Kent Nature Partnership Biodiversity Strategy – 2018 to 2044

The Kent Biodiversity Strategy sets out the contribution the county of Kent, and the Kent Nature Partnership, can make to the Government's ambition to leave our environment in a better state than we found it and the aspirations set out in its 25 Year Environment Plan "A Green Future".

The (draft) Kent Biodiversity Strategy has been prepared by Kent Wildlife Trust and Kent County Council under the guidance of a Task and Finish Group, comprising the following members of the Kent Nature Partnership:

Jason Adams	Environment Agency
Debbie Bartlett	University of Greenwich
Camilla Blackburn	Kent Wildlife Trust
Sirina Blankson	Kent & Medway NHS & Social Care Partnership Trust
Lucy Breeze	Kent Environment Strategy – Kent County Council
Bryony Chapman	Kent Wildlife Trust
Hannah Cook	Kent & Medway Biological Records Centre
Paul Haddaway	Kent Wildlife Trust
Huw Jarvis	LEADER
Alan Johnson	RSPB
Liz Milne	Kent County Council
Laura Newland	Natural England
Lyn Newton	Swale Borough Council
Mark Pritchard	Medway Valley Countryside Partnership
David Scully	Tunbridge Wells Borough Council
Ruth Tyson	Kent County Council
Anne Waite	Kent Wildlife Trust

Introduction

Why does nature matter?

Nature is remarkable and is essential to our lives. It is responsible for the air we breathe, the water we drink and the food we eat. It provides us with clothes to wear, materials to build with and medicines to cure. It provides us with a place to recreate and reflect and provides great joy and interest; as such it is inextricably linked to our mental health and wellbeing.

Despite this, nature is facing a crisis. Globally, the Living Planet Report (2018) shows that wildlife populations have declined by over half in less than 50 years and that the variety of life on earth is disappearing fast[1]. Nationally, the 2016 State of Nature Report[2] found that the UK has lost significantly more nature over the long term than the global average, with suggestions that we are among the most nature-depleted countries in the world – over half of our species are in decline. This is therefore a pivotal point in time to turn around nature's fortunes – for nature's sake and for the essential role it plays in our lives.

What is biodiversity?

Biodiversity is the variety of life on Earth, in all its forms, and the interactions between them – it is the wide range of living things and the habitats they rely on. Biodiversity does not just concern rare or endangered species and habitats, everything, even the most commonplace, has an important role in the wider ecosystem and the processes they support. The abundance of a species is also crucial in maintaining a healthy ecosystem.

Kent has a wonderfully rich and varied biodiversity resource, with globally rare habitats such as the vegetated shingle of Dungeness, our ancient chalk grasslands and the marine chalk reef habitats around our Kent coast. Our wealth of varied habitat supports some nationally rare and special species only found in Kent within the UK, such as the specialist leafhopper *Anoscopus duffieldii* at Dungeness or the late spider-orchid, on the chalk downland in East Kent.

Because of the services and functions that biodiversity provides, this resource can also be described as our natural capital. Natural capital provides (food, raw material and growth), regulates (air, water, soil and climate) and supports us culturally with non-material benefits. Biodiversity is the "live" element of natural capital and many of the benefits that stem from natural capital are as a result of the interactions between biodiversity and non-living resources. By investing in these biodiversity assets, we are investing in our own future and wellbeing.

[1] https://www.wwf.org.uk/sites/default/files/2018-10/wwfintl_livingplanet_full.pdf
[2] https://www.rspb.org.uk/globalassets/downloads/documents/conservation-projects/state-of-nature/state-of-nature-uk-report-2016.pdf

Kent's biodiverse environment[3]

- Over 20,000 species have been recorded in Kent; nearly 30% of all UK species.
- Over 3,400 rare and threatened species have been recorded in the County.
- 36 Biodiversity Action Plan priority habitats.
- Over 400 S41[4] priority species.
- 40% of the UK's coastal vegetated shingle at Dungeness.
- The largest UK population of Lizard Orchids at Sandwich Bay.
- 35% of the UK's coastal chalk; Thanet alone holds 12% of Europe's exposed coastal chalk[5].
- 70% of the south east's ancient woodland resource.
- 11% of England's ancient semi-natural woodland.
- 16% of England's saline lagoons.
- 5% of the UK's and 20% (1,658 ha) of the south east's chalk grassland (the UK is thought to hold half the world's chalk grassland).
- Only 200 chalk rivers are known globally, 85% of which are found in the UK in southern and eastern England.
- 22 internationally designated sites, comprising 15 Special Areas of Conservation, 7 Special Protection Areas and 6 Ramsar Sites.
- 6 designated and 3 recommended Marine Conservation Zones totalling over 700 km^2.
- 98 Sites of Special Scientific Interest, covering 8.7% of the county.
- 466 Local Wildlife Sites, covering 7% of the county.
- 154 Roadside Nature Reserves, with a combined length of 89km.
- 2 Areas of Outstanding Natural Beauty, the High Weald and Kent Downs.
- Almost a third (27%) of the county is semi-natural habitat.

Natural capital[6]

The Natural Capital Committee describes natural capital as "The sum of our ecosystems, species, freshwater, lands, soils, minerals, our air and our seas"…"These are all elements of nature that either directly or indirectly bring value to people and the country at large. They do this in many ways but chiefly by providing us with food, clean air and water, wildlife, energy, wood, recreation and protection from hazards"

- 40% of global GDP relies on natural capital.
- 84% of European crops depend on wild insect pollination; the value of pollination to UK agriculture is £440m per year.
- Proximity to open space can enhance the value of commercial property by 3% and housing by 18%.
- Annual visits by UK residents to the countryside and/or villages contribute £5.5 billion; and to the coast contribute £7.4 billion.
- Around 15m tonnes of carbon dioxide was sequestered by forestry in 2006 and reduced the UK's carbon dioxide emissions by 3%. Carbon sequestration from UK woodland is estimated to be £680m p/a.
- Urban greenspaces can have a cooling effect of 1-2°C.
- Having a view of greenspace increases emotional wellbeing by 5% and general health by 2%
- People with easy access to nature are 3 times more likely to participate in physical activity, resulting in 40% less likely to become overweight or obese.

[3] Facts and figures provided by Kent & Medway Biological Records Centre (KMBRC)
[4] Section 41 (S41) of 2006 Natural Environment and Rural Communities (NERC) Act
[5] English Nature. 2001. *North East Kent European marine sites Management Scheme.*
[6] Values taken from Securing the Value of Nature in Kent, 2011, David Pape and Jacklyn Johnson

A collaborative approach to meeting the challenges

There are pressures on land use which are specific to Kent's location, such as its proximity to London and as a gateway to Europe, through road, rail, sea and air links. But the biggest pressure Kent faces is the significant and unprecedented levels of growth. The Kent and Medway Growth and Infrastructure Framework identifies some 178,600 additional homes and 396,300 additional people by 2031 (that's 24% and 23% growth respectively). And in addition to this is the infrastructure needed to support this – transport, education, health and social care, utilities and community facilities. This all requires space (land) and resources. The Kent Habitat Survey 2012 showed that land covered by development in Kent had increased from 10.7% in 1961 to 17.3% in 2008, an increase of around 62% of the original resource. With unprecedented growth levels predicted, land take will increase even further. And a growing population needs food and materials; intensive food production and farming places further pressures on the land. But the natural environment need not always be a barrier to growth; in fact, through its natural capital, biodiversity is integral to growth.

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

- Direct loss of habitats - through increased development or other land uses, such as mineral extraction.
- Intensification of land management – such as use of chemical fertilisers and pesticides in farming, ploughing up of semi-natural grasslands, loss of traditional orchards.
- Lack of appropriate management – such as the loss of woodland management as the woodland resources become uneconomic to extract; or recreational overuse of sensitive areas.
- Habitat fragmentation – species movement or migration is impaired and populations can become isolated, making them less able to survive or adapt to changing climate conditions.
- Invasion of non-native species – these can out-compete native species.
- Climate change – loss of land through sea-level rise, changes in temperature, weather and other environmental factors altering habitat composition and species movement and survival (Kent is a gateway for species colonising from Europe in a response to climate change).

It is imperative that, at a time of immense change, we all work together to meet the demands of the county whilst safeguarding the future of our wildlife and habitats. Whilst the State of Nature report may paint a bleak picture, it has also shown that when conservationists, government, business and individuals work in partnership landscapes can be restored and threatened species can be saved. This Strategy aims to help steer this collective action.

Strategic context for the Kent Biodiversity Strategy

The national picture

The Government's 25 Year Environment Plan, *A Green Future*, pledges that this will be the first generation to leave the environment in a better state than we found it and pass on to the next generation a natural environment protected and enhanced for the future. The Kent Nature Partnership supports this vision and through the Kent Biodiversity Strategy sets out the county's contribution to this by delivering healthy, sustainable and coherent biodiversity in Kent. As such, the targets set by this Strategy are set within the context of the national 25 year goals and the policies that will deliver them.

The 25 Year Environment Plan looks beyond no net loss and sets strong goals for environmental net gain; this is further backed by policy within the 2018 revised National Planning Policy Framework (NPPF). In line with this, the Kent Biodiversity Strategy assumes maintenance of the extent of our current priority habitat resource and focusses on restoration and creation. As such it intends to provide a framework for delivery of net gain, providing a focus for habitats and species of local importance and priority and, as required by the NPPF, helps to identify areas for habitat management, enhancement, restoration or creation.

