A NEW DEAL FOR NATURE Proposals for a National Policy

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ACKNOWLEDGEMENTS

The working-party divided between them the responsibility for producing first drafts of the ten sections of this Report, but all the drafts have been discussed by the whole group and the final versions represent our agreed and unanimous recommendations. The names of the five co-authors are listed in alphabetical order below, reflecting our equal roles in the work. We have written the Report in our personal capacities and in our own time, and it does not not necessarily reflect the positions of any organisations for which we work.

We would like to thank Caroline Lucas for commissioning this Report In January 2019 and we are grateful for support and encouragement from other Green Party staff, in particular Chris Venables and Laura MacKenzie.

We have taken specialist advice where appropriate, and would in particular like to thank Euan Dunn and Callum Roberts for their invaluable help with section 7 (Marine environments), and Henry Walker for help with section 4 (Farming). Some of the ideas behind our policy recommendations were inspired by *A people's manifesto for wildlife* (Packham *et al.* 2018).

We are grateful to the BTO in Thetford for providing accommodation for our meetings.

We thank Dale Tomlinson for expert professional help with the design and formatting of this Report.

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22 November 2019

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PREAMBLE: STATEMENT OF PRINCIPLES

We hold it as self-evident that humans, like any other species, are a part of nature. The agricultural systems by which we obtain all our food are also derived from natural processes and are subject to their laws. Similarly our entire economy is a sub-division of the planet's ecosystems and is governed by their own limits.

The British people, for all of their professed love for nature and despite the central place that it has long enjoyed in the cultural life of this nation, have witnessed and been party to a systematic decline in natural abundance. During the twentieth century in England, we have destroyed all but 1% of 4 million acres of flower-rich meadow. Since the 1980s the British Isles have lost 44 million breeding birds through habitat destruction.

The 2019 State of Nature report records that of 697 species assessed, 44% showed strong or moderate declines in abundance over the last decade; over the same period 37% of 6,654 species assessed showed similar declines in their distribution. Plants and animals that were once commonplace, some in almost every parish in the land, are now scarce or threatened with extinction: for example, the lapwing, curlew, water vole, adder, common toad and great yellow bumblebee. In an audit of over 200 countries, England specifically was named among the 30 most denatured on Earth.

The preservation of other life forms must become a central tenet of our society and a measure of a civilised nation. The approximately 60,000 species of animals and other organisms that are inhabitants of these islands have a right to flourish alongside ourselves. Their continued residence is a national obligation: the puffins on our coastal cliffs, the bluebells in our oak woods, the small tortoiseshells or hedgehogs in our gardens. Wild places and wild species not only have claims to our shared countryside, they are a source of immense benefit to us. The natural world and open landscapes – moors, downs, mountain-tops, sea-cliffs – are invariably the background condition to our sense of spiritual well-being and release. There is mounting scientific evidence for something most of us know in our bones: beautiful and biodiverse landscapes are good for our mental health. Untrammelled space – whether it is a city park full of trees and boating lakes or a snow-topped mountain – is a precondition of many forms of exercise: sports, running, cycling, playing with our children, walking with friends and family.

The natural world is an unending source of fascination, joy, wonder and human creativity. Landscapes and wildlife inspire scientific inquiry, learning, writing, poetry, photography, film, dance, music, art and sculpture. If you took the references to British nature out of William Shakespeare's plays, then there would be deletions on every page. The nation's favourite piece of classical music is 'The Lark Ascending' by Ralph Vaughan Williams.

The moral drive to conserve nature consists of two parts. It is for other species so that they might flourish. It is for ourselves so that all of the multifarious benefits of wildlife and wild places will continue to nourish our minds and bodies.

Our good health, survival and prosperity depend upon life on Earth. If we continue to trash our planet we will consign not only other species to extinction but, ultimately, ourselves. We must put the self-sustaining variety of life – biodiversity – at the centre of all work by government departments. This report provides a blueprint for how to achieve it.

PUBLIC VOICES FOR NATURE

State-funded conservation was initiated in the 1940s and has an exceptional record of achievement over eight decades. However, since the early 1990s it has been divided into four separate devolved organisations derived from the Nature Conservancy Council (NCC). They are: Natural England, Natural Resources Wales, Northern Ireland Environment Agency and Scottish Natural Heritage. Some aspects of their shared remit is coordinated through a supra-national body, the Joint Nature Conservation Committee.

Since the division took place, the roles of the separate organisations have outwardly remained constant – to advise their respective administrations on nature conservation – but the substance and tone have shifted. The organisations are now not champions for, but advisers on, nature to government; their zeal to protect nature has been muted, their morale undermined, the overall budgets have been cut in line with a lowering of commitment to the environment by successive administrations. Staff salaries have been strictly controlled for the last decade.

