Part 2 : Statement of biodiversity priorities – Strategy area description

Canterbury view by Jim Higham

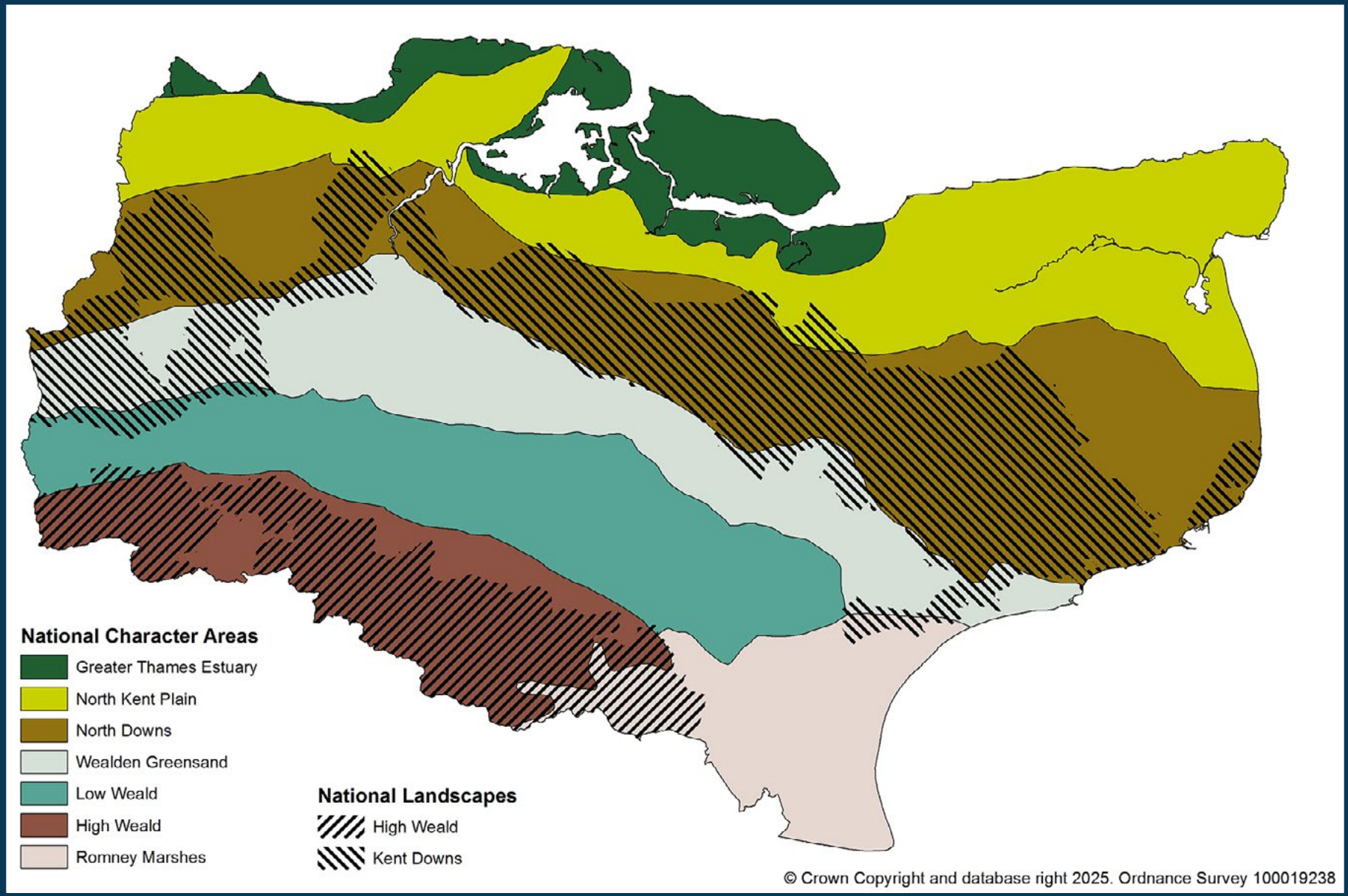
1. Kent and Medway's natural landscape

When examining an area on a large scale, and for the purposes of nature recovery, it is important to look at natural and functional areas, rather than those defined by administrative boundaries.

The National Character Areas provide a means of considering the area on a strategic scale. These follow natural lines in the landscape, defined by a unique and shared combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. The Kent and Medway Local Nature Recovery Strategy area has seven distinct National Character Areas (NCA):

- Greater Thames Estuary (NCA81)
- North Kent Plain (NCA113)
- North Downs (NCA119)
- Wealden Greensand (NCA120)
- Low Weald (NCA 121)
- High Weald (NCA122)
- Romney Marshes (NCA123)

The Strategy area also includes two National Landscapes(formerly known as Areas of Outstanding Natural Beauty) the Kent Downs and the High Weald.



The National Character Areas of Kent and Medway and the county's National Landscapes.

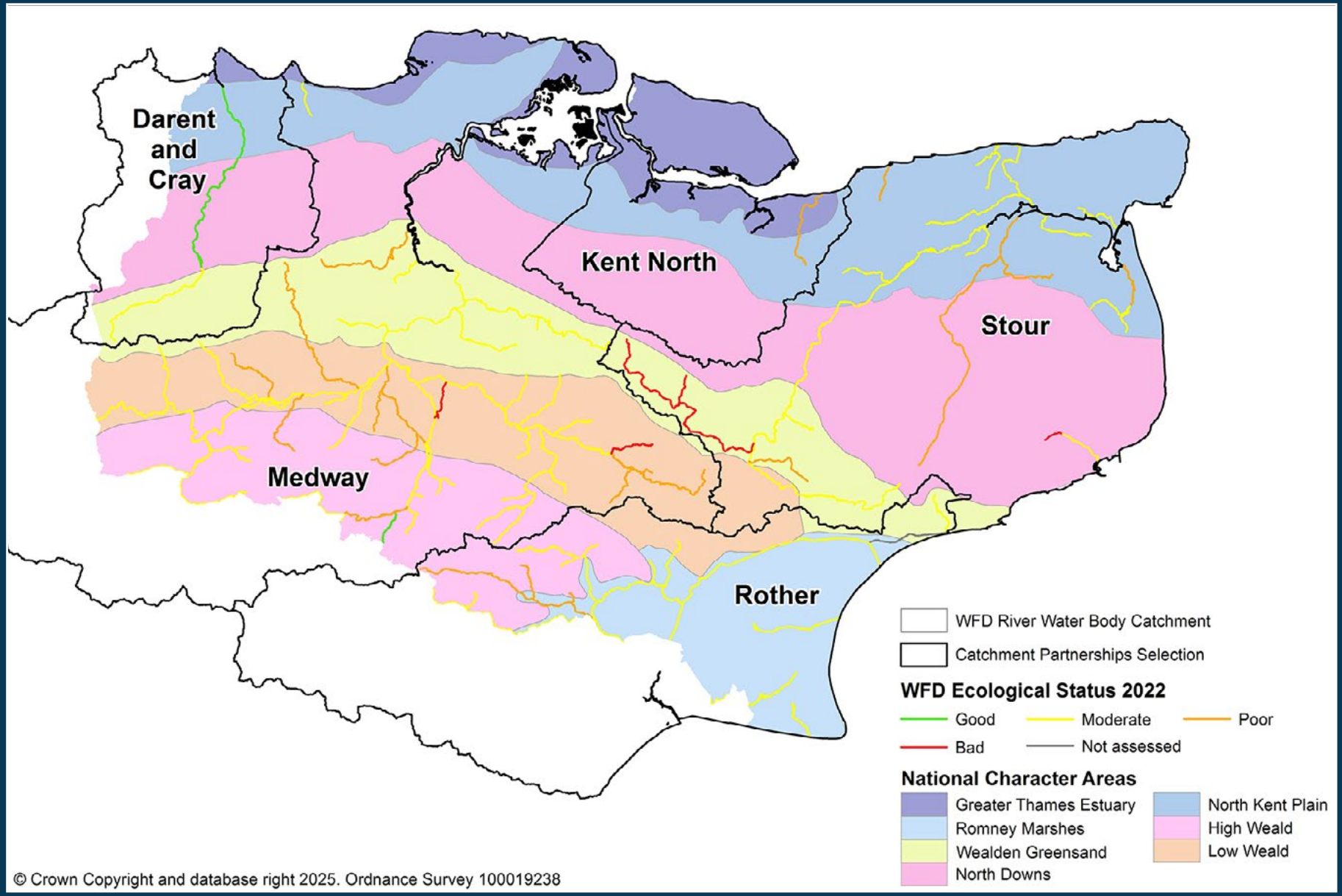
Another way of considering the areas of the county, in terms of functional landscapes, is on a catchment basis. A river catchment is a natural drainage basin that collects water from various sources, channelling this water into a low point and eventually merging into the main river. Everything within a catchment is linked and reliant on everything else. Within a catchment will be, for example, areas providing natural flood management, water provision for agriculture, and wildlife dependent on the associated food chains. These are just a few ways in which water may provide a service. For rivers and their connected habitats to be healthy, both need to be healthy.

The county has five catchments (not all exist solely within the borders of Kent and Medway):

- North Kent catchment
- River Stour catchment
- River Medway Catchment
- River Darent and Cray catchment
- River Rother catchment

For the purposes of this introduction to the Strategy area, the description is framed around the National Character Area descriptions, supplemented with further detail on the catchment.

River Stour by Jim Higham



The River Catchment Areas of Kent and Medway.

1.1 Greater Thames Estuary National Character Area

This is predominantly a remote and tranquil landscape of shallow creeks, drowned estuaries, low-lying islands, mudflats, and broad tracts of tidal saltmarsh and reclaimed grazing marsh that lies between the North Sea and the rising ground inland. It forms the eastern edge of the London Basin and encompasses the coastlines of South Essex and North Kent, along with a narrow strip of land following the path of the Thames into East London.

Despite its close proximity to London, the Greater Thames Estuary National Character Area contains some of the least settled areas of the English coast, with few major settlements and medieval patterns of small villages and hamlets on higher ground and the marsh edges. This is a stark contrast to the busy urban and industrial areas towards London, where population density is high and development pressures are increasing. Sea defences protect large areas of both reclaimed grazing marsh and its associated ancient fleet and ditch systems, and productive arable farmland. Historic military landmarks are characteristic features of the coastal landscape.

The coastal habitats of the Greater Thames Estuary National Character Area are internationally important for their biodiversity interest, and support large numbers of overwintering and breeding wetland birds, rare plant and invertebrate species, and diverse marine wildlife. The coastline of the National Character Area also includes a stretch of the King Charles III England Coast Path.

The vast majority of the coastline and estuaries is designated as Ramsar sites and Special Protection Areas. Brownfield sites support priority open mosaic habitat and its associated nationally-rare invertebrate species. The coastline is also of major geomorphological interest for the study of estuarine and coastal processes, and for its nationally and internationally important deposits of London Clay fossils and Pleistocene sediments.

There is a marked contrast between the wild and remote coastal marshes and the industrial and urban developments, which are highly visible in the low-lying landscape. A key challenge is to accommodate increasing development pressure in the area, protecting and enhancing the natural landscape and its internationally important coastal habitats and species, and nationally important open mosaic habitat.

1.2 North Kent Plain National Character Area

This is the strip of land between the Thames Estuary to the north and the chalk of the Kent Downs to the south. The area is open, low and gently undulating. It is a very productive agricultural area with predominantly high-quality, fertile loam soils, characterised by arable use. Traditional orchards, soft fruits and other horticultural crops grow in central and eastern areas, giving rise to name 'Garden of England'.

There is an extensive area of ancient woodland around Blean, designated a Special Area of Conservation for sub-Atlantic and medio-European oak or oak-hornbeam forests. This is one of the largest complexes of ancient semi-natural woodland in England and the largest area of continuous woodland in Kent. Wooded heath and grassland also form a significant part of the Blean complex. The woodlands in the west of the National Character Area provide important areas of green space and are key sites for biodiversity. They include Chattenden Woods, Shorne and Ashenbank Woods, Great Crabbles Wood, Darenth Wood, Northward Hill and Crofton Woods. Part of this area makes up the North Kent Woods and Downs National Nature Reserve, designated as such in 2025. The east of the National Character Area is characterised by poplar and alder shelterbelts and small woodlands.

However, the majority of the National Character Area is an open landscape. Characteristic shelterbelts occur within the fruit-growing areas, but the agricultural land is mostly devoid of hedgerows. There are also fragments of neutral, calcareous and acid grassland, and also heathland, including Dartford Heath.

Reculver coastline by Jim Higham

The North Kent Plain National Character Area meets the sea between Whitstable and Deal, changing from a north-facing to an east- or south-facing shore. There is a great diversity of coastal habitats, including chalk cliffs and reefs around Thanet, and soft cliffs between Herne Bay and Reculver and also at Pegwell Bay. Thanet Coast and Sandwich Bay are both designated as Special Areas of Conservation and as Ramsar sites, the latter reflecting the mudflat invertebrates and internationally important numbers of wading birds they support. There are also areas of intertidal sand and mud, salt marshes (especially at Pegwell Bay), sand dunes (notably Sandwich Bay), shingle beaches (at Minnis Bay and near Deal), brackish lagoons and maritime grasslands on clifftops and sea walls.

The North Kent Plain National Character Area has a strong urban element, with a large number of built-up areas and coastal towns. Developments around London and the Medway towns, in particular, have contributed to significant urbanisation in the west of the National Character Area.

This National Character Area is important for food production and associated services (such as soil and water regulation and management) that help to protect the area's natural assets. In addition, flood protection is an important consideration along the rivers and coastline.

To the north is the alluvial Greater Thames Estuary. The area's western boundary is defined by Inner London and the Thames Basin Lowlands.

The North Kent Plain area is characterised by tidal waterbodies and marshy estuarine habitats, many of which include artificial or heavily modified watercourses. It includes the lower and tidal reaches of the Darent and Lower Medway, the network known as the Stour Marshes, plus the White Drain. It also includes the Isle of Thanet chalk groundwater body.

There are some rivers not designated as artificial or heavily modified, which include the Whitehall Dyke, a stretch of the Great Stour between Wye and the A2, Lampen Stream, Wingham, the lower part of the Little Stour, and Swalecliffe Brook. The lowest section of the Darent flows through North Kent Plain area.

1.3 North Downs National Character Area

This is a chain of chalk hills extending from the Hog's Back in Surrey and ending dramatically at the internationally renowned White Cliffs of Dover. The settlement pattern is characterised by traditional small, nucleated villages, scattered farms, and large houses with timber framing, flint walls and Wealden brick detailing. Twisting sunken lanes, often aligned with ancient drove roads, cut across the scarp and are a feature of much of the dip slope.

The Kent Downs National Landscape (formerly Area of Outstanding Natural Beauty) designation is testament to the scenic qualities and natural beauty of the area.

Agriculture is an important component of the landscape, with variation in soils supporting mixed farming practices – arable, livestock and horticulture have co-existed for centuries. The woodlands, many of which are ancient, are a prominent feature of the landscape, yet their ecological value has suffered in recent years due to a reduction in active management since the 1990s, particularly of mixed coppice. Two Special Areas of Conservation are designated for their rare woodland compositions. Chalk grassland is particularly notable, with seven Special Areas of Conservation designated for chalk grassland interest, including outstanding assemblages of rare orchids. The chalk downland habitats support rare species, including the Late Spider Orchid, the Black-Veined Moth and Straw Belle Moth, which are currently found only within the North Downs.

The North Downs are cut by the valleys of the Stour, Medway and Darent, with their associated wetland habitats. The chalk aquifer of the North Downs is important for supplying water within Kent. The coast is of international significance with a Special Area of Conservation designation due to the rare maritime cliff communities found within the cliff face and on clifftops.

Two stretches of the coast are recognised as heritage coast: South Foreland, and Dover to Folkestone. An outstanding range of historical and geological features are found along the coast, including Dover Castle and the White Cliffs, with their strong cultural associations. Other historical features, including numerous Scheduled Ancient Monuments and buildings dating from the medieval period, are scattered throughout. The heritage coast includes a stretch of the King Charles III England Coast Path. Also within this National Character Area is another National Trail, the North Downs Way, which runs through the heart of the National Character Area , from Dover and Folkestone in the east and extending west into Surrey.

In the east, Dover is the main settlement, but the Medway towns of Rochester and Chatham and the town of Folkestone also lie on the periphery of the National Character Area. Other towns, including Maidstone, Ashford and Sevenoaks, and the city of Canterbury, within adjacent National Character Areas, lie close to the boundary.

Views from the eastern scarp are dominated by generally undeveloped landscapes much valued by visitors, with outstanding views from many parts of the downs to France. These views are affected to varying degrees by the Channel Tunnel terminal development and the M25 and M20 corridors.

The North Downs National Character Area includes all of Kent's chalk streams, namely the Nailbourne and Little Stour, Dour, North and South Streams in the Stour Catchment, the Great Stour below Wye, and the Middle and Lower Darent.

These rivers are typically characterised by their stable flow conditions, clear water and associated vegetation communities, as well as supporting trout and salmon populations, although all are impacted by a range of pressures. The Great Stour and Darent are the only rivers not classified as modified, with the former also classed as a Local Wildlife Site. The Upper Dour includes some reaches identified as Priority River Habitat by Natural England, due to their naturalness.

1.4 Wealden Greensand National Character Area

The long, curved belt of the Wealden Greensand runs across Kent, parallel to the North Downs, and on through Surrey. Around a quarter of the total National Character Area is made up of extensive belts of woodland – both ancient mixed woods and more recent conifer plantations. In contrast, the area also features more open areas of heath on acidic soils, river valleys and mixed farming, including areas of fruit growing.

The area has outstanding landscape, geological, historical and biodiversity interest. Some 51% of the total National Character Area is covered by landscape designation, including the Kent Downs National Landscape. The underlying geology has shaped the scarp-and-dip slope topography, with its far-reaching views, but it has also had a significant bearing on the area's sense of place: there are clear links between vernacular architecture, industry and local geology. The heritage assets provide vital connections to the National Character Area's industrial, military and cultural history, and include distinctive deer parks and more recent 18th-century parklands.

Biodiversity interests are represented by internationally and nationally designated sites alongside numerous local sites and other non-designated semi-natural habitats. The internationally designated sites include three Special Protection Areas, two Ramsar sites and eight Special Areas of Conservation, representing the outstanding value and quality of the heathland, woodland, wetland and coastal habitats found within the Wealden Greensand National Character Area. In addition, fragments of acid grassland and parkland landscapes add to the overall diversity of habitats.

The Kent area of the National Character Area is considerably more urbanised than the south-western part, with many towns, including Maidstone, Ashford and Folkestone. The area forms a major transport corridor, with the M25, M20 and M26 motorways and other major road and rail routes running through it.

Woodland by Jim Higham

A short coastal stretch extends from Folkestone to Hythe, with a heavily developed hinterland. As a result, most of the coastline is protected by coastal defences. The exception is Copt Point, where the eroding cliffs are designated for their wildlife and geological interest. This part of the coastline is also part of the defined Dover–Folkestone Heritage Coast. The coastline offers a contrasting recreational experience from that associated with the heathlands, wetlands and woodlands of the wider National Character Area.

The curved Greensand ridge partially encircles the adjoining Low Weald National Character Area. The Kent Lower Greensand groundwater body is considered a major aquifer, important for public and industrial water supply both within and outside the Wealden Greensand National Character Area. The management of the coastal stretch between Folkestone and Hythe influences, and is influenced by, the coastal stretches in adjoining North Downs and Romney Marsh National Character Areas. The coastline of the National Character Area also includes a stretch of the King Charles III England Coast Path.

