HEADLINES AND KEY FINDINGS

Misty Landscape in Kent

The State of Nature in the UK and around the world is startling, and scientists warn that we are entering a sixth mass extinction event (the first directly linked to human activity). The climate and biodiversity crises are inextricably linked, and in 2020, the United Nations published the alarming statistic that one million animal and plant species are threatened with extinction globally. Nature is declining at unprecedented rates and that this decline will have grave impacts worldwide as the very foundation of economies, livelihoods, food, health, and quality of life are destroyed. Kent is no exception; species continue to go extinct from the county, and many more are threatened, along with their habitats.

2021 was a critical year for action on the global climate emergency, in which the first part of the 6th assessment report from the Intergovernmental Panel on Climate Change (IPCC) was published, and in which the UN Climate Change Conference in Glasgow (COP26) brought together 120 world leaders around a focus on the science, solutions and political will to act. At COP26 there was collective recognition of the urgency of the crisis, and that impacts will be less severe with an average temperature increase of 1.5°C rather 2°C. The next decade was recognised as critical and the need for accelerated action stressed. There was agreement on the need to reduce carbon dioxide emissions by 45% to achieve net zero by 2050, and on a move away from fossil fuels and their subsidisation. CO26 also established a work programme to define a global goal on adaptation to climate change, which will identify collective needs and solutions to the climate crisis already affecting many countries.

The State of Nature In Kent 2021 report documents how human impacts are driving dramatic changes in wildlife in Kent. It presents an overview of how the county's wildlife is faring, drawing on the best available data and experience of professional and amateur experts alike, to report on how nature has changed in Kent. The focus is on what has happened in the last decade, and whether things are getting better or worse for nature. The pressures that are acting on nature are assessed, and the responses being made collectively to counter these pressures are highlighted.

The wealth of varied habitat in Kent supports more than 3,400 rare and threatened species, with some of these nationally rare and some only found in Kent within the UK. But it is not just the rare or endangered that matter; even the most commonplace species are vital within the wider natural environment, and bioabundance – as well as biodiversity – is under threat. We are fortunate to live in such a county, but also have a responsibility to hand a thriving natural environment over to future generations.

Having as accurate picture as possible of the State of Nature in Kent will be ongoing necessity as we strive for nature recovery in the county. Where it has been possible to do so, the findings of the last report of this kind, 'The State of Kent's Wildlife 2011', has been used as a benchmark by the individual authors who have contributed to this report.

Here we provide a snapshot of the detail contained in the report, presenting a timeline of historical change, an overview of headlines and key findings, and for the first time, an assessment of the percentage of species found in Kent that are threatened with extinction based on the International Union for Conservation of Nature (IUCN) Red List Categories.

Far too often this State of Nature in Kent report has shown that a lack of evidence has hindered our ability to report on changes over the last ten years. Evidence must be front and centre of strategies to restore Kent's nature and resourced appropriately. The next State of Nature in Kent report must be underpinned by a far more comprehensive evidence base.

We must also be mindful of the influence of shifting baseline syndrome - the loss of perception of change that occurs as successive generations redefine what is 'natural' - on our perception of the state of nature; regular reporting is key to ensuring the magnitude of degradation in the natural environment is accurately perceived.

Nature is in crisis, and we must act now if we are to halt and reverse this trend locally, and to play our part on the global stage. Through the deployment of nature-based solutions that seek to lock-up carbon, mitigate the threats from warming and sea-level rise and maintain intertidal habitats, and maximise biodiversity and bioabundance outcomes on land and at sea, we must ensure Kent delivers effective nature recovery. Collective action must be galvanised around a co-ordinated land-use plan for the county: the Local Nature Recovery Strategy for Kent must be ambitious in scale and scope, bringing together every stakeholder to ensure individual and collective action is delivered strategically and effectively.

The headlines and key findings reported here are a catalyst for action and the overwhelming message from within these pages is clear; in spite of significant efforts, we haven't done enough. We know what we must do now, and we must do it faster, bigger and better than ever before.

HISTORICAL CHANGE IN BIODIVERSITY

The State of Nature in Kent 2021 focuses on recent changes in biodiversity, and the drivers of these changes, though humans have been shaping our landscape, and the wildlife within it, for millennia. It is widely accepted that the UK's biodiversity has been massively depleted by centuries of habitat loss, management changes, development and persecution, prior to the last report of this kind for Kent in 2011. We are unable to measure this depletion accurately, but know that many significant changes have occurred over the last one hundred and fifty years.

GOOD NEWS...

1900s

1911: Great Crested Grebe regularly breeding in Kent.

1958: Bittern regularly breeding in Kent.

1978: Sandwich Tern commenced regular breeding for the first time in 20th century in Kent.

1983: Avocet returned to Kent as a breeding species (bred regularly in the nineteenth century).

1997: First Wasp Spider recorded in Kent at Giggers Green, near Aldington.

1990s: Water-biter Bush-cricket reintroduced to Lydden Temple Ewell.

1999: Buzzard confirmed breeding West Kent.

2000s

2000: Little Egret regularly breeding in Kent.

2001: UK's first enclosed Beaver trial established at Ham Fen.

2004-2006: Sand Lizard reintroduction established a population in Kent.

2011: Otter returned to Kent.

2013: Lodge Hill declared a SSSI, the first ever to protect Nightingales.

2013: Long-tail Blue first recorded in Kent.

2016: Brown Hairstreak recorded for the first time since 1971.

2018: Few-flowered Spike-Rush found at Ham Fen after a 142 year absence from the county.

2019: Little Tern fledged at the Castle Coote area of South Swale reserve for the first time in 15 years.

2019: Micro-moth Hypercallia citrinalis rediscovered in Kent having last been recorded in 1979.

2019: Greater Horseshoe Bat rediscovered in Kent.

ACTIONS TO HELP NATURE...

1800s

1876: Wild Birds Protection Act introduced.

1900s

1912: Charles Rothschild founded the Society for the Promotion of Nature Reserves (now The Wildlife Trusts).

1915: The SNPR compiled a list of 284 sites 'worthy of preservation' - the Rothschild Reserves. Kent sites included Blean. Woods, Collyerhill Wood, Crundale Downs, Devils Kneading Trough, Dungeness, Sandwich & Pegwell Bay to name a few.

1930: Purchase of Cheyne Court, Romney Marsh, the RSPB's first nature reserve.

1932: Dungeness purchase announced - one of the RSPB's oldest nature reserves.

1951: Kent Ornithological Society founded.

1952: Dungeness Bird Observatory and Sandwich Bay Bird Observatory founded.

1952: Ham Street Woods NNR designated.

1955: Kent Field Club founded.

1958: Kent Trust for Nature formed (Became Kent Wildlife Trust in 1997).

1962: Kent Wildlife Trust purchased its first reserve, Downe Bank.

1968: First Kent AONB established.

1981: Wildlife and Countryside Act introduced.

1984: First Kent Countryside Partnership formed.

1990s: Water-biter Bush-cricket reintroduced to Lydden Temple Ewell.

1993: Stodmarsh NNR and RAMSAR designation.

1998: South Foreland and Dover-Folkestone Heritage Coasts formed.

1998: Sandwich & Pegwell Bay designated a National Nature Reserve.

2000s

2000: Medway Swale Estuary Partnership formed.

2001: Thanet Coast Project established.

2001: Cliffe Pools becomes an RSPB nature reserve.

2007: A Living Landscape for the South East publication released.