- 1 We need a **statutory nature framework**, regardless of party politics or the changes of government. It would place a concern for wildlife at the heart of planning. It would integrate nature conservation into all departments of local and national organisations. It would guarantee the place of state-funded conservation advisors and end the possibility of them being muzzled or emasculated.
- 2 **Restoring the voice of nature in the corridors of power**. The old NCC's public pronouncement on the importance of wildlife was always measured and this reasoned and independent voice will be restored to make the challenging case for wildlife.
- 3 New joint conservation committee. The separate organisations require strong official links and coordinated policies so that they function as a unified whole. The new joint committee needs to ensure collective agreement and action across the separate parts of the United Kingdom. But it needs also to guarantee coordinated effort at a European level. As an example, Britain is one of the most important countries in Europe and in the north Atlantic for breeding seabirds. These millions of wild animals do not adhere to political boundaries and our national effort needs to be aligned with international policy.

- 4 **Monitoring and census work**. Proper population counts are the foundation of all overarching conservation measures. These have been inadequately funded in the past. Future census work will be placed on a guaranteed repeat timetable.
- 5 **Funded research** is an essential part of effective conservation action. A properly resourced scientific team will be placed at the heart of enhanced coordination.
- 6 A proper budget framework is required that is integrated and officially recognised across all government departments. This will ensure that nature conservation is not sidelined as a low priority or as an after-thought. Instead, provision for wildlife will be maintained at a constant and appropriate level which is unaffected by changes of government or administration personnel.
- 7 **Council for Nature**. A new unit within the statutory agencies will be established to reinforce links between the latter and the voluntary/charitable nature non-governmental organisations, so that there is a single united voice on nature policy. The same forum can reconcile differences of approach or substance. The constitution and funding of such a body would require wide consultation and careful thought to ensure its independence and authority.
- 8 **Statutory designations for ever**. Too often what was intended as permanent recognition of a site's wildlife value as expressed through its statutory designation has proven to be temporary. Governments too often override their own wildlife legislation or the site is allowed to deteriorate and it is then denotified. The proposed HS2 railway line will, if implemented, damage 12 Sites of Special Scientific Interest (SSSI) as well as 111 Local Wildlife Sites and 19 ancient woodlands. Only in the most extreme issues of national security should designations be flexible or over-ridden.
- 9 End the badger cull. The political and partisan scapegoating of badgers in the issue of bovine TB is a distraction in solving this pressing agricultural issue. The cull will not work. Recent scientific evidence points to the central role of cattle to cattle transmission. The minor role played by badgers is more likely to be combated by the cheaper and more humane alternatives of vaccination and biosecurity improvements. However, there will continue to be a need for localised and selective licensing of badger control to protect ground-nesting native birds.
- 10 An end to the sale of peat by 2022. Peat bogs are one of the most important habitats for wildlife in these islands and internationally. They are the most effective landscapes for carbon sequestration. The systematic mining of lowland peat bogs has to end, both here and abroad. The importation of peat should therefore also be banned.

NATIONAL PARKS AND OTHER PROTECTED LANDSCAPES

To date there are 15 national parks in England, Scotland and Wales. There are also 394 national nature reserves and about 7000 sites of special scientific interest covering more than 5.6 million acres. Despite all these achievements, nature has not been effectively protected in Britain and the processes that have driven declines need to be arrested and reversed.

- The single most pressing need is for a **national blueprint** that creates the vision for, and in time the substance of, connectivity across the entire natural environment. This is an essential prerequisite of the government's proposed Nature Recovery Network. Too often, nature reserves are islands of biodiversity in a sea of intensive agriculture. This situation offers little or no opportunity for wildlife populations to link or spread.
- 2 The **Nature Recovery Network** is an important start. However, our vision of this innovation is a complete system of connecting corridors that reaches down and creates a capillary network at the most local level throughout all parts of our islands. Only this level of connectivity will genuinely sustain a viable wildlife whole.
- 3 National Parks and Areas of Outstanding Natural Beauty were originally founded to fulfil ideas about the preservation of landscape beauty or to give public access to green space. The legal and administrative framework for such areas often did not prevent the loss of associated wildlife. SSSIs and NNRs often exist within otherwise degraded national park landscapes and both these parts need to be substantially improved for wildlife. This mission to uplift environmental conditions in National Parks and AONBs will be at the heart of state-funded enhancement of British nature. Alternative titles to AONB will be considered, given that 'beauty' is an inadequate measure of conservation's real purpose.
- 4 **New National Parks**. At present 15 national parks cover a total area of 22,916 square kilometres and 9.45% of the land area. Most are in upland landscapes, far from population centres. A new goal to designate 20% of Britain will be established. New lowland parks will be considered: possible examples include the Norfolk/Suffolk Brecklands, the Lincolnshire/Norfolk Wash coast, the Cambridgeshire/Lincolnshire Fens and Dorset/East Devon (see also the recommendations in the National Parks and AONBs Review, published 21 September 2019).

