













Developing the County's Local Nature Recovery Strategy

# Pressures and priorities workshops report - Part 1 30<sup>th</sup> January - 20<sup>th</sup> February 2024

# Pressures, threats and challenges for Kent and Medway's nature













#### Introduction to Making Space for Nature in Kent and Medway

Making Space for Nature will work with partners and stakeholders to collaboratively developing the Local Nature Recovery Strategy for Kent & Medway (LNRS). These strategies have been created as a result of the 2021 Environment Act, with 48 to be created across England with no gaps or overlaps. Developed at a landscape scale by a Responsible Authority (Kent County Council), the LNRS will agree the local priorities and associated actions for nature recovery and wider environmental benefits. Collectively, the 48 LNRSs 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 at <u>www.makingspacefornaturekent.org.uk</u>

#### The MS4N Pressures and Priorities Workshops

Between 30th January and 20th February 2024, a series of workshops were held to identify the pressures and priorities for nature in Kent and Medway.

The purpose of the first session was to determine the "why" - identifying the key issues the LNRS needs to consider when setting its priorities of nature. Stakeholders were asked to identify the current, and future, pressures, threats and challenges.

Pressures will be used to inform the context setting for priorities and refinement of the long list. The workshop outputs will also be used to inform the pressures section of the "Strategy Area Description", as required by the LNRS regulations.

Pressures identified by the workshops but, on review, were considered outside the scope of the LNRS to address or influence can be found in part 3 of the *Pressures and priorities workshops report*.

The second session aimed to start the identification of the "what" - the priorities the LNRS might include. Stakeholders were asked to identify the outcomes they would like to see for nature - where they wanted to get to in terms of the county's habitats and species. From this, a "priorities longlist" would be formed. The outcomes of this can be found in part 2 of the *Pressures and priorities workshops report.* This longlist will go through a refinement process, using a <u>criteria-based shortlisting approach</u>, to create a proposed list of priorities for nature recovery in Kent and Medway.

Five full-day workshops were held at five different locations (Chilham, Ashford, Rainham, Gravesend and East Malling). In total, 200 people attended, representing 137 different

organisations, bodies, affiliations etc. For more details see the <u>attendance and feedback</u> report.

This report outlines what stakeholders told us they considered were the key pressures, threats and challenges for the county's natural environment. The pressures have been ordered under the following themes:

- 1. Climate change
- 2. Pollution
- 3. Water use
- 4. Human intrusions
- 5. The built environment and associated infrastructure
- 6. Land use for food production
- 7. Extraction of resources
- 8. Alien and problematic species
- 9. Other pressures

The pressures have been defined under these categories based on whether they are a driver (the broad cause or influence), an impact (the effect that influence has) or the result (how the impact manifests itself in respect of nature).

This report is a reflection of stakeholders' views and opinions. Views and opinions do not indicate fact. Analysis of these proposed pressures is still to be undertaken by the MS4N project, under the steer of the MS4N Delivery Group. No inference should be taken from the manner or order in which they are presented.

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

# 1. Climate change

Driver	Impact	Result
Cumulative impacts of climate change	<ul> <li>Pressure on rare habitats.</li> <li>Impact on water quality (temperature/dissolved oxygen/run off).</li> <li>Species shifting range, reduced habitat interconnectivity.</li> <li>Rate of habitat condition change that native species can't keep up with.</li> <li>Species movement.</li> </ul>	<ul> <li>Flagship habitats like chalk downland vulnerable to climate change.</li> <li>Loss of existing ecosystem e.g. veteran trees</li> <li>Wetland habitats can't cope with wetter winters and drier summers.</li> <li>Chalk streams – loss of globally important habitat.</li> <li>Might species distribution change make protected areas not as effective as they should be?</li> <li>Lack of species resilience to climate change - vulnerable to pest and diseases.</li> <li>Migratory patterns disrupted.</li> <li>Pollinators affected.</li> <li>Loss or decline of key local species.</li> <li>Influx of new species (invasive or beneficial).</li> <li>Indigenous species die out.</li> <li>Loss of insects affecting foodchain.</li> <li>Stress on all wildlife</li> </ul>
Drought	<ul> <li>Water shortage</li> <li>County already water stressed.</li> <li>Sources of water for wildlife are depleting.</li> <li>Aquifer and reservoir recharge issues.</li> <li>Increased demand for extraction.</li> <li>Less resilient water supply.</li> <li>Conflict of human water supply with hydration of freshwater habitats including reserves and protected areas.</li> <li>Weirs and revetments.</li> <li>Unpredictability in water sources.</li> </ul>	<ul> <li>Particularly damaging to water dependent/habiting species.</li> <li>Biodiversity vulnerable to drought in summer.</li> <li>Plant and animal declines – specific losses.</li> <li>Wet woodlands drying up.</li> <li>Wetlands drying out.</li> <li>River levels reduced – impact on habitats.</li> <li>North Kent Marshes drying up - ongoing battle to keep water on in spring/summer.</li> <li>Concentrates pollutants.</li> <li>Higher impact of pollution in water.</li> <li>Difficulty in establishing newly planted trees.</li> <li>Species unable to adapt to increased temperatures.</li> </ul>

