states that “the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological consideration interests and soils, recognising the wider benefits of ecosystem services and remediating and mitigating degraded etc land” (Ministry of Housing, Communities and Local Government, 2019).

3. Protect and Create wildlife corridors

Wildlife corridors should be protected from development proposals that would result in their loss or harm to their quality, extent or functioning. Large developments should create wildlife corridors around and through their sites, taking local habitats into consideration. The planning department should work alongside other departments to utilise the potential of canals, railways, roads, cycle ways and other linear features to be wildlife corridors.

Advice for Parish Councils

Neighbourhood Plans should follow the guidance and principles set out above. The Marden Neighbourhood Plan is a good local example of how biodiversity can be incorporated throughout the plan. It includes information and policies on sustainable construction, soil conservation, biodiversity net gain, habitat conservation and biodiversity opportunities through water management. (Marden Parish Council, 2019)

Further guidance

Useful technical advice can be found in the government circular on Biodiversity and geological conservation. This document includes guidance on making decisions regarding species and habitats in development, and relevant links to European law. Much of the technical detail in here may be of use to planners making decisions on wildlife sites. (Office of the Deputy Prime Minister and Defra, 2005)

The Oxford City Council Biodiversity Technical Advice Note expands upon the information provided here and also provides information on how to provide space for wildlife within the built environment. (Oxford City Council, 2019). Similarly, the Exeter Design Guide’s section on biodiversity (appendix 2) provides further useful information. (Exeter City Council, 2010)

Appendix 2 Funding Sources and further advice

Scale	Name/description	Contact or website
Borough	Maidstone Borough Council Community Infrastructure Levy - money paid by developers to fund infrastructure schemes necessary to support development proposed in Local Plan (Maidstone Borough Council, 2017) Plan for spending of this money is outlined in the Maidstone Infrastructure Delivery Plan (Maidstone Borough Council, 2016) and will commence in 2020	Check with AW
	Maidstone Borough Council Section 106 money - Open space is the 3 rd highest priority for both residential development and business development to spend S106 money on (Maidstone Borough Council, 2017)	Check with AW
	Maidstone Borough Council's Go Green Go Wild Small Grants Scheme	http://www.maidstone.gov.uk/home/other-services/communities-and-volunteering/tier-2-primary-areas/go-green-go-wild#go_green_go_wild_small_grants_scheme
Kent	Kent County Council's 'Inside Track' - Newsletter of funding opportunities	https://www.kent.gov.uk/leisure-and-community/community-grants-and-funding/inside-track-newsletter
	Kent Community Foundation - funding for local charities	https://kentcf.org.uk/funding?dm_i=1REE,6DDDF,K4A764,P7HX6,1
	Kent County Council grants for small business to be more environmentally friendly	https://www.kent.gov.uk/about-the-council/information-and-data/Facts-and-figures-about-Kent/environmental-policies/council-environmental-targets-and-performance/initiatives
	Kent Mammal Group Grants 2019	https://www.kentmammalgroup.org.uk/index.php?option=com_content&view=article&id=136:kmg-grants&catid=45:notice-board&Itemid=85
	Defra rural development programme	https://www.gov.uk/guidance/rural-development-programme-for-england-leader-funding
	Defra flood and coastal risk management funding	https://www.gov.uk/government/statistics/funding-for-flood-and-coastal-erosion-risk-management-in-england
	National Lottery Heritage Fund	https://www.heritagefund.org.uk/funding

National	National Lottery Community Fund	e.g. Awards for All https://www.tnlcommunityfund.org.uk/funding/programmes/national-lottery-awards-for-all-england e.g. Partnership fund https://www.tnlcommunityfund.org.uk/funding/programmes/partnerships-england
	Supermarket token schemes which can provide grants to local initiatives	e.g. Waitrose Community Matters https://www.waitrose.com/content/waitrose/en/home/inspiration/community-matters.html , e.g. Tesco Bags of Help community grants https://www.groundwork.org.uk/Sites/tescocommunityscheme/pages/Category/the-tesco-bags-of-help-programme-tes2
	Natural England funded schemes such as Reptile Mitigation Sites or Great Crested Newt Pond creation	For Great Crested Newt District Licensing Enquiries: gcndll@naturalengland.org.uk
	Southern Water	https://www.southernwater.co.uk/working-with-conservation-groups
	People's Postcode Lottery	http://www.postcodetrust.org.uk/applying-for-a-grant
	ELMS/Countryside Stewardship Schemes	https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management
	List of funders on the Environmental Funders Network	https://www.greenfunders.org/seeking-funding/
	Urban Tree Challenge Fund - funding of £10 million from HM Treasury for planting at least 20,000 large trees and 110,000 small trees in urban areas in England	https://www.gov.uk/guidance/urban-tree-challenge-fund
European	Forestry Commission Woodland Creation Grant scheme	https://www.gov.uk/guidance/create-woodland-overview
	EU LIFE programme	https://ec.europa.eu/easme/en/section/life/life-environment-sub-programme