- 5 **Revise the names for designated areas**. The designations of landscapes important for wildlife for example, SSSI, SACs, SPAs, NNRs, LNRs are confusing, outdated and partial. A radical simplification based on a single designation followed by a sequence of numbers (higher numbers to indicate national, regional and international importance) is proposed.
- 6 The protection of the Green Belt has been a major check on urban sprawl since the 1940s. However, it has sometimes done little or nothing to protect wildlife. More effort must be made to ensure green-belt areas are better managed for nature. In addition it is sometimes the case that prioritising brownfield-site development to defend green belt actually runs counter to the interests of wildlife, given that some brownfield sites are exceptionally important for nature, such as Thurrock Lagoons and Canvey Wick. A more nuanced understanding is needed to ensure that these places are not sacrificed in the interests of a blinkered orthodoxy.
- 7 Ban intensive moorland management in designated areas. At least 1.3 million hectares of upland Britain are influenced by management for grouse shooting and a significant proportion falls within designated areas. Management of these areas has to be compatible with the wildlife and environmental purposes of the national parks.
- 8 **Proper transport links** will be established to ensure that the system of national parks or other designated landscapes can be visited without reliance upon cars.
- 9 **Greater access** to national parks needs to be at the heart of their organisation. Both the staff and the visitors need to reflect the full diversity within the nation. Designated areas have to be for all parts of society.
- 10 **Dogs and wildlife**. Dog ownership among the British people has increased substantially in recent years to nearly 9 million animals. Dogs are a cherished part of home life. Most of the British countryside is a dog-friendly environment. But while the impacts of cats on wildlife are well known, dogs also place major pressures on nature-rich areas. They can cause damage and disturbance to livestock, wildlife and some habitats, for example, rivers and lakes. In areas with statutory designations national parks, AONBs, SSSIs, NNRs dogs should be kept on a lead, especially at certain seasons, as is already often required, or not permitted at all in some instances.

FARMING: HOW TO PRODUCE FOOD AND REVIVE WILDLIFE

Seventy-two percent of the UK's land area is managed for agriculture. Our countryside has been intensively farmed to the detriment of wildlife and, ultimately, ourselves. Our current farming system is not sustainable – we are using up soil, and destroying the insect and other invertebrate life on which our food production ultimately depends.

Changing farming practices have made the biggest single impact on UK wildlife in the last century. Most of this, unfortunately, has been negative. Well-documented declines continue in farmland birds and in pollinators such as butterflies and bumblebees. Causes of these declines include the increased use pesticides and fertilisers, increased stocking rates, changes in cropping patterns, farm specialisation, increased mechanisation, increases in farm and field sizes, and losses of features such as hedgerows and farm ponds.

Here is how we can better produce healthier food with fewer chemicals and poisons and encourage more wildlife.

- 1 **Support for wildlife friendly farming**. We have an opportunity to devise more efficient and positive support for British farmers. The principle of "public money for public goods" is good, but current schemes push wildlife into the corners. We must reward farmers for the nature on their farms. A new scheme can do more than simply measure 'habitat', but reward farmers for results the young birds, bees, butterflies and rare species they attract. Participating farmers' wildlife will be measured to give a baseline, with enhanced payments for increasing wildlife.
- 2 Every farmer should devote a minimum of **15% of their land (including linear features) to nature**, and be paid to do so. We need both fertile lowlands and uplands to be nature-rich places. This can ensure wildlife corridors are created across farms to help species move through the landscape (see also section 3, points 1 and 2).
- 3 Enhanced **support for upland farmers** to encourage diversification, including wilding and alternatives to livestock farming, non-native forestry and game.
- 4 **Support for new farming practices**. Kickstarter funds to support new entrants into farming and new forms of natural and regenerative farming to help farmers innovate sustainably. Green Belt land to receive additional funds to revive vegetable-growing close to urban centres and markets.