The Wealden Greensand National Character Area follows the outcrop of Upper and Lower Greensand, which curves around the western end of the Wealden anticline in West Sussex, east Hampshire and Surrey and forms a conspicuous ridge running west to east across Surrey and Kent, terminating in coastal cliffs at Folkestone Warren.

The long, curved belt of the Wealden Greensand runs across Kent, parallel to the North Downs, and on through Surrey. It moves south, alongside the Hampshire Downs, before curving back eastwards to run parallel with the South Downs in West Sussex. The National Character Area features parts of the South Downs National Park and Surrey Hills Protected Landscape.

The Wealden Greensand gives rise to headwaters for several catchments, including the Upper Darent, the upper section of the Bourne in the Medway Catchment, the Leybourne Stream, Loose Stream, Wateringbury Stream, Ditton Stream and Len (also a chalk stream), as well as the main River Medway at Maidstone.

It also feeds the headwater springs supporting the River Beult. The upper reaches of the Stour also rise from this National Character Area, with the Upper Great Stour, East Stour, Aylesford Stream and the Great Stour from Ashford to Wye entirely in this area. The waterbodies of the Stour catchment are not designated as modified within this National Character Area, and neither are the Bourne or Upper Darent, but all other waterbodies in the Medway catchment in this National Character Area are designated heavily modified.

Dover Harbour by Jim Higham

1.5 Low Weald National Character Area

This broad, low-lying clay vale largely wraps around the northern, western and southern edges of the High Weald. It is predominantly agricultural, supporting mainly pastoral farming owing to heavy clay soils, with horticulture and some arable on lighter soils in the east, and has many densely wooded areas with a high proportion of ancient woodland. At the western end, a small amount falls within the adjacent designated National Landscapes of the Kent Downs and High Weald Areas.

The area is generally wet and woody. It is dissected by flood plains and its impermeable clay soil and low-lying nature make many areas prone to localised flooding. Ponds are common, often a legacy of iron- and brick-making industries. Gill woodland is a particular feature and a valuable habitat, being scarce elsewhere in the south-east of England. Despite its proximity to London and continuing pressure for development, the Low Weald remains essentially rural in character with small-scale villages nestled in woodland and many traditional farm buildings, including oast houses.

It is important for biodiversity, being rated among the most important National Character Areas for richness of bat species, Bullfinch and Lesser-spotted Woodpecker, and several plants, including Spiked Rampion, plus a variety of rare lichens. It also supports rare invertebrates, notably woodland butterflies.

The National Character Area is bounded for much of its length by the Wealden Greensand National Character Area in the north, crossing the counties of Kent, East and West Sussex and Surrey. It includes areas of the Surrey Hills and High Weald Protected Landscapes, plus South Downs National Park. Like the High Weald, the Low Weald is densely wooded, especially in its western arc through West Sussex and Surrey.

Rivers in the Low Weald National Character Area are almost entirely part of the Medway catchment and include the River Beult, the only riverine Sites of Special Scientific Interest in Kent and designated for its clay river characteristics.

The Beult tributaries include the Ulcombe Stream, Sherway, Upper Beult and lower reaches of the Hammer Stream. All of these are classified as heavily modified, except for the Upper Beult, which is deemed natural (including a section identified by Natural England as priority habitat).

1.6 High Weald National Character Area

This encompasses the ridged and faulted sandstone core of the Kent and Sussex Weald. It is an area of ancient countryside and one of the best surviving medieval landscapes in Northern Europe. The High Weald National Landscape covers the majority of this National Character Area in Kent. The High Weald consists of a mixture of fields, small woodlands and farmsteads connected by historic routeways, tracks and paths. Wildflower meadows are now rare but prominent medieval patterns of small pasture fields enclosed by thick hedgerows and shaws (narrow woodlands) remain fundamental to the character of the landscape.

In total, 26% of the National Character Area is covered by woodland, comprising wooded shaws, pits and gills, farm woods and larger woods. Of this 26%, 17% is ancient semi-natural woodland and 5% is ancient replanted woodland. The majority of the woodland cover is ancient, managed in the past as coppice with standards surrounded with native woodland flora such as bluebells and wood anemones in the spring. Evidence of the area's industrial past is prominent, from the large iron-master houses to the iron-industry charcoal hearths, pits and hammer ponds found throughout the ancient woodlands.

The small scale and historical patterning of the landscape, interwoven woodland, wetland and open habitats, with many hedgerows and historic routeways supporting semi-natural vegetation, provide a flourishing, accessible landscape for wildlife. Exposed sandstone outcrops along the wooded gills provide a nationally rare habitat and support an array of ferns, bryophytes and lichens. The numerous gill streams of the High Weald give rise to the headwaters and upper reaches of rivers which were previously important trade routes for transporting timber, iron and wool out to the coastal ports around Walland Marsh.

In total, the National Character Area is home to 56 historic parks and gardens, covering 4,599 ha. The High Weald provides an example of one of the best-preserved medieval landscapes in north-west Europe and has a strong sense of history. This is enhanced by many features, numerous churches and chapels, and an abundance of locally distinctive traditional buildings.

The High Weald provides many services to communities living within the area's towns, villages and adjacent urban populations through the supply of drinking water, flood mitigation and carbon storage, and a range of open-air recreational activities based around its distinctive character, from walking its ancient routeways to off-road cycling in Bedgebury Forest and water sports at Bewl Water.

The wooded nature of linear routes throughout this and the Low Weald National Character Area, together with the wooded gills, provides a high degree of interconnectivity with ancient woodland habitats across the High and Low Weald areas. Gill streams are found in this National Character Area, which support specific flora associated with temperate rainforests.

The High Weald and Romney Marsh National Character Areas are inextricably linked in terms of water resources. The High Weald National Character Area encompasses some of the same catchments as the Low Weald National Character Area, and in many cases gives rise to the headwaters of streams which then move down into the Low Weald.

The majority of priority river habitat in Kent, as identified by Natural England, is found in this National Character Area, predominantly in the form of headwater streams.

It includes part of the Lower Eden, the Mid Medway above the Eden confluence, Barden Mill Stream, Somerhill Stream, upper parts of the Alder Stream and Hammer Dyke, Tudeley Brook and Lower Teise, the Teise and Lesser Teise, Upper Teise, Teise at Lamberhurst and Teise at Bedgebury, the upper sections of the tributaries of the Beult at Frittenden and Hammer Stream.

In the Rother catchment, it includes sections of the Kent Ditch, Upper Newmill Channel and a tributary of Newmill Channel, Hexden Channel.

1.7 Romney Marshes National Character Area

An open landscape of reclaimed, low-lying marshland, Romney Marshes is bounded to the south and east by the English Channel, and to the north and west by the clearly recognisable ancient cliff line, which now forms the backdrop to the marshes. It includes the vast sand and shingle beaches and flat marshland between Hythe in Kent and Pett in Sussex. This unique and sometimes forbidding area has a character all of its own and contains a wealth of wildlife and geomorphological features.

Dungeness is an area of international importance for its geomorphology, plants, invertebrates and birds. Home to some of the UK's rarest species, it is designated a National Nature Reserve, Special Area of Conservation, Special Protection Area and Site of Special Scientific Interest, as well as being a proposed Ramsar site. Dungeness (with Rye Harbour) comprise the largest cuspate shingle foreland in Europe, one of the few such large examples in the world.

Scattered settlements are linked by long, straight, open roads and have a distinctive architectural character, including weatherboarding and hung tiles. Many have medieval churches at their core. Urban areas account for a small proportion of this rural National Character Area. The transport links are sparse, and this, coupled with the nature of the landscape, rural isolation and lack of employment, means that the area suffers from issues of social and economic deprivation. The coastline of the National Character Area also includes a stretch of the King Charles III England Coast Path.

The extensive marshes of the hinterland, now a mixture of arable and grazing land dissected by an extensive network of ditches and watercourses, support a rich flora and fauna. They form a striking contrast to the coastal habitats of sandy and shingle beaches, freshwater pits, sand dunes, saline lagoons and flooded gravel pits. The open water network is a vital component of the marshes' irrigation and drainage network.

Areas of the Romney Marsh National Character Area are designated at National Landscape (Kent Downs and High Weald). These form distinct areas within the National Character Area which, radiating from the core of the marsh, act as corridors out into the adjoining High Weald National Character Area and have a unique character. They have a key role to play in connectivity of habitats and linkages to the wider marshland landscape.

The coast continues to evolve. Pressures of sea-level rise and climate change will result in coastal change, and informed decision making will be critical in helping coastal communities and habitats to adapt to change. Much of the area is well below the high tide level and, as such, is at risk of flooding.

Human land use has had a major role in fashioning the present landscape, through the drainage of marshes, military activity, gravel digging, and the construction of sea walls, housing, tourist amenities, roads, a wind farm, an airport and Dungeness Power Station.

The High Weald and Romney Marshes National Character Areas are inextricably linked in terms of water resources. The Royal Military Canal is predominantly within this National Character Area but passes through into Wealden Greensand – it provides a continuous corridor linking the two National Character Areas.

The Romney Marsh National Character Area encompasses the eastern part of the Romney Marshes catchment, a highly managed environment with recreational use of watercourses.

Waterbodies include Romney Marsh between Appledore and West Hythe, the New Sewer, Dengemarsh Sewer, White Kemp and Jury's Gut Sewer, Walland Marsh, Lower Rother, Cradlebridge, Newmill Channel, Hexden Channel and Reading Sewer.

Some of the streams in this National Character Area arise in the Low Weald or High Weald National Character Area.

2. Protected areas of Kent and Medway

2.1 Kent Downs National Landscape

The Kent Downs National Landscape stretches from the White Cliffs of Dover to the Surrey/London border. It offers dramatic views, vibrant communities, a rich historic and cultural heritage and diverse wildlife and habitats, making it a worthy landscape for national protection.

It is the eighth largest National Landscape and covers 23% of Kent's land area, providing a wealth of opportunities for people to explore, enjoy and benefit from this outstanding landscape.

The Kent Downs National Landscape features areas of the North Kent Plain, North Downs, Wealden Greensand, Low Weald and Romney Marshes National Character Areas. The majority of the North Downs National Character Area is designated as Kent Downs National Landscape.

Skylark by Jim Higham

Wildlife - The unique landscapes of the Kent Downs create and contain a rich and distinctive biodiversity, providing a home to many plants and wildlife. This includes several species that are largely or wholly confined to the Kent Downs, such as the Lady, Monkey and Late Spider Orchids and the Black-veined and Straw Belle moths. Other rare and threatened species occur in good numbers; for example the Dormouse, the Edible or Roman Snail, the Adder and rare arable field wild flowers along with several butterflies associated with downland.

Habitats – Habitats found in the Kent Downs include chalk grassland, woodlands (ancient woodland, veteran trees and wood pasture), traditional orchards and Cobnut plats, chalk cliffs and the foreshore, chalk streams and wet pasture, ponds and heathland. Many of these habitats have become isolated making them vulnerable – and some of the plants and wildlife they support are scarce within Kent and across the UK. Farmers, landowners and conservation organisations are working to connect habitats and provide ecological corridors for wildlife to travel along.

Woodland – The Kent Downs is one of Britain's most wooded landscapes, with woodland covering over 20% of its area. It is the second largest land cover after farming and is a vital component of the natural beauty of the Kent Downs. Almost 70% of the Kent Downs' woodlands are ancient woodland. The ancient woodlands of the Kent Downs also preserve the evidence of thousands of years of human activity in earthworks, monuments and place names. Coppiced Sweet Chestnut is frequently seen across many woodlands in the area.

Water and wetlands – Rivers, streams, springs and ditches include a great variety of habitat and landscape types, and are important features of the Kent Downs. The Kent Downs is crossed by three major rivers – the Darent (chalk stream), Medway (major tidal river) and Stour (chalk stream) – which carve their way through the Kent Downs landscape. Marshland is not common because of the free-draining nature of much of the underlying rock. However, marshy areas can be found at the base of the Downs, including Romney Marsh.

Geology – A large proportion of the Kent Downs is based on chalk, which leads to vibrant and colourful chalk grassland where orchids and other chalk-loving plants thrive. South-facing steep slopes of chalk and greensand, hidden dry valleys, broad and steep-sided river valleys and, of course, the iconic white cliffs around the Dover coast are some of the dramatic landforms to be seen. Breathtaking, long-distance panoramas are common across the landscape.

Farming – A long-established tradition of mixed farming has influenced the beauty of the Kent Downs – the pastoral scenery is a particularly valued part of the landscape. Farming covers around 64% of the National Landscape. Expansive arable fields are generally on the lower slopes, valley bottoms and plateaux tops. Locally concentrated areas of orchards, cobnut plats, hop gardens and other horticultural production are also present. Livestock – particularly Sheep – can often be seen grazing grassland across the Kent Downs.

Heritage – Human activity across Kent for thousands of years has created an outstanding heritage and 'time depth' to the Kent Downs. There are the remains of Neolithic megalithic monuments, Bronze Age barrows, Iron Age hillforts, Roman villas and towns, medieval villages focused on their churches, post-medieval stately homes with their parks and gardens, and historic defence structures from Norman times to the 20th century. Fields of varying shapes and sizes and ancient wood-banks and hedges, set within networks of droveways and sunken lanes, add to the historic look and feel of Kent's rural landscape, and the distinctive architecture is a reminder of Kent's lengthy history.

Access – The Kent Downs National Landscape has 1,876km (1,166 miles) of Public Rights of Way, which is four times the density of the national average. The National Landscape incorporates the Kent stretch of the 246km (153 miles) North Downs Way and its coastline includes the King Charles III England Coast Path – both National Trails. The Kent Downs accommodates 40% of Kent's bridleways and 50% of Kent's byways on 23% of the county's land area.

Bluebells by Jim Higham

2.2 High Weald National Landscape

The High Weald National Landscape extends from Romney Marsh through the High Weald of Kent and into Sussex and Surrey. It is a medieval landscape of wooded, rolling hills studded with sandstone outcrops, small, irregular-shaped fields, scattered farmsteads and ancient routeways.

The High Weald National Landscape features High Weald and Romney Marshes National Character Area. The majority of the High Weald National Character Area is designated as High Weald National Landscape.

Wildlife – The High Weald's diverse mix of interconnected habitats – many unchanged since medieval times – are home to an astonishing range of flora and fauna, which add to the unique character of the area.

Woodland – Over 22.8% of the High Weald is covered with ancient woodland, in the form of a complex and interlinked mosaic of treebelts, shaws and small or large woodland blocks. The High Weald's woodlands harbour rare species such as the Dormouse, the Pearl-bordered Fritillary and the Black-headed Cardinal Beetle. Nightjars breed in the open space created when woodlands are actively worked. The ancient woodland ground flora is species rich and includes Coralroot Bittercress, another speciality of the High Weald.

Gills – Deeply incised narrow valleys, known locally as gills, create a moist microclimate which harbours plant populations not found elsewhere in eastern or central England, and which are hundreds of miles from other British populations. Such plants include ivy-leaved bellflower and hay-scented buckler-fern.

Grassland and heathland – The Weald supports 1,400ha of unimproved grassland habitat – nearly 20% of the entire resource of lowland meadow in England. Most of these meadows are scattered across the country; nowhere else is there such a concentration as on the Weald. There are distinctive zones of open heath, remnants of the area's medieval forests, which are internationally important for their wildlife.

Coastline – The High Weald's coastline is made up of shingle ridges, saline lagoons, saltmarsh, reedbed, pits and wet grassland, with 3,720 different species of plants and animals. It also supports important wintering waterfowl populations.

Water and wetlands – Gill streams are fast flowing, are often within woodland, and support a specialised range of plants and animals, particularly invertebrates and fish, including Brown Trout and Bullhead. The area has numerous ponds, many artificial – a legacy of use of the area's natural resources. The rare Great-crested Newt is found in many, and they also contain a rich assemblage of uncommon water beetles, the Medicinal Leech and uncommon plants such as Frogbit, Lesser Water-plantain and Tubular Water-dropwort.

Geology – The High Weald countryside gets its ridges, valleys and rolling landscape from underlying bands of sandstone and clay. The harder sandstone forms the high land and ridges, which generally run east to west across the High Weald. The lower land between the sandstone ridges is the result of the softer clays having been more easily eroded. The action of the elements over time has unevenly eroded these sandstones and clays to leave the steeply ridged and folded countryside that survives today.

Farming – The High Weald's rolling hills are draped with small, irregular fields edged with ancient boundary features and often containing flower-rich grassland. This is the result of the patient work of many small farmers after the area was settled. With their heavy clay soils and steep slopes, many High Weald fields have never been ploughed to grow crops and instead have traditionally been used for rearing domestic livestock. Compared to many areas of Britain, the area still has a relatively high number of ancient, undisturbed, wildflower-rich hay meadows and pastures. These unimproved grasslands are some of our most important habitats for wildlife conservation, supporting up to 100 kinds of grasses and wildflowers which, in turn, support a great variety of insects and other creatures.

Heritage – The High Weald is a cultural landscape, shaped by people from prehistory to the present day. Its key landscape features were established by the 14th century, and it is considered to be one of the best surviving coherent medieval landscapes in Northern Europe. The area held many riches for our ancestors and was an important source of raw materials: its sands and clays, stone and iron ore, woodlands and water. The radiating network of roughly north–south droving routes lives on as the area's narrow, often sunken, roads, lanes, bridleways and footpaths. The woodland pastures were gradually cleared by farmers to create the small, irregularly shaped fields that we see today. In the medieval period, large tracts of land were set aside as hunting forests and deer parks. Remnants of these forests still exist. The High Weald was the main iron-producing region of Britain, with industrial-scale exploitation during two periods – the Roman occupation, and Tudor and early Stuart period. The archaeological legacy of this activity can be seen throughout the area's woodlands.

Access – The High Weald National Landscape features a total of 2,570km of Public Rights of Way more than 75% which are historic, being present on Ordnance Survey maps from at least 1860. The National Landscape's coastline includes the King Charles III England Coast Path National Trail.

2.3 National and international designations

Sites of Special Scientific Interest (SSSI) are the finest sites for wildlife and natural features in England, supporting many characteristic, rare and endangered species, habitats and natural features. There are 98 Sites of Special Scientific Interest within the Strategy area, covering 8.7% of the county.

Special Areas for Conservation (SACs) are designated to protect habitats and species that are important to biodiversity on a national and international scale. **Special Protection Areas (SPAs)** are designated to protect areas that are important for breeding, overwintering and migrating birds. Together, these form part of the UK's national site network. There are 15 Special Areas for Conservation and seven Special Protection Areas within the Strategy area.

The area also has six designated Wetlands of International Importance, known as **Ramsar sites**, most of which overlap with the Special Areas for Conservation and Special Protection Areas.

Marine Protected Areas (MPAs) are designated areas of the ocean, sea or estuary, managed to protect and conserve marine life, habitats and cultural or historical features. The key purpose of a Marine Protected Area is to protect and recover rare, threatened and important habitats and species from damage caused by human activities. Marine Protected Areas include Marine Conservation Zones and also Special Areas of Conservation and Special Protection Areas, with marine components.

Also included under Marine Protected Areas are **Marine Conservation Zones (MCZs)**, which safeguard rare, threatened or nationally important marine species and habitats. There are 11 Marine Conservation Zones off the coastline of the Strategy area.

National Nature Reserves (NNRs) were established to protect some of our most important habitats, species and geology, and to provide outdoor laboratories for research. There are 12 National Nature Reserves within the Strategy area. This includes the recently designated (2025) North Kent Woods and Downs National Nature Reserve, part of the King's Series of National Nature Reserves, a selection of sites recognised for their ecological importance during the reign of King Charles III. This landscape-scale National Nature Reserve features a range of habitats, including ancient woodlands, chalk grasslands and arable fields, all providing complex ecosystems that support rare and specialist species.

