


Making Space for Nature in Kent and Medway

Developing the County's Local Nature Recovery Strategy

Potential Measures Workshop Report

14th May – 23rd May 2024



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.

The MS4N Potential Measures Workshops

Between 14th and 23rd May 2024, a series of workshops were held to get stakeholder input into the identification of potential measures that would enable the delivery of the agreed draft LNRS priorities.

Four half-day workshops were held at four different locations (Chatham, Birchington, Cranbrook and Lenham). In total, 137 stakeholders, representing 95 different organisations, bodies, businesses, affiliations etc, and covering all relevant sectors, attended. For more details see the attendance report online at Workshop Reports | Making Space For Nature Kent.

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 have been were reviewed and edited to remove duplicates and are presented in this report against the relevant priorities.

The potential measures have 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 what could be considered 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 more refinement before finalisation of the LNRS, to focus on the key supporting measures.

All measures will also undergo a further review with habitat experts and technical advisory groups to ensure appropriate, feasible and deliverable. The project will also consider national policy and nationally produced LNRS guidance from NGOs (e.g. Buglife, Plantlife, BBCT etc) to ensure all relevant opportunities to support nature recovery have been identified.

This report is a reflection of stakeholders' views and opinions. Views and opinions do not indicate fact. No inference should be taken from the manner or order in which the priorities are presented.

The MS4N project team would like to thank all those that attended the workshops and so enthusiastically took part in the discussions.

Background to how we've got to the draft LNRS priorities shortlist

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. Whilst working with partners and stakeholders is important to the whole process, it is during this part of the project that we particularly require meaningful engagement - the stakeholders will be the delivery partners for the Strategy's priorities and actions. We also want 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.

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 form 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, that we will consider at the MS4N Priorities Workshops. This process, which resulted in 69 draft priorities for the LNRS, is summarised at the end of this document and the full report Creating the Kent and Medway Local Nature Recovery Strategy draft priorities shortlist can be viewed online.

The full final draft priorities shortlist for the Kent and Medway Local Nature Recovery Strategy document, and the pressures they aim to address, can both be viewed on line.

Potential measures - to be mapped
These are the measures that the project could use to create the "areas that could become of particular importance for biodiversity" – essentially the opportunity areas for nature recovery. These measures not only need to be map-able (i.e. they can be spatially targeted to where they will deliver the greatest gains for nature and widest benefits) but also need to focus on action that really will deliver nature recovery.

Potential measures - guiding principles for management etc and general approaches
These are measures identified at the workshop but are more general in nature or are considerations needed to be taken into account when designing the mapped potential measure or the detailed management/action that sits underneath that. This was useful information identified at the workshop that needs to be retained to provide the foundations of successful nature recovery.

Grassland and heathland

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
Chalk grassland	CG1	Chalk grasslands protected from loss, restored to better condition through conservation management and connected across the landscape, supporting a high diversity of species, including species tolerant to climate change.	1. Bring together landowners adjacent to core/good condition sites and look for opportunities to extend, by bringing these adjacent sites into good condition. Target arable reversion schemes to areas that can be reconnected with each other. 2. The value of chalk grassland where it is connected to other habitats rather than isolated chalk grassland needs recognising and acting on. For example, woodland on top of a hill can slow the flow on to grassland and help with soil stabilisation.	- Reduce nutrients: o Encourage the historic process of periodically moving livestock from grassland onto farmland - so more dung goes here, less on chalk grassland. o When mowing, the removal of arisings is important to ensure nutrients remain low in the soil. o Roll out successful programmes – such as "Pasture for Life" o Grazing cooperatives – to ensure availability of animals. o Reduce the amount of unmanaged scrub, and the loss of grassland and heathland from its encroachment.
Grazing marsh	GM1	Existing coastal and floodplain grazing marsh restored to better	Ensuring year-round water supply: - 1. Increase opportunities to store winter water on	- Grazing is often economically unviable - program to provide grazing animals is needed.

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		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.	land adjacent to grazing marsh to increase opportunities for "wetting" during spring/summer. This could include interceptor wet woodland on low grade land that has close proximity to grazing marsh (and could become grazing marsh). Alternatively, creation of new reservoirs close to grazing marsh to store water and replenish during periods of drought. Use of wind pumps to get water back onto marshland. 2. Resilience of floodplain increased: reconnect rivers with their former natural floodplains and improve water storage ability of floodplain to protect against climate change and drought – with breeding waders in mind. Protect floodplains from developments and minimise need for engineering by using natural systems.	Develop programme for matching graziers to landowners – to ensure sufficient grazing.
Lowland meadow	LM1	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.	1. Green hay from one rich meadow area to be transported to another less rich one (or arable) – spread on ground or fed to animals to disperse in droppings. This will create thriving new areas through seed dispersal. Build adjacent landowner buy in alongside core areas – to buffer and extend the habitat.	- Promote and implement good practice: o Light grazing and late haymaking o Ensuring soil health – soil biota survey and worming o Use of yellow rattle to prepare and improve areas. o Programmes such as Beelines o Cut and collect on smaller sites o Develop programme for matching graziers to landowners – to ensure sufficient grazing

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Acid grassland	AG1	Restore to better condition and retain acid grassland through increasing low-intensity grazing/mowing practices. identify areas where removal of scrub or secondary woodland may present opportunities for further restoration, extension and creation.	1. Manage through cattle grazing/mowing – (arisings removed) to create a combination of larger open areas and smaller mosaic "glades" in amongst gorse and thorn scrub – edges of which important for breeding birds. 2. Implement management measures - Prevent succession into secondary woodland. - Maintain bare areas for invertebrates and reptiles. - Rhododendron removal. - Enhancing seed bank if area has not been managed effectively.	- Management measures o Prevent succession into secondary woodland. o Maintain bare areas for invertebrates and reptiles. o Rhododendron removal. o Enhancing seed bank if area has not been managed effectively.
Species rich grassland	SRG1	Protect existing extent, and connect and extend resource, of all species-rich grassland by returning appropriate, wildlife friendly and traditional management techniques to these 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. - Better enforcement of mowing and grazing regimes, with seed bank management/ propagation. - Standardised management approaches - captured in design guides; including guidance on transferring seed from one area to another and on control of some species – e.g. sycamore or alexander.
Heathland	HL1	Increase in extent of high quality lowland heathland.	1. Rough grazing by horses and cattle to support invertebrates/cutting/burning.	Reduce the amount of unmanaged scrub, and the loss of grassland and heathland from its encroachment.