4. FARMING: HOW TO PRODUCE FOOD AND REVIVE WILDLIFE

- 5 "cide"-free farming by 2040. Current pesticide, fungicide and herbicide use is unsustainable. Although the weight of active ingredients in pesticides applied in Britain has almost halved over the past 25 years, the area treated, frequency of treatments, toxicity of some pesticides, and variety used on a single crop, have all increased increasing the risk to bees and other beneficial insects. European research suggests that a high proportion of routine applications are without agricultural benefit pesticides do not drive yields or income for nearly 80% of farms. "Cide"-free agriculture will be achieved by eliminating this high routine usage through Smart Farming (adoption of management information systems, precision agriculture, automation and robotics), Integrated Pest Management practices, other cropping innovations and expansion of organics. R&D for these alternatives could potentially be funded by a tax on pesticides. Denmark recently introduced a tax representing 34–55% of sale price of the pesticides. Such a tax must benefit farmers.
- 6 Artificial/synthetic fertilisers phased out by 2040. Fertilisers washing into waterways do untold damage to wildlife and water quality. Although nitrogen fertiliser use has fallen by around 35%, and phosphorus and potassium by 50%, since the 1980s, much greater reductions can be achieved. An estimated 40% of nitrogen fertiliser is not used by the crop. Phase-out by the same means as the 'cides' reduction (above).
- 7 Healthy rivers. Riverside landowners must be incentivised to re-wet, re-establish water meadows and return natural river courses. This provides increased flood resilience, good quality water and helps reverse massive declines in wetland wildlife. "Nitrate Vulnerable Zones" where the use of fertilisers is limited to ensure they don't pollute waterways should be expanded. A nationwide monitoring scheme is needed to measure pesticides in water. See also section 7, point 7.
- 8 Radically reduce British agriculture's contribution to atmospheric pollution. In 2016, agriculture contributed 88% of UK ammonia emissions and 68% of nitrous oxide emissions to the atmosphere. Livestock and poor manure/slurry management are major contributors. In addition to the public health implications, this results in acidification and eutrophication of wildlife habitats with major losses of biodiversity, particularly of sensitive and rare species.
- 9 Rigorous, transparent and fair system of annual monitoring of farm targets for wildlife, pesticide-use etc. Monitoring must also ensure that our environmental gains have to be measured on a global scale. For example, replacing intensive beef-rearing by more extensive, environment-friendly methods (cows mainly kept in spacious grass fields) in Britain to reduce chemical inputs and ammonia emissions must not simply lead to us importing more beef from factory farms overseas.
- 10 Alongside this annual monitoring, **five-yearly reviews** to be conducted by the new Joint Conservation Committee (see Pubic Voices for Nature, point 3).

SCHOOLS AND YOUNG PEOPLE

We face huge global challenges. The generations that follow us face even graver ones. We must act now to avert a climate catastrophe but future generations will still have to adapt to unimaginably rapid climatic changes. We must rapidly move away from unsustainable lifestyles in affluent nations. We must seek to halt the great loss of biodiversity that imperils our own life on Planet Earth.

The current generation of children already put many adults to shame with their commitment to addressing these planetary crises, as demonstrated by the youth climate strikes. But we can do so much more to help them.

Even as children show us the way, too many young people in Britain are growing up without access to nature and without a knowledge of our dependence on other species – for food, clean air, clean water, and for our physical and mental wellbeing. We must empower the next generation with an ecologically literate schooling that does not make them fearful. This can help them live more sustainably and act more positively for nature than their parents' and grandparents' generations.

- 1 Place nature at the heart of our education system. Rewrite the Education Act, Section 78, to put nature at the centre of the state National Curriculum from nursery to secondary school.
- 2 **One hour a day outdoors for all**. National Curriculum key stage 1 and 2 (that is, primary school) to include one-hour outdoor learning every day, in addition to break time. This outdoor learning does not necessarily need to be science or environmental education it can involve core curricula such as English and maths. Funding support for schools to deliver imaginative outdoor teaching.
- **3** Funding for teachers to gain outdoor learning qualifications. Too often teachers are fearful of taking learning outside or helping to engage children's boundless curiosity about the natural world. We must support them to gain the extra qualifications and confidence they need.

- 4 **A Natural History GCSE**. Mary Colwell's campaign to launch a GCSE in Natural History is an important initiative. We must work to ensure this GCSE is properly funded and supported with teacher training to enable maximum uptake across the state secondary school system.
- 5 **Every primary school in Britain to be twinned with a farm**. Finance to support farmers' provision of school visits and insurance. This is an opportunity for children to reconnect with land, food and animals, but also a great opportunity for farmers to diversify into education services and summer camps.
- 6 **Edible playgrounds for all schools**. Outdoor growing areas, cultivating food that children will be able to eat at lunchtime. Cultivation and horticulture to be part of the curricula from primary school through to secondary school.
- **7 Ponds for all schools**. Ponds for every school with a playing field and wildlife areas for all schools. Even playground-only inner-city schools can create nature-friendly spaces.
- 8 **Wildlife work**. 10,000 annual work-placements for teenagers with national wildlife charities and on government's national nature reserves, in order to widen access to nature and wildlife jobs for urban young people of all ethnicities and social backgrounds.
- 9 Free wildlife summer camps for teenagers. A place for everyone at least once between years 12 and 17, prioritising those from urban areas and deprived backgrounds. Camps can be provided through existing charities such as Action for Conservation; farmers can also apply for funding to set themselves up as camp centres.
- 10 **Springwatch lessons**. Every school to be retrofitted with nest-boxes with cameras so that children can watch the nesting process, chicks and predation, and have these experiences incorporated into biology lessons and other formal learning.

