



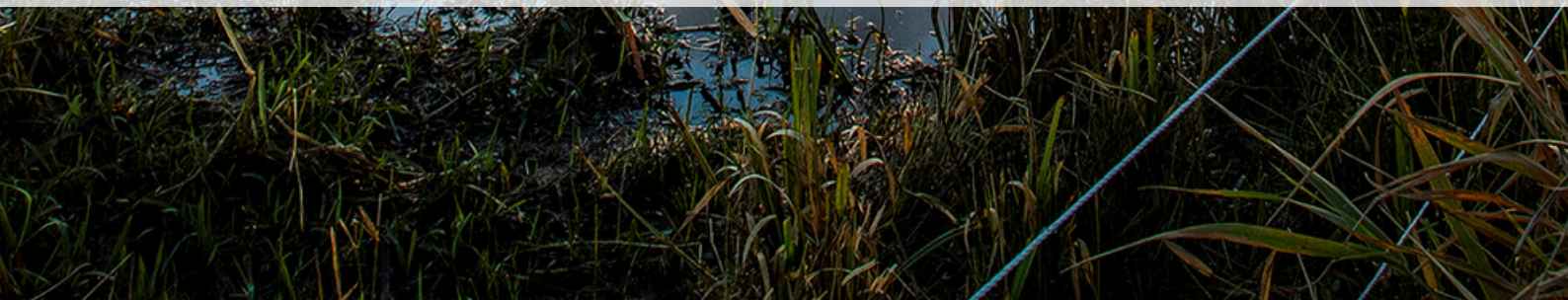
A RE-WILDING CASE FOR SURREY: FINDING THE LOCAL ECOLOGICAL 'SWEET-SPOT'



Surrey
Wildlife Trust

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August 2026



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Surrey Wildlife Trust has benefited from long-standing, constructive relationships with colleagues across all the sectors referenced in this report, and we deeply value the professionalism, commitment, and integrity that partners bring. None of the reflections in this analysis should be interpreted as commentary on individual contribution; the themes raised relate to wider system dynamics that we believe are important to explore together in support of our shared ambitions for Surrey's nature recovery. This document is offered as a contribution to collective thinking, in a thought-leadership piece intended to prompt discussion on how conservation approaches may evolve. It represents the Trust's current perspective rather than a fixed blueprint, and we hope to develop it further as partners bring their insights, evidence, and experience.

Executive Summary:

Wildlife conservation has repeatedly set itself targets that were structurally impossible to meet; despite decades of effort, we are now formally confronted with a global ecological crisis. Nature conservation has constantly struggled to cope with escalating pressures, inadequate tools, and targets for success that far exceeded the systems and incentives available to deliver them.

The tentative turning point appears to have been reached, however. The plain reality of an existential threat to mankind's future cannot allow us to continue belittling nature as an inessential nice-to-have, ever secondary in importance to base capitalist economics. But a fundamental systems change within biodiversity conservation is desperately needed. Traditional wildlife conservation has emphasised preserving "semi-naturalness" to protect insufficient, exemplary fragments of habitat that only amount to around 8% of England's land area. We need a deliberate reversal of the instinct to dominate, to approach ecosystem function far more constructively in recognition that natural processes are not obstacles to be contained but the very mechanisms that sustain resilience. This document sets out Surrey Wildlife Trust's mission in alignment with our **Transition Plan to 2030** objectives, in response to a refreshing, emergent new global thinking. Re-wilding can have a place in the over-contested jurisdiction of modern Surrey, and here we propose to map where, how and when this could happen.

A contextual history of nature conservation objectives.

To build the argument for the necessity for a systems change in our approach, we firstly review the historical pursuit of under-achieved targets in UK nature conservation. In the 2014 paper *Whose conservation?*¹, the late Prof. Georgina Mace describes the evolution of modern conservation from its origins to the present day, framed as four recognisable stages of philosophical development: Nature for itself; Nature despite people; Nature for people; and currently, Nature *and* people.

