Making Space for Nature in Kent and Medway

Developing the County's Local Nature Recovery Strategy

Kent & Medway Local Nature Recovery Strategy Priorities and Potential Measures

Draft 1.2 July 2024




Photos © Jim Higham

Introduction

Making Space for Nature in Kent and Medway

Making Space for Nature (MS4N) is working with partners and stakeholders to collaboratively develop the Local Nature Recovery Strategy for Kent & Medway (LNRS). These strategies result from the 2021 Environment Act, with 48 to be created across England with no gaps or overlaps. Developed at a landscape scale by the Responsible Authority (with Kent County Council taking on this role for Kent and Medway), the LNRS will agree and map the local priorities and associated actions for nature recovery and wider environmental benefits, that collectively will deliver a nature recovery network for England, ending the decline of nature and supporting its recovery.

Making Space for Nature will develop:

- Spatially framed strategy for nature – focussing action to where its most needed and/or where it will deliver the greatest benefits.
- Framework for joined-up action, developed with those that will be instrumental in its delivery.
- Set of agreed priorities for nature recovery, with measures to deliver.
- Shared vision for nature recovery and the use of nature-based solutions in Kent and Medway.
- Ambitious but realistic and deliverable plan, linked to supporting mechanisms and finance.

More detail on the project can be found on the Making Space for Nature website.

How we developed the LNRS Priorities and Potential Measures

The Local Nature Recovery Strategy (LNRS) will set out the priorities, in terms of habitats and species, for recovering or enhancing biodiversity and consider the contribution that this may also make to addressing wider environmental issues with nature-based solutions. In addition to identifying the county's priorities for nature recovery and enhancement, the project will also define the potential practical actions necessary to progress towards achievement of the priorities.

This is an important stage of the Local Nature Recovery Strategy preparation, as it establishes what the strategy is seeking to achieve, and the potential measures needed to support the ambitions. Meaningful stakeholder engagement at this stage of the project was key - the stakeholders will be the delivery partners for the Strategy's priorities and actions. The project also wanted to ensure that the priorities reflect what's most important to the people and organisations in Kent – to ensure it really is a LOCAL Nature Recovery Strategy, reflecting our local nature and environmental needs.

Identifying pressures and priorities for nature recovery in Kent

At the end of January and throughout February 2024, a series of workshops were held across the county to identify with stakeholders the pressures facing nature and the priorities that needed to be the focus of action to tackle these pressures and recover nature.

These five workshops were attended by a total over 200 people, representing 137 different organisations, bodies, businesses, affiliations etc. All sectors identified as relevant to the development of the LNRS were represented at the workshop, with exception of the health sector - the project has subsequently followed up with this stakeholder grouping.

Input to this initial stage was also achieved via online surveys and self-led workshops, using a toolkit provided by the project.

The outputs of this stakeholder input were:

- Pressures, threats and challenges for Kent and Medway's nature - those identified at the workshop were reviewed to determine which were in scope for the LNRS to address or influence and then edited into a list to be used in the priorities shortlisting process. The list also served as a check towards the end of the priorities development work to ensure all pressures were being addressed. The pressures collated with also be used to inform the strategy area description.
- Priorities for Kent and Medway's nature - over 800 priorities that stakeholders identified they would like to see for the county. These formed the starting foundation of the LNRS priorities development.

These 800 priorities were then taken through a refinement process to create the draft LNRS priorities shortlist:

1. Creation of priority long list by deduplicating the 800 priorities identified by stakeholders.
2. Shortlisting step 1 – excluding any priorities that were not within the statutory scope of the LNRS to address. Specific species removed and "parked" for consideration by dedicated work stream on priority species.
3. Shortlisting step 2 – assessment of remaining long list of priorities against qualifying criteria:
    a. Significance of the habitat or species in a local or national context.
    b. Contribution to National Environmental Objectives and Environmental Targets Regulations 2023.
    c. Contribution to the purposes of Kent's national landscapes of Kent Downs and High Weald.
    d. Extent to which priority needs immediate attention.
    e. Vulnerability to climate change impacts.
    f. Opportunity for other biodiversity and environmental benefits.
4. Further review and refinement (amalgamating/combining priorities where relevant) and checking against pressures to ensure all had been addressed.

This process was undertaken under the steer of the MS4N Delivery Group, and the resulting 69 draft priorities were signed off by the MS4N Board in April 2024 and published. The full report Creating the Kent and Medway Local Nature Recovery Strategy draft priorities shortlist can be viewed online.

Priorities for Kent's species

There are no species priorities within this document because priority species for the LNRS will be identified through a dedicated work package, following guidance from Natural England. Once the dedicated species prioritisation work has concluded, the species priorities identified by stakeholders throughout the various workshops will be reviewed. Any not already picked up will be considered by the Species Recovery Technical Advisory Group. More information on the species prioritisation work can be found online.

Defining the LNRS priorities and potential measures

In May, three workshops were held across the county to define, refine and, where possible, shortlist further the LNRS priorities with stakeholders. 82 stakeholders, representing 54 different organisations, bodies, businesses, affiliations etc, and covering all relevant sectors, attended and considered:

- Does the LNRS suitably cover all habitats that are a priority for action in the county?
- Does the priority shortlist sufficiently address the pressures faced by nature in the county?
- Are any additional priorities required?
- Are any of the priorities unrealistic or unachievable?
- Is there anything considered not a priority?

The general consensus of the workshops was that the draft priority shortlist addressed the needs of nature and its recovery in Kent and Medway, sufficiently tackling the pressures within its scope and ability to do so. It was acknowledged that the shortlist was still rather long and would benefit from further refinement – however stakeholders struggled to identify which of the priorities could be taken out. Some specific amendments and suggestions restructuring were arrived at. This included the creation of a top level of priorities, focussing on broad habitat types or areas of priority.

Following these workshops, another four were held in the same month to get stakeholder input into the identification of potential measures that would enable the delivery of agreed LNRS priorities. 137 stakeholders, representing 95 different organisations, bodies, businesses, affiliations etc, and covering all relevant sectors, attended. Stakeholders were asked to propose and discuss potential measures, with conversations themed around the habitat and priority groupings.

The outcome of these workshops was a vast list of potential measures. These were reviewed and edited and are presented in this report against the relevant priorities. At this stage,

potential measures which are duplicated across more than one priority, or that may link to another priority/measure, have not yet been identified.

The potential measures have also been divided into two groupings. The first are actions that the project consider could be mapped and therefore can be used to identify the areas where delivery of that action will have the greatest gains for nature and widest environmental benefits. It is these potential measures that will help to form the "areas that could become of importance for biodiversity" – the opportunity areas for nature recovery.

The second group are supporting measures – these are largely principles of good/ best land management and use, and actions that are needed in general to underpin the success of the priority. In some cases, these are long lists which will need refinement before finalisation of the LNRS, to focus on the key supporting measures.

Likewise, the actions may also be refined once we begin the mapping process.

Next steps

In addition to the aforementioned refinement and editing of the actions and supporting measures, the project will review all the potential measures with delivery partners and county experts to ensure that they are appropriate, practical, feasible and deliverable. Feedback is also welcomed from all stakeholders. And whilst there may also be some tweaking of the priority wording, it is anticipated that the LNRS priorities will not now change.

Mapping of the actions will also now begin to enable the final stage of the LNRS work to be completed - identifying the "areas that could become of importance for biodiversity". These draft opportunity areas for nature recovery will be published in September and reviewed with stakeholders in our final set of LNRS development workshops.

Any comments or queries relating to this document should be sent to makingspacefornature@kent.gov.uk

Understanding this document

After a summary of the Local Nature Recovery Strategy's priorities, the document sets out the strategy's overarching principles for nature recovery in Kent and Medway, which centre around the ambition of better, bigger, more and joined up.

Within this section, the priorities and potential measures for connectivity, nature based solutions, land management and land use and species are outlined.

The document then focuses on the habitat based priorities. Through these habitat based priorities, we are looking for opportunities to better protect, extend, increase and connect so that they, and the species they support, will be more resilient to the changing climate and the other pressures facing nature.

For each of the habitat's sub priorities, the following potential measures are identified:


Measures which relate to managing existing habitats – delivering better.


Measures which extend or buffer existing habitats – delivering bigger.


Measures which restore or create new habitat – delivering more.


Measures which focus on connectivity – delivering joined up.


Measures which deliver nature based solutions.