The natural capital approach, whereby consideration is given to the socio-economic value of the natural environment through the ecosystem services it provides, runs through the 25 Year Environment Plan and should do in all matters to ensure the environment is best represented. Ensuring the future of the county's biodiversity is a critical element of realising the maximum benefits of Kent's natural capital.

The Kent picture

The Kent Biodiversity Strategy has been developed by the Kent Nature Partnership with the intention that the targets will over time be adopted and incorporated into relevant local policy and plans. The Kent Nature Partnership has a vision *for the Garden of England to have a healthy natural environment that is rich in wildlife, is enjoyed and valued by all and underpins our long-term economic, social and personal wellbeing* – thriving biodiversity is key to achieving this vision.

In its strategic priorities, the Partnership recognises the need to improve the quality, extent and connectivity of our high value habitats and aims to deliver a network of high value natural and semi-natural habitats, made up of locally and nationally recognised sites, that is well managed and connected. This Strategy is the means by which this outcome, and more, will be achieved.

Because of the many functions that biodiversity provides, this Strategy must be considered alongside others; not least of all the Kent Environment Strategy. The Biodiversity Strategy provides the detail and focus needed to achieve the natural environment aspirations of the Kent Environment Strategy, in particular to *conserve and enhance the quality and supply of the county of Kent's natural and historical resources and assets*.

The 25 Year Environment Plan sets out that Local Natural Capital Plans will be developed to link the Plan's goals with local priorities; a Local Natural Capital Plan will be developed to incorporate Kent, Sussex and Surrey. This Strategy will be pivotal in setting out the priorities for Kent's biodiversity within this wider strategic area.

There are a plethora of other strategies and work that the Kent Biodiversity Strategy should be cognizant of; these are listed in Appendix II.

How we have chosen our priority habitat and species

Kent is home to 36 priority habitats[7] (see Appendix I for complete list) and more than 85 priority species[8]. Whilst all remain important to the county, the Strategy has chosen to select 15 priority habitats and 8 species on which efforts should be specifically focussed and targets set. The criteria for their selection are noted in the box below.

The targets for these selected priority habitats and species are based on those set by the Kent Nature Partnership in 2014 and represent targets to be achieved from 2014 to 2025, unless otherwise indicated.

Certain individual species or species groups can provide a useful mechanism for monitoring environmental change, providing warning signs of shifts in the health of our ecosystems and providing opportunities for the general public to effect positive change at a local level. The Strategy has selected a handful of such species as indicators. Similarly, where a species is considered to be undergoing significant decline or pressures but where there is no formal monitoring or targets cannot be easily defined, indicators have been identified for these species.

[7] UK priority habitats were selected using one or more of the following criteria: for which the UK has international obligations; are at risk (rare or high rate of recent decline); functionally important for species inhabiting wider environments; and/or important for species of conservation concern.

[8] UK species identified as being the most threatened and requiring conservation action.

Kent priority habitat selection criteria

- Habitats for which Kent is a stronghold at UK level
- Habitats for which there is sufficient data available relating to extent and quality of current resource.
- Opportunity for the KNP to deliver gains for this target through joint working.

Kent priority species selection criteria

- Species that can act as an indicator for the broader health of the natural environment and biodiversity.
- Species for which Kent is a stronghold.
- Species that would benefit from particular attention in Kent.
- Species which will benefit from landscape scale conservation.
- Species for which data/monitoring is obtainable so targets can be measured.

Implementation, measuring progress and review

Whilst this Strategy, and its goals, has a 25 year timeframe some of the targets will have a shorter timeframe in line with aspirations to deliver in the short to medium term. The Strategy will be reviewed every 5 years. Given the long timeframe of the Strategy and the ambitious nature of the goals, a five year implementation plan will sit alongside it with delivery of the targets broken down into smaller, shorter actions. Monitoring and review of the strategy, based on delivery of the implementation plan, will be every two years.

It is intended that the targets will be owned by all that have an opportunity to influence and impact biodiversity in the county – from statutory agencies to local planning authorities; land owners to non-governmental organisations; those that use the land to those that benefit from its services. All have a role to play and the Kent Nature Partnership umbrella brings these players together to help deliver the Strategy's aspirations for biodiversity.

The natural world and sustainable growth can work well together: let us lead the way in demonstrating how this is done in Kent and Medway.

Our 25 year mission and goals

The Kent Biodiversity Strategy aims to deliver, over a 25 year period, the restoration and creation of habitats that are thriving with wildlife and plants, ensuring the county's terrestrial, freshwater, intertidal and marine environments regain and retain good health.

The Strategy looks to protect and recover threatened species and enhance the wildlife habitats that Kent is particularly important for. It also aims to provide a natural environment that inspires citizen engagement and is well used and appreciated, so that the mental and physical health benefits of such a connection can be realised by the people of Kent.

This will be achieved through the delivery of the following goals:

Terrestrial habitats, ecosystems and species: **by 2044 Kent has a rich and growing terrestrial biodiversity, underpinned by more resilient and coherent ecological networks and healthy, well-functioning ecosystems.**

Freshwater and intertidal ecosystems and species: **by 2044 Kent has clean, productive and biologically diverse freshwater and intertidal ecosystems underpinned by implementation of a 'source-to-sea'[9] approach.**

Marine habitats, ecosystems and species: **by 2044 Kent is making its contribution to reversing the loss of marine biodiversity and delivering clean, productive and biologically diverse oceans and seas through good management**.

Connecting people with the natural environment: **by 2044 the widest possible range of ages and backgrounds will be benefiting from the mental and physical health benefits of the natural environment; and we will have inspired the next generation to take on guardianship of the county's biodiversity.**

[9] An integrated approach to land and water management, working across sectors and borders, that respects natural river catchments and their processes, and considers our impacts upon water along its entire path from headwaters (the source) to coastal waters and beyond.

Objectives and targets

Terrestrial habitats, ecosystems and species

By 2044 Kent has a rich and growing terrestrial biodiversity, underpinned by more resilient and coherent ecological networks and healthy, well-functioning ecosystems.

Over the last few decades, we have lost significant areas of many of our most precious habitats. We now need to restore those degraded habitats, replenish our depleted soils and arrest the decline of native species to deliver robust ecological networks that are sustainable, ecologically coherent and resilient to climate change. We will expand our use of natural processes and natural solutions to ensure more sustainable use and management of habitats, to provide biodiversity net gains, and to protect and grow our natural capital.

Our objectives for terrestrial habitats, ecosystems and species are, by 2044:

- 20% land (74,700ha) well managed[10] for nature[11]
- An ecological network of semi-natural habitat covering 30% of Kent (112,000 ha)[12]
- 75% Sites of Special Scientific Interest restored to favourable condition, securing their wildlife value for the long term
- Over half of Local Wildlife Sites in good management[10], securing their local wildlife value for the long term
- More, bigger and less fragmented areas of wildlife-rich habitat outside the protected sites network for wildlife, with an increase in the overall extent of priority habitats (as detailed below in the habitat-specific targets) to ensure greater connectivity and resilience to climate change
- Kent-specific threatened and iconic species of terrestrial animals and plants are recovering, including those that support ecosystem services (for details, see Species table below)

The table below sets out the targets for the terrestrial priority habitats and species.

[10] **"Well managed/good management"** in respect of this priority refers to: SSSIs in favourable or unfavourable recovering condition; SPAs/SACs with formal management plans or where potentially damaging activities are being managed; land parcels managed under options for Maintain/Manage or Restore under the Higher Level/Tier of an agri-environment/land management scheme; land in a Woodland Grant Scheme or which has a Forestry Commission Woodland Management Plan ; LWS in management; NNRs, LNRs, RSPB, National Trust, KWT, Woodland Trust, Plantlife reserves.

[11] In order to deliver net gain, we need to increase the proportion of existing semi-natural habitat in good management. In 2015, 20.8% of the county (Kent area = 373,600 ha) was identified as high value, semi-natural habitat (for definitions of semi-natural and high value, please see Glossary). However, only two thirds of this was identified as well-managed (in effect 14.6% of the county or 54,640 ha).

[12] 20% (74,700 ha) of the county is high value, semi-natural habitat (for definitions, please see Glossary). In order to deliver net gain, we need to not only also increase the proportion of existing high value, semi-natural habitat in good management but to increase the extent of semi-natural habitat and improve connectivity. Current coverage of semi-natural habitat is estimated at 27%. A recent Kent Wildlife Trust review, the *Landscape Scale Connectivity Literature Review* (written in 2010 by Natural Values and commissioned by KWT) concluded that in order to provide the necessary ecological connectivity, the county should be aiming for a target of 30% semi-natural habitat (112,000 ha). It is this long term (25 year) target that the KNP is aspiring towards, using as its basis the Biodiversity Opportunity Area mapping work which took place in 2008, was revised in 2014 and is due to be updated in 2019. In Kent, there are 98 SSSIs and over 466 Local Wildlife Sites alone, which together cover 15.7% of the county. However, there are also areas of ancient woodland and broadleaved woodland which fall outside any designation, but can be considered as a fairly secure wildlife habitat, so 30% is a less ambitious target than it seems. In addition, semi-natural habitats can include habitat which does not meet BAP priority habitat criteria, such as semi-improved grassland.