Woodland and trees

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
Ancient woodland	AW1	Ancient woodland, and ancient and veteran trees, are protected from loss, with damaged areas restored through management and the removal of non-native/invasive trees and plants.	1. Appropriate and targeted management of ancient woodland, with collaboration between landowners, woodland managers and community, allowing a shared knowledge and resources in order to retain specific features of ancient woodland and enhance biodiversity - eg coppicing, deer and squirrel management. 2. Appropriate management/removal of tree species that are susceptible to disease (eg ash), invasive, or of low ecological value. 3. A significant increase in size of buffer-zones around ancient woodland, from the current 15m 4. Solitary ancient trees buffered with new woodland creation 5. Connectivity of buffer-zones with hedgerows to extend habitat connectivity.	- 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.
	AW2	Areas of ancient woodland buffered and better connected for climate resilience.	1. Ancient woodlands connected through hedgerows, planting standard trees, and standing deadwood. 2. Wide buffers around ancient woodland - more than 15m	
Wet woodland	WW1	Increase the extent of high quality wet woodland in the county and improve connectivity with the freshwater habitat network.	1. Establish long-term management plans for woodland and surrounding land, that incorporate nature-based water management solutions such as leaky dams and beavers to maintain and enhance wet woodlands. Increased collaboration between ALBS, NGOs	- Provide funding for landowners to support wet woodland management and allow seasonal flooding. - Incentivise landowners to turnover low-grade agricultural land to wet woodland creation

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			and communities to ensure appropriate ongoing management. 2. Creation of wet woodland using nature-based techniques such as leaky dams, and ecosystem engineers eg beavers 3. Creation of ponds within woodlands, and naturally regenerated riparian zones. 4. Ensuring appropriate connectivity between waterways and woodland 5. Linking wet woodlands to the headlands of chalk streams. 6. Buffer-zones around wet woodlands, such as High weald Ghylls, and around rivers	
Woodland and trees	WD1	An increase in native woodland, with diverse ecology, well connected and under appropriate management to support natural regeneration and extension.	1. Provision of habitats for vulnerable woodland species, such as dormice and bats. 2. Conversion of unproductive land into woodland 3. Tree planting around urban areas, and to safeguard areas at risk of flooding 4. Connectivity with the wider habitat settings 5. Connecting woodlands and hedgerows to provide wildlife corridors, particularly between fragmented areas of woodland 6. Protecting small pockets of woodland as well as big, as key stepping stones for species movement 7. Protection of land that serves as a connection between woodlands 8. Green bridges to connect woodlands fragmented by road and rail	Sensitive management of woodland, supported by funding to ensure skills training and ongoing maintenance capacity Management and/or removal of invasive non-native species eg rhododendron Use of appropriate and traditional management techniques, such as coppicing Removal of diseased trees, and replacement with resilient native alternatives Preservation of dead and dead standing wood within woodlands Collaboration between landowners to share skills and equipment. Holistic management of woodlands and glades to sensitively consider the understory, ground flora, and soil. Woodland creation to use native broadleaved, resilient species

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	WD1a	Ensuring the resilience of woodlands	1. Planting species of trees that will be more resilient to climate impacts. 2. Allowing natural regeneration of woodlands to occur. 3. Creating buffer-zones around existing woodlands, which will eventually serve as woodland extensions. 4. Replacing coniferous woodland with native broadleaved species 5. Ensuring a diversity of native tree species within woodlands, to safeguard against pest and disease	
	WD2	Appropriate deer and grey squirrel management in woodland (and connecting areas) to reduce impacts and support new planting and natural regeneration.	1. The use of fences, physical barriers to prevent deer damaging ecologically-sensitive areas - funding for such protection measures.	- Education for landowners on best practice for deer and squirrel management - Funding for farmers and landowners to manage deer and squirrel populations, including skills training - Monitoring of populations of deer and squirrel, to establish priority areas for control - Greater research on best tree planting practices to deter deer foraging - eg planting amongst nettle and bramble.
	WD3	Increase the average canopy cover of Kent through woodland and trees outside woodland to 19%.	1. Using appropriate management styles, including: - Coppicing - using native, diverse and resilient species - including fruit trees - controlling deer and squirrel populations - allowing a variety of successional states eg scrub left to develop into mature woodland, different canopy layers	- Plant more highway trees - Set tree targets at local level - eg district targets. - Planting of the right tree in the right place - taking into consideration existing habitats, appropriate soil types, a diversity of species, and preserving landscape character - Plant more trees in hedgerows - Incentives for farmers to plant more trees on

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			- a mix of planting and natural regeneration for woodland establishment 2. Create large buffers around existing woodland. 3. Buffer rivers by allowing natural regeneration of alder, oak and native species. 4. Woodland creation to integrate firebreaks, which also serve purpose of providing more diverse habitats 5. Add catchment and interception woodlands at the top of the chalk downs 6. Identify priority connectivity sites for woodland creation 7. Protect and expand existing woodlands - increase conservation areas and TPOs 8. Plant more urban trees, and manage them in a sensitive way - in gardens, hedgerows, on streets, avenues in parks, and in new developments 9. Urban forests - eg Miyawaki method 10. Mapping to establish appropriate sites for woodland creation/expansion, and to plan for things like flood defence, shade creation, climate resilience and adaptation, succession etc 11. A greater use of trees in worked landscapes - agroforestry and silvopasture	their land - on non-productive land, in hedgerows. - Support farmers to foster collaboration between them, and offer guidance on species and site location. - Active aftercare and monitoring to ensure planting sites survive.
	WD4	Restoration of native trees, once prolific in Kent, lost from the wider treescape as a result of disease, pest, climate change and drought	1. Strategic, funded, widespread planting and natural regeneration of resilient, native tree species, to create new woodland (from copses to largescale), expand existing woodland, and	- The replacement of dead and diseased trees (particularly ash) as they are lost from woodlands and hedgerows with a diversity of resilient species, including natives, near-natives

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		(including poplar, ash and elm) to return the ecological functions these trees provided to the county's landscape.	to offer connectivity through lone standard trees, in: - farmland - road verges and roundabouts - new developments - school grounds - gardens - brownfield sites 2. Planting of native species such as beech, poplar, hornbeams, oaks, juniper, Wingham Elm (resilient variety) and Kentish varieties such as Kentish cob, Wild Service	and non-natives (as supported by the Forestry Commission): Aspen, alder, small-leaved lime, sessile oak, field maple, wild cherry, bird cherry, rowan, buckthorn, pedunculate oak, sycamore, birch - planted appropriately and with the context considered carefully. - Appropriate management of trees, eg coppicing

Freshwater and wetland

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Chalk streams	CS1	Chalk streams reaching good ecological status and providing high quality river habitat, with natural and uninterrupted flows along their permanent course and well managed ephemeral headwater streams, protected from pollution and with a more natural channel shape, supporting a characteristic flora and fauna.	1. Removal of weirs and physical obstructions to ensure fish passage (Dour, Little Stour, Sarre Penn, Stour) 2. 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. 3. Nature based solutions in the wider catchment to reduce nutrient input to groundwater body and protect aquifer recharge. 4. Naturalise channels in urban areas (Darent) and deculvert streams. 5. Create buffers and sediment traps along roads, rivers and infield, to prevent sediment and polluting runoff from entering chalk streams, including from roads.	- Protect chalk streams from discharge, especially where there is not currently a pressure from effluent discharge, and address misconnections. (Darent, Dour) - 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.
	CS2	Protect the quality and quantity of the groundwater body on which chalk streams and associated habitats rely.	1. Implement SuDS to support recharge to the aquifer and support baseflows, urban rain capture and rural measures to increase recharge, protect from inappropriate sealing of surfaces. (Darent) 2. Remove and prevent development on winterbourne streams and key recharge zones.	- Monitor abstraction and flow of streams. - Improve soil health and structure and restore grasslands to support recharge. - Work with water companies and abstractors to understand requirements and understand flows. - Implement water efficiency measures in new developments.
Ponds	PD1	Restore ponds with high ecological value and creation of	1. Create and restore ponds for wildlife particularly in dry landscapes like the North	- Manage invasive species in ponds. - Support volunteer groups to carry out pond