Driver	Impact	Result
Drought (cont.)		<ul> <li>Associated pests and diseases.</li> <li>Loss of food.</li> <li>Affects flowering times and lengths, therefore affecting pollinator numbers.</li> <li>Over time, habitat change.</li> <li>Habitat loss for water voles and beavers.</li> <li>River fragmentation &amp; loss of natural river banks and flows.</li> <li>No worms, slugs, snails available for mammals and amphibians/reptiles to eat.</li> <li>Loss of dew ponds.</li> </ul>
Extreme weather events	<ul> <li>Erosion</li> <li>Extreme temperatures – hot and cold.</li> <li>Drought.</li> <li>Heavier rainfall and increased flooding.</li> <li>Storms.</li> <li>More extreme weather events e.g. heatwaves</li> <li>Increased risk of fire/wildfires.</li> </ul>	<ul> <li>Loss of dew ponds.</li> <li>Increased contamination of waterways.</li> <li>Loss of natural habitats and species unable to adapt/migrate.</li> <li>Impact on food production.</li> <li>Coastal erosion.</li> <li>Tidal flooding – saltwater encroachment on freshwater habitats.</li> <li>Salination of freshwater habitats.</li> <li>Loss of intertidal habitats – biodiversity and fisheries, nurseries lost.</li> <li>Habitat and species lost to fire.</li> <li>Loss of coastal heathland through wildfires.</li> <li>Reduced reproductive success of wildlife.</li> </ul>
Flooding	<ul> <li>Localised flooding from rivers and streams breaking their banks.</li> <li>Land drains are not sufficient.</li> <li>Increased surface run-off due to development.</li> <li>Flooding impacts on agriculture, grazing fields and access.</li> <li>Flood management impacting river flows.</li> <li>Runoff and CSO spills.</li> </ul>	<ul> <li>Loss of Kingfisher nesting holes.</li> <li>Damage to habitats.</li> <li>Loss of habitats.</li> <li>Sustainable flood management needed.</li> <li>Need for more wetlands.</li> <li>Need for more riparian native trees - willow, birch, alder.</li> <li>Nature is a solution!</li> <li>Soil erosion</li> </ul>

Driver	Impact	Result
Flooding (cont.)		<ul> <li>Hibernating wildlife e.g. dormice and water voles.</li> <li>Impact on coastal areas, tidal rivers, ponds from flood management measures.</li> <li>Poor water quality.</li> </ul>
Higher temperatures	<ul> <li>Hot urban areas.</li> <li>Health risk to people, animals and plants</li> <li>Increased land temperatures.</li> <li>Risk to food security and impacts on economies.</li> <li>Increased water temperatures.</li> <li>Rising water temperatures reduces oxygen levels.</li> <li>Warming of coastal/intertidal areas and water.</li> </ul>	<ul> <li>Decrease in biodiversity with temperatures higher than optimum conditions.</li> <li>Migration of species.</li> <li>Loss of aquatic fauna and flora.</li> <li>Extinction of iconic and natives species.</li> <li>Destructive to marine species.</li> <li>Negative impacts on shellfish and marine invertebrates.</li> <li>Loss of saltmarsh and intertidal habitat.</li> </ul>
Mitigation	- Land demand for carbon stores and carbon sinks.	- Habitats/planting delivering carbon sequestration/offset not conducive with actual nature recovery need.
New climate, new land use/crops	<ul><li>Changing agricultural practices e.g. vineyards.</li><li>Forced to change crops due to temperature.</li></ul>	- Impacts species around farmland.
Pests and diseases	<ul> <li>Increasing pests and diseases</li> <li>Algal blooms - climate change &amp; pollution,</li> <li>Diseases and epidemics, e.g. Avian flu.</li> <li>Fast movement of pest species and diseases - Kent the frontline for this.</li> <li>Invasive species.</li> <li>Ash dieback.</li> </ul>	<ul> <li>Kills off marine and aquatic species.</li> <li>Kills a large area of a population, messes up trophic levels/food web</li> </ul>
Sea level rise	- Coastal squeeze	<ul> <li>Loss of intertidal habitats.</li> <li>Coastal habitat unable to migrate landward.</li> <li>Habitat fragmentation.</li> <li>Loss of annual vegetative drift line (vegetative shingle)</li> <li>Saltmarsh loss.</li> <li>Species displacement</li> <li>Proliferation of coastal grazing marsh.</li> </ul>