2010: Making Space for Nature: A review of England's Wildlife Sites and Ecological Network published.

2010: Kent Botanical Recording Group formed.

2011-2012: Landscape scale survey of marshlands in east Kent conducted for Shining Ram's-horn Snail.

2012: Kent ARCH Habitat Survey.

2012: Kent Nature Partnership established.

2013: First UK State of Nature Report published.

2013: First Kent Marine Conservation Zones established.

2016: Kent Environment Strategy produced by Kent County Council.

2018: The Government's 25 Year Environment Plan published.

2019: Great Crested Newt district level licensing scheme launched in Kent.

2019: Five additional Marine Conservation Zones established in Kent waters.

2020: Wildwood Trust and Kent Wildlife Trust receive more than £1 million to fund wilding project in Blean Woods.

2020: Kent Biodiversity Strategy published.

2020: Kent and Medway Energy and Low Emissions Strategy published.

2020: Inception of a Local Nature Recovery Strategy for Kent.

2020: UK signs Leaders' Pledge for Nature - Commits to protect 30% of UK land in boost for biodiversity.

PRESSURES ON NATURE...

1900s

1963-1965: M2 construction.

1971-1991: M20 construction.

1988: Work commenced on channel tunnel.

1994: Channel tunnel opened.

2000s

2002: Cliffe airport proposal.

2003: High Speed 1 (HS1) section 1 opened.

2007: High Speed 1 (HS1) section 2 opened.

2010: High Speed Rail Network HS2 announced.

2011: Lodge Hill planning application.

2016: Brexit.

2020: London Resort proposal.

2020: Cleve Hill solar farm proposal.

2020: Covid-19 pandemic.

BAD NEWS...

1900s

1915: Wood White Butterfly lost from Kent.

1922: Black-veined White Butterfly lost from Kent.

1926: Guillemot last bred in Kent.

1935: Kentish Plover last year of regular breeding in Kent.

1945: Marsh Fritillary Butterfly lost from Kent.

1947: Corncrake last year of regular breeding in Kent.

1952: Grey Squirrel colonised all areas of Kent.

1959: Red Squirrel last recorded in Kent.

1960's: Natterjack Toad extinct in Kent.

1961: American Mink are recorded for the first time in Kent.

1966: Silver-studded Blue Butterfly lost from Kent.

1971: High Brown Fritillary Butterfly lost from Kent.

1974: Red-backed Shrike last year of regular breeding in Kent.

1997: Small Pearl-bordered Fritillary Butterfly lost from Kent.

1998: Frog Orchid last recorded in Kent.

2000s

2002: Pearl-bordered Fritillary Butterfly lost from Kent.

2005: Willow Tit last year of regular breeding in Kent.

2016: Redstart ceased breeding in Kent.

2018: Turtle Dove added to the Rare Breeding Birds Panel (RBBP) species list.

2019: Bugs Matter survey finds 50% fewer insects in Kent than in 2004.

PRESSURES ON WILDLIFE

The greatest pressure faced by Kent's wildlife comes from significant and unprecedented levels of growth. The Kent and Medway Growth and Infrastructure Framework identifies some 178,600 additional homes and 396,300 additional people by 2031 (24% and 23% growth respectively). This, along with the supporting infrastructure required – transport, education, health and social care, utilities and community facilities - all require land and resources. Furthermore, there are pressures on land-use which are specific to Kent's location, such as proximity to London and as a gateway to Europe, through road, rail, sea and air links.

The Kent Habitat Survey 2012 showed that land-use classified as development had increased from 10.7% in 1961 to 17.3% in 2008, an increase of around 62% of the original resource. With unprecedented growth levels predicted, land-take will increase even further. A growing population needs food, water, and materials, and intensive food production and farming places further pressures on the land. The natural environment need not always be a barrier to growth however, in fact, via the provision of natural capital, biodiversity is integral to growth.

In addition to these pressures on land use, there are some general trends which, historically, have had a negative effect on the natural diversity of Kent, including:

- Intensification of land management, such as use of chemical fertilisers and pesticides in agriculture, ploughing of semi-natural grasslands, loss of traditional orchards;
- Direct loss of habitats through increased development, urbanisation and over-tidying and other land uses;
- Degradation of soil health and productivity resulting from nutrient depletion, declines in levels of humus, and erosion and compaction of soils;
- A wide range of pollutants, from many sources, that threaten wildlife and have an impact on all habitats, with the most widespread current harm from excess nutrients (phosphate and compounds of nitrogen) in air and water. There has also been a rise in concern over plastic pollution, particularly in the aquatic environment;
- Lack of appropriate management, such as the loss of woodland management as woodland products become uneconomic to extract, or recreational overuse of sensitive areas;
- Habitat fragmentation, which impairs species movement or migration, leading to populations becoming isolated and less resilient to changing climate conditions;
- Invasive non-native species, which can out-compete native species, and pests and diseases, which can have impacts beyond the species they directly attack;
- Climate change – loss of land through sea-level rise, temperature, rainfall and weather pattern change, and other environmental factors alter habitat composition and species movement and survival. Kent is a gateway for species colonising from Europe in response to climate change, including Invasive Non-Native Species (INNS);
- Lack of investment and a drop in public sector expenditure on biodiversity, which in the UK, as a proportion of GDP, has fallen by 42% since a peak in 2008/9.

Many of these challenges are being addressed at a national level through government policy, but it will be necessary to respond locally to policy such as the Environment Act and make it work on the ground. Kent organisations will also need to work collaboratively on addressing the full range of pressures outlined above. Ambition will be tempered by resources, never-the-less, it is imperative that at a time of immense change, we all work together to meet the demands of the county whilst safeguarding the future of our wildlife and habitats. Whilst national and local State of Nature reports may paint a bleak picture, they also demonstrate that when conservationists, government, business and individuals work in partnership, landscapes can be restored and threatened species can be saved. This report aims to inform on where we are, diving deeper into the pressures faced in the county, and to help steer collective action to mitigate their effects on wildlife in Kent.

HEADLINES

Kent's population is growing at above average rates[1], *the county has some of the highest rates of house building in the UK[1], and the number of* ***vehicles*** *on Kent's roads* ***increased by 14.3%*** *between 2006 and 2016.*

In **2019, 79% of the rivers and lakes in Kent** monitored for phosphorus **did not meet the required standard** for good ecological status as set out under the Water Framework Directive. (Compared to 67% of water bodies across the South East, and 56% throughout England).

Levels of **small particulate air pollution** in Kent are **double the World Health Organisation** recommended annual average maximum limit.

In **2019, 77% of Kent's groundwater bodies did not meet** the required WFD **standard for good chemical status** and two groundwater bodies deteriorated, in part due to the presence of nitrates in the water. (It is a similar picture across England, with nitrate being the most common cause of groundwater test failures).

Water industry discharges are the **biggest contributor of phosphorus to** Kent's **rivers and lakes**, followed by agriculture and private sewage treatment plants.

The ***area of land*** *under conservation management in Kent* ***declined by 3.8%*** *(14,075 ha) between 2016 and 2020.*
(Losses are mainly due to the expiration of entry level environmental stewardship schemes between 2016 and 2020).

[1] The Kent Nature Partnership recognises that there are both positive and negative consequences of population growth/house building for nature in Kent

While **projects are improving**, restoring, and reconnecting threatened **chalk grassland** habitats...