Stodmarsh NNR by Jim Higham

House Sparrow by Jim Higham

2.4 Nature sites of local significance

Local Wildlife Sites (LWSs) are proposed locally, using robust, scientifically determined criteria and detailed ecological surveys. Their eventual delineation is by the relevant local planning authority. Their selection is based on the most important, distinctive and threatened species and habitats within a national, regional and local context. This makes them some of the Strategy area's most valuable wildlife areas, with a total of 482 Local Wildlife Sites covering 27,950ha.

Roadside Nature Reserves (RNRs) protect and manage road verges which contain threatened habitats or wildlife. There are 153 such reserves along the roads of Kent, with a combined length of 193km.

There are also **43 Local Nature Reserves (LNRs)**, which are places with wildlife or geological features that are of special interest locally. They range in size from 0.8ha to 410ha.

Kent has **six important bird areas, four important plant areas** and **four important invertebrate areas.**

The Strategy area also features many habitats considered to be irreplaceable – those which would take significant time to restore, recreate or replace if they are destroyed, often as a result of their age, diversity or uniqueness. In planning and Local Nature Recovery Strategy terms, these **irreplaceable habitats** are defined in Kent as ancient woodland and ancient trees, coastal sand dunes, spartina swards and lowland fens. This definition of irreplaceable habitats is currently under review and other irreplaceable habitats may be added in due course.

Extent of the Strategy area's nationally designated sites, Local Wildlife Sites, Local Nature Reserves and irreplaceable habitat.

3. What makes Kent and Medway's nature so special

3.1 Habitats

Kent is one of the largest counties in England by area, covering 391,823ha. Its varied landscape has a wealth of natural features and wildlife habitats. The complex geology of the region, its soils, topography and other environmental conditions, have all influenced Kent's landscape and habitats. In addition, the long coastline has a range of important, and in some cases unique, coastal and marine habitats.

Further influences on Kent's natural environment come from its location. It has a temperate climate subject to continental weather influences due to its proximity to mainland Europe, generally being drier than the UK average, with warm summers and cold spells in winter. As a result, the county can support many species that are uncommon elsewhere in Britain. Additionally, it has an ancient landscape history, with many of the semi-natural habitats being a product of historic land management practices, such as the grazed chalk downland of the North Downs and ancient coppice woodland that spreads across the South East.

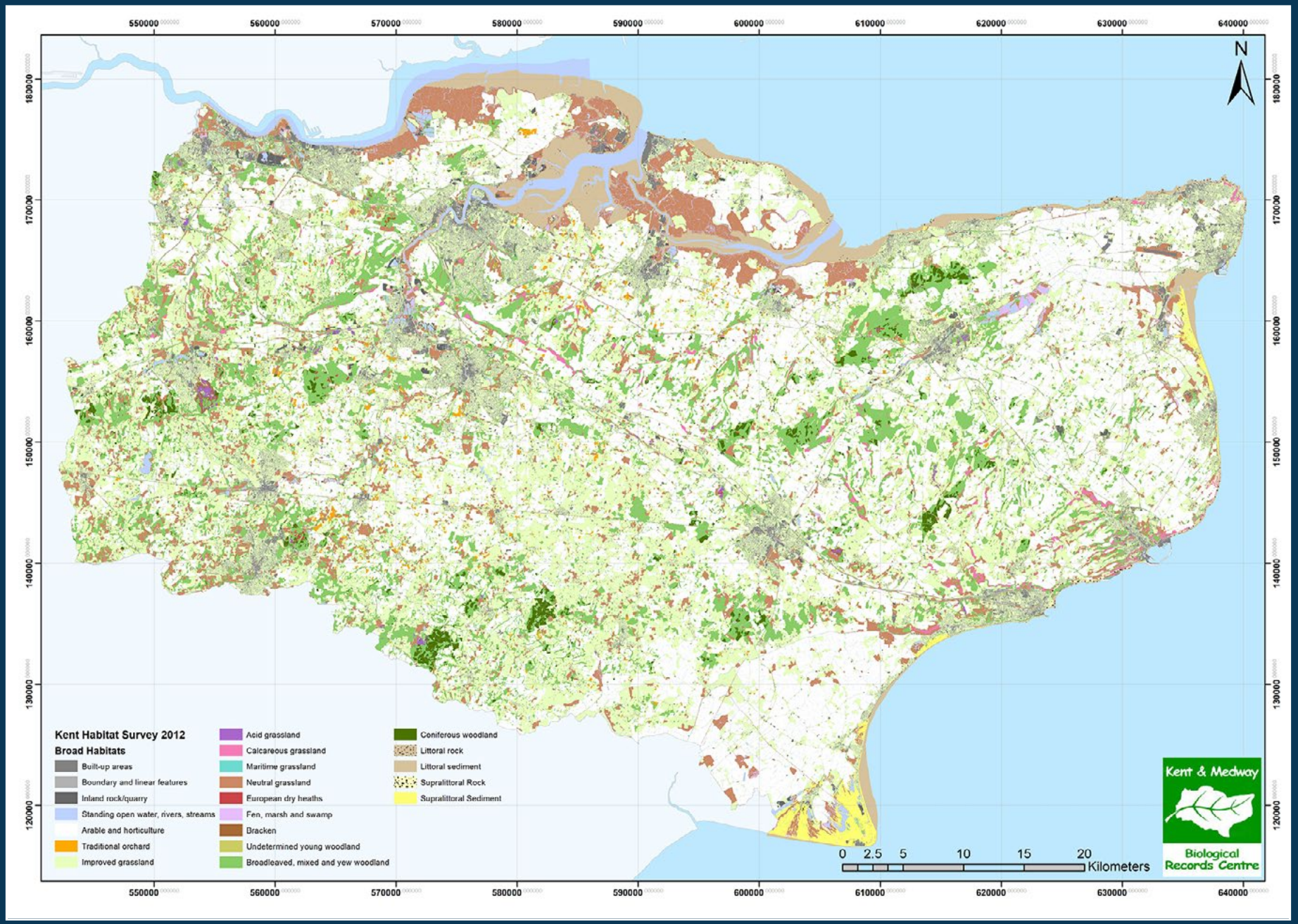
Many of these habitats are inherently beautiful and are integral to the attractiveness of Kent's countryside. However, they are also an important resource because they contribute to the maintenance of our environment through the provisioning (e.g. food, water and materials), regulating (e.g. flood management, pollination, temperature regulation), supporting (e.g. healthy soils, nutrient cycling) and cultural (recreation, tourism, health and wellbeing) services they deliver.

In 2012, Kent County Council completed the Kent Habitat Survey. It covered the entire county, analysing aerial photographs and previous survey data, and using targeted field survey to produce an up-to-date map of all habitats in Kent. Key findings from the survey included the following:

- The natural and semi-natural habitats of Kent cover 27% of its surface area.
- The built environment, including industry, development, travel infrastructure and urban areas, covers 16% of the county.
- Arable and horticulture is the land use covering the greatest area of Kent, 35%, followed by intensively managed improved grasslands at 30%.
- Woodlands are the largest semi-natural habitat in Kent, covering 12% of the county, with 11% being broadleaved, mixed or yew woodland.
- Traditional orchards occupy 0.4% of the county but comprise around 10% of the traditional orchard area in England.
- Kent has a very small resource of lowland meadow, with just over 5ha of UKBAP and EU Annex 1 lowland hay meadow. The survey produced the first records of this habitat type in Kent. A further 19ha of lowland meadow and pasture is also UKBAP priority habitat.
- Heathland is one of the county's rarest and most fragmented habitats. Around 74ha was recorded from several sites across the county, an increase on the 52ha recorded in 2003. There are seven main clusters of heathland in Kent, with 19 further small sites of heathland found across the county. The largest cluster of heathland covers 25ha.
- The county contains several nationally and internationally important habitats around the coastline, including chalk cliffs and reefs, and vegetated shingle.
- Kent has 36 priority habitats. Of these, 17 have been identified as habitats of local and national significance or that support scarce or declining species.

The county features 36 UK Biodiversity Action Plan (UK BAP) priority habitats and – identified as the most threatened and requiring conservation action under the UK Biodiversity Action Plan. The diversity and extent of the Strategy area's habitats is illustrated by the habitat survey map and the table below.

More detail on the county's habitats is provided within the corresponding habitat priority can be found in Part 3.



Kent Habitat Survey 2012 broad habitats

Kent Habitat Survey 2012 findings

Grassland habitats

Habitat	Extent	Significance locally and nationally
Lowland calcareous grassland	1,929ha	Occurring along North Downs, with 60% classed as BAP habitat. Chalk grassland in Kent represents 5% of the UK's resource and 20% of the South East's. With the UK holding half of the world's chalk grassland, Kent's habitat extent is globally important.
Coastal and floodplain grazing marsh	14,174 ha	Majority found along North Kent marshes and grazing marshes of Romney. BAP habitat with greatest cover in county – 3.6% of area. 55% protected by Sites of Special Scientific Interest.
Lowland meadow	27ha	Locally very rare and represents less than 0.1% of the broad neutral grassland habitat recorded in the county.
Lowland dry acid grassland	512ha	One of the rarest and most threatened habitats in Kent. 51% classed as BAP habitat.
Lowland heathland	74ha	Mostly found within the National Character Areas of Wealden Greensand and High Weald, although 22% is within the North Kent Plain and a small amount in the North Downs. All BAP priority habitat, with nearly 90% of this being within either SSSI or LWS.
Arable field margins	-	Not recorded by the 2012 survey. Found throughout Kent where nature-friendly land management practices have been adopted.

Successional habitats

Habitat	Extent	Significance locally and nationally
Open mosaic habitat on previously developed land	-	Not recorded by the 2012 survey. The county has some significant brownfield sites that support an extremely rich diversity of wildflowers and animals, including nationally scarce invertebrates. Many of these sites are found within the Thames Gateway. Most notable of these is Swanscombe Marshes, on the Swanscombe Peninsula, is home to a remarkable mosaic of grasslands, coastal habitats, brownfield features, scrub and intricate wetlands.
Scrub	-	Not recorded by the 2012 survey. This habitat can be found across Kent, with examples at Holborough Marshes and Old Park near Canterbury.

Woodland, trees and hedgerows

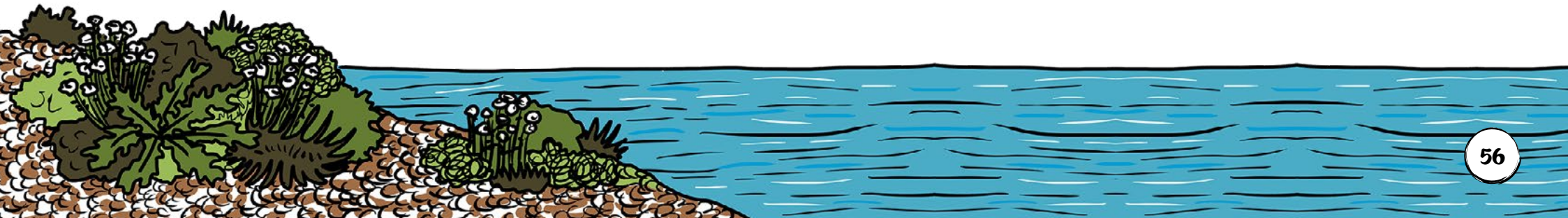
Habitat	Extent	Significance locally and nationally
Broadleaved, mixed and yew Woodland	44,490ha	• 1.4% of Kent but, despite the high cover of woodland across the county, only 3% is classed as BAP priority habitat: • Lowland mixed deciduous woodland – 153ha; mostly found within the North Kent Plain and the North Downs National Character Areas. • Lowland beech and yew woodland – 613ha; present notably in the High Weald and Kent Downs National Landscape • Wet woodland – 662ha, accounting for 46.3% of the total woodland BAP habitat recorded in Kent. Important part of the landscapes in the High and Low Weald, as well as the Wealden Greensand and North Kent Plain. • The county's woodland accounts for 22.5% of the South East's ancient woodland resource and 11% of England's ancient semi-natural woodland.
Wood pasture and parkland	3,176ha	Notable sites in Kent are Knole Park in Sevenoaks and Hatch Park in Ashford
Hedgerows	Approx. 11,734km	Found throughout Kent lining roads, railways and footpaths, bordering fields and gardens, and on the coast.
Traditional orchard	1676ha	Largest proportion is traditional apple orchards, followed by cherry, mixed, pear and plums. Traditional orchards are found across the county, particularly in the Kent Downs and High Weald National Landscapes and the Faversham fruit belt.

Freshwater

Habitat	Extent	Significance locally and nationally
Rivers and streams	6,592ha	The 2012 Kent Habitat Survey did not include rivers and streams and consequently did not record any areas of BAP priority habitats. Chalk streams emerge from the North Downs and form the source of the rivers Darent, Cray, Shuttle, Dour, Nailbourne and stretches of the Great Stour, Little Stour and North Stream. There are only 200 chalk streams known globally, 85% of which are found in South and East England – consequently our chalk streams are nationally and internationally significant.
Standing open water	4,628ha	Including BAP priority habitats of lowland fen (12ha) and reedbeds (545ha)

Coastal

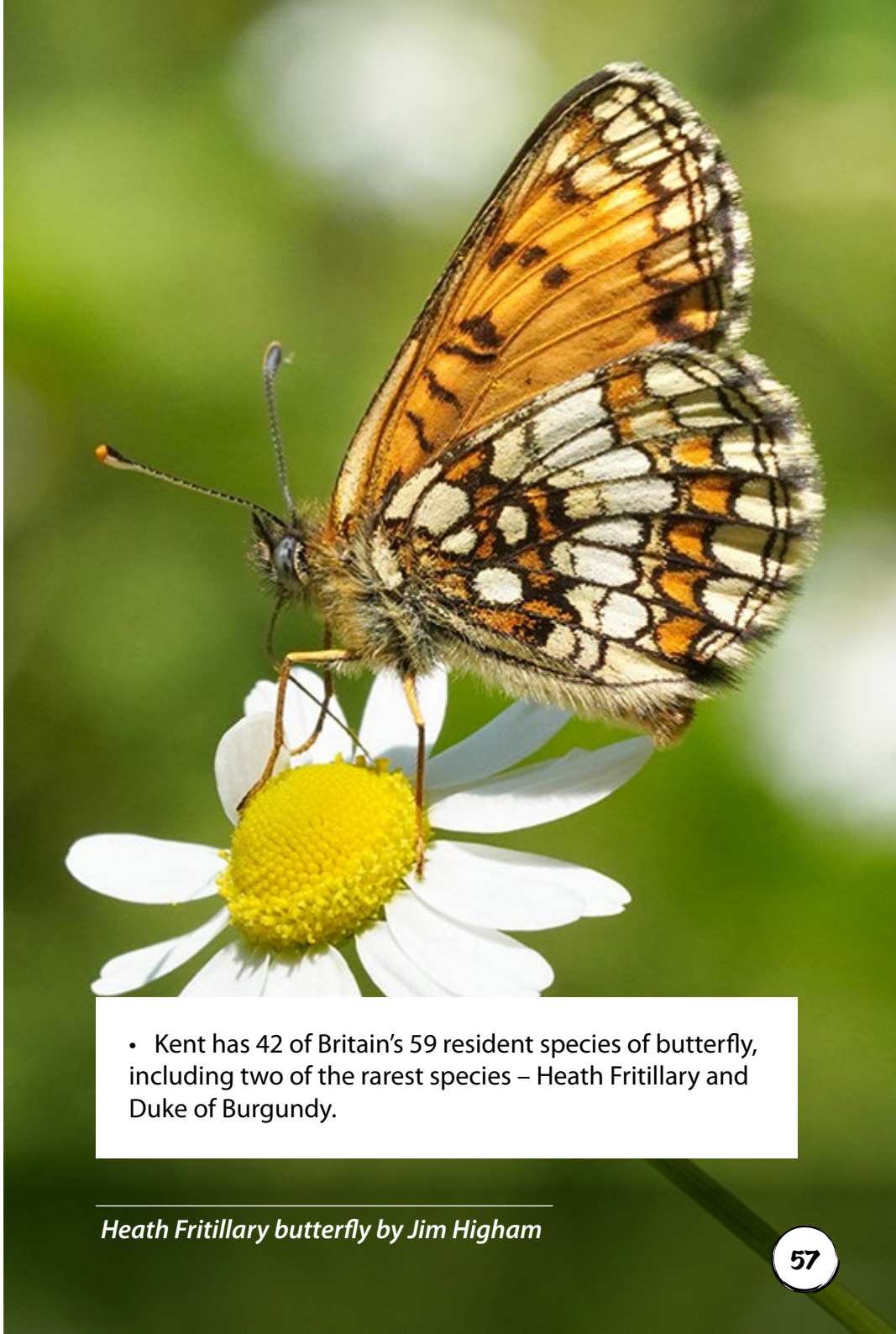
Habitat	Extent	Significance locally and nationally
Coastal saltmarsh	1,338ha	Majority found along the North Kent coast, and a large area at Sandwich and Pegwell Bay in the east of the county. Represents 11.2% of the county's littoral sediment resource. Kent's coastal saltmarshes are internationally important.
Intertidal mudflats	10,078ha	Majority of habitat is found along the north coast. Coastlines of Medway, Swale and Canterbury districts have more than 85% of this habitat between them. Second largest BAP habitat in the county – 2.6% of the area. Kent's intertidal mudflats are internationally important.
Seagrass beds	29ha	More than half (52.8%) is found off Medway's shores and 38.9% off Swale's.
Intertidal chalk	415ha	Found to the north-east and east of the county. 56% of England's chalk coastline is found in Kent and Thanet alone holds 12% of Europe's exposed coastal chalk, making the county both nationally and internationally important.
Oyster beds	-	Not recorded by the 2012 survey – locations of Native Oyster beds are commercially sensitive.
Saline lagoons	286ha	Kent has 286ha of saline lagoons or ponds (representing 16% of England's total resource), of which 276.2ha is the Annex 1 habitat 'saline lagoons' (coastal lagoons). They are found primarily along the North Kent coast.
Coastal vegetated shingle	2104ha	Dungeness has the most diverse and extensive examples of stable vegetated shingle in Europe, making it internationally important. This site represents 40% of the UK's coastal vegetated shingle.
Coastal sand dunes	455ha	Main dune systems are limited to the eastern and a small area of southern coastline; the largest area is found at Sandwich Bay.
Maritime cliffs and slopes	221ha	Notable examples found at the White Cliffs of Dover, and Folkestone Cliffs and Downs.
Sheltered muddy gravel	9.3ha	More than half found off Dartford, and nearly a third off Swale.



3.2 Species

As reported by Kent's 2022 State of Nature review, 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. It noted that over 20,000 species have been recorded in total in the county, which represents nearly 30% of all UK species and includes the following species:

- Kent's native amphibian fauna consists of five species – Common Frog, Common Toad, Smooth Newt, Palmate Newt and Great Crested Newt.
- The county is home to a wide number of nationally important and rare bee, wasp and ant species. 219 species of bee, 221 species of wasp and 41 species of ant are present in the county. Among these, Kent is nationally important for Banded Mining Bee, Maidstone Mining Bee, Grey-Backed Mining Bee, Shrill Carder Bee, Four-Banded Weevil-Wasp, Square-Jawed Sharp-Tail Bee and Fringe-Horned Mason Bee.
- Almost 68% of Britain's beetles have been recorded in Kent. Beetles can be found in almost all habitats in Kent, semi-natural habitats hold the richest diversity of species. Notable species for Kent include Pride of Kent Rove Beetle, Kentish Clown and Sandwich Click Beetle.
- About 245 bird species have been recorded regularly in Kent during the past 100 years, 150 of them breeding species. Kent supports national strongholds of species, whose ranges are contracting towards the southeast, including the rapidly declining Turtle Dove and Nightingale. Kent's location also makes it well placed to receive new colonists and support birds at the limit of their European range. The most important habitats at a national and international scale are coastal, which support important populations of wintering and some breeding birds.