Measures which focus on improving land management and land uses.


Measures which will support the success of the priority.


Priority species supported by the sub-priorities and potential measures.

Measures with a reference code are measures we anticipate mapping, to inform our opportunity mapping and the subsequent identification of "areas that could become of importance for biodiversity". The majority of these mappable measures deliver against better, bigger, more, joined up and nature based solutions.

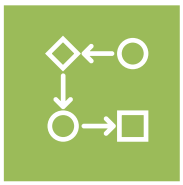
Measures which focus on improving land management and land uses are largely best/good management practices that will underpin the mapped measures or support action to deliver benefits to specific species.

Measures which will support the priority are other general actions considered necessary to the success of the priority.

Priority species identified are those species identified by the strategy development process as requiring attention but don't require bespoke action – instead will benefit from the gains or improvements delivered by the potential measures. Species which do require special attention for their recovery are detailed in the earlier species priority chapter.

Contents

Summary – Kent and Medway's Priorities for Nature Recovery



Connectivity – Habitats are connected at both a county and local scale, delivering bigger, better, more and joined up with no important species populations left completely isolated.

Nature based solutions – maximise the potential of Kent and Medway's nature based solutions.

Land management and land use – land management and land use throughout Kent and Medway not only meets the economic and social needs of the county, but also deliver nature recovery gains.

Species – all management of Kent's priority habitats taking account of the needs of the priority species that both contribute to, and depend on, that particular habitat. With management utilising the role of species to help deliver more dynamic, natural, intact and climate resilient ecosystems.

Grasslands - Retain the existing extent and connect and extend the county's grasslands. Return appropriate management that takes account of the needs of the priority species that both contribute to, and depend on, grasslands and maximises the important roles these habitats play in carbon storage, water management and soil health. Deliver high quality grassland habitats that are species-rich dynamic, natural, intact and climate resilient.

Successional habitats – Protection from loss and damage of open mosaic habitats found on previously developed land and low level scrub, providing the structural diversity for the benefit of species which rely on the early successional habitats.

Woodland, trees and hedgerows – Protection of the existing extent, and an increase in, Kent and Medway's native woodland, trees and hedgerows, which is well connected and supports a diverse ecology. A focus on embedding appropriate active management for our woodlands, so that our existing resource is in a good state, with robust ground flora and soil structures. A mixture of natural regeneration and new establishment means a greater contribution to net zero targets and delivery of the many other nature based solutions provided by functioning woodlands and trees.

Coast – Coastal and estuarine habitats are allowed evolve, with natural dynamic processes and progression restored, to enable adaption and resilience to climate change and minimise loss. Sustainable management supporting a range of high functioning coastal habitats, delivered strategically, so that trade-offs in succession from one coastal habitat to another are considered in a holistic manner.

Freshwater – Kent's freshwater habitats are clean, sufficient and stable, in a healthy and good ecological state, supporting the restoration of, and an increase in, freshwater species abundance and diversity. Management works with nature to restore catchments' functions and deliver a connected mosaic of wet habitats across the landscape, which help to improve water quality and manage flood risk.

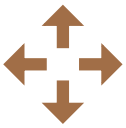
Urban – Ensure that nature is not forgotten in the urban environment, with blue and green spaces and trees providing habitat for wildlife and these areas also delivering other services through nature based solutions.

Better, bigger, more and joined up – the overarching principles for nature recovery in Kent and Medway

In order for our nature to respond and adapt to the increasing challenges of climate change and the other pressures it faces, we need to ensure the local nature recovery strategy for Kent is applying the principles of Lawton – better, bigger, more and joined up. In applying these principles across the local nature recovery strategy, we will not only support the recovery of nature but also ensure that our habitats and species have the ability and space to respond to the impacts of climate change, increasing their resilience and enable dynamic habitats and species that are able to adapt.

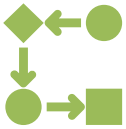
The overarching principles delivered by the Kent and Medway Local Nature Recovery Strategy are:

Better – improve the quality of our existing habitats and ensure they are in a healthy and functioning state, by applying and resourcing better and appropriate management. We also need to better conserve and protect what we already have.



Bigger – increase the size of our most valuable and important habitat sites, not only extending but buffering, to protect them from the pressures of human influences.

More – through habitat restoration and creation, establish new, nature-rich sites that not only provide more space for nature but also provide connectivity between existing core sites.



Joined up – enhance connections between, and join up, sites, through improving the quality of the land that exists between, creating new, physical corridors and establishing 'stepping stones.

Nature based solutions – the strategy also considers how we can work with nature and use natural processes to tackle some of the socio-economic challenges our county faces, maximising the benefits of nature recovery.

Land management and land use – critical to this landscape scale approach to nature recovery are private landowners, land managers and farmers, who all have a crucial role to play in delivering a better, and more coherent and resilient wildlife network.

Connectivity

Habitats are connected at both a county and local scale, delivering bigger, better, more and joined up with no important species populations left completely isolated.

Sub priority CON1 – County's key wildlife sites better connected by addressing the fragmentation and barriers preventing movement of species.	
	CON1.1 – Improve connectivity corridors between RAMSAR, SAC, SPA sites and safeguard these areas. CON1.2 – Identify and protect potentially lower wildlife value areas which are strategically important in reducing fragmentation. CON1.3 – Use and build upon farm clusters to improve connectivity of farmed landscape.
	- Where a project will link into land within the "strategic significance" zone – extend into unidentified areas – these extended areas should also then be considered strategically significant. - Identify bottlenecks to fragmentation. - Use a range of habitats to connect up – e.g. scrub to link woodland, scrapes to wet areas. - Join up small, privately owned woods as wildlife corridors; address management and introduce coppicing. - Flyways for bees and birds.
	<Priority species to be added in once LNRS species are finalised>

Sub priority CON2 – Fragmentation caused by arterial roads, railway and other major infrastructure retrospectively addressed, reconnecting habitats and wildlife pathways.	
	CON2.1 – Installation of green bridges, wildlife crossings, tunnels and other appropriate structures, alongside retrofitting existing structures, to address historic fragmentation caused by major infrastructure.
	- Maintain a register of habitat fragmentation caused by major infrastructure to enable a pipeline of projects for funding and investment. - All new infrastructure to consider fragmentation impacts and mitigate.
	<Priority species to be added in once LNRS species are finalised>

Sub priority CON3 – Habitats connected at both a county and local scale, delivering bigger, better, more and joined up with no important wildlife habitats, or species populations, left completely isolated.	
	CON3.1 – Conserve essential areas for connectivity
	CON3.2 – The county's highway, cycleway, pathway and PROW networks acting as functional networks for wildlife
	- Address light spill, light availability on sensitive receptors especially rivers (bats, riparian mammals, fish). - Preserve ancient wildlife corridors – many of which are now footpaths. Assess the role access routes are already playing for wildlife.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CON4 – Management of habitats and wildling approaches to deliver a connected mosaic of habitats at a large scale, where nature can flourish, and species requirements are considered.	
	CON4.1 – Conserve essential migration routes for priority species and those species especially vulnerable to climate change. CON4.2 – Designate broad buffer zones and connecting strips between significant habitat areas.
	- Ensure a mosaic of habitats e.g. woodland, meadow – to ensure species have what they need throughout the seasons. - Early identification and removal of invasive and non-native plants, to address transport and spread.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CON5– Landscape scale management, with partners beyond the county, to address habitat change and species migration as a result of climate change.	
	- Work with Responsible Authorities to the north of the county to ensure they are identifying species migrating from Kent as a result of climate change dispersal. - Increase understanding of likely species movement and habitat change to improve ability to identify which counties to work with. - Increased sharing of data across boundaries. - Monitoring of any landscape scale working to assess measurable impact/improvements. - Big Chalk. - Cross-channel UNESCO Global GeorparK. - Other cross boundary initiatives?
	*<Priority species to be added in once LNRS species are finalised>*

Nature based solutions

Maximise the potential of Kent and Medway's nature based solutions.