...**Fragmentation** and **loss of connectivity** through development in the west of the county, and conversely through **under-management** and scrub encroachment in the eastern half, **have reduced the area of chalk grassland in Kent**.

The area of land designated as ***SSSI has increased*** *in the last 10 years, and includes* ***three new sites****, however...*

Only 69% of SSSIs in Kent are in **favourable condition**, while Kent now has 11 Marine Conservation Zones, this does not always mean greater protection, management measures or enforcement is in place.

Of the 3,684 species in Kent that have had their UK threat status assessed, **372 (10%)** of extant species **are classified as threatened with extinction** from Great Britain. This compares with 1,188 (15%) of 8,431 species assessed that are threatened with extinction from the UK as a whole.

Reflections at St Margaret's Bay
© Laura Jane Pilcher @pixabay

KEY FINDINGS

KENT BIODIVERSITY STRATEGY OBJECTIVES

The KBS was published just two years prior to this report in 2020, and it is not the aim of this report to explicitly report against its objectives. It aims to begin to provide a baseline against which reporting can take place. However, where a direct update is available, this has been included below. Otherwise, it was felt useful to include thematically linked headlines and key findings of the report to KBS objectives, where relevant. A monitoring programme is being developed for KBS to measure objectives. Future 'State of Nature in Kent' publications may also be targeted at monitoring certain objectives.

The following key indicates where key findings relate either explicitly or thematically to Kent Biodiversity Strategy objectives:

- Explicitly linked to objective
- *Thematically linked to objective*

Positive and negative headlines and key findings are indicated using the following key:

✓ Positive

✗ Negative

It is critical to understand what is known, and the known unknowns. Critically, where producing this report has highlighted gaps in the available data and resources to do so, these are evident; there is often not enough of the right type of data to assess trends in Kent's nature. Where it has not been possible to collate or analyse any relevant data within the scope of this project, or where data do not currently exist, this is indicated by 'data deficient'.

xiv

Conservation evidence and wildlife recording

There is often not enough of the right type of data to assess trends in Kent's nature.

✗ The disconnection between the general public and nature has been increasing since the 1950s.

✗ The decline in natural history teaching in schools has resulted in poor nature literacy.

✗ The lack of up-to-date habitat mapping for Kent presents challenges in assessing and creating change.

✓ The conservation evidence function was created within Kent Wildlife Trust in 2015, and continues to grow.

✓ Interest in observing and recording wildlife among the public has increased in the last twenty years or so, with the development of 'citizen science'.

✓ Kent has a wealth of talented naturalists and an active community of natural history groups.

Signposting – the following key indicates where further detail for each key finding can be found within the report:

Headlines and key findings

- *i* Kent Red List assessment
- *ii* Pressures on wildlife

Drivers of Change

- *i* Agricultural management
- *ii* Climate change
- *iii* Hydrological change
- *iv* Urbanisation
- *v* Invasive non-native species, pests and pathogens
- *vi* Air pollution
- *vii* Water pollution
- *viii* Habitat management: woodland
- *ix* Habitat management: lowland calcareous grassland
- *x* Habitat management: coastal and floodplain grazing marsh
- *xi* Habitat management: coastal habitats
- *xii* Marine
- *xiii* Wildlife recording
- *xiv* District level licensing: Great crested newt
- *xv* People engagement
- *xvi* Public health

Conservation: towards a Nature Recovery Network

- *i* Natural capital
- *ii* Conserving special places
- *iii* Restoring landscapes
- *iv* Conserving nature in an urban landscape
- *v* Conserving nature in a changing climate
- *vi* Species conservation
- *vii* Marine conservation
- *viii* Environmental policy
- *ix* People engagement in conservation
- *x* Challenges, risks and opportunities and resources for conservation

The state of Kent's species

- *i* Kent's fungi
- *ii* Kent's vascular plants
- *iii* Kent's spiders
- *iv* Kent's dragonflies and damselflies
- *v* Kent's flies
- *vi* Kent's ants, bees and wasps
- *vii* Kent's beetles
- *viii* Kent's grasshoppers, crickets and allied insects
- *ix* Kent's butterflies
- *x* Kent's moths
- *xi* Kent's amphibians
- *xii* Kent's reptiles
- *xiii* Kent's birds
- *xiv* Kent's mammals
- *xv* Kent's bats
- *xvi* Kent's marine fauna and flora
- *xvii* Kent's marine seaweeds

Landscape-scale conservation in Kent

- *i* More
- *ii* Better
- *iii* Joined

Case studies

TERRESTRIAL ECOSYSTEMS, HABITATS AND SPECIES:

The aim is that by 2045, Kent will have a rich and growing terrestrial biodiversity, underpinned by more resilient and coherent ecological networks, and healthy, well-functioning ecosystems. Objectives from the Kent Biodiversity Strategy.

This report does not set out to directly report percentage change against objectives; however, where indicated, the following thematically linked findings are relevant.

Objective: 20.84% of high value semi-natural habitat (74,750 ha) well managed for nature (from the 2015 baseline of 14.6% (54,640 ha)).

*The **area of land** under conservation management in Kent **declined by 3.8%** (14,075 ha) between 2016 and 2020.*
(Losses are mainly due to the expiration of entry level environmental stewardship schemes between 2016 and 2020).

i

Combined, **land in** Countryside or Environmental **Stewardship** accounted for 72,229 ha **(19.3%)** of Kent's land surface (373,906) in 2021.

Objective: An ecological network of semi-natural habitat (high and low value) covering 30% of Kent (112,000 ha) (from the 2015 baseline of 27% (100,872 ha)).

*In total, **16% of Kent is covered by** one or more **designations**, with 6.5% having European or international level protection, 8.9% with national protection, and 7.1% with local site designation.*

i

***Three farmer clusters** are being facilitated in Kent.*

Objective: 75% Sites of Special Scientific Interest restored to favourable condition, securing their wildlife value for the long term (from the 2019 baseline of 68%).

Only 69% of SSSIs in Kent are in **favourable condition**, 21% are in unfavourable recovering condition.

2.2% of SSSIs are assessed as unfavourable – no change, and **7.3% as unfavourable declining.**

ii

The area of land designated as ***SSSI has increased*** *in the last 10 years, and includes* ***three new sites:*** *Chattenden Woods, Lodge Hill and Swanscombe Peninsula.*

Objective: Over half of Local Wildlife Sites in good management, securing their local wildlife value for the long term.

- Data deficient

Objective: More, bigger, and less fragmented areas of wildlife-rich habitat outside the protected sites network for wildlife, with an increase in the overall extent of all priority habitats to ensure greater connectivity and resilience to climate change.

- Data deficient

Objective: New development to better provide for a greener urban environment, through increased urban tree planting, the inclusion of integral wildlife niches, and green building and landscape design.