- Kent has 42 of Britain's 59 resident species of butterfly, including two of the rarest species – Heath Fritillary and Duke of Burgundy.

Heath Fritillary butterfly by Jim Higham

- Kent has 42 of Britain's 59 resident species of butterfly, including two of the rarest species – Heath Fritillary and Duke of Burgundy.
- When it comes to dragonflies, Kent is one of the most species-rich counties in the UK: the county currently hosts 36 species. The abundance and diversity of wetlands in Kent is a significant factor influencing the county's abundance and diversity of dragonflies.
- Kent has a rich variety of flies, with some 60% of the British species recorded. Key habitats for some of the rarer species include broadleaved woodland, chalk grassland, coastal grasslands, grazing marshes and saltmarsh and private gardens.
- Kent has a rich assemblage of fungi, with 859 species recorded in the county. Many common species are widespread across the county, with the rare or endangered species restricted to the county's unimproved chalk grasslands, meadows, ancient woodlands, traditional orchards, parkland with veteran trees, churchyards and sand dunes.
- There are 25 species of Bush-cricket, Cricket, Grasshopper and Groundhopper which are regularly recorded in Kent and Medway, around five species of Cockroach found outdoors and four species of Earwig. A number of species are rare or scarce nationally.
- Twenty-nine terrestrial mammal species are found in Kent, including the Water Vole, Hedgehog, Hazel Dormouse, Harvest Mouse and Eurasian Beaver. Terrestrial mammals occupy all identified Kent priority key habitats. Not included in this number is the rich fauna of bats, with 17 of the UK's 18 species recorded in the last 10 years.
- Kent has abundant and varied marine wildlife, known to comprise at least 700 species. The coast also hosts a moderately rich seaweed flora with 256 brown, green and red algae of the 650 known in the British Isles. The Thanet, South Foreland to Dover and Folkestone seashores are the most species rich.
- All key habitats in Kent hold at least one population of nationally important macro or micro moth species, with 750 macros recorded (about 80% of the UK moth species) and between 1,300 and 1,400 of micros. Important populations of rare moth species include Straw Belle and Black-Veined Moth on the Kent Downs, the principally coastal species Bright Wave and Fiery Clearwing, and Fisher's Estuarine Moth around the Thames Estuary.
- The county's native reptile fauna includes two snakes, the Grass Snake and Adder, and two lizards, the Viviparous Lizard and the Slow Worm. Kent's reptiles use a range of habitats, of which chalk grassland and its associated low scrub is particularly important.
- 473 spider species are recorded, representing almost 71% of the total number recorded in the British Isles – six of these have only been recorded in Kent. Key habitats for these species are chalk grasslands, ancient woodlands and coastal habitats.
- More than 2,500 taxa make up the Kent vascular plants. The county's rare plant register currently lists 333 species and includes the nationally rare plants of Wild Cabbage and Coralroot, both of which have significant Kent populations. In the last 10 years, four native species have been added and 14, previously thought to have been lost, have been re-found.

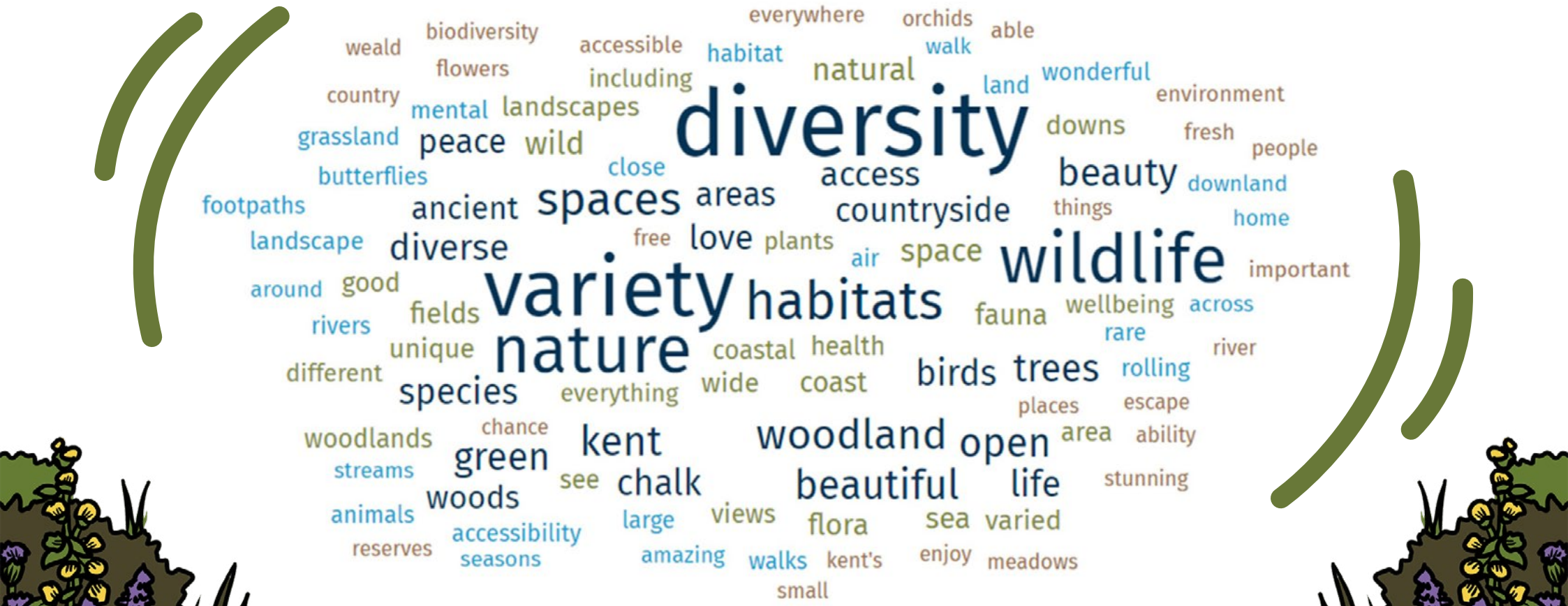
More detail on the county's species is provided within the corresponding species priority in Part 3.

3.3 More than facts and figures

It is easy to focus on the numbers when considering what makes Kent's nature so special but it is also important to consider how it influences the county's culture and identity, comprising a significant part of the county's character. Moreover, what it means to the people of Kent – who ultimately will either deliver or demand (or both) the recovery of nature.

When asked "What do you love about Kent's nature?", our residents not only demonstrated a passion and enthusiasm but also recounted personal memories and their connection with nature. For example, "I love it when the Blackthorn blossoms and when I get to pick blackberries" commented one respondent. "I love the timelessness of ancient woodland, the ebb and flow of birds on tidal mudflats" commented another.

However, woven throughout the responses was a sense that our biodiversity was under threat and that perhaps our nature was not being valued highly enough. But there was hope that a collaborative vision for the future and better decision making would offer Kent's nature the support to flourish.



Wordcloud showing what Kent loves about nature (Making Space for Nature online survey, 2023)

Short eared owl by Jim Higham

4. A changing landscape

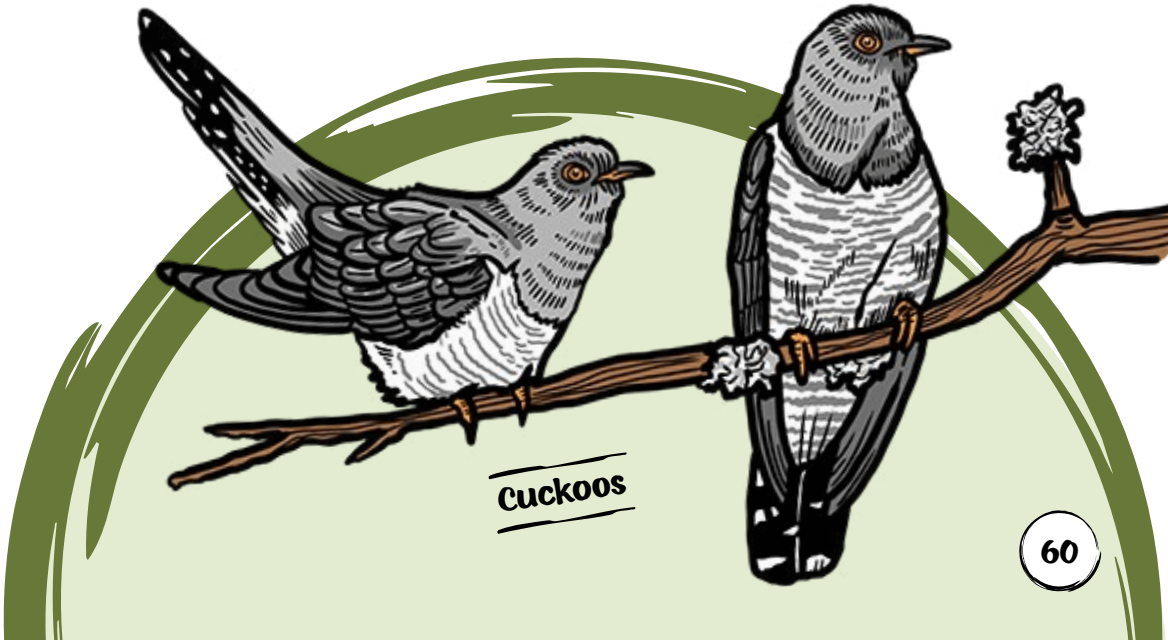
4.1 Changes in landcover

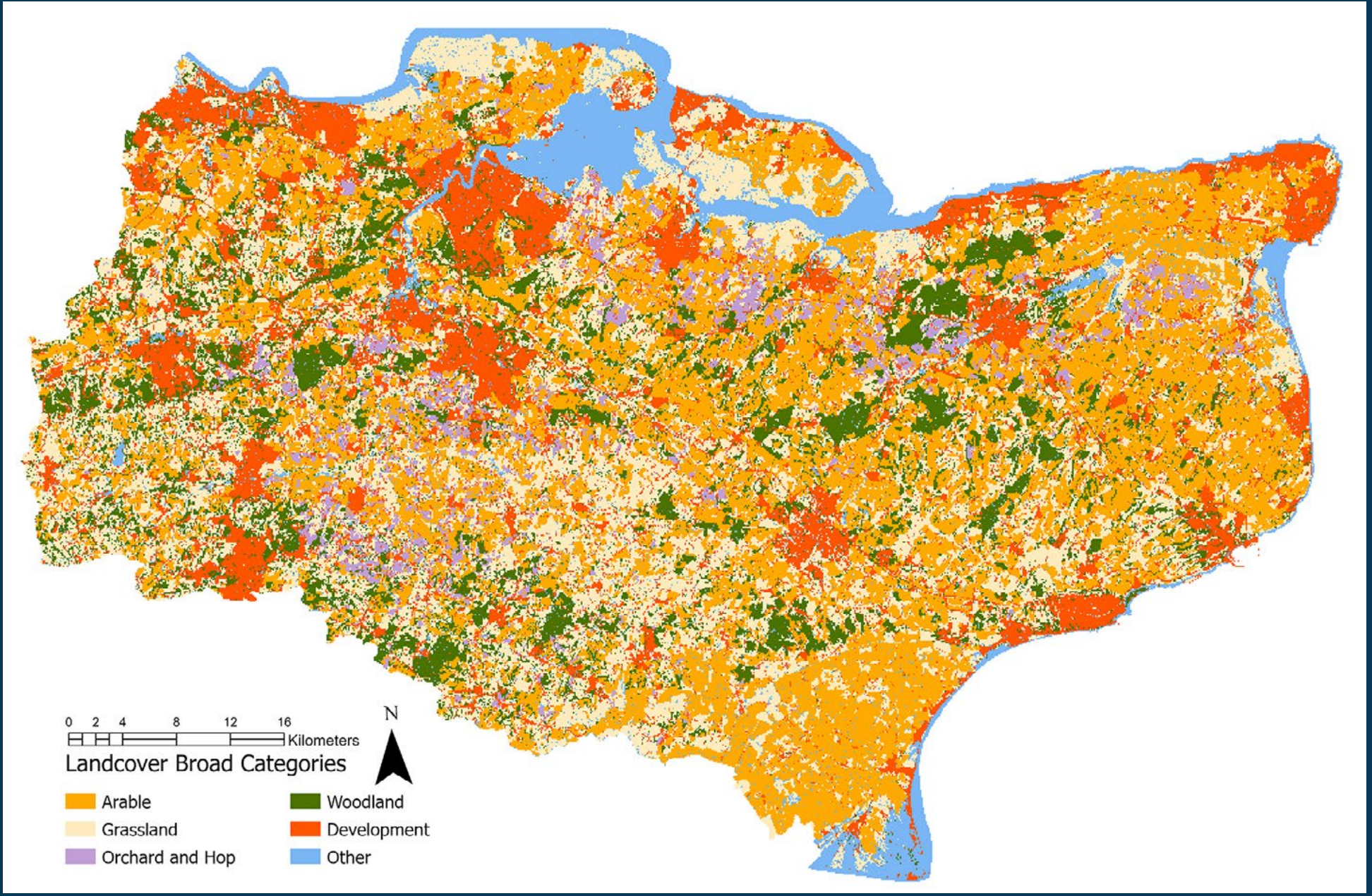
The 2012 Kent Habitat Survey undertook a land cover change analysis across the period of 1961–2008. Although it concluded 16 years ago, this is still the most recent, comprehensive study of its kind for the county.

The map overleaf illustrates the broad landcover of the county. Arable has the greatest extent, followed by grassland, development and woodland.

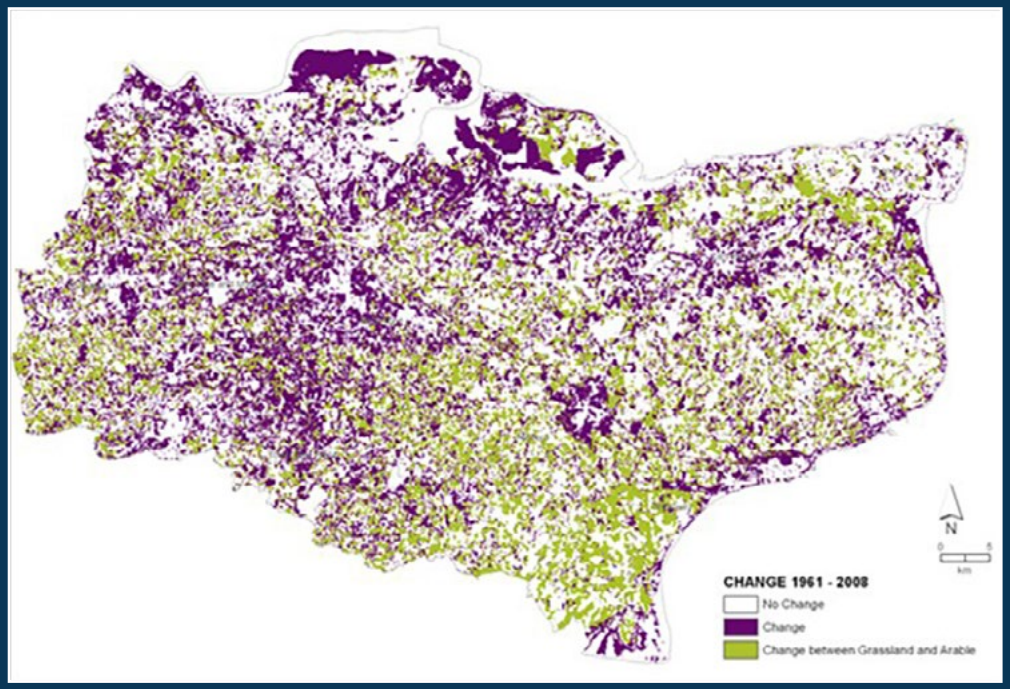
The change analysis showed that land covered by development had noticeably increased, from nearly 11% in 1961 to over 17% in 2008. This represented a total increase of 62% on the 1961 resource. Orchards and hop cover had declined the most, with a dramatic two-thirds of the resource lost since 1961. The extent of land covered by arable and grassland had changed very little, hovering at around 60%.

The two maps overleaf illustrate the changes – the first since 1961 and the second for the last decade of the survey period. The change between arable and grassland does not necessarily represent a real or permanent change and is more a reflection of the agricultural economy fluctuation.

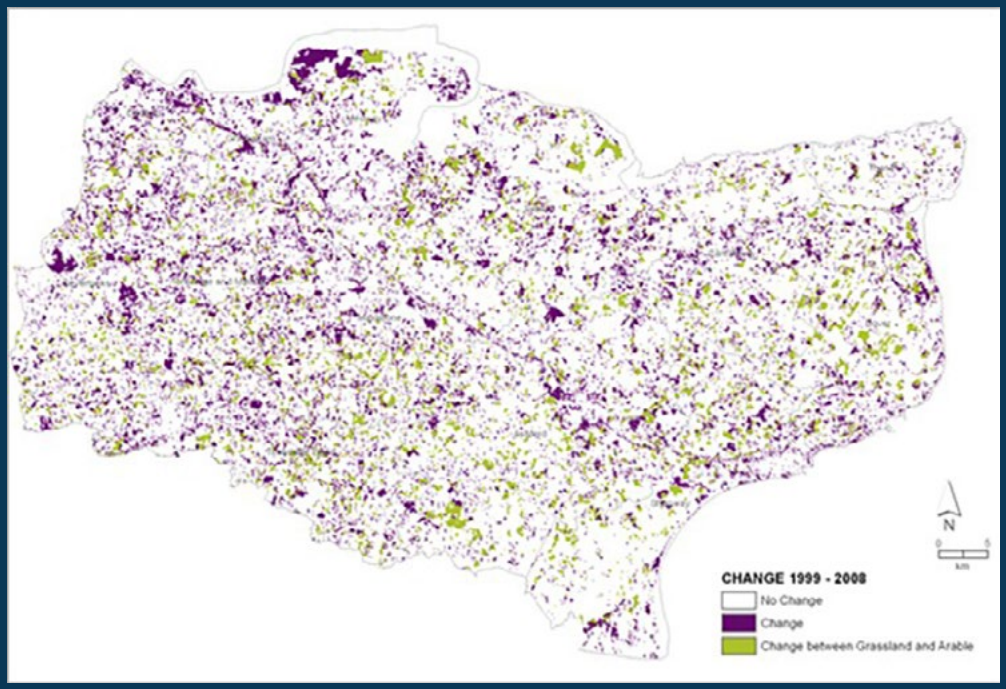




Map of broad landcover in Kent (2008)



Filtered change in landcover 1961 to 2008



Filtered change in landcover 1999 to 2008

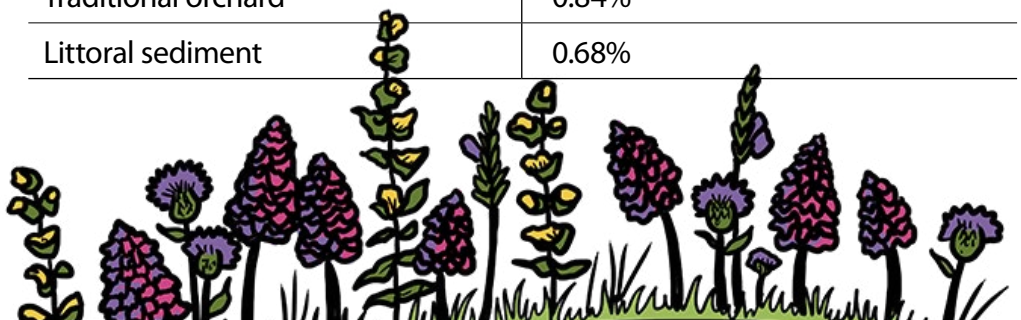
Marsh Harrier by Jim Higham

4.2 Changes in the distribution and extent of habitats

The 2012 Kent Habitat Survey also undertook an analysis of habitat change since the published survey 10 years previously.