Sub priority NBS1 – Increase the extent of carbon sequestering habitats in the county, which are purposefully managed to function as a carbon store whilst prioritising a nature recovery function.	
	- Increase the extent of agricultural land that is managed for higher carbon sequestration, focusing on soil health and biomass production.
	- Support the development of standards for carbon offset projects for a range of habitats, including agricultural land and salt marshes, and foster accredited carbon schemes. - Encourage developers to link Biodiversity Net Gain and carbon offset opportunities. - Support developers by providing advice and education on valuable habitats and recommending options throughout the development process for protecting and restoring these.
	<Priority species to be added in once LNRS species are finalised>

Sub priority NBS2 – Protect habitats delivering critical ecosystem services in the county.	
	- Strengthen the protection of existing habitats that are important for carbon sequestration.
	<Priority species to be added in once LNRS species are finalised>

Sub priority NBS3 – Improve soil health and structure by enhanced and increased soil management so that it is better delivering for invertebrates, carbon sequestration, water retention and management and production/provisioning.	
	NBS3.1 – Target investment to known areas of soil degradation and where this is impacting provisioning services.
	NBS3.2 – Plant hedgerows across open landscapes to capture water and minimise runoff, reducing scour and siltation.
	- Reduce use of pesticides, herbicides and fertilizer. - Reduce use of insecticides and wormers in livestock. - Encourage regenerative practices: reduced inputs, reduced cultivation, no/minimum till, deeper rooting, stronger rooted swards, over wintering stubble, cover crops, minimise compaction, plough along contour, maintain invertebrates and bacteria. - Adopt principles of agroforestry and permaculture to improve soil management, such as

	tree planting and tree management with introduction of fungi, use of Miyawaki type techniques. - Encourage conservation grazing practices to develop stronger grassland root structures and adaptive multi paddock grazing with long rests to restore soil health. - Grazier network to support this practice, with mentoring, community support and training. - Identify risks of increased runoff due to changes in crops and put in place measures to reduce.
	- Baseline mapping of soil health. - Determine soil health of areas rather than point data, so a wider collaborative management approach can be employed. - Share local 'waste' resources that improve soil health and structures e.g. seaweed for mulch and compost greens, woodchip, mushroom substrate etc - connect organisations. - Removal of plastics from compost before added to soil. - Education and technical support on importance of soil health and benefits of good soil management.
	*<Priority species to be added in once LNRS species are finalised>*

Land management and land use

Land management and land use throughout Kent and Medway not only meets the economic and social needs of the county, but also deliver nature recovery gains.

Sub priority LM1 – Increase in number of farms employing nature friendly farming practices and sensitive land management, resulting in farmland across the county that is rich in wildlife.	
	LM1.1 – Identify opportunities for new or extended farmers clusters in areas of strategic significance not already covered. - Encourage regenerative principles of land management e.g. soil no/min till, cover crops, inclusion of livestock, integrated pest management practices, reduced inputs fertilizer/pesticides. - Integrated pest management (IPM) – use of biological, physical and cultural tools to control pest species, linking to wider functional ecosystem (creating beetle banks is a simple example; agroforestry and hedgerow management also support IPM). - Encourage (invertebrate friendly) livestock management spraying, faecal egg counts, reduced/careful use of antibiotics. - Encourage creation, expansion and maintenance of headlands, margins, ponds.
	- Provide a 'matching service' for connecting conservation graziers with regenerative farmers. - Provide advice and education to farmers about regenerative principles, including case studies to show financial benefits, mentoring and public education. - Encourage the development of nature friendly/regenerative farming clusters, linking together to create corridors for wildlife and to enable of shared resources e.g. graziers. - Support and advice for farmers to assist them maximise environmental benefits of land in grant schemes.
	<Priority species to be added in once LNRS species are finalised>

Sub priority LM2 – Farmland delivering targeted action for nature recovery.	
	LM2.1 – Identify key pieces of farmland that are strategically important for linking natural habitats.
	- There are many buffers around arable fields, these should be managed better and turned into grasslands, plus develop multipurpose buffers, including buffer vegetation growth capturing nitrogen. - Encourage creation of wider, higher, bigger hedges, smaller fields, with grass margin buffers, more scrub, cover crops, arable weeds/wildflowers, create ponds. - Encourage the creation of wide environmental buffer margins within linear water ways (ditches, streams, rivers) to reduce run off from agricultural land and nitrogen enrichment. - Manage environmental options such as bird seed on longer rotations and on a landscape

	scale to avoid sudden loss of food source (due to ploughing up).
	- Use innovative monitoring apps to identify gains. - Empower farmers/landowners to choose which priority species they wish to target based on their knowledge of their land.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority LM3 – Farmland responding to climate change induced pressures with the help of nature.	
	LM3.1 – Identify farmland at greatest risk of climate change impacts, including water stress areas.
	LM3.2 – Increased connectivity across farmed landscape to improve climate resilience.
	- More cover and catch crops to mitigate flooding and drought. - Agroforestry – integrating trees into agricultural landscapes. - Climate resilient food-crops.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority LM4 – Protect freshwater habitats and groundwater bodies in farmland from agricultural diffuse pollution (caused for example by soil, nutrient or livestock management practices and physical modifications) and the impacts of over-abstraction.	
	LM4.1 – Increased water capture, rainwater harvesting, reservoirs, ponds, holding areas, leaky wood dams and less use of mains water and ground water in areas of highest water stress.
	- Adaptive and judicious grazing/better grazing practice to keep more soil carbon. More resilient grazing, livestock can stay out for longer, results in less slurry, less runoff/pollution. - Encourage the creation of wide environmental buffer margins within linear water ways (ditches, streams, rivers) to reduce run off from agricultural land and nitrogen enrichment.
	- Work with farmers and farmer clusters to address water on a whole farm basis and in the context of their catchment, improving soil health to hold and purify water, reduce need for fertilizer and pesticide use through integrated pest management approaches and provide a toolkit for landowner engagement on water quality.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority LM5 – Publicly accessible open spaces managed for both wildlife and people.	
	LM5.1 – Protection of habitats and species sensitive to disturbance by employing site management, and other measures, which support connection to, and experience of, wildlife but ensures our most sensitive sites remain undisturbed.
	LM5.2 – Create sacrificial/honey pot sites to reduce the impact of visitors on vulnerable sites.
	- Use restrictive buffers to protect sensitive areas from public and dog disturbance. - Tailor sensitive management to sensitive habitats e.g. hedge maintenance or mowing regimes.
	- To include historic sites, stately homes, historic and managed gardens, golf courses, cricket fields, sports pitches etc. - Use an improved and well-maintained Public Rights of Way (PRoW) network to keep the public on paths and re-direct them away from sensitive sites whilst also encouraging connection with nature. - Provide initiatives for landowners to improve public access through their land, to extend the PRoW network and avoid the public forging their own paths through sensitive areas. - Educate the public by providing interpretation to explain land management or conservation works, encouraging respect, appreciation and rule following from the public. - Adequate, biodiverse green space and dog exercise areas included in new housing estates. This gives people direct access to green space on their doorstep to aid in reduction of visits to sensitive sites, particularly for dog exercising.
	*<Priority species to be added in once LNRS species are finalised>*

Species

All management of Kent's priority habitats taking account of the needs of the priority species that both contribute to, and depend on, that particular habitat. With management utilising the role of species to help deliver more dynamic, natural, intact and climate resilient ecosystems.

Sub priority SP1 – Species assemblages formed across priority habitats inc. reintroductions where needed, to form functioning ecosystems resilient to extreme weather and invasive species.	
	
	
	
	
	
	
	- Focus on building ecosystem redundancy to reduce risk of trophic collapses in response to extreme weather/disease.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority SP2 – Monitor the migration of new species into the county as a result of a changing climate, with proactive strategies for both naturalised species and the control invasive/pests.	
	
	
	
	SP2.1 – Establishing suitable habitat and connectivity for climate migrant species.
	
	
	- Monitoring species (positive and negative) that are likely to arrive and identifying what is needed to support 'positive migrants'. Understand the long-term consequences of species migrating in. - Look at European population trends – can we predict what is likely to happen in Kent? Enable better forward planning. - Establishment of a county-wide monitoring programme. - Employ more citizen science to assist with monitoring. - Better understanding of invasive vs migrating. - Early identification, notice/information and proactive in eradicating invasive species. - Early identification and removal of invasive and non-native plants, to reduce other associated invasive species spread. - Improved biosecurity.
	*<Priority species to be added in once LNRS species are finalised>*

Grassland habitats

Retain the existing extent and connect and extend the county's grasslands. Return appropriate management that takes account of the needs of the priority species that both contribute to, and depend on, grasslands and maximises the important roles these habitats play in carbon storage, water management and soil health. Deliver high quality grassland habitats that are species-rich dynamic, natural, intact and climate resilient.