URBAN WILDLIFE

Britain has been an urban nation longer than any other. Today, 83% of England's population lives in urban areas. Let's lead the way in re-imagining the urban landscape as a place for people *and* wildlife.

We need nature in our urban spaces. There is an impressive amount of evidence for the mental and physical health benefits of high-quality green space. A 2019 study found that those who spent two hours each week in natural spaces reported significantly better physical health and mental wellbeing than those who didn't – regardless of wealth, age or general health.

UK gardens cover an area larger than the county of Somerset – they are an untapped resource for nature. We need to cast off the cult of tidiness and embrace gardens and parks with more wild areas. Scruff and scrub is good for nature. From peregrine falcons to foxes, some wildlife already thrives in cities – but it can do better with our help. And greener, healthier, more biodiverse cities will transform our lives too.

- 1 **Pocket Parks for all**. Access to wild green space must be considered a fundamental right for British people. Set a target to have accessible wild green space within 1km of every home. Pocket parks can be managed by local councils or voluntary "friends of" groups.
- 2 **Greener gardens**. Ban the sale of all plastic grass, unless for sports pitches via planning permission. Plastic grass is a small but telling symbol of our alienation from life-giving nature, in which we increasingly encase our daily existence in lifeless plastic and concrete. The replacement of front gardens with asphalt parking must be halted. Planning permission to be required for any future paving of front gardens, and non-porous hard surfaces outlawed.
- 3 **New homes for wildlife**. New simple low-cost building regulations for wildlife friendly houses. Every house and block of flats must provide integral bat/swift/sparrow/starling nest-holes – i.e. hollow bricks. All new wooden and concrete fencing to include hedgehog holes.
- 4 **New wildlife for new homes**. New housing developments already follow a principle of "net gain" in theory, every new development should enhance local nature. We need to push this much further to benefit wildlife. Every new housing development must provide a minimum of 5 sq/m of pond/marsh/reedbed per 5 houses. Every new development of 5+ houses must have a 'village green': a pond and grass play area for children with native hedging and a wild 20% of wild borders. If there is no scope for local wild spaces on development sites, a pocket park must be created within 1km.

- 5 **Two million native trees for cities, towns and suburbs by 2030**. Planted and "adopted" by local schools so children name them, have ownership over them. Native street trees including wildlife-friendly hawthorns and sallows. We also need to re-imagine oaks as street trees they are resilient and can be pollarded into street-friendly sizes.
- 6 **Pesticide-free towns and cities**. Non-organic weed-killers/pesticides banned from use on verges, parks and private land.
- 7 A wildlife patch for every parish. Many villages are not wildlife-friendly, despite their rural setting. But many residents are desperate to help. We need funding to train parish councillors in wildlife management, so that parish land, village greens, churchyards and verges can be returned to a nature-friendly state. Where verge cutting is needed, it should follow Plantlife's new national guidance for a twice-yearly cut to allow the seeding of wildflowers.
- 8 Wild public land. Hospital grounds to be re-greened and rewilded to aid patient recovery, funded by hospital parking charges. All public land around police stations, fire stations, and elsewhere to be rewilded with native grassland, flowers and trees, to be overseen by Council wildlife officers. New regulations to ensure private and council-owned golf courses provide wild, nature-friendly areas, learning from best-practice initiatives/examples.
- 9 Sustainable urban drainage. New estates already have marshy areas, swales, for drainage but we can do more. Every new and existing industrial estate and warehouse/ supermarket area above a certain size (1 hectare) must have a wildlife pond or marsh area. Landowners to be obliged to maintain it in a "wildlife-friendly" state – that is, not allow it to fill with litter.
- 10 Brilliant brownfields. Some of our best wildlife sites are old industrial "brownfield" sites. Some need to be permanently protected as Sites of Special Scientific Interest (SSSIs). But we need to look beyond the "permanent" protection provided by traditional nature reserves. Many brownfield sites are particularly beneficial before they get too overgrown. So let's have "pop-up" brownfield sites: temporary protection for derelict land, and incentives for land-banking developers/industrialists to maintain derelict land in a wildlife-friendly state for 10-year periods. Some brownfield sites could be protected until other adjacent land can be earmarked for temporary wildlife brownfield status.