Driver	Impact	Result
Seasonal variation/ disruption	- Hibernating species wake up early due to higher temperatures, when there is not enough food for them.	<ul> <li>Impact on flowering times.</li> <li>Impact on hibernation times.</li> <li>Reduced availability of forage when it is needed.</li> <li>Decline in native species that hibernate e.g. dormice.</li> <li>Increased competition for resources.</li> <li>Earlier nesting birds (outside timeframe of current regulations/protections).</li> <li>Indigenous species die out.</li> <li>Impact on food production.</li> </ul>
Soil	<ul><li>Less frost to break up clay soils</li><li>Poor soil management/over use</li><li>Soil erosion</li></ul>	<ul><li>Habitat change/loss.</li><li>Land use change</li><li>Crop failures.</li></ul>

#### 2. Pollution

Driver	Impact	Result
Air	<ul><li>Air pollution</li><li>Air pollution from traffic</li></ul>	- Poor air quality
Chemicals	<ul> <li>Chemical run-off</li> <li>Pesticides and fertilizer run off from farmland/</li> <li>Dog flea treatment.</li> <li>Industrial waste.</li> </ul>	<ul> <li>High potassium and phosphate levels watercourses</li> <li>Nutrification of waterways.</li> <li>Water pollution.</li> <li>Animal and plant life lost.</li> <li>Insects killed.</li> <li>Collapse of local food chain.</li> </ul>
Light	- Light pollution	<ul> <li>Nocturnal and diurnal species (moths, bats and birds)</li> <li>unable to feed.</li> <li>Loss of nocturnal and diurnal species</li> </ul>
Noise	<ul><li>Noise pollution from urban areas.</li><li>Marine noise pollution.</li></ul>	<ul> <li>Disturbance of wildlife.</li> <li>Can kill marine animals.</li> <li>Affects navigation abilities of marine mammals.</li> </ul>
Plastic	<ul><li>Plastic pollution.</li><li>Redundant plastic tree guards.</li></ul>	<ul><li>Threat to marine life.</li><li>Food chain impacted.</li></ul>
Waste	<ul><li>Commercial dumping.</li><li>Flytipping.</li><li>Litter.</li></ul>	<ul> <li>Species loss.</li> <li>Contaminated ground water.</li> <li>Contaminated soil.</li> <li>Food chain contamination.</li> <li>Habitat damage.</li> </ul>

Driver	Impact	Result
Water	<ul> <li>Water pollution.</li> <li>Excess pollution.</li> <li>Novel chemicals in waterways.</li> <li>PFAs.</li> <li>Microplastics.</li> <li>Sewerage in seas.</li> <li>Water pollution - algal blooms</li> <li>Water pollution.</li> <li>Inefficient regulation.</li> </ul>	<ul> <li>Algal blooms.</li> <li>Dead zones in freshwater.</li> <li>Nutrient over-enrichment of rivers.</li> <li>Eutrophication.</li> <li>Poor water quality.</li> <li>Disruption of ecosystem processes.</li> <li>Species loss.</li> <li>Habitat loss.</li> <li>Poor water supplies.</li> <li>Loss of recreation.</li> <li>Reduced fish populations.</li> </ul>

#### 3. Water use

Driver	Impact	Result
Land management	<ul> <li>River modifications.</li> <li>Water drained from catchment too quickly - not enough flow variation for wildlife to spawn, travel, rest etc.</li> <li>Drainage and infill.</li> <li>Reduced river morphology.</li> <li>Lack of water level management on marshland.</li> <li>Faulty/damaged sluices.</li> <li>Over managed water bodies.</li> <li>Weirs and other structures in watercourses.</li> </ul>	<ul> <li>Rivers can't act in natural way.</li> <li>Reduced freshwater species breeding.</li> <li>Loss of wetlands, ponds and ditches.</li> <li>Not enough physical variation to support life cycles.</li> <li>Saline inundation to freshwater grazing marsh.</li> <li>Increased flood risk.</li> <li>Reduced biodiversity.</li> <li>Loss of floodplains.</li> <li>Loss of riparian habitats.</li> <li>Prevention of fish passage and eel migration.</li> <li>Reduced connectivity within catchment.</li> </ul>
New development	<ul><li>Increased waste water.</li><li>Increased flood risk.</li><li>Increased water demand.</li></ul>	<ul> <li>Nutrification of water bodies</li> <li>Habitat changes.</li> <li>Biodiversity changes.</li> <li>Soil changes.</li> <li>Water scarcity.</li> </ul>
Water not sufficiently protected from impacts	<ul> <li>Road runoff into soil, sewers and waterways.</li> <li>Litter and plastics.</li> <li>Nutrients.</li> <li>Riverbank encroachment.</li> <li>Dog treatments (ivermectin).</li> <li>Farm runoff.</li> <li>CSO outfalls / sewage.</li> <li>River siltation of rivers</li> <li>Invasive species.</li> </ul>	<ul> <li>Reduction in water quality.</li> <li>Loss of biodiversity.</li> <li>Loss of habitat connection.</li> <li>Nutrification of waterways.</li> <li>Impact on ecosystems and species that depend in it.</li> <li>Reduced water flows.</li> </ul>