Nature based solution opportunities from grassland habitats

<To be added in once priorities and measures are agreed>

Wider benefits of healthy and functioning grassland habitats

<To be added in once priorities and measures are agreed>

Sub priority GL1 - Chalk grasslands are protected from land use changes and other threats, restored to a better and species-rich condition, and connected and buffered across the landscape to promote ecological integrity and resilience, particularly for the purpose of facilitating species movements in response to climate change.	
	GL1.1 – Increase the extent of high quality, connected chalk grassland by bringing sites adjacent to core/good condition sites into conservation management.
	GL1.2 – Opportunities to restore wildflower habitat on road verges and other green spaces to contribute to a county network of wildlife-friendly habitat corridors.
	GL1.3 – Increase functional links between chalk grassland and other habitats to maximise nature based solutions offered by improved connectivity.
	- Reduce the nutrient input to chalk grassland – for example, through management of livestock presence and removal of mowing arisings. - Appropriate grazing, cutting or mowing regimes which supports plants setting seed and invertebrate life cycles, whilst managing the growth of coarse grasses and scrub. - Preference for the use of green hay to introduce new plant species, over seed mixes and plugs. Where latter is used, seed source to be of native and local provenance.
	- Advisory and supportive programmes facilitating conservation management, such as Pasture for Life and grazing cooperatives.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority GL2 - Existing coastal and floodplain grazing marsh restored to better condition and retaining more freshwater, with sensitive areas and the breeding waders they support protected from land management and recreational disturbance. Opportunities taken to create and extend areas of this habitat and increase its climate resilience.	
	GL2.1 – Increase opportunities to store winter water on land adjacent to grazing marsh to increase opportunities for "wetting" during spring/summer.
	GL2.2 – Design grazing marsh habitat restoration, extension and creation where it will offer the greatest gains to support the county's breeding wader populations.
	GL2.3– Reconnect rivers with their former natural floodplain and improve the water storage ability of floodplain, in order to protect against climate change impacts and drought.
	- Protect floodplains from developments. - Development of grazing programme to match graziers with landowners.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority GL3 - Existing species-rich lowland meadow is protected from loss, restored to better condition and extended through sensitive land management practices to reduce soil nutrient levels. Through the extension of lowland meadow, this habitat is better connected, reducing the risk of isolated meadow species and declines in species richness.	
	GL3.1 – Maintain core, good condition lowland meadow sites through the application of grazing/cutting regimes sensitive to the existing and potential flora and fauna of the site.
	GL3.2 – Increase the extent of high quality, connected lowland meadow by creating new lowland meadow sites, in close proximity to core/good condition sites, using green haylage from local donor meadows. GL3.2 – Increase the extent of lowland meadow opportunity areas through the use of yellow rattle.
	GL3.3 – Increase connectivity of, and provision for wildlife in, lowland meadows by leaving field margins uncut, hedgerows well-connected and integrate some bare patches or banks within the grassland site.
	GL3.4 – Establish neutral grasslands on floodplains, to create resilience to flooding and drought and protect water quality.
	- Minimise land management practices of ploughing, re-seeding, fertiliser/slurry application, winter tilling, and drainage[1]. - Appropriate and flexible grazing management plans with conservation-led stocking densities and timing of grazing, avoiding poaching and under-grazing. Where possible, reduce the number of animals or remove grazing between April and August[1]. - If site management requires cutting, stagger cutting times, leaving some areas in flower at all times and creating a varied structural diversity across the site[1].

[1] Buglife - https://www.buglife.org.uk/resources/planning-hub/local-nature-recovery-strategy-guidance-in-england/

	- No late cuts on hay meadows[1]. - Ensure suitable soil health, through soil biota survey and worming.
	- Development of grazing programme to match graziers with landowners.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority GL4 – Retain, restore and extend the county's acid grassland and heathland habitat mosaics, to improve the species diversity these limited habitats in Kent and Medway support.	
	GL4.1 – Implement a balanced low intensity grazing and/or mowing regime that ensures that acid grassland is maintained and retained but not at the expense of the mosaic's heathland resource. GL4.2 – On acid grassland, manage to create a combination of larger open areas and smaller mosaic "glades" in amongst gorse and thorn scrub, to provide habitat for breeding birds. GL4.3 – Improve climate change resilience of dry heaths by incorporating resilience measures for fire risks.
	GL4.4 – Restore, create and extend acid grassland and heathland through the prevention of succession into secondary woodland and the management of scrub encroachment.
	- Maintain bare areas for invertebrates and reptiles. - Rhododendron removal. - Enhancing seed bank if area has not been managed effectively.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority GL5 – Protect, restore and increase fields with a diversity and abundance of arable weeds and wildflowers.	
	GL5.1 – Management of field margins to provide graduated field edges, with wider and cultivated margins. GL5.2 – Management of fields, with mixed times of cultivation to encourage a diversity of arable weeds.
	GL5.3 – Replicate management approach of Ranscombe Farm to develop areas with similar arable weed diversity and abundance.
	- Removal of chemicals, mixed timings of cultivating areas will benefit different species.
	- Improve awareness and understanding of arable weeds with landowners and farmers. - Map and identify priority species of arable wildflowers specific to clay and chalk. - Encourage all gardeners to plant, even a small, cultivated patch would help their spread.
	*<Priority species to be added in once LNRS species are finalised>*

Successional habitats

Protection from loss and damage of open mosaic habitats found on previously developed land and low level scrub, providing the structural diversity for the benefit of species which rely on the early successional habitats.

Nature based solution opportunities from successional habitats

<To be added in once priorities and measures are agreed>

Wider benefits of healthy and functioning successional habitats

<To be added in once priorities and measures are agreed>

Sub priority SH1 – Protection from loss and damage of open mosaic habitats found on previously developed land for the benefit of species which rely on the early successional habitats.	
	SH1.1 – Appropriate management plans in place for key sites, including the provision of features such as ponds, open area, scrapes. SH2.2 – Support the succession of habitats to occur naturally. SH2.3 – Maintain open areas through vegetative management (restrict chemical use, retain deadwood and don't clear everything).
	- Protect land from recreational disturbance.
	- Survey Kent's open mosaic habitat/brownfield sites to identify the county's best and most significant sites. - Monitor management to review success. - Educate planners and developers of the worth and vulnerability of OMH. - Local plans to identify open mosaic habitat areas and sites to be protected from development. - Take fly tipping and contamination of these sites seriously and discourage using the term 'waste' land. - Raise awareness about the importance of open mosaic habitats – use example sites to educate and promote awareness around the importance of this habitat. - Review abandoned railways as potential long corridors of open mosaic habitat.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority SH2 – Increase the extent of low level, scrub/successional habitat, providing a mix of young and mature scrub to enable structural diversity and the support of a wide range of species. Link this scrub habitat with hedgerows, woodland and other habitats to support wildlife corridors.	
	SH2.1 – Selective grazing by cattle of areas within the scrub to create open areas and allow for regeneration.
	SH2.2 – Scrub on hedgerows, field margins and outside woodlands to create successional habitats and wildlife corridors. SH2.3 – Open glades and rides between scrub, to break it up and allow wildlife to move between habitats.
	- Cut and removal when encroaching on other habitats.
	- Raise awareness about the importance of scrub habitats.
	*<Priority species to be added in once LNRS species are finalised>*

Woodland, trees and hedgerows

Protection of the existing extent, and an increase in, Kent and Medway's native woodland, trees and hedgerows, which is well connected and supports a diverse ecology. A focus on embedding appropriate active management for our woodlands, so that our existing resource is in a good state, with robust ground flora and soil structures. A mixture of natural regeneration and new establishment means a greater contribution to net zero targets and delivery of the many other nature based solutions provided by functioning woodlands and trees.