Kent's population is growing at above average rates, *the county has some of the highest rates of house building in the UK[1], and the number of* ***vehicles*** *on Kent's roads* ***increased by 14.3%*** *between 2006 and 2016.*

iv

12 *Nationally Significant* ***Infrastructure Projects*** *have been bought forward in Kent over the last 10 years.*

[1] The Kent Nature Partnership recognises that there are both positive and negative consequences of population growth/house building for nature in Kent.

iv

The **8,000 home Otterpool** *Garden Community within Folkestone and Hythe District will include* **50% greenspace** *and developers have committed to achieving a 20% net gain.*

iv

Developments are being used as a vehicle for creating ***high-quality habitats*** *in country parks, such as the Oare Lakes development in Faversham where the creation of a wetland nature reserve is proposed to buffer the adjacent Swale SPA.*

iv

Kent Nature Partnership is encouraging all local authorities to ***adopt a minimum 20% biodiversity net gain*** *from development and incorporate the principles of Nature Recovery Networks into local policy.*

iv

Swale Borough Council *have proposed a* ***minimum 20% net gain*** *policy in their local plan.*

iv

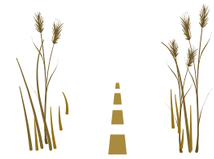
Biodiversity net gain sets a framework by which development must **leave the environment in a better state** than it was before, with a **minimum of 10% biodiversity uplift** being required.

iv

The Kent Nature Partnership is proposing a **county-wide approach to Biodiversity Net Gain** to be adopted by all planning authorities.

xi

1000s of people have been **engaged** by **Bird Wise,** set up to mitigate the pressure of increased residents coastal bird populations.



iv

150 Roadside Nature Reserves protect 89 km of roadside verges for wildlife in Kent.

iv

Medway Council have stopped regular cutting along **30 miles** of their road network to **promote wildflowers.**

Objective: Protect and restore existing trees, hedgerow and woodland, while increasing the county's tree cover with the right trees in the right places to support the recovery of wildlife, deliver natural climate solutions, and enrich people's lives.

- Data deficient

Objective: Kent-specific threatened and iconic species of terrestrial animals and plants are recovering, including those that support ecosystem services.

vi ✗

Kent Biodiversity Strategy lists **387 priority species** for Kent, identified as being the most threatened in the British Isles and **requiring conservation action.**

i ✗

Of the 3,684 species in Kent that have had their UK threat status assessed, **372 (10%)** of extant species **are classified as threatened with extinction** from Great Britain. This compares with 1,188 (15%) of 8,431 species assessed that are threatened with extinction from the UK as a whole.

iii ✗

22 spider species that occur in Kent are **threatened with extinction** in Britain.

vi ✗

42 species of ants, bees and wasps are considered **extinct** in Kent.

xii ✗

x 4

All four native reptile species are thought to be in **decline in Kent**.

xiii ✗

There is strong **evidence of decline in Kent's birds**, especially farmland and woodland species, and **wintering waterfowl** that previously were increasing.

xiv ✗

Of **29 terrestrial mammal species** found in Kent, **eight** are of major conservation **concern**.

xv ✗

Populations of most of **Kent's bat species** have **declined** in recent decades.

v ✗

***Invasive Non-Native Species**, Pathogens and Pests **that threaten wildlife** in Kent include:*

- *Ash dieback*
- *American mink*
- *Australian swamp stonecrop*
- *Parrot's feather*
- *Water fern*
- *Spanish bluebell*
- *Himalayan balsam*
- *Oriental chestnut gall wasp*
- *Pacific oyster*
- *American signal crayfish*

i ✓

859 species of fungi** are known **from Kent...

i ✗

...eight of these fungi are on the **UK Red Data List**, and **43** on the **Kent Red Data List**.

iii ✓

***Kent has 71% of all species of spider** recorded in the British Isles.*

iv ✓

***Kent** is one of the most **species-rich counties** in the UK for **dragonflies and damselflies**; 36 species are resident or regular migrants.*

iv ✓

***Kent** has the UK's **only dainty damselfly populations**.*

v ✓

60%** of the **British fly species** have been recorded **in Kent.

vi ✓

***Kent supports** nationally **important populations of ants** (41 species), **bees** (219 species) and **wasps** (221 species).*

vii ✓

***Almost 68% of Britain's beetles** have been **recorded in Kent**, including many threatened species.*

ix ✓

***Kent has 42** of Britain's 59 resident **species of butterfly**, including three of the rarest species.*

x ✓

While nationally the abundance of **moths** is in decline, **trends in Kent** over the last 10 years are mixed, but **more** species **show an increase** than a decrease.

xi ✓

***Kent's amphibian populations** are thought to be **reasonably stable**, though there have been historical losses.*

xii ✓

Sand lizards have been reintroduced into Kent following extinction in the late 1960s.

xiii ✓

***245 bird species** have been **recorded regularly in Kent** during the past 100 years, 150 of them breeding.*

xv ✓

*Kent has a **rich fauna of bats** with **17 of the UK's breeding species** recorded in the last 10 years.*

xv ✓

Three species of bat new to Kent have been **recorded in the last ten years**.

vi ✓

*Opportunities have been identified to **re-establish expatriated species** to Kent:*

- *Corn crake*
- *Chough*
- *Pine marten*
- *White-tailed sea eagle*
- *Cirl bunting*
- *Stone curlew*
- *White stork*

✗

***Kent's position** close to the **continent makes it a gateway for new species to arrive** either by natural dispersal, or by human assisted migration... a vulnerability in terms of INNS...*

✓

*... and a **stepping stone** to enable species to **adapt and respond to climate change.***

PRIORITY HABITATS

Objectives from the Kent Biodiversity Strategy.

1. Lowland Beech and Yew woodland

Objective: by 2025, restore 92 ha; create 49 ha), lowland mixed broadleaved woodland (restore 30 ha; create 16 ha).

viii ✗

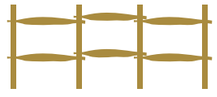
*Due to a **lack of evidence** at a strategic scale, it is a **challenge to report** on the state of Kent's woodlands.*

viii ✗

*Since being **first recorded** in the county **in 2012, Ash Die Back (ADB) now affects trees** of **all sizes** throughout the county.*

viii ✗

***Woodland specialist species** are being affected in Kent, mirroring the national picture with **losses of woodland birds** including Willow Tit, Wood Warbler and Redstart.*



viii ✓

***Effective woodland** management may be **starting to increase in Kent** with the emergence of new markets for woodland products.*

2. Chalk grassland

Objective: by 2025, 730 ha creation; 770 ha enhancement and restoration of semi-improved chalk grassland.

ix ✓

While **projects are improving**, restoring, and reconnecting threatened **chalk grassland** habitats...

ix ✗

...Fragmentation and **loss of connectivity** through development in the west of the county, and conversely through **under-management** and scrub encroachment in the eastern half, **have reduced the area of chalk grassland in Kent**.

ix ✗

***Notable chalk grassland species** such as Wart-biter Bush-cricket, Glow-worm, Straw Belle and many specialist orchid species **are barely hanging on**.*

ix ✓

*There is approximately 1,900 ha, or **2.5%** of the **world's remaining lowland chalk grassland in Kent.***

[ix]

Partnership working with farmers is delivering **gains** for chalk grassland habitats, species and farmland birds.

3. Lowland meadow

Objective: by 2025, 25 ha creation; 100 ha enhancement and restoration.

[i]

A ***preference for silage*** *over hay* ***threatens*** *the* ***diversity*** *of meadows.*

Lowland dry acid grassland/ Lowland heathland

Objective: by 2025, enhancement and restoration of 5 ha heathland; 20 ha acid grassland.

- Data deficient

Hedgerows

Objective: by 2025, restore 2250 km and plant 2250 km new species-rich hedgerow.

- Data deficient

Brownfield

Objective: by 2025, to map and maintain the county's best and significant brownfield sites and manage them appropriately for their significant species.

- Data deficient

Traditional orchard

Objective: by 2025, maintain in favourable condition 39 ha; restore 8 ha and create 67 ha.

- Data deficient

PRIORITY SPECIES

Objectives from the Kent Biodiversity Strategy.