Driver	Impact	Result
Water resources	<ul> <li>Over abstraction.</li> <li>Flood management impacting river flows as flood gates are shut on and off.</li> <li>Water scarcity.</li> </ul>	<ul> <li>Insufficient water for wildlife/plant life.</li> <li>Low water flows into chalk streams.</li> <li>Changing habitats.</li> <li>Deoxygenation.</li> <li>Biodiversity loss.</li> </ul>

#### 4. Human intrusions

Driver	Impact	Result
Access	<ul> <li>Increased pressures on natural space from recreation and access.</li> <li>Inequalities in access to nature - inequalities</li> <li>Disturbance from and direct impacts of recreation activities and dogs.</li> <li>Rubbish.</li> <li>Vandalism.</li> <li>Uncontained access / veering off paths.</li> <li>Tensions between nature and public use of land.</li> </ul>	<ul> <li>Footfall impacts.</li> <li>Habitat damage and degradation.</li> <li>Trampling.</li> <li>Soil compaction and erosion.</li> <li>Wildlife disturbance.</li> <li>Migratory and ground nesting birds disturbance.</li> <li>Water quality reductions.</li> <li>Livestock disturbance.</li> </ul>
Criminal/illegal activity	<ul> <li>Illegal waste disposal.</li> <li>Fly tipping.</li> <li>Pollution.</li> <li>Hare coarsing and other poaching.</li> <li>Vandalism/removal or destruction of trees (newly planted)</li> </ul>	<ul> <li>Soil contamination.</li> <li>Loss of protected sites.</li> <li>Loss of priority habitats.</li> <li>Loss of wildlife.</li> <li>Loss of biodiversity.</li> </ul>
Disconnect with nature	<ul> <li>Apathy towards nature.</li> <li>Plant blindness.</li> <li>Fear of nature.</li> <li>Lack of motivation to take personal responsibility for your local natural area.</li> <li>Loss of connection between urban populations and wildlife</li> <li>Nature reduced to ecosystem services – an economic value.</li> <li>Lack of knowledge.</li> <li>Lack of public support.</li> </ul>	<ul> <li>Loss of wellbeing and health advantages.</li> <li>No demands for protection of nature.</li> </ul>

Driver	Impact	Result
Lack of knowledge/ understanding	<ul> <li>Lack of nature friendly gardening practices.</li> <li>Unaware of impacts they have.</li> <li>Public interest in more charismatic species, forgetting that lower species such as invertebrates affect the higher taxonomic species.</li> </ul>	<ul> <li>No wildlife corridors.</li> <li>Reduced biodiversity.</li> <li>Unintended damage to natural environment.</li> </ul>
Land management	<ul> <li>Intentions misplaced – establishment of unsuitable species e.g. trees in the wrong place/landscape.</li> <li>Loss of traditional land management techniques and skills e.g. ditch management, hedge laying, coppicing, land management,</li> <li>Public estate not used to its potential for nature.</li> <li>Pressure to remove street tress (and urban trees more generally).</li> </ul>	<ul> <li>Loss of valuable habitat for specific species dependant on appropriate land management.</li> <li>Woodland loss and fragmentation.</li> <li>Missed opportunities for nature.</li> <li>Destruction of riparian habitats.</li> <li>Loss of habitat for birds.</li> <li>Decline in nature corridors.</li> </ul>
Litter and waste	<ul> <li>Litter from cars, visotors, walkers etc.</li> <li>Plastics.</li> <li>Rubbish dropped from cars and visitors, gets eaten/stuck on wildlife</li> <li>Dumping in subtidal habitats.</li> </ul>	<ul> <li>Into food chain killing animals.</li> <li>Wildlife getting injured or killed by litter.</li> <li>Contamination of shellfish.</li> </ul>
Marine	<ul><li>Moorings bottom out on intertidal.</li><li>Moorings impact on subtidal e.g chains.</li></ul>	- Damage to marine bed.
Pets	<ul> <li>Disturbance/killing of wildlife from cat/dog.</li> <li>Dog/cat treatments contaminating water.</li> </ul>	- Loss of wildlife. - Water pollution.
Wildlife removal	<ul><li>Foraging for fungi [and other] collection.</li><li>Foraging for sale.</li><li>Stealing orchids and rare plants.</li></ul>	- Potential loss of that species from site.