Nature based solution opportunities from woodland, trees and hedgerows

<To be added in once priorities and measures are agreed>

Wider benefits of healthy and functioning woodland, trees and hedgerows

<To be added in once priorities and measures are agreed>

Sub priority WTH1 – Retain the extent, and improve the condition, of existing woodland and trees outside woodland through active management, improving habitat provision for woodland species.	
	WTH1.1 – Holistic management of woodlands and glades to sensitively consider the understory, ground flora, and soil; allow a variety of successional states, developing to mature, providing different canopy layers; preserve dead and dead standing wood. WTH1.2 – Reinstate and increase coppicing as a management measure. WTH1.3 – Management and/or removal of invasive non-native species, removal of diseased trees and control of damaging deer and grey squirrel populations. WTH1.4 Targeted management in order to provide habitats for vulnerable woodland species.
	WTH1.5 Protect small pockets of woodland to provide key stepping stones for species movement.
	- Increase conservation areas and Tree Preservation Orders. - Skills development and training in the use of appropriate and traditional management techniques. - Collaboration between landowners to share skills and equipment
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH2 – Increase the average canopy cover of Kent through woodland and trees outside woodland to 19%.	
	WTH2.1 – extension of existing woodland through natural regeneration. WTH2.2 – Retain and plant more highway trees.
	WTH2.3 – Conversion of unproductive land into woodland and a greater use of trees in worked landscapes (agroforestry and silvopasture). WTH2.4 – Plant more trees in hedgerows.
	WTH2.5 – Use tree and hedgerow establishment to increase connectivity, provide wildlife corridors and address fragmented areas of woodland.
	WTH2.6 – Plant more urban trees and create urban forests, siting tree planting to where they will provide flood management, air quality and temperature regulation benefits.
	- Ensure planting of the right tree, in the right place, taking into consideration existing habitats (to ensure there is no detrimental impact to other high value open habitats), appropriate soil types, a diversity of species, and preserving the landscape character. - Woodland creation to use native broadleaved, resilient species of local provenance. - Incentivise and support farmers and landowners to plant more trees on unproductive land and in hedgerows, in worked fields and shelter belts, with guidance on species and site location. - Active aftercare and monitoring to ensure planting sites survive. - Encourage agroforestry.
	- Mapping to establish appropriate sites for woodland creation/expansion, to identify nature based solution opportunities and to set tree targets at local level. Identify suitable trees. - In urban areas, plant hedgerows in new developments instead of built infrastructure, and retrofit urban trees on industrial estates and other sealed areas. - Encourage tree planting in private gardens and educate residents in beneficial species and management of them. - Establish more hedges in rural areas including hedgeline trees, focusing in particular on native trees. - Improve financial and practical support for woodland creation and management, including the creation of markets for local wood-based products (e.g. coppice). - Use old quarry sites and similar industrial areas to establish woodlands. - Foster collaboration between farmers and landowners to share skills, knowledge and partner in tree establishment efforts.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH3 – Return the ecological function provided by native trees previously prolific in Kent, by restoring those lost to disease, pests, climate change and drought (including poplar, ash and elm).	
	WTH3.1 – Replace dead and diseased trees as they are lost from woodlands and hedgerows with a diversity of resilient species, including natives, near-natives and non-natives and planted appropriately and with the context carefully considered; to include: aspen, alder, small-leaved lime, sessile oak, field maple, wild cherry, bird cherry, rowan, buckthorn, pedunculate oak, sycamore, birch.
	WTH3.2 – targeted and strategic planting, and natural regeneration, of resilient, native tree species, with focus on beech, black poplar, hornbeams, oaks, juniper, Wingham elm (resilient variety), ash, Wild service and county varieties such as Kentish cob.
	- Careful procurement of tree stock, from local provenance and with biosecurity guaranteed.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH4 – Ensure the resilience of the county's woodlands.	
	WTH4.1 – Management that facilitates and enables the natural regeneration of woodlands.
	WTH4.2 – Replace coniferous woodland with native broadleaved species.
	WTH4.3 – Establish new woodlands, and extend existing, with a diversity of native tree species to safeguard against pest and diseases and include species that will be more resilient to climate impacts.
	WTH4.4 – Create buffers zones around existing woodlands and establish trees outside woodlands to increase connectivity across the wider habitat setting and landscape. WTH4.5 – Establish green bridges to connect woodlands fragmented by road and rail.
	- Identify priority connectivity sites for woodland creation.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH5 – Ancient woodland, and ancient and veteran trees, are protected from loss, with damaged areas restored through natural processes, management and the removal of invasive and problematic non-native trees and plants. Areas of ancient woodland are buffered and better connected.	
	WTH5.1 – Appropriate and targeted management of ancient woodland, in order to retain specific features of ancient woodland and enhance biodiversity.
	WTH5.2 – Establishment of wide buffer zones around ancient woodland that are linked to hedgerows, to extend habitat connectivity.

	WTH5.3 – Solitary ancient and veteran trees buffered with new woodland creation.
	WTH5.4 – Connectivity of ancient woodland improved by links to hedgerows, establishment of standard trees and increased standing deadwood. WTH5.5 – Use of ancient woodland inventory to identify isolated blocks of ancient woodland.
	- Management to include (as appropriate) coppicing, deer and grey squirrel management, retainment of deadwood and removal of tree species that are susceptible to disease, invasive or of low ecological value. - Buffer strips should include no built elements (including back gardens). They should be scrub or grasslands, sustainable drainage schemes, amenity greenspace, ditches, or natural woodland regeneration.
	- Detailed mapping and identification of all veteran and ancient trees, through combined efforts between landowners, community, local authorities and land managers. An inclusion of these maps within local plans. - Education for landowners and managers, local authorities and developers, to ensure best management practices that are both ecologically and economically sustainable. - Collaboration between landowners, woodland managers and community, allowing a shared knowledge and resources.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH6 - Increase the extent of high quality wet woodland in the county and improve connectivity with the freshwater habitat network.	
	WTH6.1 – Establish long-term management plans for woodland and surrounding land, which ensures connectivity between waterways and woodland and incorporates nature-based water management solutions, such as leaky dams and ecosystem engineers (e.g. beavers), to maintain and enhance wet woodlands.
	WTH6.2 – Creation of ponds within woodlands, and naturally regenerated riparian zones.
	- Implement wet woodland management and allow seasonal flooding. - Turn over low-grade agricultural land to wet woodland creation. - Consider downstream impacts when creating new wet woodlands.
	- Increased collaboration between government agencies, non-governmental organisations and communities to ensure appropriate ongoing management.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH7 – Retain and protect the High Weald's unique ghyll woodland and the plant species they support and the important functions they provide for the wider river catchment.	
	WTH7.1 – Create buffer zones around the ghyll woodland to ensure they remain largely undisturbed.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH8 – The extent of species-rich hedgerows throughout the county is increased, with lost hedgerows replaced, gaps filled and management of existing hedgerows improving the quality as well as quantity. Hedgerows providing a coherent network of shelter, nesting and forage for wildlife across the landscape and allowing other habitats to be linked.	
	WTH8.1 – Preserve and restore ancient hedgerows along ancient field patterns, in association with ditches and banks. WTH8.2 – Actively manage the county's hedgerows, fill gaps and remove invasive species; rejuvenate and restore hedgerows that have declined in structural condition.
	WTH8.3 – Buffer hedgerows with grass margins, scrub and headlands.
	WTH8.4 – Strategic siting of new and extended hedgerows to aid habitat connectivity and support species forage, shelter and movement; restore links to copse and woodland.
	- Incorporate hedgerows into livestock management practices, create more small fields, consider 'managed decline' of fences alongside establishment of new hedges. - Hedgerows protected from loss, aggressive management, neglect and chemicals. - Increase the extent of hedgelaying, coppicing and gapping up in hedgerow management. - Maintain a varied structure so there are some taller, denser areas and emergent trees, with tree root systems contributing to soil health, microrhyza and biophytes. - Plant and manage hedges with consideration for rights of way, including selection and location of species.
	- Map and survey existing hedgerows using Apps and UK Centre for Ecology countrywide lidar map of hedgerows. Identify lost hedgerows using regeneration mapping. - Strengthen links to planning to protect existing hedges, require new developments to have hedges and include hedges in solar farm designs. - "Hedgeucation" to provide management advice, training and details of funding available, in one place, covering all aspects of planting, managing and restoring hedgerows and the benefits of hedgerows. Aimed at not just farmers but also highways, non-farming landowners (including horse owners, small holdings and urban gardens) and contractors. Also include public education.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH9 – An increase in traditional orchards, under sensitive management, supporting an abundance and diversity of wildlife.	
	WTH9.1 – restore and bring established traditional orchards back into positive management, including long sward length, wildflower meadow strips between trees, limited or no spraying, sensitive pruning and dead wood/ dying trees retained.
	WTH9.2 – Establish new community orchards, with a focus on urban locations.
	- Map current traditional orchards and identify potential future orchards for succession. - Raise awareness of role of traditional Kentish orchards as part of our heritage and as a habitat for wildlife. - Revive Orchards for Everyone Trust. - Resource establishment and management of orchards through alternative uses such as memorial trees, green burials. - Connect local orchards to each other to share knowledge, resources, volunteer help and equipment. - Develop advice on selection of species, development of new traditional orchards to take account of climate change, pests and disease.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority WTH10 – Appropriate deer and grey squirrel management in woodland and connecting areas, to reduce impacts and support new planting and natural regeneration.	
	WTH10.1 – Implement culling activity to achieve and maintain populations to a level of acceptable impact on the natural landscape. WTH10.2 – Install fences and other physical barriers to prevent deer damaging ecologically-sensitive areas. WTH10.3 – Include deer barriers on any installations to address habitat fragmentation (e.g. wildlife crossings).
	- Education, training and support for landowners on best practice for deer and grey squirrel management. - Awareness raising on the need to manage deer and grey squirrel population numbers. - Monitoring of populations of deer and grey squirrel, to establish priority areas for control. - Greater research on best tree planting practices to deter deer foraging. - Development and support of markets and supply chains for meat arising from culling activity.
	*<Priority species to be added in once LNRS species are finalised>*