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		new ponds especially as part of a mosaic of habitats, protecting all ponds habitats from run-off pollutants and invasive species, while allowing successional habitats to develop where appropriate.	Downs, including by restoring dew ponds, dip slope ponds, including by providing grants for lining of ponds in permeable areas, and creating ponds associated with headwater chalk streams. 2. Design 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. 3. Create ponds as nature based solutions, including a treatment train for runoff and to capture rainfall events for example on farmland and in new developments to reduce flood risk, and to restore peatland. 4. Connect ponds through associated habitats and ensure their connectivity in the landscape as part of a mosaic, and use this to reduce distance between waterbodies. 5. Protect ponds from agricultural runoff and road runoff by implementing wide buffers around them, including consideration of fencing.	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. - Include ponds in site restoration plans for old quarry sites and similar industrial sites. - Link to existing pond creation schemes such as Great Crested Newt Ponds. (This is a delivery mechanism not a measure maybe?)
Rivers	RIV1	All rivers and streams in Kent achieve good ecological status or potential, with more naturally functioning rivers able to move dynamically, free from physical modifications and barriers, supporting more diverse habitats, flows and channel shapes, connecting with their	1. 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. (Minster Marshes, Medway tributaries). 2. Remove redundant barriers to fish passage and make remaining barriers passable for fish	- 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

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		floodplain and a mosaic of habitats including wet woodlands, wet grasslands and temporary wetlands.	including eel, trout, salmon. (Medway, IDB survey already available, canterbury, Little Stour, Chartham Mill, Minster Marshes pumping station) 3. Open up and daylight culverted rivers, streams and ditches. 4. Renaturalise some ditches by introducing meanders, oxbows and associated ponds, and manage ditches more sensitively by following natural cycles, dredge sensitively. (IDB BAP evidence) 5. Restore freshwater and saltwater marshes (Darent) 6. "Encourage creation of new wetlands and promote their protection."	widths, opportunities for channel shading. - Manage and remove invasive species, including signal crayfish, himalayan balsam, mink (Stour), 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.
	RIV2	Clean, sufficient, stable and passable freshwater environments to support an increase in freshwater species abundance and diversity.	1. 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. 2. 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. 3. Slow the flow and store water in the catchment in low productivity areas, implementing natural flood management measures such as large	- 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 intergrated pest management approaches and provide a toolkit for landowner engagement on water quality. - Increase capacity of sewage treatment plants and invest in alternatives to the release of untreated sewage into all watercourses, establish tertiary treatment wetlands wherever possible on STWs. - Address misconnections znd private sewage treatment works that impact water quality through engagement and education on the

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			woody debris, creation of wet woodlands, reedbeds, flood attenuation ponds and similar. 4. Where rivers are silting up, adjust the gradient of the river to allow silt to be flushed through. (Stour).	spotting misconnections and maintenance of private sewage treatment works (e.g. septic tanks, cesspits, package treatment owkrs). - Use of constructed wetlands - nutrient stripping & tert treatment for discharge. - 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 WFD monitoring) and habitats providing water quality benefits such as reedbeds and other wetlands, including through the use of engaged citizen scientists. - Maximise the opportunity of reservoirs and similar waterbodies as wildlife habitat. - Use trees to improve water quality over time. - 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, and

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				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.
	RIV3	Establish wide, more natural buffer strips with a diverse vegetation structure along rivers, streams and springs, providing a balance of light and shade, supporting wetland habitats and protection from pollution.	1. 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. Consider breaking of drains where habitats can wet up permanently. 2. Renaturalise river corridors in areas of re-development where there is current hard standing (eg old industrial sites). 3. Combine buffers with the use of nature based solutions to hold and clean water, including for example large woody debris, sediment traps.	- Use riparian corridors as corridors to encourage other species especially in urban areas, for example by installing bat and brid boxes and including widlife ponds along river corridors. - Identify buffer guidance for all streams and rivers, including headwaters and wider drainage network, given the watercourse sufficient space to expand as appropriate to its size and location. - 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. - For new developments, protect floodplains and river corridors from encroachment, including physical modifications to the channel and sealing of surfaces in floodplains. - Encourage uptake of existing stewardship

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				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. - 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).
	RIV4	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.	1. 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. 2. Renaturalise urban and modified sections of headwaters. 3. Hold and slow water in headwater streams through nature based solutions (leaky woody dams and large woody debris, reedbeds, etc), and approaches such as stage 0 to restore more natural channel shape and processes especially where this can provide flood risk benefits and improve stable flows.	- Identify headwater streams and associated drainage areas and map them clearly, including in local plans. - Protect headwater streams from abstraction and discharge which impact them disproportionately (through planning system?) - Improve monitoring and understanding of headwater systems and their water quality, flow and biodiversity in Kent. - Protect headwater streams from agricultural pollution and road runoff through the use of fencing, buffer strips and interception features.
	RIV5	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	1. Restore banks and channel through regrading and creation of more shallow banks and associated wetland areas. 2. Remove physical obstructions and restore a naturel channel shape.	- Reduce stocking density along the river. - Install woody debris in the channel.

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		along the floodplain and headwater streams.		
Groundwater	GW1	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.	1. Install reedbeds and similar wetland habitats to improve water quality before recharge to groundwater. 2. Implement floodplain reconnection, storage ponds and similar measures to slow the flow to benefit local groundwater recharge, including in urban areas.	- 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. - 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. - Encourage more water sensitive farming practices to reduce need for pesticides, fertilisers and reduce risk of soil compaction. - Reduce demand on groundwater bodies by implementing water efficiency measures in new developments and retrofit in existing, and reducing need for boreholes through rainwater harvesting and runoff capture.
Lowland mire sites	LM1	Restoration of lowland mire sites (fen and raised bog), with the provision of buffers to allow the habitat extent to increase.		- Public engagement and landowner engagement on the value of wet areas and the need to re-wet them.
Reedbed	RB1	Increase the extent of high quality reedbeds across Kent and ensure existing reedbeds are in	1. Manage reedbeds to prevent encroachment of woodland, and by managing associated ditches and dykes, conservation grazing, minimal	- Create reedbeds to polish effluent from sewage treatment plants. - Ensure appropriate design, monitoring and

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		appropriate management.	chemical interventions, consider management of saline flooding. 2. Provide opportunities for spring flooding (e.g. for waders) by creating water storage areas for winter rainfall. 3. Create reedbeds in developed areas as measures to sow the flow and protect water quality, coupled with education about their value. 4. Create natural reedbeds along river corridors and integrate them with the wider landscape, allowing them to connect sites such as Stodmarsh. (Low Weald, Stour, Wantsum).	maintenance of nutrient neutrality wetlands, to deliver multiple benefits. - Ensure reedbeds created for nutrient neutrality for developments deliver the benefits intended.