The change from habitats in 2003 to other habitats in 2012 totalled an area of 37,870ha. The table below shows the broad habitats that accounted for 98% of the change. All other broad habitats present in Kent had less than 0.5% change, many much less, and only accounted in total for 2% of the total change. The change does not necessarily represent a loss of habitat overall but on a broad habitat basis does represent a loss of that specific habitat type.

Broad habitat	Percentage of broad habitat changed to another habitat type
Arable and horticulture	61.76%
Improved grassland	21.41%
Neutral grassland	5.28%
Broadleaved, mixed and yew woodland	2.67%
Inland rock	2.25%
Built-up areas	1.91%
Standing open water and canals	0.97%
Calcareous grassland	0.85%
Traditional orchard	0.84%
Littoral sediment	0.68%



4.3 Changes in the distribution and extent of species

In 2022, trend analysis of changes in the distribution and extent of Kent species was published, written by the county's species specialists. While this showed that there was positive news to report across most of the species groups, thanks to conservation efforts, the national and global trend of species decline was mirrored, with species continuing to go extinct from the county and many more threatened, along with their habitats.

However, Kent was shown to be holding its own for insects, being one of the most species-rich counties in the UK for dragonflies and damselflies, and having 42 of Britain's 59 resident species of butterfly. The individual trends vary but conservation efforts ensured that some of some the rarest butterfly species, such as Heath Fritillary, are now on the increase in Kent.

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

Kent's amphibian populations are thought to be reasonably stable, while all four native reptile species are thought to be in decline.

Downward trends are also to be found in Kent's birds, especially farmland and woodland species, and in wintering waterfowl that were previously increasing. Populations of most of Kent's bat species have also declined in recent decades.

Kent is also on the frontline for species colonising from Europe, with the arrival and establishment of cattle egret and black winged stilt being linked to climate change. The downside of proximity to Europe is that airborne pathogens such as ash dieback are easily spread and this fungal disease is now firmly established in the county.

Some headlines from the State of Nature in Kent report (2022) are shown below, with more detail provided within the corresponding species priority in Part 3.

Wins for Kent's species

- First Wasp Spider recorded in Kent (1997).
- Water-biter Bush-cricket reintroduced to Lydden Temple Ewell (1990s).
- Little Egret regularly breeding in Kent (2000).
- UK's first enclosed Beaver trial established at Ham Fen (2001).
- Brown Hairstreak recorded for the first time since 1971 (2016).
- Few-flowered Spike-Rush found at Ham Fen after a 142-year absence from the county (2018).
- 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 (2019)

Losses for Kent's species

- Small Pearl-bordered Fritillary Butterfly lost from Kent (1997).
- Frog Orchid last recorded in Kent (1998).
- Pearl-bordered Fritillary Butterfly lost from Kent (2002).
- Willow Tit last year of regular breeding in Kent (2005).
- Redstart ceased breeding in Kent (2016).
- Turtle Dove added to the Rare Breeding Birds Panel species list (2018).
- Bugs Matter survey finds 50% fewer insects in Kent than in 2004 (2019).

Stag Beetle

5. Pressures, threats and challenges for Kent and Medway's nature

Changes in Kent's habitats and species are influenced by a range of pressures, challenges and drivers. It is important that any strategy to recover the county's nature takes these into account, addressing them directly where possible and acknowledging the limitations they may present where this is not possible.

Many of the pressures described here are linked to both climate change and the competing demands on land use – which together present the biggest problems facing Kent's habitats and species.

Through strategy workshops, Kent's stakeholders assisted in compiling the current and future pressures and challenges facing nature in the county. These covered:

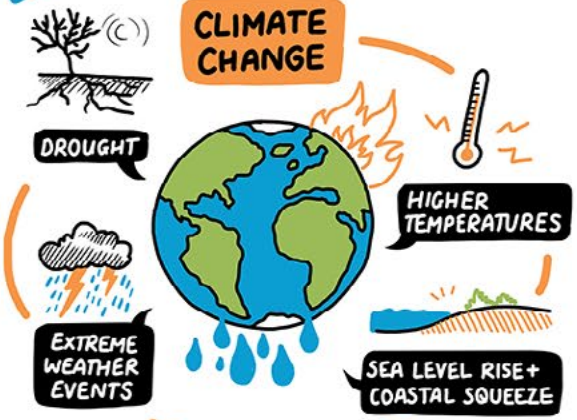
- **Climate change**
- **Pollution**
- **Water demand and management**
- **Human pressures**
- **Built-up areas**
- **Agricultural practices**
- **Land management practices**
- **Game hunting, wildfowling, game fishing and coarse fishing**
- **Diseases and invasive and non-native species**
- **Lack of funding and resources**
- **Lack of data, evidence and understanding**

Poppies at Ranscombe by Liz Milne

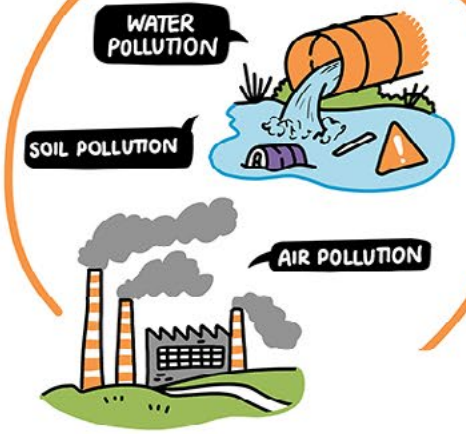
PRESSURES

SOME OF THE PRESSURES THAT WERE IDENTIFIED FOR BIODIVERSITY IN KENT + MEDWAY...

CLIMATE CHANGE



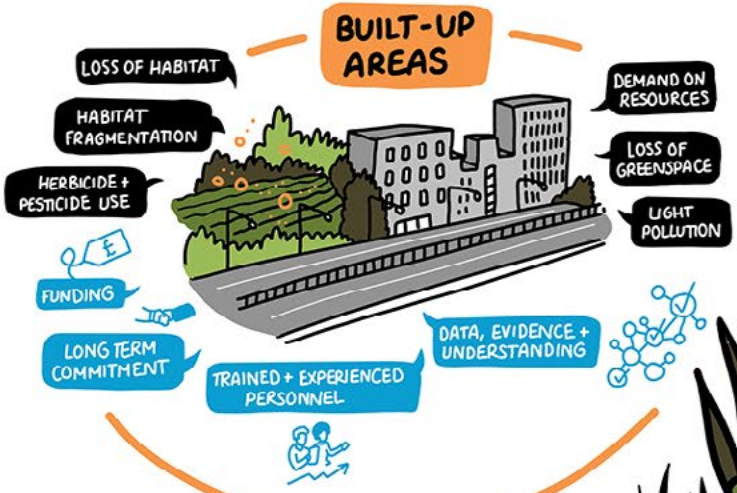
POLLUTION



WATER DEMAND + MANAGEMENT

HUMAN PRESSURES

BUILT-UP AREAS



PRESSURES

SOME OF THE PRESSURES THAT WERE IDENTIFIED FOR BIODIVERSITY IN KENT + MEDWAY...

AGRICULTURAL PRACTICES

- INTENSIVE PRACTICES
- LOSS OF HORTICULTURE
- LOSS OF HEDGEROW
- LOSS OF DITCH MANAGEMENT
- HERBICIDE + PESTICIDE USE
- OVER USE OF INORGANIC FERTILISERS

LAND MANAGEMENT + USE

- LACK OF COPPING
- LACK OF DEER MANAGEMENT
- WOOD LOTTING
- LACK OF GRASSLAND GRAZING
- CLOSE LINEAR PLANTING
- MISSED OPPORTUNITIES FOR NATURE
- INAPPROPRIATE MANAGEMENT FOR HABITAT

RECREATIONAL PRESSURES

- INTENSIVE GAME RELEASES
- UNLICENCED/ UNMANAGED FISHING + SHOOTING
- LAND + WATER CRAFT in SENSITIVE HABITATS
- WILDLIFE + HABITAT DISTURBANCES

DISEASES + INVASIVE + NON-NATIVE SPECIES

- ASH DIEBACK
- DUTCH ELM DISEASE
- AMERICAN MINK
- JAPANESE KNOTWEED
- HIMALAYAN BALSAM
- KENT IS THE ENTRY POINT FROM THE CONTINENT
- SIGNAL CRAYFISH

LACK OF...

- FUNDING
- TRAINED + EXPERIENCED PERSONNEL
- LONG TERM COMMITMENT
- DATA, EVIDENCE + UNDERSTANDING

5.1 Climate change

The strategy area is on the frontline of climate change. Impacts of climate change include warmer, wetter winters and drier summers, and it is considered that, as a result of climate change, Kent and Medway has experienced some of the hottest UK temperatures in recent years.

Based on the Met Office's UK Climate Projections for the South East, by 2080:

- summers are likely to be hotter by around 5°C to 6°C
- winters are likely to be warmer by around 3°C to 4°C
- summer rainfall is likely to decrease by 30% to 50%
- winter rainfall is likely to increase by 20% to 30%
- sea-level rise is likely to increase by 0.8m

The impacts of climate change are likely to be felt acutely in Kent, with its long, strategically important coastline, large number of properties at risk of flooding and warm summers compared with the rest of the United Kingdom.

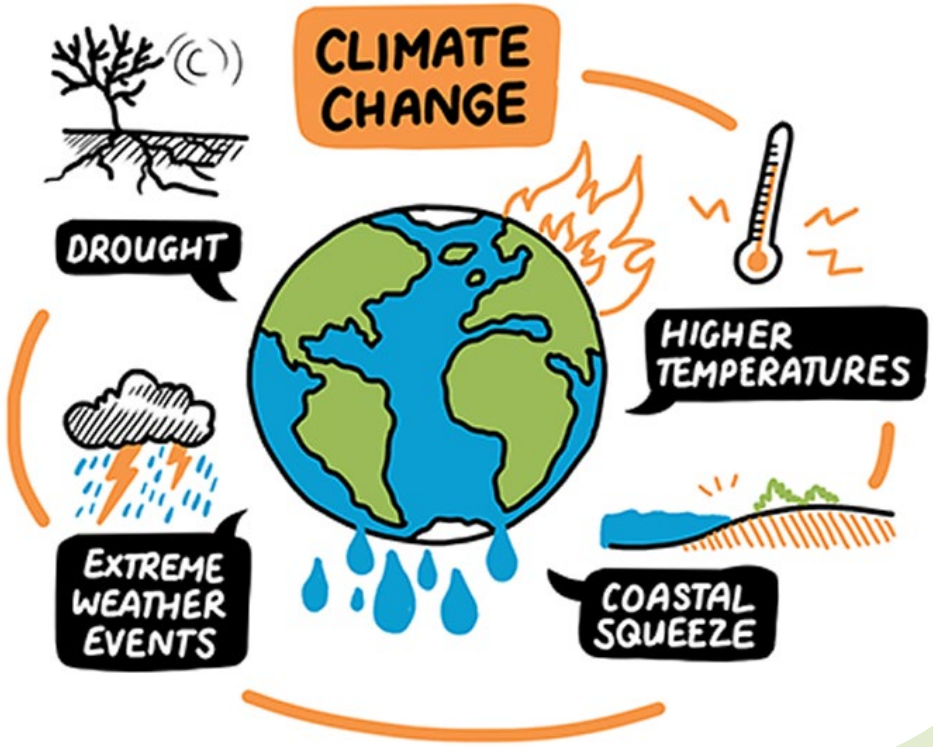
Kent is facing immediate and urgent challenges relating to climate change, including new pests and diseases, sea-level rise and coastal erosion. Both drought and flooding are affecting our water bodies and wetlands. Other impacts include water scarcity, wildfires, soil erosion and poor air quality. Changes in species distribution and abundance, and changes in land management practice, are also taking place.

Drought is a climate change impact that is being further compounded by a growing population and the associated high demand for water – not just for people but also for the accompanying food production. As a result, Kent is now a water-stressed county, which in turn is impacting on where certain types of food production and development can take place.

With our landmass gradually dipping into the sea due to isostatic effects, habitats on the Kent and Medway coast are particularly vulnerable to sea-level rise. Furthermore, rising sea temperatures present an additional pressure on native habitats and species.

Many native species cannot keep up with the rate of habitat condition change taking place because of climate change. Some species are moving north, and others are declining. The fragmentation of habitats and the wider landscape can restrict the ability of species to move in response to the changing climate.

Climate change is resulting in disruption for pollinating species, and in migratory patterns and life cycles for a range of other species. The decline in the insect populations has been linked to climate change, as well as other factors such as land management practices, including the use of pesticides.



Elmley Nature Reserve by Jim Higham

Meanwhile, species previously not found in Kent and Medway are migrating from further south as a result of climate change, with changing conditions also favouring some less welcome invasive non-native species, which have negative effects on our endemic species.

Extreme climate events, including periods of intensive rainfall, are resulting in pollution from excessive nutrient run-off and erosion, in turn reducing soil health. The invertebrates in our soil are often unable to cope with the impacts of waterlogging and reduced oxygen in one season, and then a lack of sufficient water in another.

The county's wetland habitats are particularly vulnerable to these extremes of wetter winters and drier summers, while rare habitats such as chalk streams are susceptible to slower flow rates in summer and the increased build-up of pollutants caused by this. Other habitats, such as chalk downland, while generally more resilient to climate change, are also vulnerable to these extremes, with intense rainfall damaging or washing away the top layers of the soil.

Our approach to mitigating climate change and finding greener energy sources can also create impacts on the natural environment in terms of where projects such as solar and wind farms are located.

While the causes of climate change are global and largely out of the control of the Local Nature Recovery Strategy, its impacts are an overriding context for the Strategy. Consequently, many of the priorities and potential measures are looking to manage and mitigate the impacts of a changing climate and make our natural environment more resilient and adaptable. Some of the key considerations for climate change impacts when designing a Local Nature Recovery Strategy are outlined in the table overleaf.

Climate change impact	Key considerations
Drought	• Climate change impacts compounded by extra demand for water extraction – demand for water for food production, nature conservation and, of course, communities • River flow rates reduce, resulting in a greater concentration of pollutants • Riverbanks dry out, resulting in habitat loss for Water Voles, Kingfishers and Otters. • Soil health suffers • Vital areas for breeding wading birds, such as coastal grazing marsh, which needs to stay wet all year, are drying up • Saline lagoons' delicate salinity regime is vulnerable to drier summers and wetter winters • Difficulty in establishing newly planted trees • Difficulty in establishing certain types of crops, driving land use change/uncertainty
Extreme weather events	• Heatwaves in summer and heavier rainfall and increased flooding in winter • Soil quality is impacted in a range of habitats • Tidal flooding can result in saltwater encroachment on freshwater habitats • Contamination of waterways through the concentration of pollutants • Risk of wildfires destroying some habitats
Higher temperatures	• Biodiversity needs optimum temperatures for a given habitat or species • Rising freshwater water temperatures reduces oxygen, resulting in a loss in fauna • Small changes in sea temperature are affecting fauna • Less frost in winter to break up clay soils leading to a decline in soil health • Changes in seasonal patterns affecting life cycles
Sea-level rise and coastal squeeze	• Intertidal habitats such as saltmarsh and mudflat are gradually lost • Loss of annual vegetative drift line, so vegetative shingle cannot replenish

5.2 Pollution

5.2.1 Water pollution

Nutrient pollution remains one of the most pressing environmental challenges facing Kent's rivers, streams and groundwater. Phosphates and nitrates are the main pollutants; nitrates are particularly persistent in slow-moving groundwater. Most rivers in Kent – including all chalk streams – are fed by groundwater, making them especially vulnerable to nutrient pollution. Once groundwater is contaminated, it can continue to pollute surface waters, creating a cycle of poor water quality that limits nature recovery unless it is directly addressed.

Agriculture is still the leading source of nitrate contamination in groundwater, followed by leaking sewers, private sewage systems and historic waste. The State of Nature in Kent report (2022) highlights widespread exceedances of safe nitrate levels, with long-term implications for drinking water and ecosystem health.

Phosphorus pollution is driven primarily by treated sewage effluent, with agricultural runoff and private treatment systems also contributing. These sources fuel eutrophication, leading to algal blooms, oxygen depletion and damage to aquatic ecosystems. Using too much fertiliser – particularly over-application or spreading during heavy rainfall – worsens the problem by washing nitrates and phosphates into rivers and lakes.

Surface water bodies are especially vulnerable during the summer months, when low flows concentrate pollutants. Chalk streams, which are ecologically rare and hydrogeologically sensitive, are particularly at risk. While improvements in surface water quality may be achievable in the short term, groundwater recovery will take longer due to the legacy of historic nitrate use and the slow movement of water through the soil to the water table.

Pollution is not confined to inland waters. Coastal areas in Kent are increasingly affected by sewage discharges, storm overflow events and illegal outflows. These are compounded by risks from petroleum pollution due to shipping. High phosphate levels and sewage pollution contribute to algal blooms that smother seagrass beds – which are vital nursery habitats for juvenile fish.

Other pollutants are also of concern. Metals, pesticides, pharmaceuticals, flea and other parasite treatments, industrial chemicals, plastics and silt, particularly from housing development sites, all contribute to the degradation of water quality. Microplastics and chemicals such as PFAS ('forever chemicals') are pervasive in freshwater. They do not break down naturally and will take an extremely long time to remove.

The water quality information outlined here is based on the Water Framework Directive classifications for 2019 and taken from the State of Nature in Kent report (2022). Interim classifications for ecological quality elements were produced for 2022 where suitable data was available. The next full set of classifications will be produced for 2025.

5.2.2 Air pollution

Air pollution sources include almost anything that involves fuel combustion. Air pollution can influence the quality of soil and water bodies by polluting rain and snow, which falls into water and soil environments. Of particular concern are small particulates in the atmosphere, as they remain suspended in the atmosphere for a long time and can be dispersed over a wide area. These particles can change the nutrient balance in water ecosystems, leading to species loss and damage to forests and crops. They also acidify water bodies.

Kent is going to experience an increase in road freight, road building and road widening, which will have impacts in terms of air quality and biodiversity.

Atmospheric nitrogen is also having a significant impact on nature, with excessive levels of nitrogen causing a loss of sensitive species, changes to habitat structure and function, reductions in biodiversity, changes in soil chemistry and greater sensitivity to climate change and pests. Ground-level ozone can reduce plant growth, flowering and crop yields.

A recent study of atmospheric fine particulates suggested that, across Kent, atmospheric levels were double the World Health Organization's recommended annual average maximum limit. The impact on wildlife and biodiversity can be significant, leading to health problems for animal species, including reproductive failure and birth defects when species are exposed to high levels of pollutants.

Ammonia from agricultural activity, including fertiliser application and intensive livestock production, also produces additional nitrogen air pollution. Where deposited in soils and vegetation, it can acidify soil and over-fertilise sensitive ecosystems. It also acts as a fertiliser, making conditions too rich for many wild fungi and plants. In 63% of Special Areas of Conservation – our best wildlife sites – nitrogen levels are already too high, with dire consequences for the animals, including pollinating insects, which depend on wild fungi and plants for food, nutrients and shelter.