Shrill Carder Bumblebee

Objective: by 2020, an increase in the distribution of Shrill Carder Bumblebee in recording hectads (10 km x 10 km) in Kent. In addition, by 2023, male and/or queen Shrill Carder Bees are recorded on all Beewalk transects where the species is known to occur.

[vi]

The ***Thames Estuary*** *is a* ***stronghold for the Shrill Carder Bee****, England's rarest bumblebee.*

[vi]

The ***'Back from the Brink'*** *Shrill Carder Bee Recovery Project, and* ***Making a Buzz for the Coast*** *project delivered* ***numerous positive outcomes*** *for the species.*

Turtle Dove

Objective: by 2020, to maintain the population of turtle doves in the 7 highest priority Turtle Dove Friendly Zones (out of a total of 13 TDFZs in the South East) and for activity to have begun in the remaining 6 Turtle Dove Friendly Zones.

Turtle Dove numbers are stable in Turtle Dove Friendly Zones.

[xiii]

The ***Turtle Dove remains at risk*** *of being* ***lost in Kent as a breeding species.***

Nightingale

Objective: by 2025, 1,450 to 1,550 singing males.

[xiii]

Kent *remains one of the* ***last strongholds of Nightingale*** *in the UK.*

[xiii]

The ***Nightingale*** *is at* ***risk of being lost in Kent as a breeding species***

Swift

Objective: by 2025, to stop the decline of Swifts by ensuring that every new house built in Kent contains one Swift box or nest-brick.

[xiii]

The ***Swift*** *is* ***in decline*** *in Kent.*

Adder

Objective: by 2025, increase by 2.5% per annum in the Adder range (number of monads occupied) and overall frequency of recording.

[xii]

The ***Adder*** *is thought to be* ***in more urgent need*** *of new conservation efforts* ***than any other British reptile****.*

[xii]

KRAG *is undertaking a* ***long-term monitoring programme*** *to assess the* ***impacts of climate on Adders****.*

Adonis Blue

Objective: by 2025, to retain Adonis Blue on all known sites and locate more sites, to show an increase in the known distribution of 731 km squares. The Adonis Blue population trend (monitored by the UK Butterfly Monitoring Scheme) is Stable or Increasing.

ix ✓

Adonis Blue *are now well* ***established*** *and* ***spreading*** *across the landscape once more.*

Heath Fritillary

Objective: by 2025, maintain a minimum of 25 interconnected colonies in Kent. Increase the area of suitable interconnected habitat within the Blean complex through active coppice, non-native tree removal, and grazing, to create and maintain open areas, enhance food plant distribution in the Blean to 1980 levels by 2010 and then maintain (30 ha per year). Establish new populations outside of the current distribution to safeguard and enhance the status of the population.

ix ✓

Heath Fritillary *has done well in the last decade,* ***increasing in number and*** *extending its* ***range***.

Dwarf/Kentish Milkwort

Objective: mapping and monitoring and action to move towards removal of this species from the brink of extinction by 2050.

ii ✓

Dwarf Milkwort maintains a presence at each of its **three extant sites**, responding well to conservation measures at Godmersham Downs.

ii ✗

Despite searching, Dwarf Milkwort has **not been recorded outside** of its recent **known range**.

FRESHWATER AND INTERTIDAL ECOSYSTEMS, HABITATS AND SPECIES:

The aim is that by 2045, Kent will have clean, plentiful and biologically diverse freshwater and intertidal ecosystems, underpinned by implementation of a catchment-based approach. Objectives from the Kent Biodiversity Strategy.

Objective: 75% freshwater SSSIs restored to favourable condition, securing their wildlife value for the long term.

- Data deficient

Objective: Over half of Local Wildlife Sites in good management, securing their local wildlife value for the long term.

- Data deficient

Objective: Reaching or exceeding objectives for rivers, lakes, coastal, and ground waters that are specially protected, whether for biodiversity or drinking water.

iii ✓

The area of ***standing water*** *and canal habitat* ***slightly increased*** *by just under* ***2%*** *(79.8 ha) from 2003 to 2012.*

iii ✓

Four Interreg-funded projects *are ongoing in Kent (PROWATER, H2O: Source2Sea, SCAPE and TRIPLE-C), all* ***advancing thinking and delivery around nature-based solutions*** *in freshwater settings, which will feed into future schemes in terms of how stewardship of the water resource is appropriately considered and promoted.*

Objective: no deterioration in the status of any water body in Kent. If deterioration of any element's classified status occurs, actions will be implemented to reverse the decline.

vii ✗

Although **water pollution has been significantly reduced** over the last 20 to 30 years, Kent's water bodies are **still under pressure from pollutants**. Two of the most common affecting Kent's water bodies are **phosphorus** and **nitrates**. A small number of other persistent chemicals are also a cause for concern (Environment Agency, 2020).

vii ✗

The **water quality** in Kent's rivers is **impacted** by pollution from wastewater and urban sources, which is increasing **due to population growth**.

vii ✗

Agriculture places pressure on water resources through **demands for irrigation and pollution.**

vii ✗

In **2019, 77% of Kent's groundwater bodies did not meet** the required WFD **standard for good chemical status** and two groundwater bodies deteriorated, in part due to the presence of nitrates in the water. (Across England, nitrates are the most common cause of groundwater test failures).

vii ✓

Since 2015, **sixteen of Kent's rivers** have **improved** their phosphate classifications, with **seven improving to 'good' status.**

vii ✓

There are now **stricter rules for farms** located in **Nitrate Vulnerable Zones**, which cover nearly **60% of Kent**.

Objective: Improve 375 km (15 km per year) of waters in Kent (rivers, lakes, canals, groundwater, transitional and coastal waters). The enhancements include work to improve ecological, chemical and/or physical quality, e.g. reducing pollution, restoring flows and improving habitat.

vii ✗

Water industry discharges are the **biggest contributor of phosphorus to** Kent's **rivers and lakes**, followed by agriculture and private sewage treatment plants.

vii ✗

In **2019, 79% of the rivers and lakes in Kent** monitored for phosphorus **did not meet the required standard** for good ecological status as set out under the Water Framework Directive. (Compared to 67% of water bodies across the South East, and 56% throughout England).

vii ✗

The **predominant source of nitrates** affecting Kent's groundwater **is agriculture.**

vii ✗ 20%

Out of ten **groundwater bodies affected** by high **nitrate** levels in Kent, five have **leaking utility sewers** identified as one of the probable sources.

vii ✗

Kent's groundwater is **affected** by historical and persistent **chemicals**.

vii ✗ 0%

None of Kent's rivers or lakes **achieved good status** for other chemicals in 2019, **compared to 98%** achieving good chemical status **in 2016**.

v ✓

***Water companies** are increasingly **becoming more attuned** to **risk-assessing** their operational impact in terms of the Invasive Non-Native Species (INNS) risk and what more they can do to help.*

vii ✓

*The **Reduction and Prevention of Agricultural Diffuse Pollution Regulations** came into effect in **2018** to ensure that farmers manage their land, fertilisers and livestock to prevent diffuse pollution from occurring.*

PRIORITY HABITATS

Objectives from the Kent Biodiversity Strategy.