Coastal and marine

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped)	Potential measures – guiding principles for management etc and general approaches
Coastal habitats	CL1	Coastal habitats are allowed evolve, with natural dynamic processes and progression restored, to enable adaption and resilience to climate change and minimise the loss of intertidal habitats.	1. Beneficial use of dredged sediment (BUDS): - Raise height of coastline creating areas for saltmarsh restoration, seagrass regeneration and high tide roosts as well as breeding areas for seabirds and waders. - Managed realignment of coastlines and connecting fragmented areas. - 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.	- Creating a functionally linked landscape with areas for wildlife to thrive o Refuges for wildlife - 'no go' or restricted areas. o Using nature inclusive solutions for sea defences such as reef cubes and artificial rock pools on sea walls. o Protect sand dunes by maintaining existing fences.
	CL2	Sustainable management of estuaries and open coast to be promoted, allowing a range of high functioning coastal habitats to develop.		- Allow space for tidal ingress to mitigate coastal squeeze. Identify opportunities for retreating coastal defences and softening defences – seek areas outside of these already designated. - "Restoration halo effect" = managed realignment leads to more grazing marsh, in turn improves water quality, more sea grass, etc.
	CL3	Improved condition of saltmarsh and mudflats, with functioning ecosystems supporting wildlife.	1. Working with landowners: - To create more space for nesting seabirds to avoid competition and predation. - To use BUDs and managed realignment (see CL1) - Fence off important roosting/nesting sites to limit disturbance - Link areas with other wetland habitats to form a large landscape scale mosaic of wetlands to	

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			reduce the tendency for waders and seabirds concentrated at key hotspots and reserves.	
	CL4	Reducing small scale loss and increasing connectivity and functionality of intertidal mud for foraging birds.	1. Managed realignment (or removal of flood defences) to restore sediment and natural flooding. 2. Reducing disturbance of foraging birds with creation of refuge areas: - Maintain high tide roosts free from disturbance. - Protect inland grazing/breeding/ overwintering areas as well as intertidal zones.	
	CL5	Reverse the decline in seagrass off Kent's coast.	1. Restoration: - Planting more seagrass beds - expand on existing projects Use the area earmarked for sediment development as a potential flood plain for seagrass reintroduction (adjacent) to SSSI at Pegwell – the area floods every year anyway. If Sealink goes ahead involve and educate NP as to appropriate remediation rather than their suggested few trees and playground (completely out of place for the habitat). 2. Reduce pollution which is causing smothering. Pollution reduction suggestions: - Identify priority areas for sampling and direct EA to do more (e.g. to monitor for sewerage) - More reedbeds to filter, work with water companies to use bioremediation. - Address misconnects (domestic or other sites not correctly linked to sewage system, results	

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			in pollution of rivers, which in turn flow into port waters). - Remove invasive spartina is taking over and building up silts, which is smothering areas of seagrass 3. Increase areas of seagrass across the mudflat areas of the Thames, Medway and Swale estuaries.	
	CL6	Chalk reefs nurtured and protected from erosion and damage from marine development.	1. Tackling pressures: - Non-native species removal - Controlling leisure boat activity (anchor drags) - Reducing bottom towed fishing gear in biogenic reef areas - Introducing fines for collection of shellfish for commercial use on tidal chalk reefs 2. Using chalk soil to create a natural restoration environment e.g. Samphire Hoe??	
	CL7	Protection and restoration of coastal fish nurseries	1. Protection and restoration of saltmarsh (coastal) to support fish nurseries in these habitats. Saltmarsh is a key habitat for a number of species of fish. Young of the year bass, sand smelt, common goby, sand goby and flatfish species all use saltmarsh to feed and grow. These species are also key prey for bird species and important commercially. Realignment and creation sites should ensure they consider aspects to create fish nursery habitat. This includes using the embryonic structures and channels, creating natural drainage channels. Over-engineered structures should be minimised such as linear	

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			channels. Ripples, eddies, pools and meanders should be encouraged. 2. Use harbours to create areas for biodiversity. Pontoons are important for fish species, particularly juvenile bass, mullet and herring. Work with harbour authorities to keep habitats for marine species.	
	CL8	Reduction in marine life disturbance resulting from leisure pressures at coast.	1. Restrictions to leisure crafts: - Jet ski restrictions and licenses - Protection of seal areas from boats. - Protection of offshore islands from paddleboarding and watercraft by inclusion of appropriate signage/buoys to highlight sensitivities for breeding birds and engagement with these groups. - Kite surfing at Greatstone beach – WCCP working with F&HDC to make this work for people and wildlife through education. 2. Possible rebuilding of banks and reintroduction of banks lost due to rising sea levels – for seal haul out sites; providing safe areas for them.	
	CL9	Sustainable management of oyster beds to allow them to reach their habitat building potential.	1. No take zones in established areas. 2. Create suitable substrate for oysters to colonise, especially in known suitable areas such as in the water just Northeast of Sheppey. Also, anywhere else where oysters have been historically / are known to have capacity to be naturally seeded by existing populations. 3. Removal of non-native Pacific oysters from the native beds.	- Map the 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.

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Saline lagoons	SL1	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.	Valuable in connecting wetland sites and provide a positive outcome where freshwater habitat may be untenable. Close to a sea wall. Could be relatively small and include island creation (could use BUDS for this?) with recreation disturbance limited at the edges.	- Valuable in connecting wetland sites and provide a positive outcome where freshwater habitat may be untenable. Close to a sea wall. Could be relatively small and include island creation (could use BUDS for this?) with recreation disturbance limited at the edges. - Transitional habitat as freshwater habitat becomes unsustainable due to limited resources and climate change. Create in transitional areas that are likely to flood due to limited resources and climate change. This could be considered alongside saltmarsh and floodplain grazing marsh creation. - Protect existing saline lagoons. - Prevent activities that harm and/or pollute the lagoons.
Vegetated shingle	VS1	Protect and restore vegetated shingle, ensuring there is no unavoidable loss and areas remain in, or are returned to, a favourable condition.	1. Protection of existing habitat: - Restrict gravel extraction - Maintain no-access areas - Management of the impact of compaction on shingle through recreational footfall - Appropriate ongoing management. - Allocated routes (for farmers, army (tanks!); leisure users	- Allow habitat features to develop and evolve e.g. shingle dune slacks - Encourage vegetation of new/replacement shingle for defences. - Managing encroachment: scrub removal and invasive flora removal