MARINE ENVIRONMENTS

The UK should lead the way in delivery of well-managed **Marine Protected Areas**, ensuring that wildlife and habitats within these sites are protected from extractive and other damaging activities. At present, there are 355 MPAs around the UK covering 25% of its seas, hardly any of which receive even basic protection. Only 5% of the area of these MPAs is even protected from the most damaging fishing method: trawls and dredges dragged across the seabed. The UK has committed to protecting 30% of its seas by 2030, including those in the Overseas Territories, in line with best available science. That science also indicates that to work properly, MPAs must be protected much more fully from extractive and other damaging activities.

- 1 **End overfishing** and restore fish populations by mandating that Total Allowable Catches must be set according to the best available independent scientific advice.
- 2 Rebalance fisheries to promote small-scale, nearshore, local fishing using low impact methods. Small vessels (<10m long) make up most of the UK fishing fleet by numbers but receive less than 5% of the quota of UK fish. It would be beneficial to the environment and local economies to reinvest in local, small-scale fishing operations that use low-impact methods like traps and hook and line.
- 3 Halt commercial exploitation of sand-eels and sprats in UK waters to help restore declining seabird populations, especially surface-feeders like terns and kittiwakes, which are critically dependent on these for prey (kittiwake numbers have nearly halved in the last 15 years).
- 4 **Implement a cross-taxa UK bycatch strategy** to eliminate the incidental capture and drowning in fishing gears of seabirds and small cetaceans (mainly dolphins and harbour porpoises, which suffer an annual toll of some 1,500 in UK fisheries).
- 5 **Prevent seabird extinctions** through a rolling programme of island restoration in the UK and UK Overseas Territories to maximise breeding opportunities by removing predators introduced by humans and by preventing future introductions. The dramatic recovery in seabird populations following the removal of rats from Ramsey and Lundy Islands in GB, and from South Georgia in the south Atlantic, demonstrate the effectiveness of this measure in restoring native species.

- 6 **Restore coastal habitats,** many of which have been lost to construction and agriculture or degraded by overexploitation, pollution and rising sea levels. These include seagrass, oyster beds, sand dunes and saltmarshes, which can play important roles in coastal defences, improved water quality and carbon capture and are homes to threatened species like starlet sea anemone and long-snouted seahorse.
- 7 Reduce the use of agrochemicals and change agricultural practices to limit chemical and soil loss to the aquatic environment. Currently, inputs of agrochemicals, especially fertilisers that promote excessive productivity, are leading to oxygen depletion and dead zones, harmful algal blooms and jellyfish swarms, and reduced water clarity. See also section 4, point 5.
- 8 Enhance **sewage treatment standards** to require the removal of plastics and pharmaceuticals like analgesics, anti-depressants and hormones, which are contaminating water courses and damaging aquatic life. Upgrade sewage infrastructure to prevent untreated sewage entering seas and rivers through storm water overflows.
- 9 A moratorium on expansion of **aquaculture operations**, particularly open-cage salmon farming, shown to be harming the aquatic environment. Problems caused by fish farming include a devastating increase in transfer of parasites and diseases to wild stocks, pollution from feed and faeces, genetic introgression of escaped and wild fish, chemical pollution and demand for wild fish as feed. Until the industry identifies and enacts solutions to these problems, and better regulation is in place, expansion is unsustainable.
- 10 End the current funding regime and establish a **Sustainable Oceans Fund** focussed on improving the sustainability of marine activities, ensuring that public money contributes to protecting and restoring the health of the marine ecosystem. An initial target could be £32 million p.a. to match the average of £32 million p.a. awarded to UK fisheries via the EMFF (EU Maritime and Fisheries Fund, 2014–2020).

HUNTING AND SHOOTING

Hunting and shooting is increasingly rejected by much of our society. The Green Party is opposed to all hunting and commercially driven shooting. Our position here is different. Shooting for fun is abhorrent to many people and yet a small but vocal minority passionately maintains these past-times. We are not seeking to mediate between these two groups or produce a blueprint for an ethical position on wildlife. Instead we seek to identify the best practical fix for nature.

We observe that if it is not politically possible to ban 'country sports' in the near future, this troubled industry requires urgent reform. There must be an end to industrial shooting. But we also recognise that in some circumstances, hunting and shooting lead to land management practices that benefit nature. In human-dominated ecosystems, we may also occasionally need to kill certain species to protect other, rarer species.