Coastal habitats

Coastal and estuarine habitats are allowed evolve, with natural dynamic processes and progression restored, to enable adaption and resilience to climate change and minimise loss. Sustainable management supporting a range of high functioning coastal habitats, delivered strategically, so that trade offs in succession from one coastal habitat to another are considered in a holistic manner.

Nature based solution opportunities from coastal habitats
<To be added in once priorities and measures are agreed>

Wider benefits of healthy and functioning coastal habitats
<To be added in once priorities and measures are agreed>

Sub priority CL1 – Sustainable and strategic management of estuaries and open coast to create functionally linked coastal habitats that are allowed evolve, creating areas for wildlife to thrive. Natural dynamic processes and progression is restored, to enable adaption and resilience to climate change and minimise the loss of intertidal habitats.	
	CL1.1 – Where hard defences must remain apply the "greening the grey" approach. CL1.2 – Refuges for wildlife created with either 'no go' or restricted areas.
	CL1.3 – Hard defences removed where appropriate to allow space for tidal ingress to mitigate coastal squeeze and enable the managed realignment of the coastline.
	CL1.4. – Create areas for saltmarsh restoration, seagrass regeneration and high tide roosts as well as breeding areas for seabirds and waders.
	CL1.5 – Hard defences removed where appropriate to enable reconnection of fragmented areas through managed realignment.
	- Establish a strategic approach which recognises and encourages the "restoration halo effect", whereby managed realignment leads to more grazing marsh, which in turn improves water quality, leads to more sea grass, etc. - Identify opportunities for retreating coastal defences and softening defences – seek areas outside of these already designated. - Laws and measures around use of dredged sediment are encouraging aggregate companies to use material to replenish coastlines (e.g. saltmarsh) rather than deterring them.
	<Priority species to be added in once LNRS species are finalised>

Sub priority CL2 – Reduce small scale loss, increase connectivity and improve the condition of saltmarsh and mudflats, with functioning ecosystems supporting foraging, roosting and nesting birds and fish nurseries.	
	CL2.1 – Maintain high roosts and nesting sites, with key sites fenced off, to limit disturbance and protect inland feeding, breeding and overwintering areas. CL2.2 – To support fish nurseries, use embryonic structures and channels to create natural drainage channels (ripples, eddies, pools and meanders) and minimise over-engineered structures.
	CL2.3 – Work with landowners to create more space for nesting seabirds to avoid competition and predation.
	CL2.4 – Through managed realignment and the "beneficial use of dredged sediment", raise the height of coastline in order to create areas for saltmarsh restoration.
	CL2.5 – Link areas with other wetland habitats to form a landscape mosaic of wetlands to reduce the tendency for waders and seabirds to be concentrated at key hotspots and reserves.
	- Realignment and creation sites to consider aspects to create fish nursery habitat.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CL3 – Reverse the decline in seagrass off Kent's coast to protect this important habitat for marine species and their breeding grounds and nurseries; and to preserve its vital function as a blue carbon store.	
	CL3.1 – Reduce pollution which is causing smothering of seagrass by intercepting with reedbed filtration. CL3.2 – Remove invasive spartina to reduce smothering of seagrass.
	CL3.3 – Increase the areas of seagrass beds across the mudflat areas of the Thames, Medway and Swale estuaries.
	- Identify priority areas for sampling of water quality and action. - Address pollution of coastal waters.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CL4 – Chalk reefs nurtured and protected from erosion and damage.	
	CL4.1. – Remove non-native species. CL4.2 – Control leisure boat and other recreational activity in chalk reef areas.
	- Introduce fines for collection of shellfish for commercial use on tidal chalk reefs.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CL5 – Sustainable management of native oyster beds to allow them to reach their habitat building potential.	
	C5.1 – Protect established areas with no take zones. C5.2 – Remove of non-native Pacific oysters and other invasive, non-native species from the native beds.
	C5.3 – Create suitable substrate for native oysters to colonise, focussing on existing/historic areas.
	- Map the native oyster beds and continue research which demonstrates the effectiveness of oysters at water filtration and use this to build public/government support for restoration initiatives.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CL6 – Saline lagoons are appropriately protected and managed to increase their resilience and adaptation to climate change and secure their ecological functions, including the role they will play as transitional habitats.	
	CL6.1 – Protect existing saline lagoons from loss and damaging activities that harm and/or pollute the lagoons.
	CL6.2 – Create new lagoons to connect wetland sites in transitional areas that are likely to flood, due to limited resources and climate change.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority CL8 – Reduction in coastal wildlife disturbance resulting from leisure pressures at coast.	
	CL8.1. – Protection of offshore islands and restrictions at sensitive sites. CL8.2 – Move leisure activities to sites with lower wildlife or habitat disturbance risk.
	CL8.3 – Building up of existing and creation of new seal haul out sites, which are adequately protected to provide safe areas for them.
	*<Priority species to be added in once LNRS species are finalised>*

Freshwater habitats

Kent's freshwater habitats are clean, sufficient and stable, in a healthy and good ecological state, supporting the restoration of, and an increase in, freshwater species abundance and diversity. Management works with nature to restore catchments' functions and deliver a connected mosaic of wet habitats across the landscape, which help to improve water quality and manage flood risk.

Nature based solution opportunities from freshwater habitats

<To be added in once priorities and measures are agreed>

Wider benefits of healthy and functioning freshwater habitats

<To be added in once priorities and measures are agreed>

Sub priority FW1 – All rivers and associated catchments achieve good ecological status or potential, with more naturally functioning rivers, free from physical modifications and artificial barriers, which are able to move dynamically and have diverse habitats, flows and channel shapes. Rivers are connected with their floodplain and a mosaic of wet habitats.	
	FW1.1 – Manage and remove invasive species, including signal crayfish, himalayan balsam, mink, and encourage and consider reintroduction of native species (otter, beaver, native fish species under pressure such as trout, bullhead), with appropriate management strategies and habitat creation and management. FW1.2 – Remove redundant barriers to fish passage and make remaining barriers passable for fish including eel, trout, salmon. FW1.3 – Add catchment and interception woodlands at the top of the chalk downs.
	FW1.4 – Open up and daylight culverted rivers, streams and ditches. FW1.5 – Re-naturalise some ditches by introducing meanders, oxbows and associated ponds, and manage ditches more sensitively by following natural cycles, dredge sensitively.
	FW1.6 – Reconnect rivers and floodplains through a range of approaches including installation of woody debris, stage 0, restoration of historic meanders, regrading banks to create shallow edges and establishing mosaics of water meadows, wet grasslands and wet woodlands.
	- Ensure local authorities are able to include restoration opportunities in their infrastructure funding plans by providing clear and accessible spatial evidence on restoration opportunity locations, buffer areas, etc. Provide accessible evidence and guidance/Clearly map out ideal buffer areas for rivers including headwaters and key flow pathways/source areas for runoff, historic channels, identifying optimal buffer widths, opportunities for channel shading. - Encourage the creation of new wetlands and promote their protection. - County-wide / catchment-wide management strategy for freshwater invasives.