Connectivity

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
Fragmentation	FRG1	County's key wildlife sites better connected by addressing the fragmentation and barriers preventing movement of species.	1. Identify opportunities to defragment, add corridors and connect areas: - Improve connectivity corridors between RAMSAR, SAC, SPA sites and safeguard these areas. - Flyways for bees and birds – defragmentation - Lesser value wildlife areas needed as opportunity areas to reduce fragmentation - Identify bottlenecks to fragmentation. 2. Use a range of habitats to connect up – e.g. scrub to link woodland, scrapes to wet areas. 3. Woodland – - Woodland buffer zones - Open glades and rides between scrub, to break it up and allow Animals to reach between habitats. - Joining up small privately owned woods as wildlife corridors…return to coppicing – address poor management. - Use of ancient woodland inventory to ID isolated blocks of ancient woodland 1. Farming - - Connectivity of different landowners secured through funding. - More farm cluster work will address fragmentation.	- 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.
Connectivity	CON1	Habitats connected at both a county and local scale, delivering bigger, better and	1. Identify areas that are essential connectivity or have the potential in terms of connectivity - steer development away from these.	- Addressing light spill, light availability on sensitive receptors especially rivers (bats, riparian mammals, fish)

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		more joined up with no important wildlife habitats, or species populations, left completely isolated.	2. Allow habitat succession to expand woodland, via buffer zones of scrub.	
	CON2	Management of habitats to deliver a connected mosaic of habitats at a large scale, where nature can flourish and species requirements are considered.	1. Accommodate for the natural migrations of species ranging from birds, deer to dormice and great crested newt – so hedges connecting woodland, habitats connecting water. 2. Designating broad enough buffer zones around and connecting strips between habitat areas e.g. Bee lines (3km wide) – hedgerows linked with wildflower grass verges.	- Ensuring a mosaic of habitats e.g. woodland, meadow – to ensure species have what they need throughout the seasons – particularly some invertebrates. - Early identification and removal of INNS plants – this will address transport and spread.
	CON3	The county's highway, cycleway, pathway and PROW networks acting as functional networks for wildlife.		- Looking after ancient wildlife corridors – many of which are now footpaths – assess the role access routes are already playing for wildlife.
	SB2	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.		- Cut and removal when encroaching on other habitats. - Selective grazing by cattle of areas within the scrub to create open areas and allow for regeneration - Scrub on hedgerows, field margins and outside woodlands to create successional ecotone.

Climate change resilience

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
Climate change resilience	CR1	Improve connectivity of the landscape, with dynamic habitats which evolve and change, to support climate change resilience, with particular attention paid to <<habitats>> and <<species>>.		- More and better managed mosaic habitats: o Mixed habitats = more resilience = less shock to the ecosystem when diseases appear. o Increasing biodiversity and landscape diversity makes habitats more resilient to climate change. - Natural regeneration: o Allowing natural regeneration of habitats rather than forced "improvements". o Having areas to experiment and allow habitats/nature to evolve naturally and see what happens. o Being more relaxed about the way the habitat is managed – nature leading/natural regeneration – this could be difficult to do and also to measure. Mapping the area will be important for this – could experiment with this in the Low Weald area. - Looking at high quality habitat that supports a wider range of biodiversity – perhaps quality over quantity is more important. - Creating a continuously moving target when it comes to land management: o How do people feel about not putting a target on a land that they've been paid to manage or support. How can you prove value for money? Funding targets etc.

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				○ How can we get a non-end point? - Using woodlands as an economic resource – more reason for planting and will encourage better management/maintenance of woodland areas = increased biodiversity. - Drought and flooding mitigation: Beavers – support these issues by holding back water in a landscape. Beaver management – coexistence strategies. Allowing them to spread (carefully). - Maintaining existing habitats in new climatic conditions: - Buffering of habitats so species can move - Pre-empt conditions in the future – allowing species to spread into new habitats - Using nature reserves to research into how the habitats are changing. - Coastal habitats – looking strategically at our coasts – changing sea defences, allowing opportunities to roll back the habitat. Looking for long term focus on areas where freshwater can be retained and what can be inundated with saltwater. Natural shifts in habitats. Allowing coastlines to shift. Incorporating areas for natural carbon sequestration. Using low-grade farming areas to convert – if financial incentives are beneficial elsewhere (BNG etc.).
	CR2	Proactively address the migration of new species into the county as a result of a changing climate, with		

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		strategies for both naturalised species and invasive/pests.		
	CR3	Landscape scale management, with partners beyond the county, to address habitat change and species migration as a result of climate change.		

Nature based solutions

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
Nature based solutions	NBS1	Increase of woodland and trees outside woodland to deliver air quality improvements.	1. Establish more hedges in rural areas including hedgeline trees, focusing in particular on native trees. 2. Map strategic woodland opportunity areas including information about types of trees suitable. 3. Use old quarry sites and similar industrial areas to establish woodlands.	- 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. - Improve financial and practical support for woodland creation and management, including the creation of markets for local wood-based products (e.g. coppice). - Encourage agroforestry.
	NBS2	Work with nature to restore river catchments' functions to improve water quality, manage flood risk and deliver enhanced biodiversity.	1. Establish buffers and riparian margins around river systems in rural and urban areas, with a range of natural habitats. 2. Focus NFM measures on headwater areas and upper catchments. 3. Protect floodplains and reconnect them where possible, taking account of potential future flood extents. 4. Create and manage SuDS, buffer verges and roadside trees on highways and developments to reduce fast runoff and protect water quality.	- 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. - Improve soil health. - Restore rivers to a more natural course and shape, supporting diverse vegetation on river banks, to slow flows and support biodiversity. - Use nature-based solutions to improve recharge to chalk aquifers. - Reintroduce ecosystem engineers such as beavers. - Restore peatlands. - Implement nutrient neutrality regulation across the county. - Prioritise NBS over built infrastructure.

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
	NBS3	Increase the extent of carbon sequestering habitats in the county, that are purposefully managed to function as a carbon store whilst prioritising a nature recovery function.	1. Establish neutral grasslands on floodplains. 2. Protect marshes from drying out, especially in areas where they can provide additional benefits, and encourage salt marsh restoration on reclaimed land. 3. Increase extent of native woodlands through natural regeneration.	- 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. - Plant and manage hedges in rural areas and in new developments and highways. - Strengthen the protection of existing habitats that are important for carbon sequestration. - Increase the extent of agricultural land that is managed for higher carbon sequestration, focusing on soil health and biomass production. - Consider supporting biomass market by encouraging biomass energy use on new developments.
	NBS4	Protect habitats delivering critical ecosystem services in the county.	1. Increase the extent and condition of lowland meadows and neutral grasslands, especially on floodplains and aquifer recharge areas to create resilience to flooding and drought and protect water quality. 2. Protect existing saltmarshes from drying out and consider restoration of salt marshes in combination with managed realignment,	- Better manage hedges and woodlands, including encouraging the introduction of native trees with disease resistance and creation of accessible woodlands which can be used for recreation. - Improve soil health to provide drought resilience and flood risk reduction as well as carbon sequestration. - Protect and improve the condition of chalk

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			supporting tidal flood risk reduction and providing important fish nursery areas. 3. Create and retain ponds where they can provide additional flood risk benefits by capturing and slowing flows, e.g. at the foot of slopes. 4. Protect and increase extent of naturally functioning floodplains. 5. Protect shingle beaches and their role in shellfisheries. 6. Support pollinator initiatives in public and private spaces, including large industrial sites. 7. Support access and recreation at key sites in urban and rural areas, including coastal sites, country parks, green corridors and similar.	rivers to support recreational activities such as angling. - Communicate the value of Kent's habitats to local communities to the wider public to ensure stewardship.
	NBS5	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.	1. Protect reedbeds. 2. Protect marshes from drying out.	- Implement nutrient neutrality.