- **1 Ban lead shot**. Denmark banned lead shot nearly 30 years ago. Lead shot is poisoning wild birds and potentially poisoning people. There is a partial ban in Britain, with lead outlawed for shooting wildfowl over wetlands, but it is widely flouted. Lead shot is a dangerous and unnecessary anachronism: there are simple, cost-effective steel alternatives.
- 2 License all game shoots. All shoots must face tough and transparent monitoring. Licence-holders found guilty of wildlife crimes or flouting regulations will have their licences removed. Each licensee will have a quota (a "bag limit") for the number of birds they can shoot.
- 3 **Ban the release of non-native game birds** into the countryside. Britain currently allows an unlimited number of non-native pheasants and partridges to be released into the countryside each year. Numbers have risen from around four million annually in the early 1970s to more than 60 million each year today. This is unsustainable and is damaging native wildlife.
- 4 **Ban the shooting of snipe and woodcock**. Both these species are rapidly declining in Britain – snipe down 87% over 25 years; woodcock down 76%. While many of the woodcock shot in Britain are winter migrants from Europe, the species is declining there too. The same general principle applies to other wild game species covered by the Wildlife and Countryside Act of 1981, including migrant wildfowl, if there is scientific evidence of a significant decline.

- 5 **Outlaw medicated grit**. Medicated grit is used to treat wild red grouse to main artificially high numbers. Banning it will reduce the number of red grouse on moorland and make grouse-shooting a more realistic "wild" experience for those who wish to participate, as well as making the industry more sustainable.
- 6 A vicarious liability law for England and Wales. Vicarious liability ensures that landowners are legally responsible for criminal acts (such as raptor persecution) on their estates. This will reduce wildlife crime. This is already the law in Scotland.
- 7 A licence for all animal control. We have a duty of care to so-called "pest" species as well. Killing pregnant foxes should not be lawful. Close seasons will protect the welfare of wild animals such as foxes, wild boar, beavers, stoats and weasels.
- 8 New certified training scheme and licence for gamekeepers. At the moment most gamekeepers are glorified "chicken" farmers tending huge crops of tame pheasants. Their knowledge of the countryside can be used much more positively they can become qualified wildlife managers, count birds and manage deer populations, for instance.
- **9 Manage our deer population.** Populations of both native and non-native deer are thought to be at their highest for a thousand years. Non-native animals have contributed positively towards ecosystems in Britain, but in a country lacking apex predators (such as wolves) the numbers of some non-native and native animals need to be managed. Deer are causing unprecedented damage to trees, wildflowers and other rare plants. Their grazing of woodland cover has contributed to a 50% decline in woodland birds. We need a national deer strategy, with regional targets for per-hectare deer population, to allow natural regeneration of native woodlands, including Caledonian pines in Scotland.
- 10 **Further reform the Hunting Act**. Hunting foxes and deer with dogs is an archaic practice and the vast majority in this country do not want it. A newly strengthened, more robust law must stop the current "trail hunting" that is fox hunting in disguise. New, humane country sports such as trail-hunting with bloodhounds must replace the old barbarism.

BIOSECURITY FOR OUR WILDLIFE

Nearly 3,000 non-native species have established in Britain and are augmented by an additional 10 to 12 species every year. Between 10 and 15% of these cause significant adverse impacts and are classed as Invasive Non-native Species (INNS), presenting a direct, major, and rapidly growing threat to our native wildlife. They often have profound impacts on familiar landscapes and species: Dutch elm disease, caused by non-native fungi, killed over 60 million British elm trees and transformed the landscape of central England in the 1970s; native red squirrels have been all but eradicated by the introduction of grey squirrels and particularly by the viral pox they carry. In addition, the impacts (including eradication efforts) of INNS on ecosystem services and agriculture have major economic implications. They are already estimated to cost the GB economy at least £1.7 billion a year and it is estimated that ash dieback will eventually cost the UK £15 billion.

The increase in numbers of species entering the country is driven by the globalisation of trade and travel, while our warming climate allows a growing proportion of these to establish. We can counter this ever-increasing threat through both general and targeted, species-specific, measures.

- 1 Improved early-warning systems to assess the threats posed by INNS will be developed through close international collaboration, particularly with our EU partners, and call on best-practice worldwide. To include monitoring changes in geographical range as well as assessment of likely impacts on native species: e.g. the bacterial pathogen *Xylella fastidiosa* that has devastated olive groves in Italy since 2013 has now spread to France and Spain. It is described as one as one of the most dangerous pathogens worldwide and can potentially infect a wide range of hosts.
- 2 **Preventing entry** thorough improved pre-emptive measures to keep potential new INNS out of GB and our Overseas Territories. These include more effective detection and enforcement at our borders through points 3 and 4.
- 3 **Reforming our laws and policies** to limit species movements and enforce stricter checks at our borders.