Rivers

Objective: by 2025, improve 105 km of waterways (15 km per year x 7 years).

iii ✗

***Kent's rivers are vulnerable** to land-use change and management, **modifications** to river channels, **and changes** in weather patterns.*

iii ✗

*The **water quality** in Kent's rivers is **negatively impacted by pollution** from wastewater and urban sources, which is **increasing due to population growth**.*

iii ✓

***Recent conservation efforts** have focused on **reducing the impact of** river **modifications**, reducing **pollution**, and **restoring natural processes** within rivers.*

Chalk streams

Objective: by 2025, raise the profile and prioritise the restoration of this globally rare freshwater habitat.

iii ✗

Over-abstraction has a ***serious impact*** *on river ecosystems,* ***especially chalk streams****.*

Ponds

Objective: by 2021, 322 additional ponds with a total area of 161,000 m²

iii ✓

In 2012, Kent had 19,206 ponds.

i ✓

In spite of ***national decline****,* ***farmland pond numbers*** *in Kent remain* ***stable****.*

xiv ✓

District-level licensing for the Great Crested Newt *has the potential to significantly* ***increase*** *the number of* ***high-quality ponds in Kent****.*

✓

76 *restored or newly-created* **ponds** *in Kent* **were surveyed** *during the first year of monitoring.* ***Thirty-six tested positive for Great Crested Newts****, representing a* **39.5% success** *rate of colonisation one year after their creation/restoration.*

Coastal and floodplain grazing marsh

Objective: by 2025, restore 2000 ha.

x ✓

The extent of **well-managed grazing marsh has increased by at least 1,800 ha** since the 1980s, with an additional 450 ha of restoration planned in 2021-22.

x ✗

Invasive non-native species *Floating Pennywort, Crassula and American Mink* ***impact grazing marsh in Kent****.*

x ✓

55% of grazing marsh *in Kent is* ***designated as SSSI*** *and direct loss of habitat has slowed.*

Intertidal mudflats and coastal saltmarsh

Objective: by 2025, create 50 ha of net gain for both habitats combined.

xi ✗

Kent's intertidal mudflats *and coastal saltmarsh are* ***vulnerable*** *to the effects of* ***sea-level rise****.*

xi ✗

Recreational disturbance *is a constant* ***pressure*** *on* ***coastal habitats*** *and is* ***causing disturbance of shorebirds****.*

xi ✓

Saltmarsh *is one of the most* ***important habitats*** *in Kent for* ***biodiversity****.*

xi ✓

Saltmarshes in Kent *appear* ***not*** *to have* ***suffered reduction*** *in extent* ***during the past decade****.*

xi ✓

Kent's ***mudflats support*** *species including the* ***nationally scarce Tentacle Lagoon Worm.***

xi ✓

Kent's saltmarsh supports *an* ***amphipod*** *that* ***may play*** *an important* ***role in controlling saltmarsh erosion****.*

xi ✓

Research *is helping to* ***lobby for greater support to protect*** *areas from disturbance.*

Wet woodland

Objective: by 2025, creation of 10 ha of wet woodland.

- Data deficient

Vegetated shingle

Objective: by 2025, maintain total extent of coastal vegetated shingle habitat; ensure no net loss; and restore all coastal vegetated shingle to favourable condition (or unfavourable to recovering).

xi ✗

***Recreational disturbance** is **damaging fragile habitats** including dunes and vegetated shingle.*

xi ✓

*The **vegetated shingle at Dungeness** is one of the largest such expanses in Europe and of **international importance**.*

xi ✓

***Romney Marsh Countryside Partnership** and **KWT's Fifth Continent Project** have been working with other landowners, including the Ministry of Defence, to **promote and support appropriate habitat management** of the shingle.*

PRIORITY SPECIES

Objectives from the Kent Biodiversity Strategy.

European Eel

Objective: By 2025, demonstrable progress to Silver Eel escapement targets in all catchments that we influence; secure access for eel to an additional 200 km of habitat.

iii ✗

***Obstructions to passage** in the River Medway are thought to **explain the disparity of eel population density** between it and the River Stour.*

Lapwing

Objective: by 2025, > 1,000 pairs of breeding Lapwing.

iii ✓

***720 ha of habitat restoration** on the North Kent Marshes have **resulted in substantial increases in breeding waders** between 1982 and 2010/12. Numbers of Lapwing have increased from 561 to **833 pairs**.*

Sandwich Tern

Objective: by 2025, to retain the colony of 300 to 500 pairs in the Medway Estuary in the short-term and to identify sustainable breeding habitat in North Kent in the long-term.

xiii ✗

***The Sandwich Tern is vulnerable to being lost** in Kent, as its **breeding** population is restricted to a **single area**.*

Water Vole

Objective: by 2025, to retain Water Vole populations on all known sites and demonstrate progress in assessing county-specific status through encouraging involvement in the National Water Vole Monitoring Programme (evidenced by all existing sites being monitored and the addition of new sites to the register). This will enable subsequent assessment of the population across Kent and enable specific actions to be identified.

xiv ✓

***Kent holds three national key areas for water vole:** Elmley, The North Kent Marshes, and Stodmarsh.*

iii ✗

The **distribution** of Water Vole is **still declining** in Kent's key areas for this species, despite conservation efforts.

True Fox-sedge

Objective: by 2025, update monitoring data for this species, with a view to verifying any decline and what management action might appropriately address this (e.g. by managing the invasive growth of trees and scrub around pond and ditch margins).

ii ✓

New finds and the **rediscovery** of some of its **old sites** mean more is known about the Kent status **for True Fox-sedge** than at any time since the 1940s.

MARINE ECOSYSTEMS, HABITATS AND SPECIES:

The aim is that by 2045, Kent will be making its contribution to reversing the loss of marine biodiversity and delivering clean, productive and biologically diverse oceans and seas through good management. Objectives from the Kent Biodiversity Strategy.

Objective: A series of Marine Protected Areas off the coast of Kent, forming an ecologically coherent network that is effective in conserving marine habitats.

xii ✓

While Kent now has **11 Marine Conservation Zones**.

xii ✓

*This **does not** always mean greater protection, management measures or enforcement is in place.* In 2019, **additional features were designated** within Kent's pre-existing MCZs.

i ✓ 39% (33.5%)

*The **area** of sea **under conservation management** in Kent in 2020 was **39.0%** (158,895.6 ha of Kent's seas to the meridian line), **up from** 33.5% (136,033.2 ha) in **2016**.*

Objective: there will be no further decline of Kent's Marine Protected Areas, which will be showing signs of recovery as a result of regular monitoring and well-informed management that limits damaging activities.

xi ✓

North East Kent Scientific Advisory Group working within the North East Kent Marine Protected Area has **provided information on the distribution, impact and control** of Invasive Non-Native Species (INNS).

vii ✓

***Coastbusters** has **been successful in reducing and stabilising threats** from invasive species:*

- *1,597 volunteer hours*
- *322,495 invasive pacific oysters removed*
- *1,252.5kg invasive wireweed removed*

Objective: Kent's Marine Protected Areas will be improved and extended, so that representative habitats missing from the network are featured and offered protection as required.

vii ✓

The **Medway Estuary** MCZ is now part of **a 'no-take' zone**.