Nitrogen dioxide can negatively impact on insect biomass (Campbell & Vallano, 2018) or directly impair the fitness of birds via inhalation exposure (Sanderfoot & Holloway, 2017). When leached into water, it leads to eutrophication, where elevated concentrations of nutrients stimulate the blooming of aquatic algae, which can cause an imbalance in the diversity of fish and ultimately high numbers of fish deaths.

Ongoing analysis in the Countryside Survey has clearly demonstrated that, over the last 30-40 years, roadside verges have seen a significant decline in once common wildflowers such as Comfrey, Lady's Smock, White Dead-nettle, Garlic Mustard, Bird's-foot Trefoil, Ox-Eye Daisy and Early Purple Orchid. At the same time, Cow Parsley, nettle species and some grasses have flourished because the verges have been fertilised into excessive growth by nitrogen compounds from car exhausts, especially diesel ones.

Deposited directly from the air and in rain, the nitrogen enriches the soil, creates acidic conditions and causes direct damage to our flora. More than two-thirds of our wildflowers, including plants like Harebell and Betony, require low or medium levels of nitrogen. Only robust species, such as Common Nettle, Cleavers and Hemlock thrive in nutrient-enriched soils. Woodlands, grasslands, heaths and bogs have all become colonised by nitrogen-loving plants, with knock-on effects for all our wildlife.

5.2.3 Soil pollution

A key factor for the health of many species in the agricultural landscape begins with the soil, but good soil health is essential for all habitats.

Across Kent, conventional farming and agrochemical inputs for improved pasture, arable and in top fruit, have reduced the soil biology, leading to a break in the food chain. In extreme cases, excessive nutrients from certain agricultural activities, along with sewage effluent, are contributing to soil pollution; the polluted soil is then very restrictive in terms of the biodiversity it can support.

Apples in the sunlight by Jim Higham

5.3 Water demand and management

Water resources and scarcity is an issue in Kent and Medway, with increasing demands from an ever-growing population, including food production, being compounded by climate change.

The county is faced with the challenge of having too much water in the wrong places and too little water where it is needed. Increased hard standing from urbanisation and developed areas, along with more erratic weather and intense rainfall, has resulted in increased surface flooding risks. Climate change impacts, including higher temperatures, have increased the need for more water, while drought reduces the natural supply. In these circumstances, over-abstraction compounds these issues.

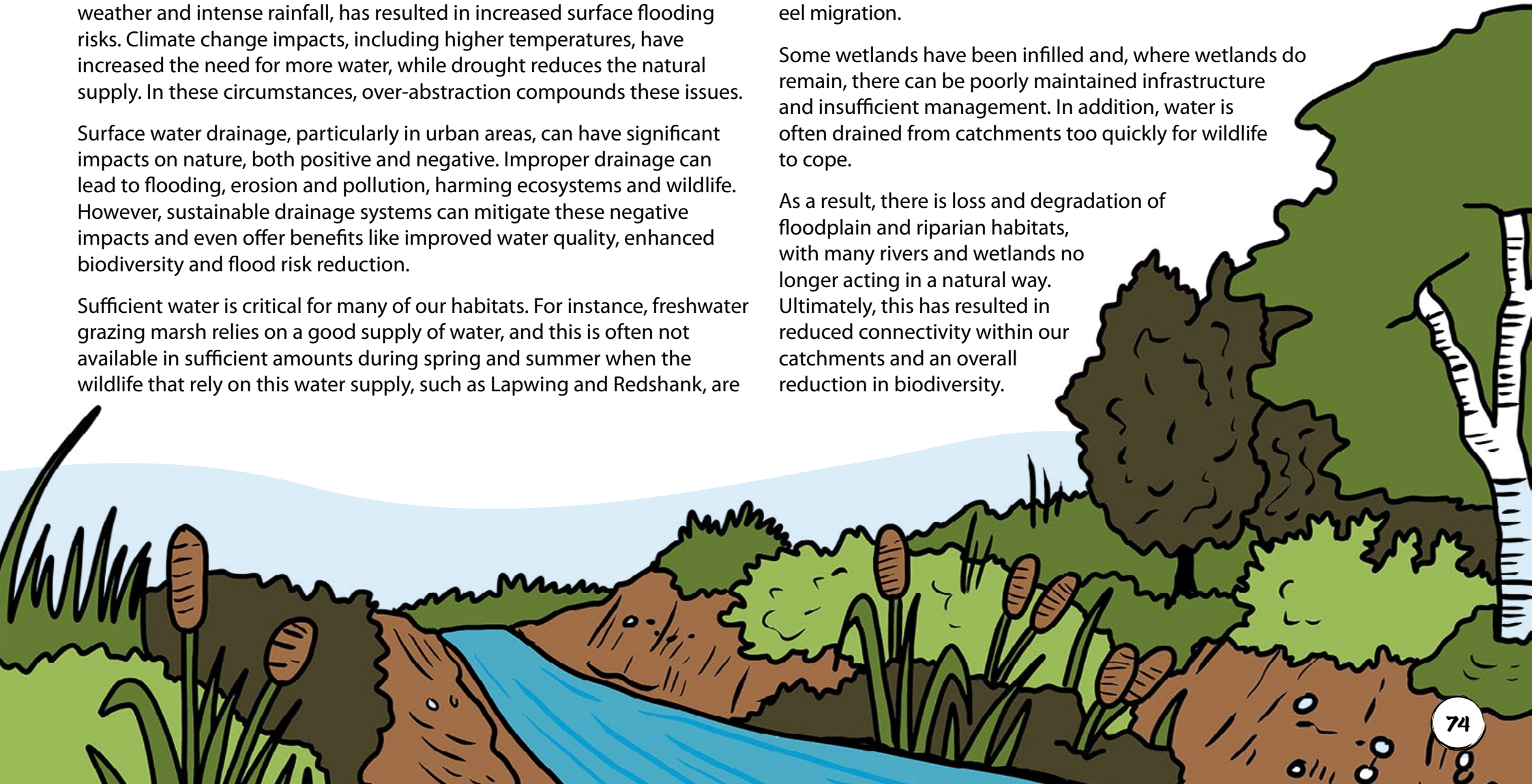
Surface water drainage, particularly in urban areas, can have significant impacts on nature, both positive and negative. Improper drainage can lead to flooding, erosion and pollution, harming ecosystems and wildlife. However, sustainable drainage systems can mitigate these negative impacts and even offer benefits like improved water quality, enhanced biodiversity and flood risk reduction.

Sufficient water is critical for many of our habitats. For instance, freshwater grazing marsh relies on a good supply of water, and this is often not available in sufficient amounts during spring and summer when the wildlife that rely on this water supply, such as Lapwing and Redshank, are present. Further to this, low river flows in the summer months results in concentrated of pollutants, leading to the contamination of waterways which in extreme cases, can prove fatal for the associated wildlife.

As well as the demands we place on water, we are also dealing with the consequences of centuries of artificial river modifications. This has included the straightening of rivers, and the building of barriers such as weirs and other structures. The impact is reduced flow variation for fish and amphibians to spawn and prevention of passage for fish and eel migration.

Some wetlands have been infilled and, where wetlands do remain, there can be poorly maintained infrastructure and insufficient management. In addition, water is often drained from catchments too quickly for wildlife to cope.

As a result, there is loss and degradation of floodplain and riparian habitats, with many rivers and wetlands no longer acting in a natural way. Ultimately, this has resulted in reduced connectivity within our catchments and an overall reduction in biodiversity.



5.4 Human pressures

5.4.1 Access

There are often inequalities in access to nature, with some areas having neither sufficient access routes nor natural green space close to where they live. The societal and health impact of this is compounded further, given that many of these areas are experience deprivation and low health. Where there is access, there can be tensions between the needs of nature and the need for public use of the land, particularly on more sensitive wildlife sites. Our coastal sites are particularly vulnerable to this, as the impact of recreational disturbance on breeding, passage and wintering waterbirds can render large areas of otherwise suitable habitat effectively unusable by these species.

The county's Public Rights of Way play a vital role in providing access to nature, but in some cases disturbance of wildlife is an issue. Many people will stick to Public Rights of Way and other appropriate pathways and routes but, in some cases, veering off them results in wildlife disturbance and the trampling of vegetation, soil and sensitive habitats. In other cases, people still use land for recreation even if there is no public access, resulting in risks to not just wildlife but also to livestock and crops, plus antisocial behaviour such as littering and vandalism.

In urban areas, the type of green space provided and its management also often pressurises nature. Sometimes, there is an aversion to having areas that are seen as overgrown but would actually provide a better habitat for wildlife. This is often accompanied by an ingrained intent to maintain tidiness – also to the detriment of wildlife.

Disturbance of wildlife by people and dogs often takes the form of ground nesting birds, such as skylarks, being put up from their nests. Livestock can also be disturbed, not only potentially harming the animals themselves but also resulting in the trampling of nests. In some areas, dog attacks on animals used in conservation grazing have made it nearly impossible to manage these sites for wildlife. Disturbance to feeding birds, particularly on our coasts, is also an issue. Many of our sites are designated for overwintering wildfowl and wading bird species, and the disturbance of these birds through leisure activities, including dog walking, is putting a serious strain on the birds' ability to feed, rest and survive the winter and spring migration back to their nesting sites.

5.4.2 Criminal and antisocial activity

Criminal activity relating to wildlife and nature can take many forms. Fly-tipping is a common problem which is both unsightly and can result in soil contamination and harm to wildlife. Illegal waste disposal causes pollution. Litter has direct impacts on wildlife, getting into the food chain and injuring or killing animals, or contaminating water bodies.

Vandalism in wild areas can destroy newly planted trees, remove nest boxes or monitoring equipment, or burn grassland and heathland sites.

Illegal hare coursing still takes place in some areas of the county, and there are also reports of poaching and the shooting of a range of wildlife.

Early Purple Orchids by Jim Higham

5.4.3 Wildlife removal

While sustainable foraging is a perfectly legitimate activity which connects people with nature, excessive foraging for fungi, fruit and other flora and fauna can have a negative impact. People collecting orchids, other rare plants and birds' eggs is not the problem it once was, but incidents are still reported and pose a risk to our rarer species.

5.4.4 Disconnect with nature

Many people strongly value their local wildlife, and act for nature through community groups, volunteering and so on. However, apathy towards nature can result in people lacking motivation to take personal responsibility for nature recovery or to provide a voice for nature. Apathy also means that people are less likely to go into natural areas, so do not experience the health and wellbeing benefits of nature. This is self-perpetuating, as a lack of connection can further the apathy.

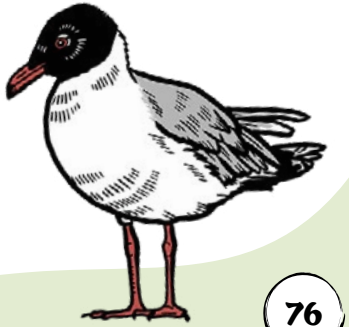
Disconnect with nature can be particularly prevalent in urban populations, where in some cases there is limited opportunity to experience nature. But it can also happen in rural locations, where barriers might be more psychological, such as people being afraid of nature or remote places.

Disconnect with nature means that people do not value nature, but placing a financial value on nature does not always result in the right outcomes. If society only sees nature for the economic value it has, rather than its inherent value, some of its less tangible benefits may be overlooked and further damage done. Sometimes, it is suggested that the loss of nature can be compensated for if enough money is spent. While recognising the value of nature may result in important finance being donated, if the sole value placed on nature is financial, then nature and society will ultimately lose out.

5.4.5 Lack of knowledge and understanding

Apathy that stems from simply not understanding or having knowledge can prevent a person from striving to understand it better. When people lack understanding, they are also often unaware of how their actions and behaviour impact wildlife. This can result in unintentional damage to, or mismanagement and use of, the natural environment.

By contrast, although public interest in more charismatic mammal and bird species is helpful, it can mean that there is a lack of appreciation of species, such as invertebrates, that underpin the wider ecosystem. Having a better understanding is important, since everyday wildlife is where most people can make a difference, through approaches such as nature-friendly gardening practices, bird and bat boxes and maintaining wildlife corridors.



5.5 Built-up areas

The public built and managed estate – parks, gardens, schools, sports facilities – are not always used to their potential for nature. This presents an opportunity to support nature recovery through improvements to land management.

While some amenity spaces, such as sports fields, need to be closely mown and have limited wildlife value, they are still part of a network of green spaces and, if managed well, this wider network provides vital green lungs in urban areas and connectivity for wildlife between the town and the wider countryside.

Many green spaces are not managed for nature, however, and are over mown, with plant species not allowed to flower and tree planting not always focusing on native and climate-resilient species. Weed control through use of pesticides (mainly herbicides) also restricts biodiversity.

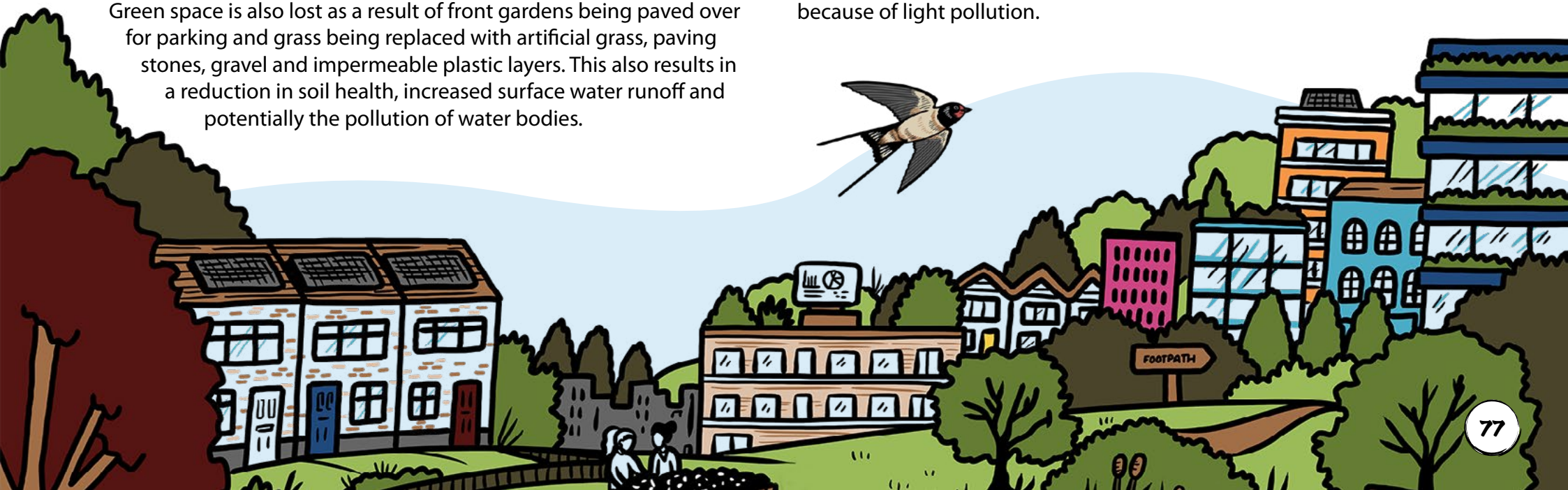
Some nature-friendly land management practices, such as cut and collect, can be more costly at the outset and are sometimes simply not accessible as a result.

Green space is also lost as a result of front gardens being paved over for parking and grass being replaced with artificial grass, paving stones, gravel and impermeable plastic layers. This also results in a reduction in soil health, increased surface water runoff and potentially the pollution of water bodies.

A growing population requires housing and infrastructure – not only does this result in land take but it also fragments the landscape and reduces connectivity. People also need somewhere to spend their leisure time. As the population increases so does its impact, with human disturbance of wildlife being a frequent problem that is particularly acute where development is close to fragile habitats. The green infrastructure provided for new developments is vital for alleviating pressure on more sensitive wildlife sites. A further impact of an increasing population is the associated number of pets, causing disturbance to, and predation on, wildlife.

Roads result in a fragmented natural environment, direct mortalities from vehicles, and air, noise and light pollution. Kent is going to see an increase in road freight, road building and road widening, which will impact biodiversity.

Light pollution is not just from roads but from urban street lighting and other sources. It has mainly negative impacts on nature, including interfering with biological rhythms and influencing behaviours. Insect populations can be particularly disorientated, with moth species being disproportionately predated by bats, for example. In turn, bats suffer from disruption of navigation and roosting behaviours because of light pollution.



5.6 Agricultural practices

High-input farming has been a feature of post-war agriculture and the move to bigger farms, bigger machinery and monocultures has resulted in the removal of hedges and reduction of field margins. Horticulture once common to Kent, such as traditional orchard management, has been on the decline for decades, being found by many growers to be economically unviable. Changes to the way in which the land is used not only results in it visually transforming but also has significant impacts for the quality of the environment and wildlife.

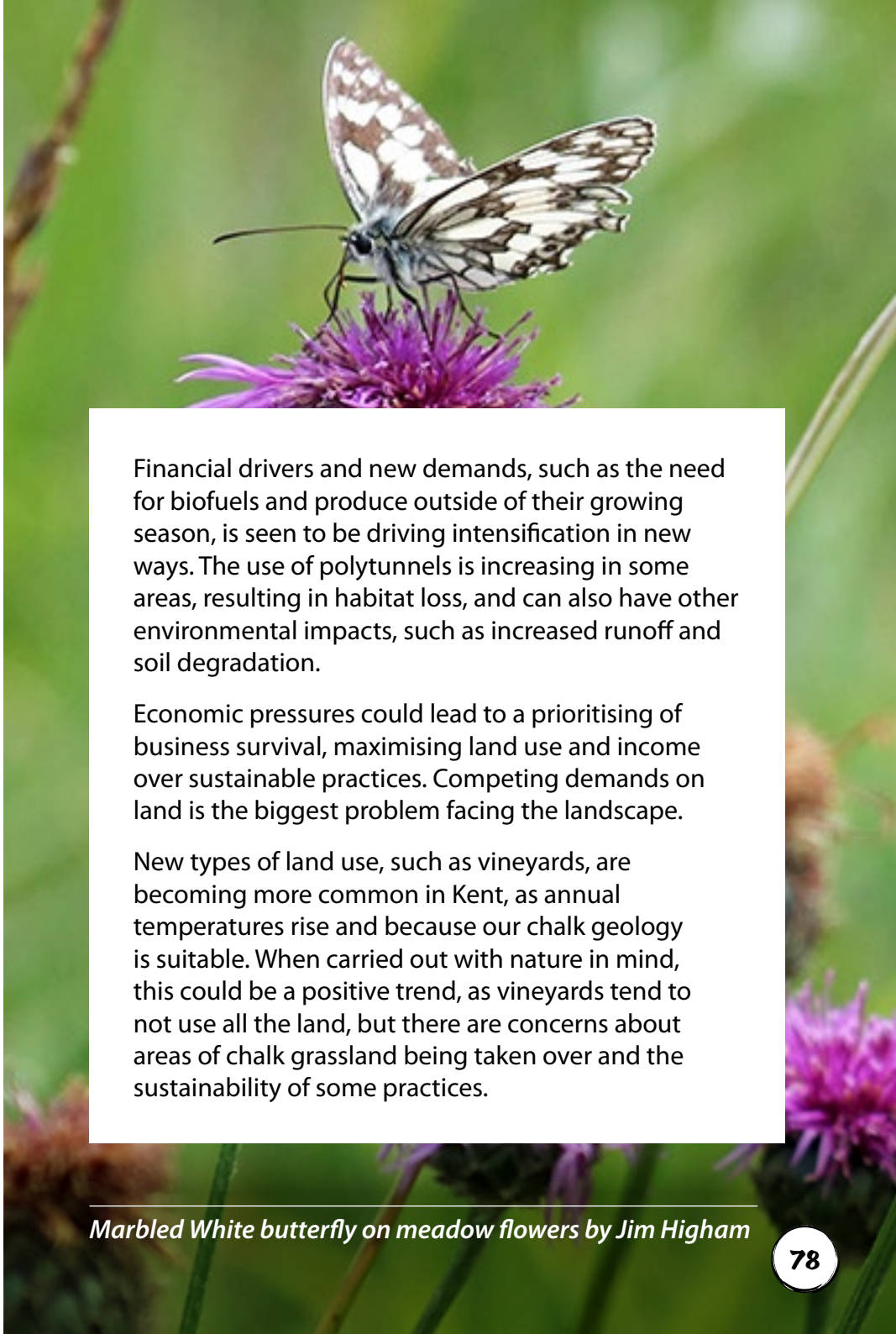
Intensive approaches have contributed to soil health degradation, a decline in pollinators, eutrophication of water and bioaccumulation of harmful chemicals up through the food chain.