Priority habitat	Champion[13]	Current resource (Kent Habitat Survey 2012[14])	2025 target	Rationale
Lowland Beech and Yew Woodland	Natural England / Forestry Commission	613 ha UK BAP priority habitat	Restore 92 ha; create 49 ha	Lowland beech and yew woodland is particularly distinctive in Kent with notable examples existing within the High Weald and Kent Downs Areas of Outstanding Natural Beauty. However beech is sensitive to drought and it likely to be particularly vulnerable to the projected changes in rainfall and temperature in the south-east of England with beech and yew woodland on free draining calcareous soils being most at risk. To build resilience an increase of 15% is desirable by 2025 through a combination of restoration of conifer plantations on ancient woodland sites and new woodland creation. Agri-environment schemes are a key funding stream for this work but there may also be opportunities for woodland creation and restoration as a result of future development through mandatory net gain.
Lowland Mixed Broadleaved Woodland	Natural England / Forestry Commission	153 ha UK BAP priority habitat	Restore 30 ha; create 16 ha	Lowland mixed deciduous woodland can have a hugely biodiverse canopy layer and ground flora and is a robust habitat with respect to future climates. Much of this woodland has been lost through clear-fell and plantation planting. By 2025 an increase of 30% is desirable through a combination of restoration of conifer plantations on ancient woodland sites and new woodland creation. Agri-environment schemes are a key funding stream for this work but there may also be opportunities for woodland creation and restoration as a result of future development through mandatory net gain.

[13] For definition, please see Glossary.

[14] http://www.archnature.eu/the-kent-habitat-survey-2012-final-report.html. The Kent Habitat Survey provides the most comprehensive data regarding the extent of priority habitats in the county. However, the criteria for classifying habitat types as Priority Habitat (BAP) type were very strict and the data were not verified neither have they been updated since 2012.

Chalk grassland	Natural England	1159 ha UK BAP priority habitat	730 ha creation; 770 ha enhancement and restoration of semi-improved chalk grassland	Kent supports around 5% of the UK's chalk grassland habitat with around 2000 ha in total; 1159ha being of the highest quality and a further 770 ha being semi-improved chalk grassland. There are currently 4 projects underway in Kent, targeting management, restoration and maintenance: Old Chalk New Downs hosted by Kent County Council; Natural England's East Kent Focus Area; Darent Valley Partnership hosted by the Kent Downs AONB; White Cliffs Partnership hosted by Dover District Council.
Lowland meadow	Kent Wildlife Trust	27 ha UK BAP priority habitat	25 ha creation; 100 ha enhancement and restoration	Kent supports 27ha of BAP priority habitat quality grassland and a further 430 ha of species-rich neutral grassland which meets Farm Environment Plan criteria. The Saving our Magnificent Meadows (Plantlife / MVCP) and Ashford Meadows (KWT) Projects have delivered 11ha of meadow creation and approximately 50 ha of meadow restoration and enhancement on sites such as Alex Farm Pastures SSSI and Moat Farm. In addition, there will be new opportunities for meadow creation or enhancement work through agri-environment schemes and projects delivered by KNP partners and others.
Lowland dry acid grassland / Lowland heathland	Kent Wildlife Trust	261 ha Lowland dry acid grassland UK BAP priority habitat / 74 ha Lowland heathland UK BAP priority habitat	Enhancement and restoration of 5 ha heathland; 20 ha acid grassland.	Identifying acid grassland as UK BAP priority habitat type is difficult outside of the optimal survey season, which has led to widely varying figures for the extent of this habitat in Kent. However, it is clear that both heathland and acid grassland are some of the rarest and most threatened habitats in the county, that opportunities for habitat creation are limited, and that poor management of acid grassland is frequently a key factor in the loss of this habitat. The focus therefore needs to be on supporting existing landowners with ongoing management advice and identifying new sites where these habitats can be restored and enhanced, either through removal of scrub and secondary woodland or through improvements to more established habitats. These targets include work within the Sevenoaks Greensand Commons HLF project and sites such as Stelling Minnis Common and Ashford Warren.

Hedgerows	Medway Valley Countryside Partnership	Approx. 11,734km[15]	Restore 2250km and plant 2250km new species-rich hedgerow	From 1990 onwards the decrease in managed hedgerows [in England] has been predominantly through the lack of management leading to conversion to lines of trees/shrubs and relict hedges rather than hedgerow removal. The types of woody linear features that increased were clearly those which were less managed, in particular relict hedges and lines of trees/shrubs[16]. The targets for planting new hedgerows and hedgerow restoration aim to reverse this trend and will principally be delivered by the KNP partners and others through mechanisms such as agri-environment schemes.

[15] Because no consistent methodology was in place, nor accurate survey data recorded in the 2003 Kent Habitat Survey **no** like for like comparison is possible with the 2012 Kent Habitat Survey and extreme caution should be applied when using these targets. In 1995 there was estimated to be 1144km of Species rich and Ancient Hedgerow in Kent from a national survey by English Nature. This equated to some 0.9% of the total England resource, while Kent covers 2.8% of England's landmass. No reliable data from 2003 seem to exist or can be found.2012 Kent Habitat Survey did not specifically survey for Species Rich and Ancient Hedgerows. It can be interpolated from habitat polygon data however that there are some 14,905 km of hedgerows and lines of trees habitat (combined) in Kent. Earlier studies from UKBAP in 2007 have determined that 42% of hedgerows may be Species Rich and Ancient. Therefore if just hedgerow data (LF11) are used this equates to 11734km of hedgerow. 42% of that would be 4928 km so either the 1995 figure is wrong or the current methodology gives a falsely high result. That being said it is proposed that the targets are based around the 11734 km figure.

[16] http://www.hedgelink.org.uk/index.php?page=16

Species	Champion	Status	2025 target	Rationale
Shrill Carder Bee	Kent Wildlife Trust	Despite being a highly threatened species, the shrill carder bee is present at a large number of sites along the North Kent coast and part of the East Kent coast and Kent is one of its remaining strongholds in the UK.	By 2020, male and/or queen shrill carder bees are recorded on all BeeWalks transects where the species is known to occur	With bumblebees, presence alone is not necessarily a good indicator of how populations are faring and one needs to take into account effective population size (numbers of males and queens, which are the reproductive castes as opposed to the workers). This target cannot be an annual target: the males and queens can sometimes be hard to detect and may not always get picked up on any transects. This data will be collected as part of the national monitoring scheme for bumblebees (BeeWalk).
Turtle Dove	RSPB	The Turtle Dove is the UK's fastest declining bird species and is threatened with global extinction (IUCN Red List of Endangered Species). Breeding populations, both in England and in Europe, have collapsed in recent decades and the decline is continuing. The latest UK Breeding Bird Survey data shows a 93% fall in breeding abundance between 1995 and 2014. The species is now included on the UK Red List of Conservation Concern.	To maintain the population of turtle doves in the 7 highest priority Turtle Dove Friendly Zones by 2020 (out of a total of 13 TDFZs in the South East) and for activity to have begun in the remaining 6 Turtle Dove Friendly Zones.	For species that are declining rapidly, the best option is to apply science-based conservation solutions in the areas where they still breed in reasonable densities. This means that the most effective conservation action will be delivered in the most effective places. For turtle doves, the RSPB has used Breeding Bird Atlas data to identify 'Turtle Dove Friendly Zones' and works with Natural England and local farmers to provide feeding habitat and supplementary feeding. We have good evidence to suggest that a lack of quality food is the primary cause of declines in turtle doves.

Adder	Kent Reptile & Amphibian Group	There is evidence of a considerable decline in adder distribution. In the period 1980 to 2005, 15,154 monads were recorded as occupied by the species. In 2006 to 2011 this fell to 9,237. This amounts to a potential decline of 39%.[17]	Increase by 2.5% per annum in the adder range (number of monads occupied) and overall frequency of recording.	The interpretation of data will take into account results from long-term monitoring in Kent that will indicate how prevailing conditions have influenced adder detectability and hence affected the potential recording rate. The baseline will be provided by records received by the Kent Reptile and Amphibian Group in 2018.

[17] Gleed-Owen C. and Langham S. (2012) *A conservation condition assessment of the adder (*Vipera berus*) in England, with recommendations for future monitoring and conservation policy.* Report to Amphibian and Reptile Conservation. Pp 79.

Species indicator	Champion	Status	Indicator measure	Rationale
Hedgehog	Kent Mammal Group	The population now appears to be in dramatic decline, with at least a quarter of the population lost in the last decade[18].	Number of tetrads where this species is recorded.	There are no official monitoring schemes for this species and the current Kent mammal distribution atlas (2015)[19] is based on *ad hoc* records and the Kent Mammal Group's voluntary mammal recording projects. KNP partners and others will continue to increase awareness of this species, to promote campaigns such as the People's Trust for Endangered Species' Hedgehog Street and to promote advice to land managers including farmers and gardeners.
Serotine bat	Kent Bat Group	Widespread but declining[20]	Colony counts of maternity roosts at known Kent serotine roosts.	This indicator provides a means of monitoring population trends and can be monitored effectively and with a good degree of accuracy as part of the National Bat Monitoring Programme. Ensuring no net loss of roosts is difficult, in part as a major contributing factor in roost loss (all known serotine maternity roosts are in buildings, mainly houses) appears to be changes of temperature regimes. However, there is also a difficulty in finding the maternity roosts as this is not easy and requires man power. Gaining roosts will depend on good relationships with landowners, favourable landscape management i.e. agri-environment schemes, and access to good land management advisors.