Nature for itself to justify its conservation relies on a deeply ethical belief in Creational egalitarianism that may feel morally agreeable but is also naively outmoded in consideration of the enormity of modern negative capabilities directable at the natural environment. But this was the ethos prevalent through the first half of the 20th century, that established the creation of national parks and nature 'reserves'. Later, **Nature despite people** marked a ramping of the stakes, in an era of selective legalised protection for nature, including the exemplary system of designated Sites of Special Scientific Interest and that for 'protected species', as the degradation of the environment escalated through combined post-war technological advances and political will. **Nature for people** next sought fresh recognition of the ills done to date, changing conservation policy requirements into a 'recovery' mode, from that having simply failed to stem the tide. This also hoped to rekindle ecological enlightenment in human societies via an insistent demonstration of the scale of their existential dependencies on their natural environment (as 'Ecosystem Services'). The current stage is **Nature and people**, having learned the lessons from this mixed litany of past dubious attainment and outright failure in mission. It sets a new ultimatum for our relationship with nature, based on new evidence for tolerances and tipping points in natural systems, especially considering the inevitability of anthropogenic climate change and the sheer inescapability of mutual inter-dependence in people-nature relationships.

We review the formal conservation targets of the present, primarily driven by the UN Global Sustainability Goals, aligned with the CBD's Kunming-Montreal Global Biodiversity Framework, but find that the latest Office for Environmental Protection report for 2024-25 states that

¹ *Whose conservation?* Georgina M. Mace, 2014. In Science 345, 1558 (2014). DOI: 10.1126/ science.1254704

“..Government remains off track to meet its environmental commitments”. We also reference the Government’s own alarming National Security Assessment (May 2026), which confirms that biodiversity loss impacts national security, but also formally recognises that nature is at the foundation of that security.

The emergence of Re-wilding.

A growing number of practitioners and thinkers are recognising the limitations of conventional biodiversity conservation - particularly its negligible pace of recovery and reliance on intensive, small-scale management. A more action-focused, less risk-averse movement has emerged, willing to test new approaches at scale, challenge false assumptions constraining progress, and demonstrate that nature recovery need not be limited by the narrow scope or funding model of traditional conservation. Concurrently, major shifts in agriculture are reshaping the debate about land use across Europe, as climate change makes it ever clearer that cultivating large areas of marginal land was only made possible through ill-advised public subsidy, and that food security will never be a function simply of the total area under cultivation.

There is now a national Land Use Framework¹⁷, which essentially tells us we must use land multi-functionally as there is not enough available for any single purpose, but also that actual future land use decisions are to remain politically at the local level. Here we explore what is known about modern land use in Surrey, as the county does not typify the wider English situation. We have the sixth largest population but are the fifth smallest by area. We are the most wooded (24%) and support 2.6% of the entire remaining global resource in lowland heathland; but c.3% of the county is taken up by golf courses (the highest proportion in England) and 12.8% is already built over. Surrey experiences intense competition for land use but also shows a ready propensity for change. In partnership with the Universities of Coventry and Reading, the Trust has used a palaeoecological approach to model the rate of decline in western Surrey’s Natural Capital from pre-history (c.7200 BP) to the present day. The total extent of the grouped broad habitats underpinning this analysis has roughly halved across this period, and ‘regulating’ ecosystem services combined show an averaged 33% loss in their supply (range = 10-58%). The largest losses effect water quality and in crop pollination.

Pre-conceived, intended ‘re-wilding’ as a land use option is a relatively recent phenomenon. Perhaps the best working definition for rewilding is presented by the IUCN Commission on Ecosystem Management (CEM)²¹, which has issued 10 ‘principles’ to characterise an overall management approach (see **Appendix 2**). Whilst this could appear appropriate only for near natural, ‘wilderness’ ecosystems, we show that many of the coincident forces making it necessary to be less interventionist at wildlife conservation, taking advantage of opportunities for nature recovery by re-purposing increasingly obvious, marginal agricultural land, now operate universally. The challenge in Surrey is our socio-economic context and high land values, which will always present an alternative use for redundant farmland in supporting new built development.