Species

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
Species	SPP1	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.		

Farmland (hedgerow, soil, traditional orchards, arable weeds)

Theme	**Ref**	**Proposed LNRS priority**	**Potential measures - to be mapped**	**Potential measures – guiding principles for management etc and general approaches**
Hedgerow	HW1	The extent of species-rich hedgerows through the county is increased, with lost hedgerows replaced, gaps filled and management of existing hedgerows improving the quality as well as quantity.	1. Map and survey existing hedgerows using Apps and UK Centre for Ecology countrywide lidar map of hedgerows. Identify lost hedgerows using regeneration mapping. 2. Encourage restoration of hedgerows along ancient field patterns, in association with ditches and banks. Buffer hedgerows with grass margins and headlands.	- Encourage creation of hedge corridors across landscape. - 'Hedgeucation', provide management advice and details of funding available, in one place, covering all aspects of planting, managing and restoring hedgerows, including: selection of species, management techniques (laying, coppicing), management on rotation. - Broaden/target understanding of benefits and good management practices for hedges to non farming/ other landowners including horse owners, small holdings, urban gardens. - Educate the public about role and benefits of hedges and explain the role of good management practices, such as coppicing a hedge for regeneration. - Plant and manage hedges with consideration for rights of way, including selection and location of species [avoiding sycamore and ensuring thorny species are not close to gates]. - Encourage county wide deer management, building on lessons learned from other Counties (e.g. Sussex). - Provide training on hedge management, including traditional techniques such as hedge laying and coppicing and for contractors - Strengthen links to planning to protect existing hedges, require new developments to have hedges and include hedges in solar farm

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				designs.
	HW2	Improvements in hedgerow quality and extent providing a coherent network of shelter, nesting and forage for wildlife across the landscape and allowing other habitats to be linked.	1. Identify strategic hedgerows that will aid connectivity for habitats (and species). 2. Link hedgerows to increase connectivity across the landscape, restore links to copses and woodlands. 3. Preserve/improve ancient hedgerows, ditches and banks. 4. Maintain a buffer around hedgerows as a gentler transition from open land to hedge	- Maintain a varied structure so there are some taller, denser areas and emergent trees. Tree root systems [contribute] to soil health, microrhyza and biophytes - Remove invasives and plug plant [replacements] where necessary. - Incorporate hedgerows into livestock management practices, create more small fields, consider 'managed decline' of fences along side new hedges, use to provide hedgerow hay. - Encourage integrated pest management, provide training/education on balance between pest and disease concern and presence of invertebrates and foraging. - Encourage Neighbourhood Plans to focus on mapping ecological networks (hedges, trees, etc) and policies to buffer the elements of the network, and encourage enhancement of the connections between habitats, including agricultural fields. - Engage Highways department to adopt best practice hedge management and advice to landowners. - Permit scrub around hedges to soften transition from field to hedge and encourage in corners that are harder to cultivate. Rotate scrub management so there are varied stages and

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				structures in any given years. - Plant strategically to get a mixture of hedgerow species which fruit at different times to provision birds all year around. Native species only in new trees. - New hedges along roads [where currently farmed up to road edge], will protect from snow drift and hare coursing.
	HW3	Hedgerows protected from loss, aggressive management, neglect and chemicals.		- Training and outreach to land managers as well as farmers and owners [about how to manage hedgerows] - Protect base of hedges from grazing and browsing. - Protect mature hedgerow trees and encourage more. - Prevent spray drift, create wider buffers and headlands. - Safeguard hedges for future species and habitat connectivity in priority areas [i.e. in areas that will be useful in the future, which might be different from today] - Penalties for farmers/developers who destroys hedgerows and remove trees. - Be able to report poor management. - Bring back cross compliance.
Soil health	SH1	Improve soil and structure throughout the county by enhanced and increased soil management so that it is better delivering for invertebrates, carbon sequestration, water retention and management	Reduce use of/target pesticides, herbicides, fertilizer. Test soil to find what it is missing rather than putting all fertiliser on. Encourage reduced use of insecticide/wormers in livestock to	- Provide education about the importance of soil health and mycorrhizal fungi, for public and landowners and demonstrate the productivity benefits of good soil management. - Education about importance of water cycle, water as a living system. (Walter Jehne

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		and production/provisioning.	increase soil biodiversity, e.g. dung beetles	presentation at UN) [Need to know more] - Encourage soil analysis, establish standards for assessing and monitoring soil biodiversity recovery. Test soil to find what it is missing rather than putting all fertiliser on. - Encourage regenerative practices: reduced inputs, reduced cultivation, deeper rooting, stronger rooted swards, maintain invertebrates and bacteria. Compost Johnson-su, arable support [crop trials] [need more information] - Identify risks of increased runoff due to changes in crops e.g. maize, vineyards, use grassy blocks on slopes, cover cropping, bi-cropping, education and training. - Prevention of run-off from horticulture by planting grass headlands and creating bunds. - Keep living roots in the soil all year around to reduce drying out, erosion/run off and increase carbon, encourage over wintering stubble, planting of cover crops and catch crops, mimicking natural processes by planting multiple crops in one field. Practice no/min till, minimise compaction. - [Plant] hedgerows across the landscape to capture water and prevent silt. And plough along contour. - Encourage use of cover crops, with extra longevity payments (i.e. don't remove immediately after date specified in CS option in January) e.g. Leave legumes to flower for pollinators in summer.

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				- Promote organic methods and alternative sources of nitrogen, especially near water courses, such as green manure to fix macro nutrients in soil and reduce liquid fertiliser usage. - Encourage longer rotations e.g. 7 years, with more diversity of crops, including grassland and more fungal diversity. - 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 which develop stronger grassland root structures i.e. rotational grazing, moving away from large scale set stocking. Adaptive multi paddock grazing with long rests to restore soil health. Deeper roots in soil, effective alternative to fertiliser. - Facilitate grazier network to support integrating livestock in arable to restore soil. Systems, networks etc to support and facilitate access to mob grazers i.e. enabling landowners/arable farmers etc to connect with grazers and simplify animal movement systems. - Mentoring/community support/Grazier support education, training, certification etc for evidence of regenerative grazing credentials - Value all landscapes equally and encourage grasslands everywhere [some payments are