#### 5. The built environment and associated infrastructure

Driver	Impact	Result
Demand for green energy	<ul> <li>Competing demand for land use from solar and wind farms with other uses.</li> <li>Removal of land that could have been used for growing food and/or natural spaces.</li> <li>Inappropriate locations for solar farms.</li> <li>Offshore windfarms.</li> </ul>	<ul> <li>Further loss of natural spaces.</li> <li>Impacts on marine life.</li> </ul>
Built environment fragmenting landscape	<ul> <li>Broken connectivity in landscapes</li> <li>Habitat fragmentation.</li> <li>No accounting for wildlife access into and through sites.</li> <li>Further impact from human disturbance.</li> <li>Roads fragment and prevent connection of habitats, especially woodland and grassland.</li> </ul>	<ul> <li>Habitat isolation (islands).</li> <li>Lack of connectivity between natural areas.</li> <li>No nature highways.</li> <li>Degradation around the development and further loss of habitats.</li> <li>Species populations isolated - produces genetic vulnerability, lack of resilience.</li> <li>Species decline.</li> <li>Pollution.</li> <li>Changed landscape.</li> <li>Hedgehogs cannot move about.</li> </ul>
Energy	<ul> <li>Energy infrastructure onshore and offshore.</li> <li>Land used for solar farms.</li> <li>Land lost from agricultural uses.</li> </ul>	<ul><li>Loss of habitat.</li><li>Hazards for wildlife.</li><li>Less space for nature</li></ul>
Greenspace	<ul> <li>Amenity spaces not managed for nature - over-mown, plant species not allowed to flower etc.</li> <li>Competing demands for green space, e.g. playing pitches vs nature site.</li> <li>Development not factoring in enough green space.</li> <li>Lack of connection/safe access to local greenspace.</li> <li>Pressure on existing green infrastructure due to increased population demands.</li> <li>Tree planting does not always focus on native and climate resilient species.</li> </ul>	<ul> <li>Limited biodiversity in greenspaces.</li> <li>Less natural space for nature.</li> <li>Opportunities for people to connect with nature lost.</li> <li>Pressures on natural space close to new developments, which may be fragile habitats.</li> <li>Habitat and wildlife disturbance.</li> <li>Non-native species.</li> <li>Planting dies.</li> </ul>

Driver	Impact	Result
Greenspace (cont.)	- Planting schemes in urban areas are not always ecologically appropriate.	
Human impacts in the built environment	<ul> <li>Dogs and cats.</li> <li>Pesticide.</li> <li>Human intrusion and disturbance</li> <li>Increasing demands for recreation land.</li> <li>Layering of green space use means that leisure pressure can be overly high on nature reserves.</li> <li>Leisure pressures on coastal zones/marine environment.</li> </ul>	<ul> <li>Disturbance of breeding birds.</li> <li>Lower breeding success.</li> <li>Disturbance of habitats.</li> <li>Degradation of sensitive and fragile habitats.</li> <li>Loss of space for nature/habitats</li> <li>Marine life disturbance.</li> </ul>
Land take	<ul> <li>Many pressures on land for different uses.</li> <li>Pushes nature out of highly developed areas.</li> <li>Mature hedgerows and edge habitats removed.</li> <li>Loss of ponds, wetlands and meadows.</li> <li>Destruction of established habitats.</li> <li>Compensation cannot replace established, functioning habitats.</li> <li>Brownfield land being prioritised for development.</li> <li>Loss of ancient woodland.</li> <li>Loss of greenfield sites and greenbelt.</li> <li>Development in functioning flood plains to development.</li> <li>Loss of mature orchards.</li> <li>Major infrastructure plans in Kent.</li> </ul>	<ul> <li>Natural habitat lost.</li> <li>No space for nature.</li> <li>Species displacement.</li> <li>Wildlife disturbance.</li> <li>Biodiversity loss.</li> <li>Local depletion of wildlife.</li> <li>Loss of wildlife corridors.</li> <li>Shelter and forage lost.</li> <li>Loss of open mosaic habitat on previously developed land – important for invertebrates.</li> <li>Wading bird habitat loss.</li> <li>Nature based solutions lost.</li> </ul>
Land management	<ul> <li>Lack of appropriate land management.</li> <li>Poor management of habitats on development sites after completion.</li> <li>No money for management/maintenance of green areas in developments.</li> </ul>	- Developed greenspace not delivering for biodiversity.