We therefore propose that the IUCN principles could also be applied in Surrey, and to justify this we present a re-wilding case for Surrey against each (see pp.21-25 & **Figure 6**). The backdrop to some current systems failures in UK nature conservation, that we argue works to constrain delivery of meaningful nature recovery, is complex and not just limited to that element directed by statute. The interplay of legislation, policy, interpretation, and precedent creates a landscape riven by inconsistency and contradiction. We illustrate the present complexity using a comparison of managing protected sites in the North Downs with those in the Thames Basin Heaths, where tensions between policy intent, practical management, and public use are particularly visible.

The present situation illustrates a broader truth: our existing system was not designed for the scale or urgency of the transition now required. The Trust's *Transition Plan to 2030* recognises this and sets out a more coherent approach - one that aligns statutory duties, local priorities, and practical delivery so that land managers, public authorities and communities can act with greater clarity and confidence.

Vision for a re-wilded, enlightened Surrey.

To initiate a debate on the future direction of wildlife conservation management approaches across Surrey, including those adopted by the Trust, we consulted a group of practitioners with long experience of working in the conservation sector in the county. Our internal Business Development Forum and Youth Action Committee were also consulted. From these workshops, the following 'summary of issues' emerged:

An appropriate **re-wilding strategy bespoke to Surrey** must consider the following issues of demographic relevance:

- Surrey's population density and the range of opinion and influence exerted by its demographic;
- Public resistance to reforms and change (as reinforced by misplaced lay confidence in the efficiency and operational success of the current system);
- The inherent higher-than-average land and property prices in Surrey, together with our high proportion of land in private ownership and the quantum of individuals concerned;
- The extent of Common Land with its associated legal restrictions, for example on maintaining public access and permanent fencing;
- Other legal constraints, particularly flood-risk and the *Reservoirs Act 1975*;
- Established, committed deliverables, for example, to Natural England, Environment Agency plus other sponsors.

The re-wilding 'fit' for Surrey will thus require a flexible approach, whereby an essential suite of factors must be considered to ascertain an appropriate point along a continuum, as between 100% 're-wilded' and a 100% 'traditional interventionist' management approach. **Wherever this point alights, it will be:**

- Place-based and adaptive, negotiated with all necessary stakeholders and not as prescribed by a single agency;
- Representative of a balance between reliance on self-organising, ecological processes, and requiring targeted, solution-focussed interventions where needed;
- Influenced by the strength of the following 5 key consideration factors;
 1. The time horizon it applies to;
 2. A risk analysis and tolerances thereof (including financial and reputational);
 3. Its governance, reflecting the various stakeholders and their role;
 4. A socio-economic context (ie. any potential wider investment opportunities); and
 5. Clarity of its own, obligatory monitoring system, set out to trigger adaptation where/when required.

A '**Re-wilding Consideration Arc**' (see below) can be presented as having 3 principal 'Zones', albeit spaced along the continuum:

Zone 1. Re-wilding / Design-led Rewilding - exhibiting:

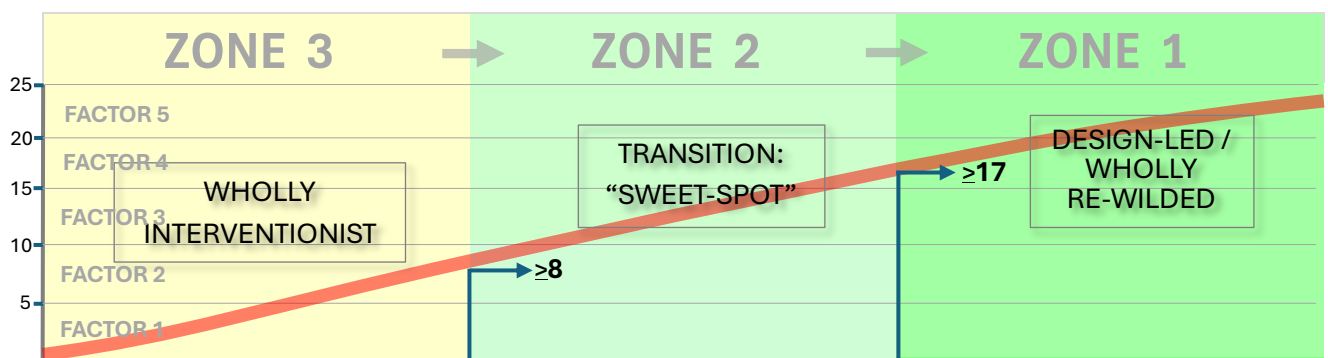
- Passive restoration, reliant on natural succession and colonisation
- Large herbivores, as primary ecosystem engineers
- Minimal mowing/domestic stock grazing
- High governance autonomy, long time horizons

Zone 2. Transition Zone (= prime area of ‘Ecological Sweet-spot’):

- Hybrid, or ‘blended’ approaches
- Targeted invasive-species removal
- Strategic planting
- Rotational extensive grazing (using domestic stock) to mimic natural regimes
- Adaptive, negotiated, dynamic

Zone 3. Interventionist Management (‘traditional’):

- Active, cyclical habitat maintenance, creation & restoration
- ‘Nature-for-itself’-inspired species translocations (re-introductions)
- Predator control (where justified)/Non-native species eradication
- Engineered hydrological adjustments



The ‘Re-wilding Consideration Arc’; see p.33 for an explanation of values.

Appendix 1 forms an ‘Action Plan’ to structure the detailed consideration for appropriateness of adopting a re-wilding approach, or derivations thereof, across our six **Landscape Recovery Areas** (LRA) identified for prioritised, strategic spatial attention during the remaining *Transition Plan to 2030* period.

Conclusion.

Given growing interest in re-wilding and keystone species reintroductions, we undertook research to inform our position. This document sets out that evidence and remains a planning stage; only careful but bold implementation of its principles and actions will deliver the desired outcomes for nature recovery in Surrey.

*A **Non-technical Summary** of this document is also available on-line, at:

www.surreywildlifetrust.org/what-we-do/science-research-0/publications

A RE-WILDING CASE FOR SURREY: FINDING THE LOCAL ECOLOGICAL 'SWEET-SPOT'

1. Introduction

The wildlife conservation movement has, from its origins as a moral philosophy in the late 19th century, repeatedly set itself targets that were structurally impossible to meet. The historical record makes this plain: despite decades of effort, we arrive in 2026 confronting a formally acknowledged global ecological crisis. The emergence of sufficient public conscience for our maltreatment of the natural world - and the eventual translation of that conscience into legislation - was an important early milestone. Yet from that point onward, conservation has been engaged in a constant struggle defined by escalating pressures, not-quite effective tools, and expectations that far exceeded the systems and incentives available to deliver them.

The tentative turning point appears to have been reached, however. Whether this is driven simply by 'failure fatigue' or is fuelled perhaps by fresh impatience from a new generation of environmentalists, no longer content to be relegated to secondary importance by base capitalist economics, is a matter for debate. But the plain reality of an existential threat to mankind's future, to which relentless biodiversity declines contribute and are also symptomatic, will not allow us to continue belittling nature as an inessential and after-thought, nice-to-have. Given the insidious, yet inevitable effects of generational 'shifting baseline syndrome', and the unlikelihood of the long-term cost of addressing the crisis by traditional approaches ever becoming publicly affordable, a fundamental systems change within biodiversity conservation is desperately needed.