[18] https://www.hedgehogstreet.org/wp-content/uploads/2018/02/Hedgehog-10-year-strategy-master-document-v5.pdf
[19] Young, J S., Ryan, H., Thompson, S., Newcombe, M., and Puckett, J. (Eds.). (2015). *Mammals of Kent.* Published by Kent Mammal Group, Kent Bat Group, East Kent Badger Group and Kent Field Club.
[20] http://www.kentbatgroup.org.uk/bats-in-kent/

Freshwater and intertidal ecosystems and species

By 2044 Kent has secured clean, productive and biologically diverse freshwater and intertidal ecosystem underpinned by implementation of a 'source-to-sea'[21] approach.

The freshwater and intertidal habitats of Kent and Medway represent a tiny proportion of their former extent[22,23], as many have been lost through factors such as agricultural intensification and drainage. We need to secure the long-term sustainable management of these fragile ecosystems by rebuilding and developing ecological networks that are sustainable, ecologically coherent and resilient to climate change. To do this, we will need to ensure that we replace like for like habitat lost to coastal realignment and make innovative use of natural flood and drought management solutions. Only then can we also ensure that these habitats are able to support vital ecosystem services such as carbon storage, groundwater recharge and flood control.

Our objectives for freshwater and intertidal habitats, ecosystems and species are, by 2044:

- 75% freshwater SSSIs restored to favourable condition, securing their wildlife value for the long term.
- Over half of Local Wildlife Sites in good management[24], securing their local wildlife value for the long term.
- Reaching or exceeding objectives for rivers, lakes, coastal and ground waters that are specially protected, whether for biodiversity or drinking water as per our River Basin Management Plans
- No deterioration in the status of any water body in Kent. If deterioration of any element's classified status occurs, actions will be implemented to reverse the decline[25].
- Improve 15km per year of waters in Kent (rivers, lakes, canals, groundwater, transitional and coastal waters). The enhancements include work to improve ecological, chemical and/or physical quality, e.g. reducing pollution, restoring flows and improving habitat[26].

[21] An integrated approach to land and water management, working across sectors and borders, that respects natural river catchments and their processes, and considers our impacts upon water along its entire path from headwaters (the source) to coastal waters and beyond.
[22] Environment Agency. *Wetlands: our role in their conservation and creation.* Doc No 123_04. Version 3. Issued 09/09/2015 .

[23] http://www.wetlandvision.org.uk/userfiles/File/Technical%20Document%20Website%20Version.pdf

[24] **"Well managed/good management"** in respect of this priority refers to: SSSIs in favourable or unfavourable recovering condition; SPAs/SACs with formal management plans or where potentially damaging activities are being managed; land parcels managed under options for Maintain/Manage or Restore under the Higher Level/Tier of an agri-environment/land management scheme; land in a Woodland Grant Scheme or which has a Forestry Commission Woodland Management Plan ; LWS in management; NNRs, LNRs, RSPB, National Trust, KWT, Woodland Trust, Plantlife reserves.

[25] The Water Framework Directive (WFD) requires that member states "implement the necessary measures to prevent deterioration of the status of all water bodies…." (Article 4.1). Water body status is based upon the assessed class of a range of variables known as 'elements', such as dissolved oxygen, macro invertebrates, fish, water balance, chemical tests, …'. All practicable action must be taken to prevent the deterioration in the status of individual elements of water bodies in England and Wales. Deterioration assessments are made of all elements as monitored and reported on by the Environment Agency following the Water Framework Directive guidelines. Element status at the start of each WFD cycle is used as the baseline against which deterioration is assessed. True deteriorations are determined by the Environment Agency and are set using baseline data from the beginning of each 6 year River basin management plan which commence: 2009, 2015, 2021 and 2027.

[26] The length improved target presents a simple and meaningful indicator of the progress partners are making to improve the water environment. This measure complements the Water Framework Directive (WFD) classification status/potential. It covers all water body types (groundwater, river, lake, estuary and coast) and focusses on the length of water body enhanced in kilometres. The kilometres enhanced is from actions reported via publicly available information. The Environment Agency corporate scorecard measure, "the water environment is healthier" covers this objective. Kilometres enhanced does not take into account, or give, an environmental, economic or social benefit for the actions. An "enhancement" will result from action taken to reduce a known pressure/ Reasons for Not Achieving Good status on the water environment by anyone, within the Environment Agency or externally, regardless of Environment Agency involvement or influence. The action must be a real physical change that will contribute towards achieving an agreed environmental objective.

- Kent-specific threatened and iconic species of freshwater and intertidal animals and plants are recovering, including those that support ecosystem services (for details, see Species table below).
- More, bigger and less fragmented areas of wildlife-rich habitat outside the protected sites network for wildlife, with an increase in the overall extent of priority habitats (as detailed below in the habitat-specific targets) to ensure greater connectivity and resilience to climate change, including minimising the loss of intertidal habitat due to coastal squeeze

The table below sets out the targets for the freshwater and intertidal habitats priority habitats and species.

Priority habitat	Champion[27]	Current resource (Kent Habitat Survey 2012[28])	2025 target	Rationale
Rivers	Environment Agency	6592 ha[29]	Improve 105km of waterways (15km per year x 7 years)	This target is based on the Key Performance Indicator of 'length improved' used by the Environment Agency. However, this figure is based on the EA's area which includes East Sussex, part of Surrey, South London and Kent and it is therefore difficult to give a precise figure for Kent only. The target is therefore a conservative figure.
Coastal and floodplain grazing marsh	RSPB	14,174 UK BAP priority habitat ha	Restore 2000 ha	The most likely opportunities up to 2025 will be restoring existing grazing marsh. This target includes habitat creation at Higham Marsh, Harty Marshes, Lydden Valley, Seasalter Levels and the Environment Agency's Flood and Coastal Risk Management programme.
Intertidal mudflats and Coastal saltmarsh	Environment Agency	10,078 ha UK BAP priority habitat Intertidal mudflats; 1338 ha UK BAP priority habitat Coastal saltmarsh	Create 50 ha of net gain for both habitats combined.	The KNP partners are committed to protecting these habitats where feasible and through shoreline management plans and strategies. The target of 50ha for coastal saltmarsh & intertidal mud (a shared target) is based on coastal squeeze affecting designated sites; this target requires considerable landowner cooperation and therefore requires a suitably lengthy timeframe for delivery.
Wet woodland	Environment Agency	662 ha UK BAP priority habitat	Creation of 10ha of wet woodland.	Wet woodland can play an important role in flood risk management – a role that is set to increase in years to come as greater use is made of natural flood management solutions. This target is based on work currently taking place to make stream corridors wetter in the Medway catchment; however, reaching the target relies on funding being obtained to continue work beyond 2021.

[27] For definition, please see Glossary.

[28] http://www.archnature.eu/the-kent-habitat-survey-2012-final-report.html. The Kent Habitat Survey provides the most comprehensive data regarding the extent of priority habitats in the county. However, the criteria for classifying habitat types as Priority Habitat (BAP) type were very strict and the data were not verified neither have they been updated since 2012.

[29] There are no recorded areas of UK BAP priority or Annex1 habitats within the 2012 KHS as rivers and streams were not a target for this survey. This figure represents the extent of all running water in Kent.

Vegetated shingle	Natural England	2104 ha UK BAP priority habitat	Maintain total extent of coastal vegetated shingle habitat; ensure no net loss; and restore all coastal vegetated shingle to favourable condition (or unfavourable to recovering).	Shingle is a finite resource. In southern England, much of it is composed of flint eroded out of chalk cliffs and moved by longshore drift along the coast. Shingle in Kent takes the form of the cuspate foreland at Dungeness which is by far the largest site in the UK at over 2000ha of exposed shingle. The remaining areas in Kent are fringing shingle beaches exposed to storm action and display temporary and mobile strandline communities. Being a finite resource, the target is to maintain the coastal vegetated shingle habitat in Kent, ensuring no net loss. Opportunities to create shingle habitat are extremely limited and of limited success.

Species	Champion	Status	2025 target	Rationale
European Eel	Environment Agency		Demonstrable progress to silver eel escapement targets in all catchments that we influence; secure access for eel to an additional 200km of habitat.	The over-arching aim is to secure sustainable eel populations. This can be achieved by addressing man-made pressures on eel to prevent a further decline and to support recovery of this species. We should be aiming towards an escapement of silver eel to a minimum of 40% historic levels in all of the catchments we influence. Our aim is to see eel fulfilling its role in the aquatic ecosystem and providing social and economic benefits from recreational fishing.
Lapwing	RSPB	Between 1995 and 2012, breeding lapwing declined by 47% in South East England. They have been lost from much of the wider countryside due to changes in agriculture, but populations on wet grassland have increased over this time due to habitat creation and enhancement, particularly on the North Kent Marshes. The estimated population of breeding lapwing in Kent in 2013 was 980 to 1,200 pairs.	> 1,000 pairs of breeding lapwing populations.	Breeding lapwing are a good proxy for wet grassland management. There are approximately 800 pairs of breeding lapwing in North Kent, and this area should be the focus for landscape-scale conservation management, involving improvements to hydrological management and grazing management. The target of 1,000 pairs by 2025 would be delivered by more farms entering agri-environment schemes and more habitat enhancement and creation projects.