	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW2 – Establish wide, more natural buffer strips with a diverse vegetation structure along rivers, streams and springs, providing a balance of light and shade, managed through a combination of natural processes and catchment support, supporting wetland habitats and protection from pollution.	
	FW2.1 – Consider breaking of drains where habitats can wet up permanently.
	FW2.2 – Establish semi-natural, complex habitats along the river banks, allowing light grazing of wet grassland areas with a focus on native livestock breeds, and encouraging woodland particularly where there is need for more shading of rivers. Allow natural regeneration of habitats and recolonisation. FW2.3 – Re-naturalise river corridors in areas of re-development where there is current hard standing (e.g. old industrial sites).
	FW2.4 – Create travel corridors for people along rivers to connect urban centres and rural areas, leaving enough space for the river and wildlife (for example by leaving one bank undisturbed and leaving a wide buffer between paths and the bank).
	FW2.5 – Make use of wide river corridors to introduce ecosystem engineers where space is available, combined with a clear communication and management strategy to foster a positive relationship. FW2.6 – Combine buffers with the use of nature based solutions to hold and clean water, including for example large woody debris, sediment traps.
	- Buffer rivers by allowing natural regeneration of alder, oak and native species. - Use riparian corridors as corridors to encourage other species especially in urban areas, for example by installing bat and bird boxes and including wildlife ponds along river corridors. - Encourage uptake of existing stewardship options to create 12-24m wide buffers, fence off rivers and streams or reduce grazing intensity along them to reduce poaching and access, allowing formal access points for livestock and dogs.
	- Identify buffer guidance for all streams and rivers, including headwaters and wider drainage network, giving the watercourse sufficient space to expand as appropriate to its size and location. - For new developments, protect floodplains and river corridors from encroachment, including physical modifications to the channel and sealing of surfaces in floodplains.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW3 – Protect headwater streams and restore a natural channel shape, allowing them to function as part of a mosaic of seasonally wet habitats including grasslands and woodlands, providing resilient flows to rivers and supporting a wide range of wildlife.	
	FW3.1 – Protect headwater streams from agricultural pollution and road runoff through the use of fencing, buffer strips and interception features.
	FW3.2 – Restore and establish wet woodland and wet grassland habitats and associated ponds in headwater areas and around natural springs, including through the use of existing stewardship options. FW3.3 – Re-naturalise urban and modified sections of headwaters.
	FW3.4 – Hold and slow water in headwater streams through nature based solutions (leaky woody dams and large woody debris, reedbeds, etc), and approaches to restore more natural channel shape and processes especially where this can provide flood risk benefits and improve stable flows.
	- Protect headwater streams from abstraction and discharge which impact them disproportionately.
	- Identify headwater streams and associated drainage areas and map them clearly, including in local plans. - Improve monitoring and understanding of headwater systems and their water quality, flow and biodiversity in Kent.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW4 – Chalk streams reach good ecological status and provide high quality river habitat, with natural and uninterrupted flows along their permanent course and well managed ephemeral headwater streams. Chalk steams are protected from pollution, with a more natural channel shape, to support characteristic flora and fauna. The quality and quantity of groundwater on which chalk streams rely is protected.	
	FW4.1 – Removal of weirs and physical obstructions to ensure fish passage. FW4.2 – Remove development on winterbourne streams and key recharge zones.
	FW4.3 – Restore natural channel shape and connect rivers with their floodplain, implement natural flood management measures including woody debris and rewet river corridors to protect recharge and mitigate against low flows and create habitat. FW4.4 – Naturalise channels in urban areas and de-culvert streams. FW4.5 – Create buffers and sediment traps along roads, rivers and infield, to prevent sediment and polluting runoff from entering chalk streams, including from roads.
	FW4.6 – Nature based solutions in the wider catchment to reduce nutrient input to groundwater body and protect aquifer recharge.
	- Protect chalk streams from discharge, especially where there is not currently a pressure from effluent discharge, and address misconnections. - Improve soil health and structure and restore grasslands to support recharge.

	- Emphasis on recreational value including angling, and engagement projects in urban areas to raise profile of rivers - Identify and communicate extent of chalk streams across Kent, including the small streams and tributaries. - Protect smaller streams and tributaries. - Identify ark sites for native species reintroduction such as crayfish. - Implement sustainable drainage schemes to support recharge to the aquifer and support baseflows, urban rain capture and rural measures to increase recharge, protect from inappropriate sealing of surfaces. - Prevent development on winterbourne streams and key recharge zones. - Monitor abstraction and flow of streams. - Work with water companies and abstractors to understand requirements and understand flows. - Implement water efficiency measures in new developments.
	<Priority species to be added in once LNRS species are finalised>

Sub priority FW5 – Restore clay rivers to a more natural channel shape, removing physical modifications and the impacts of historic alterations and restoring a mosaic of connected wetland habitats along the floodplain and headwater streams.	
	FW5.1 – Restore banks and channel through regrading and creation of more shallow banks and associated wetland areas. FW5.2 – Remove physical obstructions and restore a natural channel shape. FW5.3 – Install woody debris in the channel.
	- Reduce livestock stocking density along the river. - Protect from impacts of pollution from development pressure and agriculture. - Create wide riparian corridors to buffer and protect from agricultural run-off.
	- Prepare for beaver colonisation, mitigating impacts on land managers.
	<Priority species to be added in once LNRS species are finalised>

Sub priority FW6 – Restore ponds with high ecological value or potential and creation of new ponds especially as part of a mosaic of habitats. Protect all ponds habitats from run-off pollutants and invasive species, while allowing successional habitats to develop where appropriate.	
	FW6.1 – Manage invasive species in ponds.
	FW6.2. – Protect ponds from agricultural runoff and road runoff by implementing wide buffers around them, including consideration of fencing.
	FW6.3 – Create and restore ponds for wildlife particularly in dry landscapes including restoration of dew ponds and dip slope ponds. FW6.4 – Develop ponds with varying depths and features to ensure they are suitable for a

	variety of wildlife, including providing access for bird species, emergent plants for inverts and amphibians.
	FW6.5 – Connect ponds through associated habitats and ensure their connectivity in the landscape as part of a mosaic. Use this to reduce distance between waterbodies.
	FW6.6 – Create ponds as nature based solutions, including a treatment train for runoff, rainfall/water storage and slowing flow.
	- Include ponds in site restoration plans for old quarry sites and similar industrial sites.
	- Grants for lining of ponds in permeable areas, and creating ponds associated with headwater chalk streams. - Support volunteer groups to carry out pond maintenance, including as part of green social prescribing, and develop a network of pond specialists. - Provide resources for landowners and the general public on design principles for ponds. - Create ponds in new developments and schools to educate and engage the public about pond management and address perception of ponds as health and safety risk. - Link to existing pond creation schemes such as Great Crested Newt Ponds.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW7 – Improve the health of groundwater bodies by protecting them from pollution and over-abstraction, in turn protecting and supporting groundwater-dependent terrestrial and wetland ecosystems.	
	FW7.1 – Implement floodplain reconnection, storage ponds and similar measures to slow the flow to benefit local groundwater recharge, including in urban areas.
	FW7.2 – Install reedbeds and similar wetland habitats to improve water quality before recharge to groundwater.
	- Protect infiltration of soil and habitats, restoring habitats such as chalk grassland. - Prevent sealing of surfaces in key recharge areas through development, compaction or inappropriate management. - Encourage more water sensitive farming practices to reduce need for pesticides, fertilisers and reduce risk of soil compaction. - Work with farmers to plant cover crops to absorb nutrients from soil.
	- Create awareness of source protection zones with key stakeholders including councils, landowners and local communities and highlight the information available on groundwater and best practice approaches. - Ensure appropriate disposal of chemicals by providing facilities and education around risks, impacts and options for disposal. - Reduce demand on groundwater bodies by implementing water efficiency measures in new developments and retrofit in existing. - Reduce need for boreholes through rainwater harvesting and runoff capture.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW8 – Restoration of lowland mire sites (fen and raised bog), with the provision of buffers to allow the habitat extent to increase.	
	FW8.1 – action relating to water quality, high nutrient levels and nitrogen to be developed.
	- Management, where feasible, utilising natural engineers such as beaver and buffalo in the process.
	- Public and landowner engagement on the value of wet areas and the need to re-wet them.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW9 – Increase the extent of high quality reedbeds across Kent and ensure existing reedbeds are in appropriate management.	
	FW9.1 – Manage reedbeds to prevent encroachment of woodland, and by managing associated ditches and dykes, conservation grazing, minimal chemical interventions, consider management of saline flooding.
	FW9.2 – Provide opportunities for spring flooding (e.g. for waders) by creating water storage areas for winter rainfall.
	FW9.3 – Create natural reedbeds along river corridors and integrate them with the wider landscape, allowing them to connect sites.
	FW9.4 – Create natural reedbeds along river corridors and integrate them with the wider landscape, allowing them to connect sites.
	FW9.5 – Create reedbeds in developed areas as measures to slow the flow and protect water quality and act as an additional filter system for effluent from sewage treatment plants.
	- Education about the value of reedbeds in water management. - Ensure appropriate design, monitoring and maintenance of nutrient neutrality wetlands, to deliver multiple benefits. - Ensure reedbeds created for nutrient neutrality for developments deliver the benefits intended.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW10 – Work with nature to restore river catchments' functions to improve water quality, manage flood risk and deliver enhanced biodiversity.	
	FW10.1 – Where rivers are silting up, adjust the gradient of the river to allow silt to be flushed through. FW10.2 – Protect floodplains and reconnect them where possible, taking account of potential future flood extents. FW10.3 – Restore rivers to a more natural course and shape, supporting diverse vegetation on river banks, to slow flows and support biodiversity.