- 4 Adoption of smart technologies for border enforcement and subsequent early detection such as low-cost, handheld DNA barcode scanners.
- 5 **Early eradication contingency plans** put in place for all INNS predicted to arrive in GB. To be based on well-funded, cutting-edge research with species-appropriate lead-in times; e.g. the current BRIGIT programme monitoring, and developing of measures to deal with, the potential arrival of *Xylella fastidiosa* in the UK.
- 6 **Increase rapid intervention capacity** for new INNS entering GB, to implement humane eradication strategies, including introducing new/adapted legislation when needed.
- 7 Mitigate impacts of well-established INNS for which complete eradication is unlikely to be practicable (e.g. *Rhododendron ponticum*, New Zealand pigmyweed and signal crayfish), by supporting on-going research and evidence-based management.
- 8 **Promote citizen science surveys** to augment professional research, identifying locations and monitoring the spread of INNS; e.g. the Observatree initiative for monitoring the arrival of new, and spread of existing, tree pests and diseases.
- 9 More effective messaging from and to all levels of government, NGOs and the public, to increase awareness of threats, legislation, and personal responsibilities. To include posters at airports and vigorous advocacy, including through social media, of initiatives like the Check Clean Dry Campaign to prevent transmission of INNS (e.g. killer shrimp, crayfish plague and amphibian viruses) between water bodies.
- 10 Ensure active implementation and ongoing development of the **Invasive Non-native Species Framework Strategy** for Great Britain and the Overseas Territories.

SUMMARY CONCLUSIONS

Our focus has been on nature, and in particular on the conservation of wildlife and its habitats. We distinguish nature in this sense from a concern with the environment more generally. There has been a devasting, well-documented and continuing decline in the abundance and diversity of Britain's wildlife in recent decades, arising from causes like intensive agriculture, habitat loss, pesticide poisoning, pollution, land development and other human impacts. But although most political parties in Britain now pay at least lip-service to environmental issues, the cause of nature – which should be central to these – is rarely even mentioned. There is therefore an urgent need, and a political opportunity, for the Green Party to give a national lead here.

The aim of our recommendations is to be radical, aspirational and inclusive. We need a comprehensive national strategy to enrich the natural world – and by so doing enrich human lives as well. This should span all the principal ways we interact with nature: in both urban and rural environments; through the use of land and water in our agriculture and fisheries; and across our educational systems and leisure pursuits. It should be guided by the best science available, and it should be backed by new government commitments in the form of legislation and investment. Our proposals range from landscape-scale reforms to simple, practical measures to enhance nature and our experience of nature. Above all, we should extend the benefits of a fuller engagement with nature to the widest possible range of people – of all ages and backgrounds. There is at present a gross national deficit in access to nature, unequally distributed.

We would encourage corresponding changes to some prevailing assumptions of nature conservation. We have generally avoided the language of rewilding and restoration, since these imply a reversion to some (undefined) earlier state of nature in Britain. That is unrealistic. One cannot recreate a past period of our national history by uninventing technological advances or depopulating the landscape. We would indeed like to arrest and reverse the dire destruction of animal and plant species we are now witnessing. But we think of this in terms first of stabilising the decline through the conservation and preservation of what we still have, and then enriching and expanding it in a forward-looking way. This is nature creation and enhancement, not restoration.

We distrust any simple and single solutions to the national nature crisis, such as 'plant more trees'. That should indeed have a place in a more comprehensive policy, but as just one element, integrated with many others.

In terms of geographical scope, we have for practical and political reasons varied in our recommendations as between the UK, Britain or England. But nature does not recognise national boundaries and it is important that we become more alert to impacts both from and to other countries in areas like biosecurity and the international trade of food and organic materials, especially if we were to leave the EU and its protective legislation. International collaboration is also crucial in relation to migratory species and those whose ranges have been affected by climate change. There is a further particular national responsibility for the British Overseas Territories, some of which include key sites for threatened seabird populations and other marine life and are estimated to hold approximately 90% of the UK's total biodiversity. St. Helena alone is home to a third of the British Territories' total endemic species list. A UK 'Nature Policy' should reflect these larger global contexts of our environmental footprint and responsibilities.

We commend the recommendations in this Report to the Green Party. It would be possible to pick and choose specific policies from it, but we believe the proposals are more powerful, coherent and mutually supportive when considered as a whole.

Back cover: Gatherings of Starlings – murmurations – in the winter dusk remain one of nature's great spectacles but most number in tens of thousands, rather than the hundreds of thousands seen fifty years ago. Changes in agricultural practices have reduced the numbers of starlings breeding in Britain by around 90% since the late 1960s; the species is now Red Listed (bto.org/our-science/publications/birdtrends/2017). Most of the birds in our roosts now come from the near-continent and from northern and eastern Europe, crossing many international boundaries to over-winter here and highlighting the need for close international collaboration for nature