Sandwich tern	RSPB	Sandwich terns in Kent are restricted to the islands in the Medway Estuary, where a population of 300 to 500 pairs has bred since 1996. The colony is under immediate threat from disturbance and sea-level rise.	To retain the colony of 300 to 500 pairs in the Medway Estuary in the short-term and to identify sustainable breeding habitat in North Kent in the long-term.	The Medway Estuary colony of Sandwich terns is regionally important and under imminent threat from sea level rise and disturbance. In the short-term, we need to bolster the existing nesting habitat, seeking to increase the height of the islands to prevent over-topping on high tides. In the long-term, we need to identify new habitat in North Kent, which could be new, bespoke habitat creation, or as part of a coastal re-alignment scheme. Wherever Sandwich terns breed, they are reliant on marine habitats for food, primarily small surface-feeding fish within 15 km of the nest site. The effects of availability of fish in relation to tern productivity are poorly understood, but over-fishing and the impacts of climate change are likely to have a significant effect.

Marine habitats, ecosystems and species

By 2044 Kent is making its contribution to reversing the loss of marine biodiversity and delivering clean, productive and biologically diverse oceans and seas through good management.

The seas around the coast of Kent and Medway contribute to the wider UK marine environment - home to 'the widest range of marine habitats of any coastal waters in Europe'[30]- yet they have been badly neglected and depleted over the last few decades. Our seas and coastal waters do not follow political or regional boundaries and so, to ensure that we have marine habitats which can support healthy, sustainable ecosystems, we need to complete our ecologically coherent network of well-managed Marine Protected Areas (MPAs), as well as working more closely with local stakeholders to ease the impacts of human activity from source to sea.

Our objectives for marine habitats, ecosystems and species are:

- By 2044, all Marine Protected Areas will be monitored on a six year basis, using field surveys as well as desktop studies, leading to measures being taken to manage damaging activities, and ensuring these designated areas are showing signs of recovery and no further decline.
- By the end of 2019[31], in excess of 26% of waters[32] around Kent and Medway will be designated and form part of the wider Marine Protected Area network that helps deliver ecological coherence by conserving representative marine habitats, including subtidal mud, that are nationally and internationally important.
- By 2020[33], we will input to the development, review and implementation of the Marine Management Organisation's marine plans of particular relevance to Kent & Medway (South East plan and South plan), so that their policies ensure the safeguard and sustainable use of our seas, whilst acknowledging the pressures from economic growth and social need. By the end of 2022, appropriate management will be developed for and implemented within the entirety of Kent's Marine Protected Areas to adequately protect the features for which those areas were designated.
- By 2020 we will be managing shellfish stocks sustainably and harvesting shellfish in a non-environmentally damaging way.
- By 2020, completion of assessments for the management of fisheries within Marine Protected Areas to ensure that fishing activities are carried out in a non-environmentally damaging way.

The table below sets out the targets for the marine priority habitats. Due to the innate difficulty of undertaking meaningful monitoring of marine species at a county level, no targets have been set for marine species.

[30] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

[31] The Government will make a final decision on the designation of Tranche 3 Marine Conservation Zones twelve months after the consultation opened 8 June 2018.

[32] Area of MPAs is calculated based on MCZs designated in Tranches 1&2 and area put forward for Tranche 3 and also includes SACs which are designated for marine habitat features (but excludes SPAs, the proposed Southern North Sea SAC, and any SACs which are principally designated for highly mobile species rather than habitats).

[33] The third and final consultations on the South East and the South marine plans (Iteration 3) are due in early spring 2019. The Government's final decision will be made twelve months after the opening date of these consultations.

Priority habitat	Champion[34]	Current resource (Kent Habitat Survey 2012[4])	2025 target	Rationale
Intertidal chalk and Subtidal chalk	Kent Wildlife Trust	415 ha Intertidal chalk; Extent of Subtidal chalk as shown in remotely sensed data	To identify suitable locations and establish scientific reference areas for specific areas of chalk reef (by 2022).	There are currently no reference areas and so this will be done along the lines of the Education Conservation Areas that have been established by the Sussex IFCA in the Beachy Head West Marine Conservation Zone. These have been designed as intertidal gathering no-take zones which provide a valuable education resource and improved understanding of the populations of species in areas where there is no gathering.

[34] For definition, please see Glossary.

Connecting people with the natural environment

By 2044 the widest possible range of ages and backgrounds will be benefiting from the mental and physical health benefits of the natural environment; and we will have inspired the next generation to take on guardianship of the county's biodiversity.

Fundamental to the recovery of Kent and Medway's habitats and wildlife is the need to reconnect local people with their natural environment and to rekindle their enthusiasm for and appreciation of nature: many of us only value and protect what we care about. We need to work with all generations, and young people especially, to ensure local people have the opportunity for regular contact with our natural world and have the tools and vision to regain the biodiversity that has been lost.

Our objectives for engagement are that by 2044[35]:

- An increase in the number health initiatives, bringing more people into contact with the natural environment.
- An increase in the number of people taking action that benefits biodiversity, including citizen science projects, with 23% of Kent's residents participating in environmental volunteering[36].
- An increase in the number of opportunities for children and young adults to engage with environmental issues, in and out of school.
- There is more and better quality, accessible natural spaces and green infrastructure, close to where people live and work, particularly in urban areas, where both people and wildlife can thrive; and all new developments will include accessible green space[37].
- More people are spending time in natural spaces and benefiting their mental health and wellbeing.

[35] Baseline figures and measures of engagement with the natural environment are lacking currently. Compiling a baseline understanding against which to measure progress will be an action within the first five year implementation plan for the Strategy.

[36] To be measured using Kent Environment Strategy indicator, based on Kent Environment Strategy public perceptions survey; measured at 18% in 2016.

[37] Greenspace should meet the Building With Nature benchmark (or equivalent standard) https://www.buildingwithnature.org.uk/

Looking beyond the Strategy – further long-term aspirations of the Kent Biodiversity Strategy

The overriding strategic priority in Kent is to increase the extent, connectivity and quality of our semi-natural habitat and to tackle the decline in biodiversity. However, there are developing fields that will need consideration over the period of the Strategy.

The Strategy has a long-term ambition, working within the context laid out by the 25 Year Environment Plan, to explore the **re-establishment of natural processes and re-wildling techniques** to replenish our diminished species and maximise the potential of our landscapes through a Kent Nature Recovery Network. The multi-benefits offered by well-considered programmes of repopulating and reintroducing species can offer enormous potential to re-engage the communities of Kent in valuing their natural environment. However, it is recognised that priorities in Kent may differ from those elsewhere in the UK and that a programme of re-stocking "Kent's Biodiversity Ark" will be challenging and relies on sufficient, appropriately managed habitat.

Healthy and fertile soil underpins our economically important farming and forestry sectors in Kent. It also provides a habitat for a wide range of organisms that in turn provide food for wildlife. Soils also provide nesting habitat for our important pollinator species. We need to improve our understanding of soil health in the county and will look to use the new soil health index to be developed by the Government in the context of the 25 Year Environment Plan, at both farm and county level. This will help us to support farmers to achieve good soil management practices such as the use of cover crops and grass leys in arable rotations.

The long term control of detrimental **invasive non-native species** (INNS) is a vital part of positive management across terrestrial, freshwater, intertidal and marine environments. Non-native Invasive Species reduce resources and habitat availability for native species, cause disease, increase flood risk, damage health, infrastructure, amenity value and our economy; unfortunately, in Kent, there are invasive species which have already spread to a degree that we can no longer control. To safeguard our natural landscape, native species and habitats, as well as improve H&S and biodiversity, a catchment based approach to invasive non-native species control is the only effective and long-term solution. KNP Partners are involved in the delivery of a Regional Invasive Alien Species Management Plan (RIMPS)[38]; which targets freshwater aquatic, riparian and coastal waters and support the Non Native Species Secretariat's 'Check, Clean, Dry' campaign, which aims to promote good biosecurity practices.

Climate change will have a major impact on biodiversity in Kent over the next few decades and we are already seeing the effects; for example breeding tern colonies are regularly lost to the effects of sea level rise and increased storm events and woodland bird declines may be linked to changes in the emergence of caterpillars. There are also new species from warmer climes colonising the county, such as Norfolk hawker dragonflies and hymenoptera such as the bee wolf. Freshwater wetlands will be more difficult to maintain due to predicted drier summers, so we will need to develop plans to ensure that we make the most of the water we have. We will need to adapt our coastline to ensure that our internationally important inter-tidal habitats are given room to breathe. But most importantly, we need to deliver landscape-scale conservation, creating bigger, better and more joined-up habitats that will give biodiversity the best hope of adapting to the big changes that are coming our way.

[38] http://www.nonnativespecies.org/index.cfm?sectionid=139

Delivering gains – case studies from around the county

Title of project and dates	**Raising the profile of the coppice industry in Kent**
Lead partner	Kent Coppice Worker's Co-operative
Other organisations involved / partners	Could invite landowners
District	Kent
Description (100 words)	Rotational coppice is a woodland management technique that has been practiced for centuries and Kent remains the stronghold for the industry. In addition to directly supporting around 450 rural jobs it provides a wider range of habitats that high forest management and a specific wildlife community has co-evolved and is adapted to the structural diversity it creates. Continuation and expansion of the industry is affected by planning, specifically loss of work places as these are brown field sites and so ripe for development, biomass policies and – potentially – by Brexit.
Habitat	Lowland broadleaved woodland
Funding	Commercially viable value-added industry, particularly sweet chestnut
Key outcomes	Coppice woodlands provide rural livelihoods and have associated benefits for wildlife including priority species such as dormice (*Muscardinus avellanarius*), butterflies such as the heath fritillary (*Melitaea athalia*) and the Duke of Burgundy (*Hamearis Lucina*) as well as birds such as the woodcock (*Scolopax rusticola*) and nightingale (*Luscinia megarhynchos)*.
People	Rural livelihoods, recreational access including dog-walking, healthy living walks, and provide opportunities for research.
Challenges	Housing costs, work yards and low product costs. Brexit poses a serious threat to coppice management
Natural Capital	Natural Capital Accounts for woodland have been prepared by the Forestry Commission, by Forest Enterprise for the estate they manage and the Office of National Statistics; none consider coppice in detail and lack of data on the area of woodland managed as coppice is a contributory factor.
Monitoring / Indicators	Surveys have been carried out in the past to determine the area of coppice in active management but this is complex as the rotation length depends on product and can be up to 80 years' so it is very difficult to determine when woodland is not in active management. The best indicator is the area cut per year as this can then be multiplied by approximate rotation determined by the ratio of products. Many woodlands are monitored as part of the National Dormouse Monitoring Project; annual data produced by the People's Trust for Endangered Species.