There has been an accompanying decline in farmland birds, such as Yellowhammer and Turtle Dove, and general bee and butterfly populations. Species once common on farmland such as the Lapwing, are now pushed to the coastal margins.

Loss of traditional land management techniques and skills, such as ditch management, hedge laying and coppicing, means that there is not always the expertise available to implement land management that is more sensitive to nature.

In some cases, lack of livestock and graziers is due to insufficient or expensive fencing and a lack of local abattoirs. This is to the detriment not only of the viability of this type of farming, but also to the habitat and species it supports – freshwater marshes and wading birds being a good example.

Regenerative farming practices, which focus on soil health rather than chemicals, and other nature-friendly farming practices are now on the rise, but the move is not always easy, especially if the initial transition is more costly. Concerns over impacts on yield and associated incomes means that there can be a reluctance to move away from herbicides, pesticides and synthetic fertiliser and these are all still being widely used, sometimes excessively.



Financial drivers and new demands, such as the need for biofuels and produce outside of their growing season, is seen to be driving intensification in new ways. The use of polytunnels is increasing in some areas, resulting in habitat loss, and can also have other environmental impacts, such as increased runoff and soil degradation.

Economic pressures could lead to a prioritising of business survival, maximising land use and income over sustainable practices. Competing demands on land is the biggest problem facing the landscape.

New types of land use, such as vineyards, are becoming more common in Kent, as annual temperatures rise and because our chalk geology is suitable. When carried out with nature in mind, this could be a positive trend, as vineyards tend to not use all the land, but there are concerns about areas of chalk grassland being taken over and the sustainability of some practices.

Marbled White butterfly on meadow flowers by Jim Higham

Blean woods in the sunlight by Jim Higham

5.7 Land management practices

Most of our woodlands need some sort of management for wildlife to thrive, and traditional practices such as coppicing, which have declined over the years, have helped to provide that management.

Wood lotting, or the dividing up of woodland for sale, results in inconsistent management and fragmentation, while close linear planting is not good for wildlife and results in woodland with little understory for flowers and butterflies and no deadwood for invertebrates.

Deer are increasingly becoming a destructive pest in some woodland habitats, stopping natural regeneration by eating saplings and damaging woodland through bark stripping.

A lack of grazing on chalk, neutral, acid and maritime grasslands has meant that many areas have been lost to successional scrub habitats. Despite scrub not being welcome on these grassland habitats, it is in itself an important habitat but one that is often underappreciated and overlooked in terms of the wildlife value it provides.

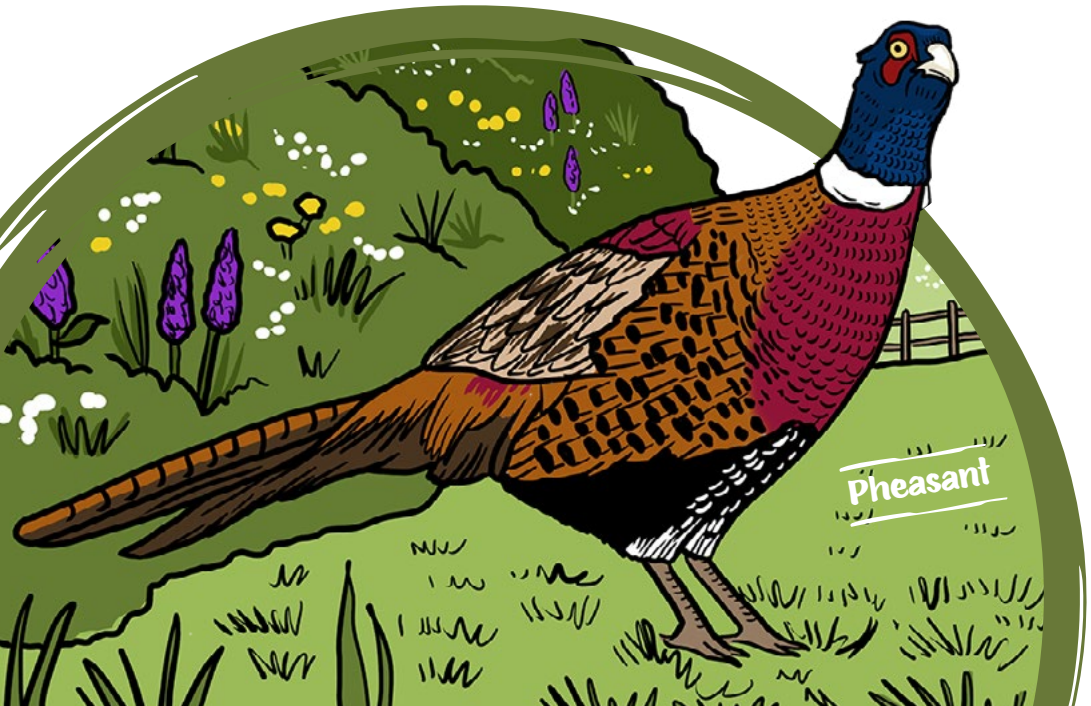
Although a lack of management is responsible for a lot of degraded habitats in the county, over-management and a leaning towards 'tidy' has meant that road verges, sea walls and amenity areas have been intensively mowed and cleared of scrub, where these areas could be providing habitat for wildlife.

5.8 Game hunting, wildfowling, game fishing and coarse fishing

The hunting and shooting of animals can be a contentious issue within nature conservation circles but, as shown by a 2020 Natural England review of gamebird releases and shoots, the impacts can be both positive and negative and the picture is often quite complex.

Within Kent, gamebird shooting and wildfowling are two common sporting pursuits, with the former mainly relating to the shooting of Pheasants and Red-legged Partridges that have normally been reared under captive conditions before being released in woodland and on farmland. Released gamebirds have effects on the fauna and flora of the habitats into which they are released, and their release is accompanied by habitat and other management activities which also have a range of effects on habitats and wildlife.

The Natural England review found that the consequences of associated land management was largely positive, typically accompanied by increases in numbers or diversity of plants, invertebrates and non-game vertebrates. Most of the negative impacts come from the released birds themselves, with impacts including soil disturbance, nutrient enrichment of soil and water, reductions in non-woody plants and reduction in abundance and/or diversity of some invertebrates. There is also evidence of negative effects on reptiles and sensitive lichens, but these occurred in very specific conflicts with nature conservation interests.



Perhaps unsurprisingly, the negative impacts are most greatly observed as the density of released birds is increased. As with most activities in the natural environment, when operated to best practice, negative impacts can be ameliorated and positive outcomes enhanced.

The other opportunity for nature from land management is related to wildfowling. The shooting of wild duck, geese and certain wading birds is an affiliated activity that occurs in Kent, with areas of wetland managed for this purpose to provide habitat such as marshland and reedbed.

Despite the potential benefits to nature of hunting and related activities, there still remain concerns in the UK, particularly in relation to unsustainable and illegal management practices. Conservation charities have raised concerns regarding the illegal killing of birds of prey, the use of lead ammunition and the release of millions of non-native species into the natural environment. With the overall impact of game hunting and wildfowling unclear, it is important to note the potential pressures and challenges this may place on nature recovery in the county while recognising, and not missing, the opportunities the activity may also present to deliver gains.

Game fishing (for eating) and coarse fishing (where species are typically returned to the water) are popular activities with a generally low impact on nature. However, when best practice is not followed, discarded or lost recreational fishing gear (including lines, fishing tackle, nets, and traps) remain in the environment for years.

In addition, the fencing of water bodies used for fishing to exclude humans and predators can have an impact on the movement of animals, including waterfowl.

Wildflowers by Jim Higham

5.9 Diseases and invasive and non-native species

As a gateway to Europe – resulting from both geography and infrastructure – Kent is the first stop for many invasive species and diseases from Europe and further afield. This can include species from across the globe, transported in food produce or in ballast water in hulls of ships, which become truly invasive, outcompeting native wildlife or causing disease in native species and in humans. It can simply be through species making their own passage. Not unique to Kent, but still an issue, is the use of non-native plants in landscaping which then spread to natural areas.

Ash dieback is a prime example, having had a huge impact on the native population of Ash trees in Kent and Medway, changing the landscape of the county and a habitat so many species depended on. Dutch Elm disease is another example of a tree disease that saw vast numbers of Elm trees wiped out across the county over the past 50 years.

Kent's waterways have been impacted by a number of invasive species including the plants Himalayan Balsam, Floating Pennywort and Giant and Japanese Knotweed. Invasive animals include Signal Crayfish and American Mink. On our coastline, there are issues with the Carpet Sea Squirt, Brushed Clawed Crabs and Pacific Oyster, all of which outcompete and displace native species, altering the structure and function of our coastal ecosystems.

Non-native plants have also affected terrestrial habitats, with Rhododendron taking over areas of native woodlands and Cotoneaster spreading on chalk grassland.

Various management and monitoring programmes are in place within the county, but the threat of new invasives and non-natives is always a risk, given the Kent and Medway geography.

However, not all migrant species will be unwelcome and, as a result of a changing climate, we will see new species move into the county. The challenge for nature recovery is determining which will add and enhance our ecosystems and which will cause harm.

5.10 Lack of funding and resources

The lack of funding and resources has a big influence on nature recovery and is, in fact, a driver for nature degradation. Even protected sites are not always afforded that protection, because of insufficient management, enforcement and policing – linked to insufficient funding and resources. Many of our most valued sites are in an unfavourable condition. Some protected sites don't necessarily have in place appropriate management because of a change in environmental conditions since the site strategy was last devised.

This is not because of lack of care or interest on the part of the landowner. Habitat management can be costly and time consuming – and often that investment will not generate any economic returns that can be reinvested. Management is also complex – one size does not fit all and often approaches need adjustments depending on the time of year, the environmental conditions or the response of the habitat and species. It is something that requires specialist knowledge and input.

Funding for nature restoration, enhancement or creation is often associated with a time-limited project and, while the achievements of such projects can be significant, they can be short lived if there is no onward investment to manage and maintain the gains. Funding is also often targeted towards capital works and does not always provide for the personnel needed to support, coordinate and deliver the nature recovery action.

Central investment in the natural environment can be short term as well, designed to fit around current policy and priorities which can change from one government term to another. Any uncertainty relating to financing and grants can be a big deterrent to a landowner who is considering entering into agreements for nature recovery.

Green financing and investment approaches are welcomed but they are not necessarily the quick fix to the problem of underfunding. Markets are developing and there is a wariness about approaches, often borne out of a lack of knowledge and understanding. In addition, the lack of regulation and standards that would ensure that the environment remains the core consideration is also seen as a barrier.

Delivering nature recovery alongside nature-based solutions, and drawing investment from sources that might not otherwise be open to such actions, may prove an effective approach. However, this still relies on public money being available for these public services. Many public services are struggling to deliver the infrastructure they are required to within the grants received, so additional biodiversity gains alongside these can be difficult.

While this pressure is not something that the Local Nature Recovery Strategy can directly address, by targeting action where it is most needed, where it will deliver the greatest benefit and where there may be the potential to deliver nature-based solutions, the best can be made with what little resources there may be. It also ensures that the county is ready to take advantage of any investment that might be forthcoming, for the benefit of nature recovery.

5.11 Lack of data, evidence and understanding

There are various gaps in the data for certain habitats and species, and data can go out of date quickly. This was a point commonly raised by stakeholders during development of the Strategy and an issue that is picked up in various sections.

The impact of a lack of data means that issues are not always identified, the evidence for action and funding is, in some cases, insufficient, and we do not always have a reliable baseline on which to measure progress.

Sometimes, important decisions are held back due to a lack of data. For instance, species reintroductions, which could aid the development of functional ecosystems, are being blocked on this basis. An evidence base on the impacts of reintroductions is essential, but often there is no policy and funding support linked to this.

6. Strategic context for the Kent and Medway Local Nature Recovery Strategy

The Kent and Medway Local Nature Recovery Strategy sits within a framework of national and local strategies, plans and regulations. Understanding these, and considering them within the development of our priorities for nature, ensures our priorities for nature are consistent across the county and joined up, our ambitions are framed within existing delivery mechanisms, and opportunities for mutual support of priorities and delivery of measures are identified.

6.1 Local strategic context for the Kent and Medway Local Nature Recovery Strategy – Local Plans

The National Planning Policy Framework requires Local Plans to contribute to and enhance the natural and local environment. Consequently, the county's local planning authorities have already identified priorities and plans for biodiversity.

In setting the criteria for the priorities that the Kent and Medway Local Nature Recovery Strategy would include, it was agreed that one of the considerations should be aligning with common and consistent priorities from existing and emerging Local Plans across the county.

In addition, where ambitions within Local Plans and associated strategies were more detailed, this information provided an outline action on which potential measures could be based.

This approach would help find the balance between producing a Local Nature Recovery Strategy that is not only ambitious but also deliverable, by working with existing local policy frameworks and the delivery mechanisms for nature recovery that they provide. It was also an opportunity to identify opportunities for collaborative and focused action, where priorities aligned.

A thorough review of the Strategy area's Local Plans and other relevant strategies was undertaken. The full details of the review can be found in Appendix 2.1 and a summary is provided below.

6.1.1 Opportunities to address shared pressures, threats and challenges at the local level

All areas have growth and development targets, resulting in development pressures. There is also the need to provide the infrastructure to support this growth. While development aims to be sustainable and minimise environmental impacts, land take, habitat fragmentation and other residual environmental impacts are inevitable. Without significant mitigation and compensation measures being secured, habitats and ecosystems will be significantly degraded.

Flood risk is a significant threat across the county – whether that is from coastal, fluvial or surface water – and this risk increases as climate change brings more extreme weather. As Kent is coastal, it is not surprising that coastal changes, erosion, land loss and flooding are a challenge for many local planning authorities in the county.

Water quality and quantity is another shared challenge, with concerns around security of supply and pollution. The impacts of climate change and the effect this has on the population's health, wellbeing and risks to living conditions are also a threat.

The other pressures, threats and challenges set out in Chapter 5 (Part 2) are experienced by more than one and sometimes the majority of the districts and boroughs.

Many of the pressures, threats and challenges felt at the local level also happen on a landscape scale, often across administrative boundaries. Flood risk management, water supply and pollution, and habitat fragmentation are just some of the challenges best addressed on a scale that goes beyond one district. Hence the Local Nature Recovery Strategy provides the shared vision and framework to enable this collaboration and to address matters in a functional way, especially where nature-based solutions can offer multiple benefits to multiple districts when they are implemented at a strategic level.

Clouded yellow butterfly by Jim Higham

6.1.2 Opportunities to collaboratively restore, enhance and create habitats

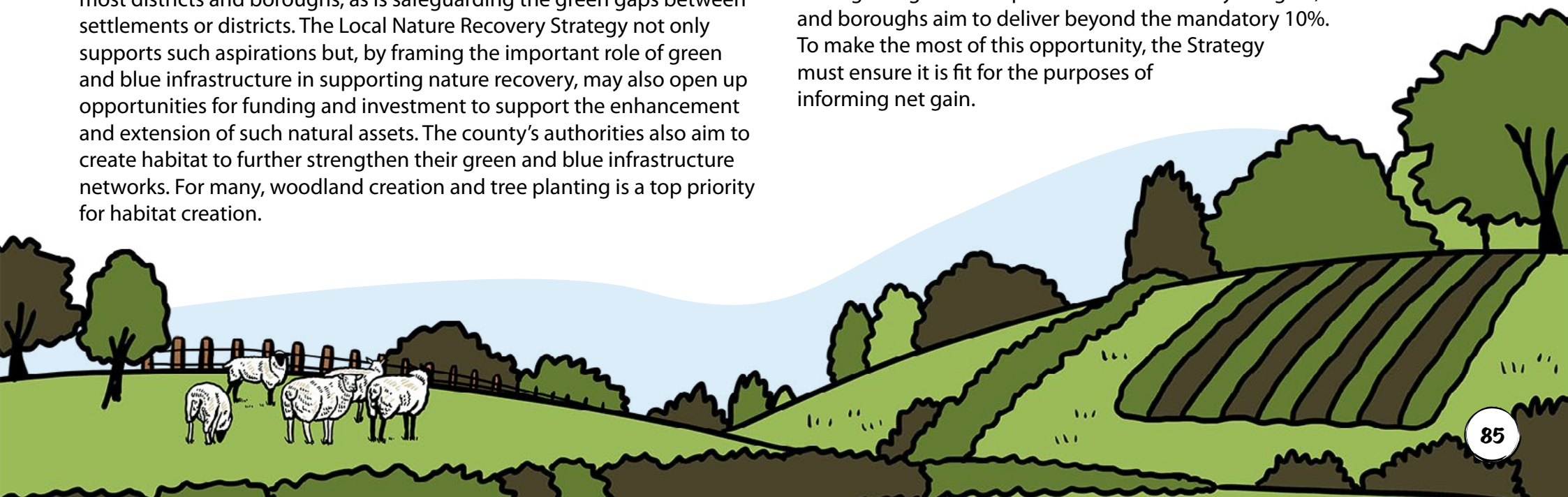
All districts refer to and endorse the aims and objectives of the Kent Biodiversity Strategy 2020, demonstrating an aspiration to maintain, restore and create habitats that are thriving with wildlife and plants, and to ensure the county's terrestrial, freshwater, intertidal and marine environments regain and retain good health. While framed slightly differently, the Kent and Medway Local Nature Recovery Strategy aims to achieve this too, and provides an updated and spatially framed collaborative approach for nature recovery.

All districts place the same importance on retaining their green and blue infrastructure networks, and using management and implementation plans to do so. The majority underpin this with a green infrastructure strategy, which includes plans and mapping for how and where these networks can be restored and enhanced. This provides useful evidence for the Local Nature Recovery Strategy in determining where urban greening can provide mutual benefits to both nature and people. For example, the protection of trees and woodlands is a priority shared by most districts and boroughs, as is safeguarding the green gaps between settlements or districts. The Local Nature Recovery Strategy not only supports such aspirations but, by framing the important role of green and blue infrastructure in supporting nature recovery, may also open up opportunities for funding and investment to support the enhancement and extension of such natural assets. The county's authorities also aim to create habitat to further strengthen their green and blue infrastructure networks. For many, woodland creation and tree planting is a top priority for habitat creation.

The importance of development integrating green and blue infrastructure is evident throughout the Local Plans. Some shared approaches are incorporating biodiversity into new developments, enhancing the green and blue infrastructure corridors, using urban greening, retaining original trees and hedgerows, and providing new open spaces. The Local Nature Recovery Strategy can assist these authorities in targeting and focusing such actions on what will deliver the greatest gains for nature and wider benefits for their existing and new local communities.

Plans also recognise the need for development to provide surface water management, water quality and quantity management, and the adaptation and mitigation of climate change impacts. Where such challenges are restricting necessary housing development, working with nature may provide a solution that also delivers benefits to the local wildlife.