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				only available in certain areas, e.g. High Weald/FIPL]. - Reduce flooding by reconnecting rivers to flood plain, encourage more grassland and increasing soil organic matter and rooting depth. Deeper rooting = better infiltration. - More help for small holdings: o Building of biomass health using local circular waste streams - compost, biochar o local compost creation, urban and rural o circular waste forum/website [to connect users] - Community composting schemes to gather local waste to create more compost/reduce landfill. - Share local 'waste' resources that improve soil health and structures e.g. seaweed for mulch and compost greens, woodchip, mushroom substrate etc - connect organisations - Addition of extra labour for plastic screening for green composting [farmers were using, stopped because too much plastic in green waste]. - [Assess] impact of solar panels, as protection to soil or increase in run-off? Pyrolisation - biochar. Burning waste products for carbon. Grubbing out orchards - biochar kilns/funding, for various scales of management. Artificial water levels [as a result of drainage]. Remove drainage systems. Effective and wildlife friendly drainage systems. Engagement with farmers to

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				get rid of invasive species of vegetation and plant native species. This will attract local biodiversity. Protect land against development, encourage appropriate development. Planning undertakings/conditions for solar panels to allow for grass/grazing underneath.
Traditional orchard	TO1	An increase in traditional orchards, under sensitive management, supporting an abundance and diversity of wildlife.	1. Map current traditional orchards and identify potential future orchards for succession. 2. Consider links to Noble Chafer – found in one orchard in Kent 3. Consider links to Turtle Doves	- Promote and raise awareness of traditional Kentish orchards as something to have pride in as part of our heritage and as a habitat for wildlife. - Revive Orchards for Everyone Trust. - Connect local orchards to each other to share knowledge, resources, volunteer help and equipment. - Seek expertise on germination, management, selection for climate change, nursery, education from Brogdale - Allow long sward length, wildflower/meadow strips between trees, limited or no spraying, sensitive pruning, dead wood or dying trees allowed to stay in situ. - Encourage alternative uses for orchards such as memorial trees, green burials. - Encourage innovative management practices e.g. electric weeding, - Encourage urban orchards through inclusion in Local Plans, SANGS, schools, allotments, community gardens. - Develop advice on selection of species, development of new traditional orchards to take account of climate change, pests and

Theme	Ref	Proposed LNRS priority	Potential measures - to be mapped	Potential measures – guiding principles for management etc and general approaches
				disease.
Arable weeds	AW1	Restoration of arable fields with a diversity and abundance of arable weeds.	1. Mapping, identify priority species of arable wildflowers specific to clay, chalk.	- Improve awareness and understanding of arable wildflowers with public, gardeners, landowners and farmers, some of the rarest plants in UK, Kent is a strong hold for these. - Ranscombe Farm case study, showing how farmer supports arable wildflowers. - Encourage natural processes to recreate conditions for gemination historically e.g. pigs, ponds, scrub. - Encourage management practices: - Field margins: graduated field edges, wider margins, cultivated margins. - In field: cultivate but don't plant, keep moving the patch so it doesn't become grass. - General: Removal of chemicals, mixed timings of cultivating areas will benefit different species (some germinate in Spring and others in Autumn) - Highlight other uses, for grazing, with traditional orchards to provide forage for turtle doves. - Encourage all gardeners to plant, even a small cultivated patch would help their spread.

Farm and land management

Theme	Ref	Proposed LNRS priority	Potential measures – to be mapped	Potential measures – guiding principles for management etc and general approaches
Farm & land management	FM1	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.		- 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. - 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.
	FM2	Farmland delivering targeted action for nature recovery.	1. Identify key pieces of farmland that are strategically important for linking natural habitats, and ensuring that these are sensitively managed, or ideally, used to create linking habitats, via hedgerows, woodland, grassland etc. 2. There are many buffers around arable	- Encourage creation of wider, higher, bigger hedges, smaller fields, with grass margin buffers, more scrub, cover crops, arable weeds/wildflowers, create ponds. - Use innovative monitoring apps (Soil Mentor, Merlin, one for pollinators). - Empower farmers/landowners to choose which priority species they wish to target based on

Theme	Ref	Proposed LNRS priority	Potential measures – to be mapped	Potential measures – guiding principles for management etc and general approaches
			fields, these should be managed better and turned into grasslands, plus develop multipurpose buffers, including buffer vegetation growth capturing nitrogen.	their knowledge of their land. - 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). - Farmers on the frontline of climate change: o More cover and catch crops to mitigate flooding and drought. o Agroforestry – integrating trees into agricultural landscapes. o Connecting areas – Shadoxhurst and Marden across the river Beult – incorporating a natural corridor along and across the river between farm clusters. This is also happening across the river Eden with the clusters near there. Just need to secure facilitation funding to make the job easier.
	FM3	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.	1. Encourage water capture, rainwater harvesting, reservoirs, ponds, holding areas, leaky wood dams. Less use of mains water and ground water, improve water resilience.	- 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. - Prevent runoff from roads entering water courses (includes plastic and other debris) - how?

Urban

Theme	Ref	Proposed LNRS priority	Potential measures – to be mapped	Potential measures – guiding principles for management etc and general approaches
Urban	OHM1	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.	1. Appropriate management plans in place for key sites, including the provision of features such as ponds, open area, scrapes. 2. Support the succession of habitats to occur naturally. 3. Maintain open areas through vegetative management (restrict chemical use, retain deadwood and don't clear everything).	- Survey Kent's OMH sites to identify the county's best and most significant brownfield sites. - Monitor management to review success. - Educate planners and developers of the worth and vulnerability of OMH. - Local plans to identify OMH areas and sites to be protected from development. - Take fly tipping and contamination of these sites seriously and discourage using the term 'waste' land. - Protect land from recreational disturbance. - Raise awareness about the importance of 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.
	URB1	Increase the extent of green space, trees and hedgerows within urban areas to not only provide more habitat for wildlife and increase but also deliver other benefits including urban	1. Targeted tree and hedgerow planting to deliver air quality, temperature regulation/cooling and surface water management benefits. 2. The use of rain gardens and bio-swales (and other SUDS features) to	

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		cooling, air and noise pollution regulation and surface water management.	manage areas at high risk from surface water flooding. 3. Green walls and roofs to provide temperature regulation in settings most at risk from urban heat island effects. 4. Naturalise urban river corridors and reconnect to floodplains to assist with flood management, temperature cooling and nutrient neutrality. 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.	
	URB2	Address habitat fragmentation of the urban environment, ensuring urban species can freely move about and developed areas and infrastructure does not impede passage.	1. 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. 2. Native hedgerow mix to link urban greenspaces and to the wider landscape and rural fringes. 3. Green bridges and tunnels installed	- 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.

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			(or existing crossings modified) to traverse barriers to wildlife movement in the urban environment. 4. 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. 5. Remove river structures where possible for fish passage. 6. Minimise mowing on verges in areas known to be of importance for pollinators connectivity.	
	URB3	Public greenspace and land management delivering wildlife benefits.	1. Areas of urban greenspace managed specifically for nature recovery where benefits are most needed. 2. Swift bricks, bat tiles, bird boxes and hedgehog highways installed where there are known key or declining populations. 3. Restore and enhance urban rivers, with river corridors naturalised. 4. Target tree establishment to areas of low canopy cover. 5. Minimise mowing on verges and grass areas in areas known to be of	- 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

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			importance for pollinators. 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.	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. - Use of interpretation/public information to increase understanding of wildlife features and wild management. - Swift bricks, bat tiles, bird boxes and hedgehog highways and hedgerows instead of fences installed as standard on all new development. - 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

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				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. - To include historic sites, stately homes, historic and managed gardens, golf courses, cricket fields, sports pitches etc.