Title of project and dates	**Introduction of haymaking to Yalding Lees to restore species-rich Lowland Meadow**
Lead partner	Medway Valley Countryside Partnership
Other organisations involved / partners	Yalding Parish Council, Medway Valley Countryside Partnership, local landowners, Saving our Magnificent Meadows (SOMM) HLF Project (Plantlife)
District	Maidstone Borough Council
Description (100 words)	Yalding Lees is a 6 hectare grassland site. It was classified as rank neutral grassland (GN31) in the 2012 Habitat Survey, and the historical management was a summer cut with the cuttings left on the grassland. The Lees lie at the confluence of three main rivers - the Medway, the Teise and the Beult – and are part of the flood prevention for the local village as a water storage area in times of high river flow. Advice in 2014 from the SOMM Project led to a change of management to hay making (cuttings removed).
Habitat	Lowland Meadow
Funding	HLF (SOMM Project); Yalding Parish Council; the hay is now of sufficiently good quality that it can be sold and offset against management costs.
Key outcomes	Restoration of 3ha in the area of species-rich floodplain lowland meadow.
People	Recreational access including dog-walking; volunteering for conservation tasks with MVCP; school education groups, healthy living walks, and environmental education for adults and Higher Education students. Location for dissertation study.
Challenges	Like many areas of Kent, Yalding has housing allocation targets set centrally. There are no development pressures at present but they can't be discounted in the future despite the area's low-lying nature and propensity to flood annually.
Monitoring / Indicators	Species: Indicators of species-rich meadow or grazing marsh e.g. pepper-saxifrage, lady's-bedstraw, salad burnet; also red-shanked carder bee, barn owl. Open public access via PROW so thousands of visitors per annum. Practical conservation work carried out by contractors for parish council

Title of project and dates	**Kent Turtle Dove Friendly Zones (TDFZs) Project**
Lead partner	RSPB
Other organisations involved / partners	Local Kent farming community and local landowners, Campsites, Natural England, Environment Agency and the National Trust.
District	12 TDFZs across Kent
Description (100 words)	Turtle doves are the UK's fastest declining bird species and they are threatened with global extinction (IUCN Red List of Endangered Species). Kent is the stronghold for turtle dove in the UK. Within Kent, 12 important core turtle dove areas have been identified as the highest priority for the species. These areas are known as Turtle Dove Friendly Zones (TDFZs) and are the areas where the RSPB is prioritising its work. Working with landowners to develop on the ground habitat for the species and engaging with the local community to highlight the plight of the species and promote community habitat delivery for this species.
Habitat	Turtle doves have three habitat requirements: • Foraging areas consisting of native arable wildflowers (they feed primarily on seed) • Dense scrub and hedgerows for nesting • A freshwater drinking source
Funding	This project is funded by the RSPB, Natural England and the Roger De Haan Charitable Trust. Many of the farmers in the project are also supported by Countryside Stewardship.
Key outcomes	• Advice delivered to at least 75% of land area within each TDFZ • At least 1 farmer/land manager per TDFZ enrolled as a Turtle Dove Farmer Champion • 2-3 ha of open seed rich foraging habitat per 1km^2 in each TDFZ, located within 300m of suitable nesting habitat. • At least 3 accessible clean water sources per km^2 • 4000 people positively engaged across the TDFZ network • At least one Turtle Dove Community Champion in place within each active TDFZ to drive forward local action • Establish a network of Turtle Dove Community Champions across the TDFZ network who are linked up and aware of the project as a whole and therein driving forward local action • Establish 0.5ha of seed rich feeding habitat delivered by focal communities in TDFZs
People	A network of local volunteers recruited as part of the project. Including Turtle Dove Community Champions, Habitat Advisors and Survey volunteers. Engaging the local community with the plight of the turtle dove and highlighting the importance of Kent for this species. Working with the community to deliver on the ground conservation measures for this species (such as supplementary feeding).
Challenges	Loss of suitable habitat because of local developments in Kent. Changes in agri-environment schemes following Brexit.
Natural Capital	The creation of feeding areas for turtle doves will benefit

	pollinating insects and contribute to good soil management.
Monitoring / Indicators	A team of local volunteers have been recruited to conduct randomly generated turtle dove surveys within the TDFZs to see if the conservation measures we have put in place are actually having an impact on turtle dove populations within the TDFZs. We are also conducting specific turtle dove surveys on many of the sites we are working with as part of the project. This includes the use of trail cameras to monitor turtle dove usage of supplementary feeding areas.

Title of project and dates	**Great Bells Farm, Isle of Sheppey**
Lead partner	Environment Agency and the RSPB
District	Swale
Description (100 words)	The 193 ha farm is located on the southern half of the Isle of Sheppey, adjacent to Elmley Marshes National Nature Reserve, and is protected by a sea wall. Great Bells would have been a grazing marsh in the past but was converted to arable more recently. Grazing marsh is a very important wetland habitat for breeding waders, such as lapwing and redshank, wintering waterfowl, water voles and a range of scarce invertebrates. Much of this habitat has either been lost through conversion to arable, or damaged through drainage or poor management. The grazing marsh in North Kent is particularly special because of its proximity to estuarine habitats; saltmarsh and mudflats. Many bird species use both habitats for feeding or roosting. Due to sea-level rise, salt marsh habitat is increasingly under pressure as it becomes squeezed up against the very sea wall defences that protect the grazing marsh. These salt marsh losses were identified in the Medway Estuary and Swale Shoreline Management Plan (MEAS SMP) and the EA has developed plans to compensate for these losses elsewhere in the estuary. At some point in the future this might involve the re-alignment of flood defences to allow the estuary to 'breathe', but this could be at the expense of grazing marsh behind the sea wall. This is where the Great Bells Farm project comes in. Great Bells Farm was purchased by the EA to provide new grazing marsh habitat to replace predicted future losses. EA commissioned the RSPB to design and build the new wetland habitats due to their experience of designing and managing wetlands, such as at Medmerry and Wallasea. The project was awarded the CIEEM 'NGO Impact Award' in 2014. The RSPB and EA worked closely together to produce a design that would capture the best elements of grazing marsh sites that we know are good for wildlife, such as Elmley Marshes. The design needed to incorporate three main elements; 1. Livestock infrastructure, such as gates and cattle handling facilities, so that the site could be appropriately grazed. 2. Predator exclusion fencing around the key areas, so that ground-nesting birds would be able to produce enough chicks to maintain their populations, something which is a particular issue for breeding waders. 3. Hydrological infrastructure, such as dams, sluices and rills (surface features that hold water) to enable the wetland element to be created. The last of these, the hydrological infrastructure, is potentially the most difficult and costly, so we used LiDAR and digital mapping to ensure that water could be held within the site, that we could move water around in the easiest way, that there would be enough surface water to attract breeding waders and that the spoil that would be created could be managed in the most efficient way. The plan also incorporated additional habitat for water vole and

	bumblebees as part of the Buzz for the Coast project. For the site to be effective as a wetland, water levels needed to be safely managed at a higher level than surrounding farmland, so an automatic pumping system was installed, designed to reduce staff resource required to manage water levels. This digital map was then used to guide the GPS equipped machinery on site to create a near-replica of the plan on the ground. All excavated material was reused on site.
Habitat	Coastal and Floodplain Grazing Marsh
Funding	Great Bells Farm was purchased by the EA
Key outcomes	• In 2010 the site had 1 pair of lapwing and 7 pairs of redshank breeding on site. By 2017 this had increased to 47 pairs of lapwing and 24 pairs of redshank. Thanks to the anti-predator fence, lapwing chick productivity has been well above the level required to sustain the population for 6 consecutive years (i.e. greater than 0.7 fledged chicks per pair). This means that Great Bells is putting more lapwings back in to the world. • Wintering waterfowl numbers have also increased, with the site regularly holding large flocks of wigeon, teal, curlew and golden plover. • The Maid of Kent Beetle, known only from two locations in the UK previously, has now been found on Great Bells. This large rove beetle is a predator of dung invertebrates and needs chemical-free cow pats to prosper.
Challenges	There are a number of issues and learning points involved with a project of this type, including; • The site was close to a former World War II air base and the presence of unexploded ordnance (UXO) was discovered prior to excavation. Because of this, we had to closely monitor UXO during the excavation phases of the project using magnetometer surveys, specialist site investigation and army specialists. • There is a lot of history around the Thames, and the project was careful to ensure that we took steps to avoid damaging local archaeology. • It is important to manage costs and risks on a project of this size, and close cooperation between the RSPB, EA and site contractors was essential.
Monitoring / Indicators	Pairs of breeding lapwing; Lapwing chick productivity