Objective: Pressures will be assessed, and appropriate management identified and implemented for the entirety of Kent's Marine Protected Areas, to adequately protect the features for which those areas were designated (it is the intention that this objective will be achieved within the shorter timeframe of 2025).

xii ✗

Pressures on **marine biodiversity** are **increasing** around this busy part of the South East.

xi ✗

Nutrient enrichment from agriculture and **development** continues to be **an issue**, as can be seen in the Medway Estuary and Marshes SSSI.

v ✗

INNS continue to increase their distribution and abundance **around the Kent coast.**

xii ✗

Ports have continued to expand resulting in significant amounts of **dredging and pier expansion**.

xii ✗

Offshore windfarms have **increased** in number or are in the **process of enlargement**.

xii ✗

Sewage pollution is an ongoing problem, with **significant incidents** occurring as recently as **summer 2021**.

xii ✓

Mitigation measures have **successfully replaced lost habitat** at Dover Port.

xii ✓

*The **Kent coast** has **not seen a significant petroleum oil pollution incident this century.***

Objective: The South East and South Marine Plans are being applied and have been integrated within relevant local plans.

xii ✓

Kent now has **two Marine Plans: The South East Inshore Marine Plan** (Felixstowe in Suffolk to near Folkestone in Kent and **The South Marine Plan** (Folkestone in Kent to the river Dart in Devon, and to the international boundary with France and the Channel Islands).

Objective: We will be managing shellfish stocks sustainably and harvesting shellfish in a non-environmentally damaging way.

xi ✗

Land-based commercial ***harvesting of coastal plants, shellfish and fish****, coupled with* ***boats using bottom trawling gear****, can* ***lead to*** *damaging* ***exploitation*** *of* ***intertidal communities*** *if not managed in a sustainable manner.*

Objective: There is better understanding of the subtidal and tidal environment and ephemeral marine features, with the development of spatial management plans and strategic action for those areas under most pressure.

vii ✓

There is a **much better understanding** of the importance of **marine biodiversity** now than 10 years ago.

vii ✓

The ***'Guardians of the Deep'*** *project* ***increased awareness*** *of* ***and connection*** *to the local marine environment, and increased the number of informed* ***coastal volunteers*** *protecting our coast.*

vii ✓

The new ***'Wild Estuary'*** *project has* ***secured funding*** *and incorporates successful elements of 'Guardians of the Deep'.*

vii ✓

Bird Wise has developed:

- ***Coastal codes*** *for photography, airborne and water activities, bait digging, and dog walkers.*
- ***Coastal Canines Club*** *- promoting ways for dogs to enjoy coasts in a way that does not cause disturbance.*
- *Bird Wise volunteers are regularly out on the coast* ***promoting the codes of conduct and advising*** *on bird disturbance.*

Objective: The natural capital value of the marine environment as a carbon sink is better understood and being managed to realise this contribution.

- Data deficient

PRIORITY HABITATS

Objectives from the Kent Biodiversity Strategy.

Intertidal chalk and subtidal chalk

Objective: by 2022, to identify suitable locations and establish scientific reference areas for specific areas of chalk reef.

- Data deficient

Subtidal mud

Objective to be confirmed.

xii ✓

The designation of ***Swanscombe MCZ in 2018 protects*** *intertidal mud* ***habitat****.*

PRIORITY SPECIES

Due to the innate difficulty of undertaking meaningful monitoring of marine species at a county level, no targets are set for marine species in the KBS; however, Harbour and Grey Seals are included as an indicator species for the health of the estuarine environment. Objectives from the Kent Biodiversity Strategy.

Harbour and Grey Seals

Indicator measure: Harbour and Grey Seal population estimates for Greater Thames Estuary.

iii ✓

Numbers of Grey and Harbour Seals are increasing population trends, with **2,866 Grey and 797 Harbour Seals recorded** in the Greater Thames Estuary (Felixstowe to Deal) in 2021.

CONNECTING PEOPLE WITH THE NATURAL ENVIROMENT:

The aim is that, by 2045, the widest possible range of ages and backgrounds will benefit from the mental and physical health advantages of the natural environment, and we will have inspired the next generation to take on guardianship of the county's biodiversity. Objectives from the Kent Biodiversity Strategy.

Objective: an increase in the number of health initiatives, bringing more people into contact with the natural environment.

xv ✓

There has been **increased recognition of** the **health benefits** provided by nature.

xv ✓

A wealth of **initiatives** have provided health benefits and **driven positive engagement** in Kent's nature including:

- Wild About Gardens
- Coast Busters
- Coastal Guardians
- Guardians of the Deep
- Bird Wise
- Forest schools
- Nature Tots
- Take Root
- Down to Earth

xvi ✓

***41% of people** said nature was **more important** than ever **during lock-down**.*

xvi ✓

*The **top reasons for** visits to **green space** are for **physical and mental health**.*

xvi ✓

***Ecology Island** project **participants** say that making a positive difference for local wildlife gives them a **sense of pride and self-worth**.*

Objective: an increase in the number of people taking action that benefits biodiversity, including citizen science projects, with 23% of Kent's residents participating in environmental volunteering.

xv ✓ x 400

***Between 2016 and 2020**, Guardians of the Deep trained a network of **400 volunteers**.*

Objective: an increase in the number of opportunities for children and young adults to engage with environmental issues, in and out of school.

xv ✓ 49,440

***Between 2011 and 2020**, KWT engaged **49,440 people** through their onsite **education programmes**.*

xv ✓

*Over the **last 10 years**, KWT has **engaged 4,499** people in **Forest School** and Nature Tots events.*

Objective: there is more and better quality, accessible natural space and green infrastructure close to where people live and work, particularly in urban areas, where both people and wildlife can thrive; and all new developments will include accessible green space.

xvi X

*There is a strong **correlation** between **green space deprivation** and **ethnicity**, with almost **40%** of people of Black, Asian and minority ethnic **(BAME) backgrounds** living in the most **green space-deprived** neighbourhoods, compared to 14% of white people.*

See also key findings reported under terrestrial ecosystems, habitats and species.

Objective: More people are spending more time in natural spaces and benefiting their mental health and wellbeing.

- Data deficient

Objective: Create a network of visitor "hubs" in key locations in Kent, including North Kent Marshes, Blean Woods and North Downs, that enable an enhanced visitor experience without negatively impacting wildlife and provide a gateway for people to get involved and take action for nature.

- Data deficient

Objective: People are using the increased coastal access rights to gain a better connection with, and understanding of, the coastal margins and marine environment.

- Data deficient

Objective: Whilst there is an increase in the number and quality of opportunities for Kent's residents to connect with the natural environment, this access is appropriately managed, and impacts from disturbance monitored, so that the health and wellbeing benefits realised are not to the detriment of the natural environment through increased use and associated recreational disturbance.

xv

Inappropriate engagement threatens Kent's **wildlife**. In the last 10 years we have seen:

- Increased pressure on wildlife sites and Public Rights of Way (PROW).
- Lack of public knowledge of impact of actions.
- Disconnect with nature leading to lack of care.
- Increases in dog attacks on livestock.
- Increases in fly tipping and littering.

xvi

Rural parishes are struggling *to combat pressures.*

Objective: Kent's population is supported in making the right environmental choices and is empowered to take direct action for the recovery of nature with its own informed actions.

iv

Public perception *is paving the way for* ***sympathetic management*** *of road verges and amenity areas.*

ix

There is ***increased awareness*** *and implementation of public and stakeholder engagement and science* ***among conservation organisations***, *for example:*

- *East Kent Beaver Advisory Group*
- *Wilder Blean*

Equality, diversity and inclusion

A lack of diversity within the conservation sector in Kent is a factor that all conservation organisations are aware of and keen to address. The KNP believe that the challenge of restoring and protecting the natural environment is one that will continue for many generations and have profound effects on all sectors of society. To this end, KNP is keen to ensure that nature recovery work involves all ages, social groups, ethnic and other aspects of diversity within Kent. KNP utilises equalities and diversity assessment within its own work but is equally keen to ensure that everyone should have the opportunity to experience the joy of wildlife in their daily lives, and in this respect are committed to improving equality, diversity, and inclusion.