Access and connection

Theme	Ref	Proposed LNRS priority	Potential measures – to be mapped	Potential measures – guiding principles for management etc and general approaches
Access and connection	AC1	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.		- Public understanding: o Signage to explain conservation works/management in a friendly manner, positive and simple language. Possibly interactive. Use of pictures or sculptures to encourage conversation. Provide the opportunity for Parish Councils to purchase these. o Signs that say "adopt a tree" or " please water me" o Provide advice and knowledge on how to care for their own spaces through local councils. Local green heros and experts o Create view points to appreciate the land o Information boards sharing notable species in sensitive areas (e.g. QR codes) o create connection to heritage, point this out at view points o Encourage voluntary groups- allotments, orchards, gardens o Teach the value of habitats to encourage care for their local area o Share acceptable behaviour o Local guides for experts in the area so that people don't just go to parks but make use of wider greenspaces and countryside that is accessible

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				- Educating children from early years:
				  o Wildlife areas at schools that are more than just playing fields
				  o Put in the national curriculum
				  o Use of home schooling, forest schools, nature clubs, groups such as brownies and scouts.
				- Countrywide campaigns to educate on the environment and appropriate behaviours
				- Improve the access network:
				  o Better signage and joining up of paths would prevent people straying from route.
				  o Provide alternative routes away from sensitive areas with dog and litter bins
				  o Facilities along PRoW routes would encourage their use and relieve pressure on sensitive sites
				  o Taller and wider paths for horse riding
				  o Incentives to farmers to improve access across the countryside
				  o More PRoW especially where development renders existing PRoW pointless
				- Linking all walking and cycling strategies across kent and medway
				- Sacrificial sites:
				  o More honey pot sites with facilities to encourage use over sensitive areas.
				  o Areas to allow electric bikes, scooters, quadbikes, motorbikes etc, to limit their damage
				  o More dog and litter bins

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				- Dogs on leads zones: o Create no dog/dog on lead zones near to an area where dog freedom is encouraged e.g. dog park o Have blanket dog walking rules across the county- fines, enforcement, no of dogs a person can walk, littering. o Education around dog disturbance o KCC produced dog walker handbook- educate, walking routes, dog off and on lead zones. - Developments: Plenty of greenspaces and walking routes for adults, children and pets to encourage people to stay local in new developments (parklets) - Restrict sensitive area access: o Close areas to the public o Fence off areas o Restrictive buffers o Restrict dogs off of leads o Restrict access of any type of vehicle (e.g. motorbikes can get through small spaces) o Identify space for a restricted access wildlife park from the off set. o Use dual colour signs to signify when access is allowed and when it is not o Curfew on access, certain times and max numbers - Sensitive management: o Hedgerow maintenance sensitive to the sensitive habitat or species

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				o Adopt suitable mowing regime sympathetic to habitat/species - Regulations: o Stronger regulations for fly tipping, littering, recreational disturbance, antisocial behaviour, trespassing o Ban dog collars which leak harmful chemicals into rivers as dog will often enter them
	AC2	Kent's population have a greater connection, and increased engagement, with natural areas and nature; and are inspired to deliver benefits for nature.	-	- Altering attitudes: o Signage to explain conservation works/management in a friendly manner, positive and simple language. Possibly interactive. Use of pictures or sculptures to encourage conversation. Provide the opportunity for Parish Councils to purchase these. o Signs that say "adopt a tree" or " please water me" o Provide advice and knowledge on how to care for their own spaces through local councils. Local green heroes and experts o Create view points to appreciate the land o create connection to heritage, point this out at view points o Information boards sharing notable species, habitats and local characteristics (e.g. QR codes) o Teach the value of habitats to encourage care for their local area o Share acceptable behaviours o Use social media to share real life projects

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				that are relatable to local people o Link with Brand Kent to share what is great about kent and medway o Create a connection to heritage of an area - Community: o Encourage volunteering through community orchards, gardens and allotments o Share knowledge and expertise with their community. Use local experts or a 'local green army' to tend to their local green spaces. o Connect with local groups such as fishing, anglers, hunting, magnet fishing groups to clear rivers of dumped metal o Guided/led walks o Education boards o 'nature champions' in local area o Citizen science through a volunteer scheme e.g. Thanet coastal wardens, o Accessible and easy to navigate nature-based mapping to encourage education for all in the local community o Promote environmentally friendly gardening o Social prescribing resources are finite so setting up community hubs to continue this o Local guides for experts in the area so that people don't just go to parks but make use of wider greenspaces and countryside that is accessible

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				o Create link up with supermarkets and fast food outlets to give discount vouchers to public who participate in voluntary litter picks - Educating children from early years: o Wildlife areas at schools that are more than just playing fields o Put in the national curriculum o Use of home schooling, forest schools, nature clubs, groups such as brownies and scouts. o Countrywide campaigns to educate on the environment and appropriate behaviours o Work with schools to adopt a tree, planter, meadow etc o Local school/organisation initiatives to do wildlife audits o Encourage landowners to take school children to learn about the countryside. There is funding but needs to be utilised. o Online resources for head teachers to use to know how to improve nature on site and share experiences with others - Improve the access network: o Better signage and joining up of paths would prevent people straying from route. Include distances on sinage and where it take you to. Regular maps on boards along the routes. Use positive and simple language

Theme	Ref	Proposed LNRS priority	Potential measures – to be mapped	Potential measures – guiding principles for management etc and general approaches
				o Provide alternative routes away from sensitive areas with dog and litter bins o Facilities along PRoW routes would encourage their use and relieve pressure on sensitive sites o Taller and wider paths for horse riding o Accessible to all- including wheelchair users, keeping obstructions to a minimum and aren't blocked o Better lighting to make them safe o Incentives to farmers to improve access across the countryside and open up areas of land for public access o More PRoW especially where development renders existing PRoW pointless o Linking all walking and cycling strategies across kent and medway o Create a good connection between urban and rural, one can be scary if the other is all you've known - Developments: o Plenty of greenspaces and walking routes for adults, children and pets to encourage people to stay local in new developments (parklets) o Residents to be 15 minutes from a green/blue space o Nature and human connection in new builds, making it relevant to everyone - Inclusive community events o Free to attend in their local area,

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				encourages them to come back and make use of the space. o Cater for all cultures, and meet their needs (e.g. single sex events for the cultures that would require this) o Select a flagship urban species to bring these cultures and communities together o Guided walks o Community challenges, prizes, social media challenges o Regular litter picks- idea of individual responsibility - Local councils: o Include engagement in local plans o Joined up thinking within local government to support and develop community projects to enhance and build habitats within urban and rural settings o Appoint on the ground nature officers o More green spaces created in peri urban and urban areas o 15 mins form blue/green space o Use KLIS/ nature deprivation mapped areas to access need.