Title of project and dates	**Shingle on the Cusp**, June 2017-December 2020
Lead partner	Kent Wildlife Trust
Other organisations involved / partners	Ministry of Defence, RSPB, NE, Romney Marsh Countryside Partnership, EDF, KMBRC
District	Shepway District Council
Description (100 words)	Vegetated shingle has been lost over the last few decades due to development and conversion to arable (in the past) and, more recently, gravel extraction, visitor pressure, military activities, beach replenishment activities, flood defence works, and invasive species (mostly from garden escapes). This project is enabling us to test methods of restoring degraded shingle habitats. Brash has been piled at different heights in plots on RSPB and MoD land and is being monitored for vegetation recolonisation and changes in invertebrate assemblage. In addition invasive species are being controlled and leaflets and web content produced to inform local residents on how to protect these habitats.
Habitat	Vegetated shingle
Funding	HLF (Fifth Continent Landscape Partnership Scheme) - £57,957 for this project; various small match funding pots
Key outcomes	Shingle habitats will be better protected and methods for doing so better understood. Burden of invasive species reduced.
People	Land managers will have access to better advice, KWT and RSPB volunteers involved in set up and monitoring, new resources (online and printed) for local residents on how to protect shingle habitats.
Challenges	Shingle vegetation develops very slowly and is very susceptible to disturbance, the project must continue to run for many years and land use may change over that time.
Monitoring / Indicators	Increased coverage of pioneer shingle species i.e. Nottingham catchfly, broom, wood sage, lichens. Monitored yearly. Invertebrates monitored via pitfall trapping in 2018, to be repeated in 2020.

Part of the Medway Flood Partnership

Environment Agency

NATURAL ENGLAND

Case Study: Improving the River Beult SSSI for People and Wildlife

Background

The River Beult is a tributary of the River Medway. It is designated as a SSSI because it is one of the few slow-flowing clay rivers in the country that still supports some of the flora and fauna expected in this kind of water body.

The river is a vital natural asset because it is a source of fresh water for wildlife and agriculture. It also naturally controls and stores flood waters, supports crop pollination, breaks down pollutants and helps the wellbeing of the local community through interests such as fishing and walking.

However, this resource is compromised by issues such as historic modifications made to change the shape of the river channel and control water levels. These impede fish passage and have resulted in flashier flooding, poor water quality, reduced flows and excessive weed growth – resulting in loss of habitat and a decline in angling.

What are we doing?

The Environment Agency and Natural England have been working in partnership with local stakeholders, as part of the Medway Flood Action Plan to understand what services the River Beult SSSI currently provides or supports and how these benefits for people and wildlife can be improved.

This has helped us to form a plan to improve the River Beult and we want to work with the community to put this plan into action to develop a more natural river and floodplain which are resilient to pressures including climate change.

Our aim:

To create a River Beult that provides:

- Natural flood management
- A healthy fishery with good angling participation
- A secure, clean water supply
- An attractive, resilient landscape that supports sustainable agriculture, flourishing wildlife and recreation

Our objectives:

1. Identify what the River Beult does for people and wildlife and what it needs to do better
2. Identify options that work with natural processes to improve the value of the river for people and wildlife, in both the short and long term
3. Develop an outline improvement plan for the River Beult with local stakeholders
4. Work with local stakeholders to design and build improvement measures in both the short and long term
5. Measure success through stakeholder benefits, SSSI condition and WFD status.

Part of the Medway Flood Partnership

Environment Agency

NATURAL ENGLAND

Key considerations

We assessed possible ways to increase the value of the benefits provided by the River Beult SSSI by:

1. Identifying what ecosystem services the river provides and what pressures affect its ability to do so
2. Working with local people to identify how to improve the services provided
3. Scoring which options would provide the greatest benefits to the most services
4. Producing outline designs for the highest scoring improvement options
5. Creating a cost estimate for the highest scoring options, including lower cost alternatives

The highest scoring improvement options

What happens next?

Putting the plan into action very much depends on the wishes of local landowners. We will use the plan to continue working with partners and local people to design and build the improvement measures. Further surveys and actions will be needed to inform the design stages. We also need to secure partnership funding and will look at a wide variety of available sources, many of which are detailed in the improvement plan. Partners will be able to use the improvement plan as a framework for developing and submitting project ideas and funding bids.

How can people get involved/ find out more

Please contact us with any questions at FBG.KSL@environment-agency.gov.uk or enquiries@naturalengland.org.uk

Title of project and dates	**Guardians of the Deep**, December 2016 – December 2019
Lead partner	Kent Wildlife Trust
Other organisations involved / partners	Medway Swale Estuary Partnership (Medway Council), Thanet Coast Project (Thanet District Council), Kent County Council, Natural England.
District	Kent and Medway
Description (100 words)	Giving everyone the chance to learn more about the astonishing wildlife that lives around Kent's shores, providing lots of ideas and activities in which people can help to look after it. Establishing a network of 360 volunteer Coastal Guardians (eyes and ears of the coast), training for volunteers in shore survey techniques and species identification, establishment of a team of trained Coastbusters (volunteers to help tackle the invasion of the non-native Pacific oyster), promotion of Marine Conservation Zones to the wider public. For schools and young people: six-week WildBeach programmes at the coast and Undersea Explorer snorkelling workshops (in swimming pools).
Habitat	Coastal – Intertidal including chalk reef, shingle spits, clay exposures, biogenic reefs.
Funding	HLF, Uren Foundation, D'Oyly Carte Charitable Trust, KWT Flourish Fund.
Key outcomes	Increased understanding and support for marine protected areas. A more skilled and active volunteer network taking action to help protect coastal areas. Coastal Guardians actively observing areas of coast, supporting the enforcement work undertaken by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA).
People	This is a people focussed project. To date (October 2018) volunteers have contributed over 800 days of volunteer time taking action to protect Kent's coast. Activities have ranged from general observation and reporting of unusual sightings or illegal activity to beach cleans and seaweed surveys.
Challenges	Constant pressure on the marine environment from industry. Huge challenge for KEIFCA in patrolling vast areas of sea to enforce the designated protection.
Monitoring / Indicators	• 360 volunteer Coastal Guardians • 60 school groups undertaking WildBeach activities • 500 children trained in snorkelling skills • 30 non-native control sessions • 75 volunteer surveys events (intertidal habitats and species/marine litter) • 180 people trained in intertidal survey techniques • 180 people trained in an additional course (e.g. marine mammal identification, coast bird identification) • 60,000 people engaged in the project • 150,000 exposed to project information

Title of project and dates	**Ecology Island Mental Wellbeing Group**
Lead partner	North West Kent Countryside Partnership and North Kent Mind
Other organisations involved / partners	Dartford Borough Council, Public Health
District	Dartford Borough Council
Description (100 words)	Ecology Island is a secluded woodland site in the middle of Dartford's Central Park, with the River Darent running alongside. The wellbeing group participants are referred into the project by NKMind and are in recovery from mental health issues or emotional trauma. Each week they carry out conservation, bush craft and natural craft activities which not only improve the site for wildlife, but significantly benefit the mental wellbeing of the group. NKMind staff are present each week to provide emotional support, and NWKCP lead the activities – each organisation plays to it own strengths to provide a fully-supported service.
Habitat	Secondary woodland and riparian
Funding	Various sources: Porchlight, Public Health, KCC Members' Grants, DEFRA Wrap fund, Saving Lives Innovation Fund.
Key outcomes	Wellbeing improvements for participants Better managed woodland Access and interpretation improvements
People	The site is used and maintained by a group of approx. 12 people who are in recovery from mental health issues. Several of them have gone on to pursue further outdoor volunteering opportunities and one participant has gained employment in the countryside sector through this project.
Challenges	Project funding is a constant challenge – no long-term funding solution has yet been found. The site is prone to fly tipping which can be disheartening for the group, although their regular use of the site seems to have improved the issue.
Monitoring / Indicators	Participant wellbeing is monitored through Warwick Edinburgh Mental Wellbeing Scale questionnaires.

Appendices

Appendix I

Priority habitats – baseline figures.

There are 36 habitat types that are in need of conservation in Kent and Medway and in Kent's waters, all of which are nationally important and some of which are rare and threatened on a global scale.

Many of the habitats listed below were not selected for inclusion within the main targets for this iteration of the Strategy because there are currently limited opportunities for what can be achieved, either through partnership working or through the constraints pertaining to that particular habitat type. Nevertheless, partners will continue to undertake work to manage, enhance, extend and reconnect these habitats, where feasible. The Kent Nature Partnership may decide in years to come to select new priority habitats from those listed below if the latter require greater focus and work.

Priority Habitat	**Current UK BAP habitat resource (Kent Habitat Survey 2012)[39] unless otherwise indicated**
Arable field margins	2751ha[40] – not recorded during 2012 KHS.
Blue mussel beds on sediment	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Coastal and floodplain grazing marsh	14,174ha
Coastal saltmarsh	1338ha
Coastal sand dunes	455ha
Coastal vegetated shingle	2104ha
Fragile sponge and anthozoan communities on subtidal rocky habitats	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Hedgerows	Approx. 11,734 km (including but not limited to BAP habitat type hedgerow)[41]
Honeycomb worm *(Sabellaria alveolata)* reefs	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Intertidal chalk / Subtidal chalk	415ha / Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Intertidal mudflats	10,078ha
Intertidal underboulder communities	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Lowland beech and yew woodland	613ha
Lowland calcareous grassland	1159ha
Lowland dry acid grassland	262ha

[39] http://www.archnature.eu/the-kent-habitat-survey-2012-final-report.html. The Kent Habitat Survey provides the most comprehensive data regarding the extent of priority habitats in the county. However, the criteria for classifying habitat types as Priority Habitat (BAP) type were very strict and the data were not verified neither have they been updated since 2012.