Driver	Impact	Result
Marine development	<ul><li>Underwater piling</li><li>Sonar surveys</li><li>Traffic</li><li>Noise</li></ul>	- Can kill marine animals. - Affects navigation abilities of marine mammals.
Paving over	<ul> <li>Front gardens turned into parking.</li> <li>Hedges removed for fencing around houses.</li> <li>Loss of green areas/grass areas to fake grass, paving stones, gravel, impermeable plastic layers.</li> </ul>	<ul> <li>Loss of green space – particularly problematic in urban areas.</li> <li>Loss of good quality urban garden habitats</li> <li>Increased run off and associated pollution.</li> <li>Lack of foraging food for invertebrates and birds.</li> <li>Lack of habitat and shelter.</li> <li>Lack of nesting/breeding habitat.</li> <li>Loss of wildlife corridors.</li> <li>Habitat fragmentation.</li> <li>Loss of urban wildlife - insects, small mammals, birds, foxes, hedgehogs etc.</li> </ul>
Population	<ul> <li>High population.</li> <li>Migration to Kent.</li> <li>Pressure on resources.</li> <li>Greater need for housing development - loss of habitat.</li> <li>Increased demand for recreation.</li> <li>Increased demand for water abstraction.</li> </ul>	<ul> <li>Land take.</li> <li>Change of land use.</li> <li>Loss of habitat.</li> <li>Species loss.</li> <li>Habitat and wildlife disturbance.</li> <li>Low river flows and river restoration.</li> <li>Biodiverse rich areas being destroyed.</li> </ul>
Run off	- Various pollutants and particulates.	<ul><li>Reduction in soil health.</li><li>Pollution of freshwater habitats.</li></ul>
Traffic	<ul> <li>Increasing demand for infrastructure to support vehicle traffic, roads and associated services.</li> <li>Noise</li> <li>Pollution</li> </ul>	<ul><li>Loss of habitat.</li><li>Fragmentation.</li><li>Reduction on biodiversity.</li></ul>

Driver	Impact	Result
Transport systems	<ul> <li>Roads created through natural sites.</li> <li>Roads and rail acting as linear barriers.</li> <li>Increased traffic levels.</li> <li>No safe crossing for wildlife.</li> </ul>	<ul> <li>Habitat fragmentation.</li> <li>Habitat loss.</li> <li>Species dispersal prevented.</li> <li>Local species populations will become extinct.</li> <li>Air pollution.</li> <li>Noise pollution.</li> <li>Roadkill.</li> </ul>
Unsustainable development	<ul> <li>Housing developments with no enhancements/mitigations for biodiversity.</li> <li>Ill-considered development, both housing and industrial.</li> <li>Poor planning and development - inappropriate design and location.</li> </ul>	<ul> <li>Habitat destruction.</li> <li>Habitat fragmentation.</li> <li>No space for wildlife.</li> </ul>
Urbanisation	<ul> <li>Urban sprawl into green belt.</li> <li>Lack of appreciation of the species living in urban areas <ul> <li>overlooked and threatened by development.</li> </ul> </li> <li>Allotments can also be pressure.</li> <li>Urbanisation / urban creep.</li> <li>Erosion of village confines.</li> <li>Loss of rural areas.</li> <li>Poorer air quality.</li> </ul>	<ul> <li>Loss of connectivity</li> <li>Loss of habitat</li> <li>Fragmentation.</li> <li>Increasing disturbance of nature</li> <li>Pressure on isolated populations of species</li> <li>Increased risk of local extinctions</li> </ul>
Water pressures	<ul> <li>Increased demands on waste water treatment works.</li> <li>Increased amount of hard surface.</li> <li>Flooding.</li> <li>More water run off issues.</li> <li>Road runoff.</li> <li>Silt and chemical run off from developed areas.</li> <li>Less absorption of rainwater.</li> </ul>	<ul> <li>Reduced aquifer recharge and water course flows.</li> <li>Nutrient neutrality issues.</li> <li>Water pollution.</li> </ul>

# 6. Land use for food production

Driver	Impact	Result
Agricultural run-off.	<ul> <li>Pollution from fertilisers.</li> <li>Pollution from pesticides.</li> <li>Pollution from chicken farms.</li> <li>Phosphate pollution.</li> <li>Nitrate pollution.</li> <li>Loss of top soil/soil depletion.</li> <li>Nutrient enrichment of terrestrial and water habitats.</li> </ul>	<ul> <li>Increased pressure on remaining areas of fertile/suitable agricultural land.</li> <li>River pollution.</li> <li>Nutrification of water bodies.</li> <li>Reduced water quality.</li> <li>Reduced water biodiversity.</li> <li>Fish deaths.</li> <li>Loss of species due to competition from more vigorous species.</li> <li>Groundwater pollution.</li> </ul>
Chemical use - herbicides, pesticides and synthetic fertiliser.		<ul> <li>Soil health degradation.</li> <li>Biodiversity.</li> <li>Decline in pollinators and other insects - affects everything as at the bottom of food chain.</li> <li>Ecosystem through bioaccumulation.</li> <li>Eutrophication of water.</li> <li>Water pollution.</li> </ul>
Costs pressures on farmers.	<ul><li>Food production costs high.</li><li>Return on food production low.</li></ul>	- Reluctance to move to new farming practices, especially if viewed as more costly.
Food security.	<ul><li>Increased need for agriculture.</li><li>Intensive food production.</li></ul>	<ul> <li>Could have negative impact on environment if intensive led but if regenerative, could be positive.</li> <li>Less space for nature.</li> </ul>
Habitat fragmentation and land management (historic).		<ul> <li>Lack of connectivity in agricultural landscape - hedges, margins, meadows, woods.</li> <li>Decline in farmland birds, such as turtle doves.</li> <li>Decline in pollinators.</li> <li>Species once found on farmland (e.g lapwing) now pushed to coastal margins.</li> </ul>