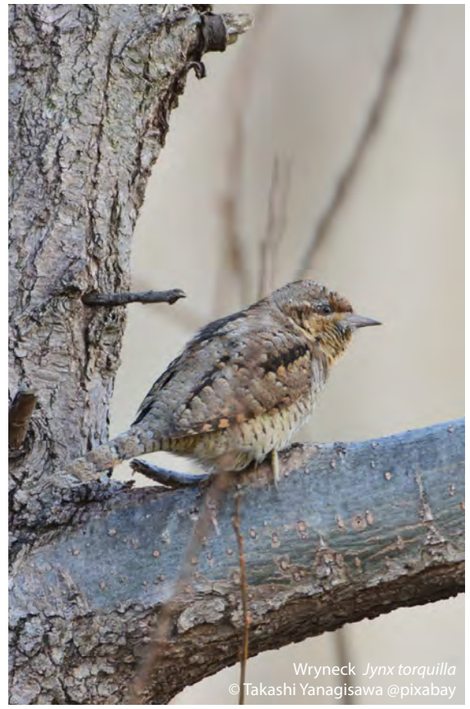
KENT RED LIST ASSESSMENT

Presented here is an assessment of the percentage of species found in Kent that have been allocated into each of the International Union for Conservation of Nature (IUCN) Red List Categories. Species assessed as Critically Endangered, Endangered or Vulnerable are formally classified as threatened and, are therefore, at risk of extinction.

Percentage of species threatened = (CR + EN + VU)/ (total number assessed – DD – RE).

A dataset of species records for Kent and their national IUCN Red List categories was extracted from the Kent and Medway Biological Records Centre (KMBRC). The dataset contained 20,258 species records for Kent, of which only 585 had data on their post-2001 British Red List status. This is because the Least Concern category is not usually applied in the status reviews published by Natural England, which inform designation reporting. To populate missing data, the post-2001 UK Red List statuses (or most recent assessments) were obtained from the Joint Nature Conservation Committee. These provide the most up-to-date source of information on the Red List statuses of UK species. The final dataset contained 3,684 assessed and 16,574 unassessed species for Kent.

The frequency of assessed species in each of the Red List categories are shown in Figure 1. Of the 3,684 species in Kent that have had their UK threat status assessed, 372 (10%) of extant species are classified as threatened with extinction from Great Britain. This compares with 15% or 1,188 of 8,431 species assessed for the UK as a whole in the 2019 UK State of Nature report. Twenty-four (0.7%) species known from Kent have become extinct in the UK since 1500, including four species of fungi or lichen, nine species of vascular plant, six species of insect and five species of bird (See Table 1). Most extinctions occurred between 1800 and the mid-20th century; however, losses are ongoing. For example, wryneck and serin have been lost in the last 100 years.



Wryneck *Jynx torquilla*
© Takashi Yanagisawa @pixabay

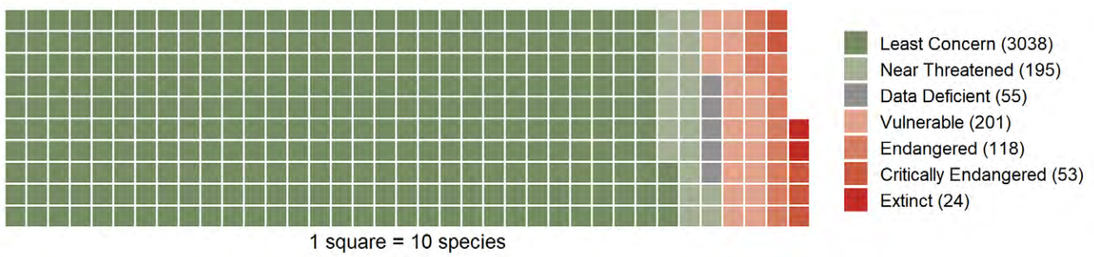


Figure 1 Frequency of assessed species in Kent in each of the Red List categories

Table 2 Species known from Kent that have become extinct in the UK since 1500.

Taxon group	Scientific name	Common name
Fungi & lichens	Calicium quercinum	
	Chaenothecopsis debilis	
	Lecania fuscella	
	Pyrenula nitidella	
Vascular plants	Angelica archangelica	Garden angelica
	Arnoseris minima	Lamb's succory
	Bromus interruptus	Interrupted brome
	Carex trinervis	Three-nerved sedge
	Caucalis platycarpos	Small bur-parsley
	Euphorbia peplis	Purple spurge
	Filago gallica	Narrow-leaved cudweed
	Galeopsis segetum	Downy hemp-nettle
	Hieracium cambricogothicum	Hawkweed
Insects	Coenagrion scitulum	Dainty blue damselfly
	Gyrinus natator	A whirligig beetle
	Lagria atripes	A darkling beetle
	Meloe variegatus	An oil beetle
	Nymphalis polychloros	Large tortoiseshell
	Polyphylla fullo	Pine chafer
Birds	Calidris temminckii	Temminck's stint
	Chlidonias niger	Black tern
	Jynx torquilla	Wryneck
	Otis tarda	Great bustard
	Serinus serinus	Serin

The percentage of assessed species, in broad taxonomic groups, falling into each of the Red List categories is shown in Figure 2. A substantial proportion of the vertebrates in Kent, but comparatively fewer species of invertebrates in Kent, are threatened with extinction in the UK. A similar trend is observed at national and global scales. Most species of bryophytes found in Kent are also threatened with extinction at a national scale.

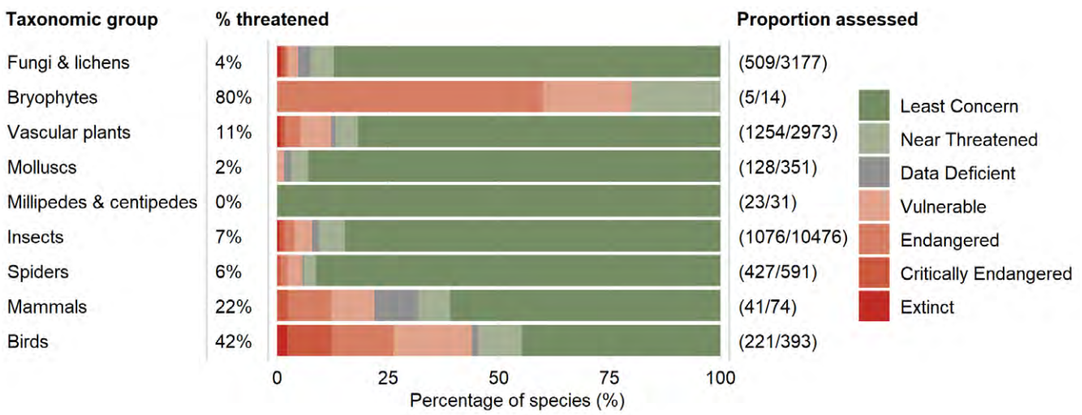


Figure 2 Percentage of species in Kent in each Red List category by taxonomic group, and the proportion of species recorded from Kent that have been assessed

Darkling-Beetle *Tenebrionidae*
© Abhishek Singh Bisht @pixabay