Biodiversity Net Gain provides a mechanism by which development can support nature recovery. The Local Nature Recovery Strategy will have a critical role in ensuring that the gains derived through this new, mandatory requirement make a meaningful contribution to the local biodiversity and are directed to where this contribution is most needed. Having recognised the potential of biodiversity net gain, several district and boroughs aim to deliver beyond the mandatory 10%. To make the most of this opportunity, the Strategy must ensure it is fit for the purposes of informing net gain.



6.1.3 Opportunities to support wider environmental goals through nature recovery

Kent and Medway's districts and boroughs all share priorities relating to wider environmental benefits, the most common being good air quality, clean and plentiful water, climate change mitigation and adaptation, enhancing the natural environment and built heritage, encouraging health and wellbeing, and access to, and engagement with, the natural environment. They all also have net zero commitments.

If we work with nature, and use nature-based solutions, these priorities can be addressed.

6.2 Local strategic context for the Kent and Medway Local Nature Recovery Strategy – other relevant plans in Kent and Medway

In addition to Local Plans, many other strategies, plans and policies were considered in the development of the Local Nature Recovery Strategy. In the same way as Local Plans, these provided a steer on environmental priorities in the county that the Strategy should work with and potentially align to. They also provided possible actions to be used as a basis for the Local Nature Recovery Strategy potential measures.

Strategies and plans that are spatially framed have provided evidence to inform the mapping of the Strategy's potential measures.

The intention is to produce a Local Nature Recovery Strategy that is deliverable within the county's existing strategic frameworks and will identify opportunities for collaborative and focused action, where priorities align.

The strategies, plans and policies that have been reviewed are:

- Catchment Flood Management Plans for North Kent, River Stour, River Medway River Darent and Cray, and River Rother
- High Weald and Kent Downs National Landscape Management Plans
- Kent Biodiversity Strategy
- Kent Climate Change Adaptation Plan
- Kent County Parks Strategy
- Kent District Level Licensing Scheme for Great Crested Newts Strategy
- Kent and Medway Energy and Low Emissions Strategy
- Kent Local Flood Risk Management Strategy
- Kent Local Transport Plan
- Kent Joint Health and Wellbeing Strategy
- Kent Minerals and Waste Local Plan
- Kent Plan Bee
- Kent Plan Tree
- Kent Rights of Way Improvement Plan
- Local green infrastructure strategies
- Medway Rights of Way Improvement Plan
- Medway Joint Health and Wellbeing Strategy
- NHS Kent and Medway Green Plan
- Preliminary flood risk assessment for Kent
- Preliminary flood risk assessment for Medway
- River Basin Management Plan for the South East
- Shoreline Management Plans for River Medway and Swale Estuary; Isle of Grain to South Foreland; and South Foreland to Beachy Head
- Surface water management plans

Appendix 2.3 provides more detail on how they have informed the Strategy.

6.3 National strategic context for the Kent and Medway Local Nature Recovery Strategy

As well as considering the local strategic priorities and policies, the future priorities of the Local Nature Recovery Strategy were also developed in relation to the contribution they could make to the national targets and ambitions for nature recovery. An overview of those that informed the selection of Kent and Medway's priorities is provided below.

6.3.1 Environment Act 2021 and Environmental Improvement Plan 2023

The Environment Act 2021 sets national targets that all 48 Local Nature Recovery Strategies are expected to contribute to.
These include the following:

- Restore or create in excess of 500,000 hectares of a range of wildlife-rich habitat outside protected sites by 2042, compared to 2022 levels.
- Halt the decline of species abundance by 2030. Ensure that species abundance in 2042 is greater than in 2022, and at least 10% greater than 2030.
- Reduce the risk of species extinction by 2042, when compared to the risk of species extinction in 2022.
- Increase total tree and woodland cover from 14.5% of land area now to 16.5% by 2050.
- Reduce nitrogen, phosphorus and sediment pollution from agriculture into the water environment by at least 40% by 2038, compared to a 2018 baseline.

The Environmental Improvement Plan 2023 makes further commitments, again that should be supported by the Local Nature Recovery Strategies:

- Work to ensure that everyone in England lives within 15 minutes' walk of a green or blue space.
- Restore approximately 280,000 hectares of peatland in England by 2050.
- Restore 75% of our water bodies to good ecological status.
- Protect 30% of land and of sea in the UK for nature's recovery by 2030.
- Support farmers to create or restore 30,000 miles of hedgerows by 2037 and 45,000 miles of hedgerows by 2050.
- Manage our woodlands for biodiversity, climate and sustainable forestry.
- Restore 75% of Sites of Special Scientific Interest to favourable condition by 2042. By 31 January 2028, 50% of Sites of Special Scientific Interest will have actions on track to achieve favourable condition.
- Ensure delivery and management of actions and policies that contribute towards our 25 Year Environmental Plan goals are suitable and adaptive to a changing climate.
- Make sure Local Nature Recovery Strategies include proposals for nature-based solutions which improve flood risk management where appropriate.
- Achieve Good Environmental Status for our seas.
- Reduce emissions of nitrogen oxides by 73% and ammonia by 16% by 2030, relative to 2005 levels.
- Reduce the rates of introduction and establishment of invasive non-native species by at least 50% by 2030.

6.3.2 Delivering 30by30 on land in England 2023

In 2020, the government committed to protecting 30% of the UK's land by 2030 (30by30). It aims to deliver this by:

- strengthening: ensure effective policy and statutory safeguards and powers are in place to improve management for nature, prevent degradation and ensure appropriate access for people
- extending and creating: designate new protected areas and restore or create wildlife-rich habitat outside of these
- investing: invest in habitat restoration across our protected areas and beyond

Local Nature Recovery Strategies will identify opportunities to create and improve wildlife-rich habitat which could, where protection or agreements for ongoing management are in place, contribute to meeting the 30by30 goal.

"Stour Valley Walk" by Kent Downs National Landscape

6.3.3 Nature Recovery Network

The Nature Recovery Network is a growing national network of wildlife-rich places, stretching from our cities to countryside, mountains to coast. It is supported by green and blue spaces that buffer and connect these wildlife-rich sites.

Growing the network involves prioritising and mapping actions, with Local Nature Recovery Strategies at the centre. The Local Nature Recovery Strategy's spatially framed proposed actions, when implemented, will contribute to expanding the Nature Recovery Network. The Local Nature Recovery Strategy partnership framework will facilitate and lead the collaboration necessary to deliver this growth.

6.3.4 Protected Landscapes Targets and Outcomes Framework

The Protected Landscapes Targets and Outcomes Framework sets out targets for National Parks and National Landscapes aimed at supporting protected landscapes to meet their huge potential for nature, climate, people and place.

Local Nature Recovery Strategies are noted as an important evidence base to aid effective planning for nature recovery activities as part of the protected landscapes' management plans. These activities within National Landscapes should be working towards the following targets, which aim to deliver thriving plants and wildlife:

1. Restore or create more than 250,000 hectares of a range of wildlife-rich habitats within protected landscapes, outside protected sites by 2042 (from a 2022 baseline).
2. Bring 80% of Sites of Special Scientific Interest within protected landscapes into favourable condition by 2042.
3. For 60% of Sites of Special Scientific Interest within protected landscapes assessed as having 'actions on track', to achieve favourable condition by 31 January 2028.
4. Continuing favourable management of all existing priority habitat already in favourable condition outside of Sites of Special Scientific Interest (from a 2022 baseline) and increasing to include all newly restored or created habitat through agri-environment schemes by 2042.
5. Ensuring at least 65% to 80% of land managers adopt nature-friendly farming on at least 10% to 15% of their land by 2030.

6.3.5 Other national strategies and policies

There is a plethora of other national strategies and policies relating to wider environmental improvements to which the Local Nature Recovery Strategy can, and should, contribute. This could be directly, for instance, aligning the priorities for our rivers and streams to support the ambitions of the Chalk Stream Strategy, or it could indirectly support, through the benefits provided by nature-based solutions, the targets of the Clean Air Strategy.

There are other strategies and policies that need to be considered so that the priorities for nature recovery in Kent and Medway do not unintentionally undermine them. For instance, in mapping our potential measures we must ensure that we do not conflict with other land-use priorities, such as food security.

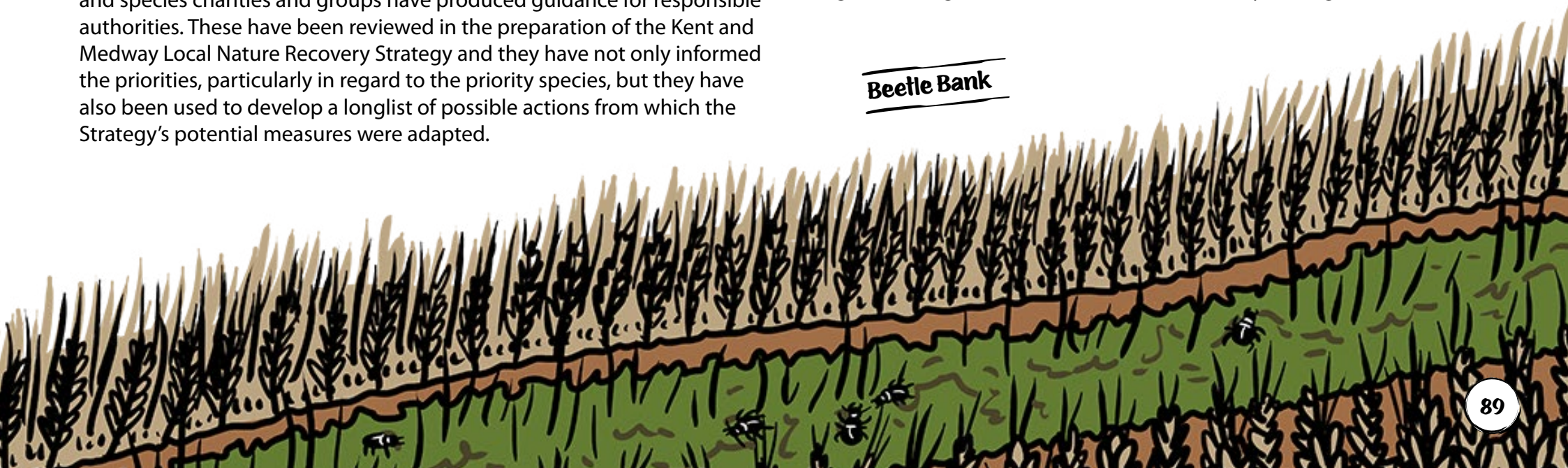
All national strategies considered in preparation of the Kent and Medway Local Nature Recovery Strategy are outlined in Appendix 2.2.

6.4 Other influences on the Strategy

Having recognised the potential of Local Nature Recovery Strategies to provide plans for specific species and habitats, several nature conservation and species charities and groups have produced guidance for responsible authorities. These have been reviewed in the preparation of the Kent and Medway Local Nature Recovery Strategy and they have not only informed the priorities, particularly in regard to the priority species, but they have also been used to develop a longlist of possible actions from which the Strategy's potential measures were adapted.

Species- and habitat-focused guidance considered in the preparation of the Kent and Medway Local Nature Recovery Strategy include the following:

- Plantlife – How to Design Your Local Nature Recovery Strategy to Deliver for Plants and Fungi.
- Buglife – Delivering for Invertebrates in Local Nature Recovery Strategies.
- Amphibian and Reptile Conservation – Design your Local Nature Recovery Strategy to Deliver for Amphibians and Reptiles.
- Bat Conservation Trust – Taking Bats into Account in Local Nature Recovery Strategies.
- Floodplain Meadows Partnership – Floodplain Meadows in Local Nature Recovery Strategy.
- Bumblebee Conservation Trust – Local Nature Recovery Strategies: A guide to help bumblebees thrive.
- People's Trust for Endangered Species – Our Guidance for Designing Local Nature Recovery Strategies.
- Freshwater Habitats Trust – Incorporating Small Freshwater Habitats into Your Local Nature Recovery Strategy.
- Big Chalk – Big Chalk and Local Nature Recovery Strategies.



Drinker Moth caterpillar by Jim Higham

7. Nature recovery opportunities in Kent and Medway

7.1 Building on a solid platform of action for nature

The 2022 State of Nature in Kent report showed that, when action is joined up, with all organisations playing a role, the outcomes for nature have been dramatic.

The report also found that Kent has an extraordinary breadth and depth of skills and experience across the public and third sectors that is at the disposal of nature recovery actions in the county.

This resource has been critical to the development of the Local Nature Recovery Strategy, which now provides a framework for collaboration and an opportunity to engage the public, private and third sectors in a dynamic way, to leverage funding to deliver nature recovery at a scale commensurate to the challenge. While possibly the most challenging time the conservation of nature has faced in the UK, it is also a time of opportunity, to work differently and bring new resourcing to bear in a way which has not been done before.

While the Local Nature Recovery Strategy provides a renewed focus and a new approach to delivering nature recovery in the county, we are not starting from nothing and there have been many achievements in the county to build on and learn from.

7.1.1 Restoring landscapes

Over the last decade, we have seen the conservation community across Kent embrace, and begin to implement, the Lawton principles through their collective work to drive forward nature's recovery at a landscape scale. The most significant and successful landscape-scale schemes that have been conceived and delivered in the county over the last decade have had at their heart an understanding of the value of working collectively and a demonstrable willingness to collaborate.

An example of this can be seen across the Kent Downs landscape, where a significant proportion of globally rare chalk grassland resource can be found. Here, a suite of landscape-scale partnership projects has been conceived and delivered to reinstate management and consequently restore and reconnect these nature-rich, chalk grassland habitats. In less than 15 years, projects have collectively restored more than 341ha of chalk grassland.

Agri-environment schemes have also proved a valuable mechanism for delivering landscape-scale restoration across the farmed landscape. In the East Kent Downs, over the last decade, the continued engagement of farmers with their local Natural England advisor has resulted in the transformation of 900ha of formerly arable or species-poor grassland. Through natural regeneration, green hay spreading and the sowing of native wildflower mixtures, these areas are now wildflower-rich habitats.

Supporting land-use change in the farmed landscape remains integral to promoting nature's recovery across the county. The farmer cluster model advocated in Kent continues to grow to enable and support collective action from farmers and land managers in discrete geographical areas.

An example is the Marden Cluster, where farmers and land managers are working together to restore and extend lowland meadow, a species-rich but depleted habitat in Kent, across the Low Weald.

Larger conservation organisations in the county have delineated focus areas to create bigger, better and more resilient landscapes for people and wildlife. Such working between these land-owning organisations has allowed the connectivity of habitats to form functionally linked networks, as has been seen in the newly established North Kent Downs and Woods National Nature Reserve, and also the Blean complex where Kent Wildlife Trust and the Royal Society for the Protection of Birds (RSPB) have worked together.

7.1.2 Increasing nature in urban areas

Since 1994, Kent Wildlife Trust and Kent Highways have been working together to create a network of Roadside Nature Reserves across the county. There are now around 150 Roadside Nature Reserves in Kent and Medway, with around 89km of roadside protected and managed by volunteers across the county, supporting important species and habitats, and providing valuable wildlife corridors.

Local initiatives also encourage nature-friendly gardening through advice, support and awards.

A wealth of community, 'friends of' and voluntary groups work tirelessly to manage urban green spaces for the benefit of both wildlife and people. These groups represent a massive amount of support on the ground for the delivery of the Local Nature Recovery Strategy's potential measures.

7.1.3 Improving environmental quality

Conservation efforts, such as Natural England's Catchment Sensitive Farming Scheme, are helping to improve water quality by reducing nutrients entering water courses through planting buffer strips, fencing livestock and improving farming practices. Such projects, together with improvements at sewage treatment works and regulation changes, have seen 16 rivers in Kent improve their phosphate classifications since 2015.

This reduction in nutrient loading means the impact from lower river flows on water quality will be reduced, which in turn improves river species' ability to withstand the seasonal extremes associated with climate change.

7.1.4 Species

Most nature conservation in the British Isles is focused on the management of habitats, based on the adage 'build it and they will come'. This is certainly true in Kent, where much of the county's conservation work has focused on the management of habitats to improve, enhance and/or extend them. Although this provides better and more habitat, this action alone is not always sufficient to prevent threatened species from declining or to restore populations to their former ranges.

Common habitat manipulation practices including scrub removal, flood management, and the creation of islands or floating rafts, coupled with predator management, have been successfully applied in Kent to see increases in nesting success of Little Terns at Sandwich Bay and Castle Coote, and Lapwing on the South Sheppey Marshes.

Kent has also seen the translocation of several threatened species that has resulted in improvements in their local conservation status, including Great Crested Newt, European Water Vole, European Beaver, Sand Lizard, Monkey Orchid and the Silver Spotted Skipper.

At a more local scale, the provision of artificial hibernacula, refugia and nest sites for birds, bats, small mammals, reptiles and amphibians is widely implemented to mitigate some of the habitats' and nest sites' deficiencies.

7.1.5 Coastal and marine

Some of the most effective Kent and Medway projects and initiatives of the last 10 years or so have been around reducing the level of wildlife disturbance or destruction at the coast.

Bird Wise is an initiative to manage wildlife disturbance along the coast in North and East Kent. A team of officers, funded through housing tariffs, work on the coast to engage and meet people, promote the codes of conduct and advise people on how to enjoy the coast without disturbing birds.

Another success story is Coastbusters. Launched in 2012, this volunteer task force was trained and given the tools to tackle the invasive Pacific Oyster and Japanese Wireweed. As a result of their efforts, the Pacific Oyster population at the National Nature Reserve at Pegwell Bay has been reduced and stabilised, and has been prevented from forming reefs. In addition, it has prevented the loss of an important intertidal mussel bed, further establishment has not occurred, and the protected chalk substrate has been maintained.

7.1.6 Community groups

Across the county, community groups are making a considerable contribution to nature recovery. Operating in a largely voluntary capacity, these groups rely on dedicated individuals committing their time and energy to improving and safeguarding the natural environment in their local area. In Thanet, Dane Valley Woods was established in 2003 on a 12-acre former landfill site, with the ambition of increasing tree numbers in an area with very low canopy cover. Today, Dane Valley Woods is home to 6,450 trees of 36 different species, as well as 265 species of birds, mammals, invertebrates, reptiles and amphibians, and provides much needed green space to local residents.

On the other side of Kent, the group High Weald Swifts work with local schools and residents to install nesting boxes for Swifts, helping to bolster their numbers in the face of habitat loss and reduced insect populations.

The Canterbury Biodiversity Network was established during the lockdown of 2020, with the aim of bringing together projects that were working to support local biodiversity and enabling volunteers to become involved in conservation projects in the area.

These are just a few examples of hundreds of community initiatives that are active in Kent, whose combined work is vital to nature recovery on a landscape scale.

7.2 Realising the opportunities for recovering nature in Kent and Medway

The Kent and Medway Local Nature Recovery Strategy presents an opportunity to build on these gains and provide a framework for the collaborative and landscape-scale action needed to recover nature in the county. It will:

- consider the landscape character, the catchment functions and ecosystem links across the county
- focus on addressing the most significant impacts arising from the pressures and challenges facing nature
- ensure our most significant and important habitats, locally and nationally, remain the target of efforts
- concentrate on habitats that are threatened in extent and degraded in quality or are at risk from climate change
- for the first time in Kent, give detailed consideration to the needs of threatened species within habitat management, identifying any bespoke interventions that are needed and ensuring that any management considers species requirements within the habitats they are associated with
- look at how it can support both the local and national priorities and ambitions for nature, green and blue infrastructure and the wider environment
- identify the actions and delivery mechanisms needed to achieve the priorities for the county's nature, and target them to the areas of the county that are in most need of action and/or where wider benefits can be delivered
- maximise opportunities for delivering nature-based solutions by directing action to where the design of nature recovery action can also deliver environmental improvements that are needed in that area