Driver	Impact	Result
Intensive farming.	<ul> <li>Monocultures.</li> <li>Spread of vineyards.</li> <li>Biofuel incentivises more intensive farming - loss of agricultural land.</li> <li>Pollution runoff.</li> <li>Surface water runoff.</li> <li>Move to bigger farms.</li> </ul>	<ul> <li>Loss of habitat.</li> <li>Loss of habitat complexity/mosaics/patchworks.</li> <li>Loss of hedgerows and field margins.</li> <li>Loss of biodiversity / less wildlife.</li> <li>Loss of opportunities to restore.</li> <li>Less space for nature.</li> <li>Poor soil health.</li> <li>Reduced invertebrate numbers and diversity.</li> <li>Ecosystem processes disrupted.</li> <li>Limited forage for wildlife.</li> <li>Loss of birds.</li> <li>Loss of insects.</li> <li>Food chain destroyed.</li> </ul>
Lack of appropriate land management.	<ul> <li>Inadequate maintenance of sensitive habitats</li> <li>Lack of management across all semi-natural habitats - grasslands, bogs, chalk grassland, wetted woodland.</li> <li>Lack of woodland management and coppicing or too much management.</li> <li>Inappropriate management of hedgerows.</li> <li>Over tidiness and poor perception of scrub and brownfield sites.</li> <li>Over tidiness of hedgerows, mowing sea walls, verges, 'amenity' grasslands.</li> <li>Erosion not managed.</li> <li>Scrub encroachment.</li> <li>Lack of deer management.</li> <li>Lack of available graziers</li> </ul>	<ul> <li>Loss of valuable habitat, especially on smaller sites.</li> <li>Degradation of woodlands.</li> <li>Loss of woodland understory.</li> <li>Reduction in species complexity.</li> <li>Loss and degradation of hedgerows</li> <li>Loss of bat habitat.</li> <li>Loss of soil.</li> <li>Loss of coastal habitats.</li> <li>Loss of connectivity and fragmentation of habitats.</li> <li>Loss of chalk downland and associated native habitats and species.</li> <li>Deer destruction of woodland habitats, stopping natural regeneration and loss of woodland.</li> </ul>
Lack of joined up thinking/efforts between neighbouring landowners.		<ul><li>Lost opportunities for the management and connectivity of hedgerows.</li><li>No landscape scale connectivity.</li></ul>

Driver	Impact	Result
Lack of protection for historic		- Loss of orchards.
semi-managed habitats.		- Loss of ancient arable fields.
Pressures on high quality agricultural land from others uses.	Other land uses: - Vines New crop types Energy production – solar farms Development mitigation schemes Housing Suitable Alternative Natural Greenspace (SANG) Open access Country park creation.  Changes in farming practices, approaches and land use: - Poly tunnels.	<ul> <li>Habitat fragmentation.</li> <li>Makes nature recovery across farmland habitats even more difficult.</li> <li>Loss of connectivity and wildlife corridors in agricultural landscape - hedges, margins, meadows, woods.</li> <li>Chalk grassland turned to vineyards.</li> <li>Loss of orchards and hops.</li> <li>Increased water use.</li> </ul>
Removal or no upkeep/ maintenance/management of margins.  Hedgerows decreasing importance in farming systems, so fall out of management.  Larger farming equipment requiring removal of hedges.	<ul> <li>Loss of field margins.</li> <li>Loss of hedgerows.</li> <li>Hedgerows not providing enough complexity (single species).</li> <li>Agriculture disconnection with countryside</li> <li>More water runoff.</li> <li>Pressure to produce food,</li> </ul>	<ul> <li>Insect depopulation.</li> <li>Loss of meadow birds.</li> <li>Loss of habitat.</li> <li>Removal of 'stepping stones'.</li> <li>Loss of connectivity between habitats.</li> </ul>
Soil health degradation – intensive practices, trampling, glyphosate, erosion.	<ul> <li>Loss of productivity/income generation.</li> <li>Cannot retain water.</li> <li>Rising nutrient levels.</li> <li>Loss of foundation for everything.</li> </ul>	<ul> <li>Reduced biodiversity.</li> <li>Affects all habitats.</li> <li>Loss of low nutrient level habitat.</li> <li>Wide ranging impacts.</li> </ul>