	FW10.4 – Establish wide buffer strips and interception features to hold runoff before it enters rivers and streams from farms, livery yards and similar land uses, and consider disconnecting land drains to provide additional interception and infiltration opportunities.
	FW10.5 – Use of constructed wetlands - nutrient stripping & tertiary treatment for discharge. FW10.6 – Maximise the opportunity of reservoirs and similar waterbodies as wildlife habitat. FW10.7 – Slow the flow and store water in the catchment in low productivity areas, implementing natural flood management measures such as large woody debris, creation of wet woodlands, reedbeds, flood attenuation ponds and similar. FW10.8 – Focus natural flood management measures on headwater areas and upper catchments.
	- Implement sustainable drainage systems in locations where they can reduce the impact of road runoff on rivers and streams, reduce the risk of combined sewer overflows, provide clean groundwater recharge, including on existing and new developments and highways and local roads. - Work with farmers and farmer clusters to address water on a whole farm basis and in the context of their catchment, improving soil health to hold and purify water, reduce need for fertilizer and pesticide use through integrated pest management approaches and provide a toolkit for landowner engagement on water quality. - Improve soil health.
	- Increase capacity of sewage treatment plants (STW) and invest in alternatives to the release of untreated sewage into all watercourses, establish tertiary treatment wetlands wherever possible on STWs. - Address misconnections and private sewage treatment works that impact water quality through engagement and education on the spotting misconnections and maintenance of private sewage treatment works (e.g. septic tanks, cesspits, package treatment works). - Protect rivers that currently are not impacted by treatment effluent from receiving effluent. - Reduce demand on water resources through implementation of water efficiency measures in all new developments and education of the public, and use of alternative sources of water such as grey water, rainwater harvesting, and runoff in industry, agriculture and housing. - Ensure sufficient monitoring of water quality across rivers (including those not included in the Water Framework Directive monitoring) and habitats providing water quality benefits such as reedbeds and other wetlands, including through the use of engaged citizen scientists. - Clearly map source of pollution incidents including sewage, litter and pesticides to directly address issues at source. - Clean up waste from rivers, including metal waste, and prevent rubbish from entering rivers by protecting high risk fly tipping spots and providing alternatives. - Work with abstractors to provide real time information about demand and availability. Consider storing water for later release to support flows and demand as needed, e.g. augmenting flows from farm reservoirs and investigate opportunities for water trading. - Raise awareness of the toxicity of pet treatments and how they impact river wildlife. - Use of grey water/non treated water for non-drinking use instead of mains water/drinking water quality for example in developments (new & retrofit) and with horticultural growers, sports clubs and similar facilities. - Engage and educate residents on floodplains and create better understanding of natural processes, for example the need for functional floodplains and 'slow the flow'

	measures. - Reintroduce ecosystem engineers, such as beavers.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority FW11 – Protect and restore wildlife-rich and functioning freshwater wetlands across the county, providing not only shelter, nurseries and breeding grounds but also carbon sinks and water management.	
	
	
	
	
	
	
	
	*<Priority species to be added in once LNRS species are finalised>*

Urban habitats

Ensure that nature is not forgotten in the urban environment, with blue and green spaces and trees providing habitat for wildlife and these areas also delivering other services through nature based solutions.

Nature based solution opportunities in urban areas

To be added in once priorities and measures are agreed.

Wider benefits of wildlife rich urban areas

To be added in once priorities and measures are agreed.

Sub priority URB1 – Address habitat fragmentation of the urban environment, ensuring urban species can freely move about and developed areas and infrastructure does not impede passage.	
	URB1.1 - Remove river structures where possible for fish passage. URB1.2 – Minimise mowing on verges in areas known to be of importance for pollinators connectivity.
	URB1.3 – Community areas and smaller pockets such as parklets, micro-forests, ponds and wild verges/swathes to establish wildlife corridors and provide habitat stepping stones across urban landscapes. URB1.4 – Native hedgerow mix to link urban greenspaces and to the wider landscape and rural fringes. URB1.5 – Green bridges and tunnels installed (or existing crossings modified) to traverse barriers to wildlife movement in the urban environment. URB1.6 – Replace hard river banks with native buffer verges and tree planting and divert some river networks to form long, linear habitats for the benefit of wildlife.
	- Connect landowners in urban areas to create a more robust urban green network. - Install green roofs, walls and other features at bus shelters, bus and train stations and bridges to extend the wildlife network. - Opportunities to improve human access throughout urban landscape taken alongside those for wildlife.
	<Priority species to be added in once LNRS species are finalised>

Sub priority URB2 – Urban public greenspace and land management delivering wildlife benefits.	
	URB2.1 – Areas of urban greenspace managed specifically for nature recovery where benefits are most needed. URB2.2 – Minimise mowing on verges and grass areas in areas known to be of importance for pollinators.
	URB2.3 – Swift bricks, bat tiles, bird boxes and hedgehog highways installed where there are known key or declining populations. URB2.4 – Restore and enhance urban rivers, with river corridors naturalised.
	URB2.5 – Target tree establishment to areas of low canopy cover.
	- Appropriate management and planting increasing wildlife benefits at community gardens, allotments, church yards, village greens, schools, golf courses, cricket grounds, sports pitches, railway embankments, car parks and hospitals. - Reduced use of pesticides and herbicides. - Better management of parks and green spaces by reducing the number of cuts and leaving wild strips, buffers and corners of fields. Plant appropriate trees with appropriate management. Use of herbaceous and perennial plants in parks and gardens which are bee and pollinator friendly and use planting around the base of trees. - Plant a resilient mix of trees suited to climate change, drought and pest and disease non-native and native where appropriate whilst increasing species diversity. - Swift bricks, bat tiles, bird boxes and hedgehog highways and hedgerows instead of fences installed as standard on all new development.
	- Use of interpretation/public information to increase understanding of wildlife features and wild management. - Development providing high quality green and blue infrastructure, trees and hedgerows with long term management in place to retain and maintain the biodiversity resource. - New developments working around the established green and blue infrastructure networks, not fragmenting existing corridors. - New developments should provide green corridors which are pleasant for people and wide enough for wildlife strips, use buffers on the sides of roads and safe passageways for wildlife in appropriate locations. - More support and incentives to residents to garden for wildlife. - Reduce light pollution impacts on wildlife, not only in new development but in existing urban lighting schemes.
	*<Priority species to be added in once LNRS species are finalised>*

Sub priority URB3 – Protect and increase the extent of green space, trees and hedgerows within urban areas to not only provide more habitat for wildlife but also deliver other benefits including urban cooling, air and noise pollution regulation and surface water management.	
	URB3.1 – Targeted tree and hedgerow planting to deliver air quality, temperature regulation/cooling and surface water management benefits. URB3.2 – The use of rain gardens and bio-swales (and other SUDS features) to manage areas at high risk from surface water flooding. URB3.3 – Green walls and roofs to provide temperature regulation in settings most at risk from urban heat island effects. URB3.4 – Naturalise urban river corridors and reconnect to floodplains to assist with flood management, temperature cooling and nutrient neutrality. URB3.5 – Increased green and blue infrastructure, and more natural space, is targeted to communities where it is most needed to deliver health and wellbeing benefits and greater connection with nature.
	*<Priority species to be added in once LNRS species are finalised>*