Further advice & information

Maidstone Borough Council	Parks Department on: Telephone: 01622 602747 Email: parksandopenspaces@maidstone.gov.uk Other MBC staff contacts!
Medway Valley Countryside Partnership - not-for-profit organisation that works on habitat management and community engagement, part of the Kent County Council's Countryside Management	https://medwayvalley.org/

Partnership network	
<p>Maidstone Local Plan – Planning Evidence documents in Natural & Historic Environment section including:</p> <ul style="list-style-type: none"> • Landscape Character Assessment 2012 provides guidance on management of the local landscape types • Landscape Character Assessment Supplement 2012 - has planting lists for each character type. • Maidstone Ancient Wood Inventory 2012 • Open Space Audit 2014 • Quality Audit 2015 • Maps of open space 2015 	http://www.maidstone.gov.uk/home/primary-services/planning-and-building/primary-areas/local-plan-information/tier-3-primary-areas/planning-payments
Kent Downs Area of Outstanding Natural Beauty team - features the Kent Land Managers' pack	https://www.kentdowns.org.uk/about-us/contact-us/
Kent Wildlife Trust	https://www.kentwildlifetrust.org.uk/contact-us
Kent Landscape Information System Map - contains map layers with access, habitat opportunities, habitat surveys, landscape character, physical environment and designated areas	https://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/ViewMap.aspx
Kent Historic Environment Record - map layers with access to a database of 40,000 archaeological discoveries and 18,000 listed buildings, landscapes, excavations and library sources	https://webapps.kent.gov.uk/KCC.ExploringKentsPast.Web.Sites.Public/SingleResult.aspx?uid=TKE1046
Catchment Sensitive Farming – provides advice, training and grant support for farmers and land-managers to reduce water and air pollution from agriculture.	<p>Free support is available for those in high priority areas (these can found using MAGiC map https://magic.Defra.gov.uk/MagicMap.aspx) which in the Maidstone area applies to an area of land along the M20 near Boxley. The CSF Local Catchment Officer for the Medway is James Woodward (james.woodward@naturalengland.org.uk)</p>
Back from the Brink's conservation projects	<p>Colour in the Margins project for arable land, especially on the Kent Downs https://naturebftb.co.uk/the-projects/colour-in-the-margins/ Outreach Officer: Zoe.Morrall@plantlife.org.uk</p>
Linking Environment and Farming	<p>Information, resource and guidance on nature-friendly farming https://leafuk.org/</p>
The Woodland Trust - two major outreach programmes	<p>Woodland creation: Large scale planting on private land https://www.woodlandtrust.org.uk/plant-trees/large-scale/</p> <p>Ancient woodland restoration: https://www.woodlandtrust.org.uk/about-us/ancient-woodland-restoration/advice-and-support/</p>
Environment Agency	<p>For work relating to rivers and water quality enquiries@environment-agency.gov.uk https://www.gov.uk/government/organisations/environment-agency</p>

Natural England	For work on protected species or sites https://www.gov.uk/topic/planning-development/protected-sites-species and Countryside Stewardship https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management and information on Biodiversity Net Gain http://nepubprod.appspot.com/publication/5850908674228224
MAGiC Map - useful mapping tool made by Defra for the UK	https://magic.Defra.gov.uk/MagicMap.aspx
Ecosystem Knowledge Network for advice and events on natural environment	https://ecosystemsknowledge.net/
Guidance on river restorations	https://www.therrc.co.uk/manual-river-restoration-techniques
Green Infrastructure Partnership - produces newsletters and promotes opportunities relating to green infrastructure, overcoming environmental challenges and supporting biodiversity through planning and development.	https://www.tcpa.org.uk/pages/category/green-infrastructure-partnership

‘Saving Nature in Maidstone’ is the biodiversity strategy for Maidstone Borough Council. It outlines how everyone can play a part in protecting and enhancing the borough’s wildlife.

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