#### 8. Extraction of resources

Driver	Impact	Result
Extraction of land minerals		- Habitat destruction.
		- Habitat disturbance.
		- Loss of irreplaceable habitats.
Extraction of marine minerals	- Extraction of sands from Goodwin Sands.	- Benthic habitat damage.
	- Dredging for gravel.	- Benthic species lost.
	- Removal of shingle from beach for	- Damage to Marine Conservation Zones.
	industrial/housing development.	- Loss of fragile shingle plant life.
	- Subtidal dredging for ports.	- Beach erosion.
Foraging	- Over foraging.	- Removal of fungi species.
	- Foraging for sale.	
Fisheries	- Bottom trawling fishing.	- Damage to sea bed.
	- Overfishing.	- Loss of benthic habitats.
		- Loss of benthic species.
		- Collapsing fish populations.
		- Impact on other marine species that depend on
		overfished species.
Game hunting	- Intensive land/habitat management for game	- Loss of natural habitat.
	bird.	- Change of habitat type.
	- Destroying species to support shoots.	- Reduction in quality of habitat.
	- Bringing non-native species into the country.	- Reduction or loss of native wildlife.
		- Badgers, foxes, birds of prey and corvids
		populations reduced.
Wood resources	- Wood-lotting.	- Woodland fragmentation.
	- Destructive commercial forestry practices.	- No understory.
	- Close linear planting.	- Reduced species abundance
	- Industrial woodlands management for wood	- No standing deadwood.
	biomass.	- Degradation of woodlands.
	- Less sensitive woodland management.	- Decline in ancient and semi-natural woodland.

Driver	Impact	Result
Water abstraction	<ul> <li>Less water.</li> <li>Lack of water.</li> <li>People and livestock inevitably prioritised over nature.</li> <li>Water abstraction from chalk streams, low flows,</li> </ul>	<ul> <li>Ephemeral rivers drying out.</li> <li>Changes in wetland and chalk stream habitats.</li> <li>Very dry valleys.</li> <li>No streams.</li> <li>Impact on freshwater species.</li> <li>Low flows No water for conservation projects/habitats.</li> <li>Pollution impacts enhanced.</li> </ul>

# 9. Alien and problematic species

Driver	Impact	Result
Diseases	- Ash dieback.	- Tree health is at risk due to disease
Invasive species	<ul> <li>Alexander</li> <li>American mink</li> <li>Asian hornet</li> <li>Brown marmorated stink bug</li> <li>Chinese mitten crabs</li> <li>Cotonaister</li> <li>Signal crayfish</li> <li>European frog bite</li> <li>Floating penniwort, Crassulia</li> <li>Grey squirrel</li> <li>Himalayan Balsam</li> <li>Koi carp</li> <li>Japanese Knotweed/hogweed</li> <li>Pacific oysters</li> <li>Oak processionary moth</li> <li>Rhododendron</li> <li>Spotted wing drosophila</li> <li>Spruce bark beetle</li> </ul>	<ul> <li>Cotoniaster on chalk grassland.</li> <li>Asian hornets outcompeting native wasps.</li> <li>Rhododendron invasion in woodlands.</li> <li>Spruce bark beetle resulting in felling of spruce woodland.</li> <li>Loss of native oyster as a result of pacific oyster.</li> <li>Outnumbering of native species – loss of native species.</li> <li>Changes in species assemblages due to novel species settling.</li> <li>Disease spread to natives from alien species.</li> <li>Increase of artificial predation of native species.</li> <li>Destruction of native plants, trees and wider habitats.</li> </ul>
Kent is gateway to Europe	<ul> <li>Kent is first stop for influx of invasive species and disease.</li> <li>Migration of species as climate warms.</li> <li>Non-native species transported in ballast water and hulls of ships.</li> </ul>	<ul> <li>Risk to biosecurity.</li> <li>Risk of non-native species introduction.</li> <li>Risk to native marine life.</li> </ul>
New development and public space landscaping	<ul> <li>Developments and public space landscaping with non-native plants.</li> <li>Wrong trees planted in developments.</li> </ul>	<ul> <li>Risk to biosecurity.</li> <li>Risk of non-native species introduction.</li> <li>Eventually dominate native species.</li> <li>Increase in alien plant and species</li> </ul>

Driver	Impact	Result
Problematic species	- Brambles – too much nitrogen in soil.	- Brambles in marshland.
		- Too much, brambles going wild.
Unmanaged deer population	- Population is too high.	- Loss of habitat - woodland understory, scrub etc.
		- Over grazing.
		- Bark stripping.
		- Eating saplings in woodlands (loss of natural
		regeneration).
		- Tree health at risk.

#### 10. Other pressures

Driver	Impact	Result
Economics	<ul> <li>Insufficient funding.</li> <li>Too much focus on creating new habitat site, when there's not enough funding to preserve and manage current habitat sites</li> </ul>	- Under management of priority habitats.
Environmental frameworks not delivering.	- Protected sites not in good management.	