[40] Habitat extent calculated from options in Environmental Stewardship agreements with start dates 2005-2010 and 2011-2013.

[41] Because no consistent methodology was in place, nor accurate survey data recorded in the 2003 Kent Habitat Survey **no** like for like comparison is possible with the 2012 Kent Habitat Survey and extreme caution should be applied when using these targets. In 1995 there was estimated to be 1144km of Species rich and Ancient Hedgerow in Kent from a national survey by English Nature. This equated to some 0.9% of the total England resource, while Kent covers 2.8% of England's landmass. No reliable data from 2003 seem to exist or can be found.2012 Kent Habitat Survey did not specifically survey for Species Rich and Ancient Hedgerows. It can be interpolated from habitat polygon data however that there are some 14,905 km of hedgerows and lines of trees habitat (combined) in Kent. Earlier studies from UKBAP in 2007 have determined that 42% of hedgerows may be Species Rich and Ancient. Therefore if just hedgerow data (LF11) are used this equates to 11734km of hedgerow. 42% of that would be 4928 km so either the 1995 figure is wrong or the current methodology gives a falsely high result. That being said it is proposed that the targets are based around the 11734 km figure.

Lowland fen	12ha
Lowland heathland / Purple moor grass and rush pasture	74ha / 11ha
Lowland meadow	27ha
Lowland mixed deciduous woodland	153ha
Maritime cliffs and slopes	221ha
Mud habitats in deep water (?)	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Open mosaic habitats on previously developed land	Baseline data not available
Peat and clay exposures with piddocks	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Ponds	Baseline data not available
Reedbeds	545ha
Rivers	Current resource: 6592ha. No recorded areas of UK BAP priority or Annex1 habitats within KHS 2012.
Rossworm *(Sabellaria spinulosa)* reefs	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Saline lagoons	286ha
Seagrass beds	29ha
Sheltered muddy gravels / Subtidal sands and gravels	9ha / Baseline data for 'Subtidal sands and gravels' not currently available as extremely costly to identify spatial extent of subtidal habitats
Spoonworms and burrowing megafauna	Baseline data not currently available as extremely costly to identify spatial extent of subtidal habitats
Traditional orchard	1676ha
Wet woodland	662ha
Wood pasture and parkland	3176ha

Appendix II

South East Strategies and Plans of relevance to the Kent Biodiversity Strategy

South East Local Enterprise Partnership Economic Plan
South East Industrial Strategy
South East Tri-LEP Energy Strategy
South East Clean Growth Strategy

Kent Strategies and Plans of relevance to the Kent Biodiversity Strategy

Kent Downs AONB Management Plan
High Weald AONB Management Plans
Kent Environment Strategy

Ashford Borough Council Local Plan
Canterbury City Council Local Plan
Dartford Borough Council Local Plan
Dover District Council Local Plan
Folkestone and Hythe District Council Local Plan
Gravesham Borough Council Local Plan
Maidstone Borough Council Local Plan
Medway Council Local Plan
Sevenoaks District Council Local Plan
Swale Borough Council Local Plan
Thanet District Council Local Plan
Tonbridge and Malling Borough Council Local Plan
Tunbridge Wells Borough Council Local Plan

Kent and Medway Growth and Infrastructure Framework
Local Transport Plan
Rights of Way Improvement Plan
Active Travel Strategy
Clean Air Strategy
Joint Strategic Needs Assessment
Kent Housing Group
Kent and Medway Energy and Low Emissions Strategy
Ash die back Plan
Local Flood Risk Management Strategy
Shoreline Management Plan 9 River Medway & Swale Estuary
Shoreline Management Plan 10 Isle of Grain to South Foreland
Shoreline Management Plan 11 South Foreland to Beachy Head
Kent's River Basin Management Plans
Climate Change Risk Assessment

Appendix III

Glossary

Biodiversity
As defined in the Defra Biodiversity Strategy 2020, biodiversity is the diversity, or variety, of plants, animals and other living things in a particular area or region. It encompasses habitat diversity, species diversity and genetic diversity.

Champion for Priority Habitats
The role of Champion is defined by the KNP as follows:

- Act as main point of contact for that priority habitat.
- Review and agree the rationale for the targets (consulting with any other key/relevant partners and/or stakeholders).
- Review and agree the targets (consulting with any other key/relevant partners and/or stakeholders).
- Review and agree the baseline figure and source from which its derived.
- Be prepared to report on progress against that target, collecting relevant data from partners (every two years).
- Assist in preparing information as relevant for the district information on that particular priority habitat.
- Ideally be selected as champion because they are an agency/organisation with either statutory or other responsibility/interest for that particular priority habitat – i.e. already well linked in to its protection, restoration and/or creation.

Ecological Network
'…an ecological network comprises a suite of high quality sites which collectively contain the diversity and area of habitat that are needed to support species and which have ecological connections between them…'[42]

Ecosystem
An ecosystem includes all of the living things (plants, animals, and organisms) in a given area that interact with each other, as well as the non-living environments (weather, earth, sun, soil, climate, atmosphere) that surround the living things.[43]

Ecosystem Service
The benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on Earth.[44]

Green infrastructure (GI)
'Green Infrastructure is a strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types.

[42] 2010 report to Defra, 'Making Space for Nature: A review of England's wildlife sites and ecological network'
[43] https://www.maximumyield.com/definition/483/ecosystem
[44] UK National Ecosystem Assessment
http://uknea.unep-wcmc.org/EcosystemAssessmentConcepts/EcosystemServices/tabid/103/Default.aspx

Green Infrastructure includes established green spaces and new sites and should thread through and surround the built environment and connect the urban area to its wider rural hinterland. Consequently it needs to be delivered at all spatial scales from sub-regional to local neighbourhood levels, accommodating both accessible natural green spaces within local communities and often much larger sites in the urban fringe and wider countryside.'[45]

High Value Habitat
Within the context of the Kent Nature Partnership Biodiversity Strategy, 'high value' refers to land which is designated as SSSI, SPA, SAC, LWS; ancient semi-natural woodland as identified within Natural England's Ancient Woodland Inventory; all BAP priority habitats; and land in the Higher Level/Tier/Countryside Stewardship schemes with Maintain/Manage or Restore options.

Local Wildlife Sites (LWS)
A suite of semi-natural habitats that have been recognised for their wildlife importance. While they are not protected by statutory conservation designations, they are often just as rich in wildlife value. Occupying a significant area (7%) of Kent, they collectively contain some of the most important, distinctive and threatened species and habitats within a national, regional and local context. Furthermore, and importantly, they act as stepping stones between surrounding areas, providing a crucial opportunity for connecting habitats which otherwise would be isolated and unable to support viable populations of wildlife. Local Wildlife Sites therefore provide vital support to the plants and animals occurring in our gardens, parks and protected areas, are an important component of the county's ecological network and provide critical ecosystem services which benefit the people of Kent.

National Planning Policy Framework (NPPF)
The National Planning Policy Framework set out government's planning policies for England and how these are expected to be applied. It provides guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.

Natural Capital
The air, water, soil and ecosystems that support all forms of life, including natural assets such as forests, rivers, land, minerals and oceans.

Natural habitat
Natural habitats retain ecological assemblages, functions and species composition that are attributable to natural evolutionary processes and have not been substantially modified by human activities. Truly natural and unaltered habitats are increasingly rare and those that remain are likely to be a high priority for conservation[46].

Net Gain
Biodiversity Net Gain is development that leaves biodiversity in a better state than before.[47]

Priority Habitat
UK BAP priority habitats were those that were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). The original list of UK BAP priority habitats was created between 1995 and 1999, and was revised in 2007, following publication of the Species and Habitats Review Report. Following this review, the list of UK BAP priority habitats increased from 49 to 65. As a result of devolution, and new country-level and international drivers and requirements, much of the work previously carried out by the UK BAP is now focussed at a country-level rather than a UK-level, and the UK BAP was succeeded by the 'UK Post-2010

[45] Natural England. (2009). *Green Infrastructure Guidance.* Catalogue Code NE176.
[46] European Investment Bank Environmental and Social Standards:
http://www.eib.org/attachments/strategies/environmental_and_social_practices_handbook_en.pdf
[47] https://www.cieem.net/biodiversity-net-gain-principles-and-guidance-for-uk-construction-and-developments

Biodiversity Framework' in July 2012. The UK list of priority habitats, however, remains an important reference source and has been used to help draw up statutory lists of priority habitats which, in England, was required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2016.[48]

Semi-natural Habitat

Semi-natural habitats have ecological assemblages that have been substantially modified in their composition, balance or function by human activities. They may have evolved through traditional agricultural, pastoral or other human activities and depend on their continuation to retain their characteristic composition, structure and function. Despite not being natural, these habitats and ecosystems often have high value in terms of biodiversity and the services they provide[49]. Examples might include most, if not all, of our Kent BAP priority habitats, but also other species-rich and semi-improved grasslands, recently planted broadleaved woodland and secondary woodland. It excludes habitats such as arable, improved grassland (rye grass) and coniferous woodland plantation.

[48] http://jncc.defra.gov.uk/page-5706)

[49] European Investment Bank Environmental and Social Standards: http://www.eib.org/attachments/strategies/environmental_and_social_practices_handbook_en.pdf