The accelerating threat of human-driven climate change should, in itself, be enough to force a fundamental reset in our relationship with the natural world - particularly our long-standing impulse to tame, simplify, and control ecological systems in order to create landscapes we find more predictable or comfortable. Traditional wildlife conservation has not been immune to this mindset. Its emphasis on preserving "semi-naturalness" and protecting small, exemplary fragments of habitat has produced a statutory system that covers only around 8% of England's land area, and that still operates within the assumption that nature must be held in a managed equilibrium. Yet nature's persistent ability to undo our attempts at control - and the escalating costs of repairing the consequences - should by now have taught us to approach ecosystem function far more constructively. What is needed is a deliberate step back: a reversal of the instinct to dominate, and a recognition that natural processes are not obstacles to be contained but the very mechanisms that sustain resilience. Such a shift would release us from the expensive, wasteful, and ultimately unrealistic belief that we can engineer our way to ecological stability by overpowering the forces that underpin the living world.

This document sets out to re-evaluate the Surrey Wildlife Trust's mission in alignment with our **Transition Plan to 2030** objectives, in response to this refreshing, emergent new global thinking, and to seriously consider and utilise the opportunities thus implied. Re-wilding *can* have its place in the over-contested jurisdiction that is modern Surrey, and here we propose to map where, how and when this could happen to the maximum, realistically measurable effect – posed as Surrey's 'Ecological Sweet-Spot'.

2. A contextual history of nature conservation objectives

In her seminal 2014 paper *Whose conservation?*¹, the late Prof. Georgina Mace eloquently charts the evolution of UK wildlife conservation from its post-war origins to the present day, framed as four clear, recognisable stages of philosophical development:

“..Although many basic conservation principles, organizations, and initiatives of global reach and impact have persisted almost unchanged for decades, the framing and purpose of conservation have shifted. These shifts mainly relate to how the relationships between people and nature are viewed, with consequences for the science underpinning conservation.”

2.1 Nature ‘for itself’

One interpretation of the movement’s birth is traceable to founding father John Muir’s nostalgic lament for a lost paradise, in a somewhat romanticised view of the world as pristine and untainted by humanity, who is presented as a fundamentally malign force unbelonging to the natural order. ‘Nature for its own sake’ as a complete justification for its conservation comes from a deeply ethical belief in Creational egalitarianism and related equanimity towards nature in its entirety. This may feel morally correct, but possibly also simplistically naïve considering the sheer scale of our modern negative capabilities directable at the environment. Whatever one’s opinion, this guiding consciousness established the desirability for creating national parks and nature ‘reserves’ and prevailed throughout the first half of the 20th century. In the UK this inspired Charles Rothschild’s foundational 1915 nationwide hitlist of 284 potential sites², that included Sheepheas, Box Hill and Horsell Common in Surrey. However, its practical inadequacy in the face of exponential post-WW2 land use changes prompted the next stage in the evolution of conservation.

2.2 Nature ‘despite people’

‘Nature despite people’ refers to a new period of militancy for conservation as advances in post-war agricultural production, widespread soft-wood afforestation, and an historic bridge to societal reforms in provision of both social housing and healthcare, led to a step-change in the scale of destructive environmental impacts. As this unfolded, to blame for the local extinction of many iconic species including both of our horseshoe bats, Otter and Peregrine in Surrey, conservation was forced to become more protectionist, for which a legal basis was considered essential. The *National Parks & Access to the Countryside Act* established the Nature Conservancy in 1949 as the formal scientific research and advisory body to government, along with the first statutory protected site system (as ‘Sites of Scientific Interest’ - SSI). Selection of these prioritised many of the nation’s classic landmarks and in Surrey, Thursley Common, Ashted Common, the Devil’s Punchbowl and Leith Hill were all within the initial tranche, although our first to be designated was in fact Chipstead Downs in 1953.

In terms of its objectives for conservation, rapid site security was then the priority and the senior biodiversity consultants of the time enjoyed relative political *carte blanche* in response to their recommendations; to develop a robust site-selection system and then quickly apply it to ensure a legally underpinned framework for exemplary site safeguard. In an era when state acquisition

² See; [The Rothschild List 1915-2015: A review 100 years on](#) (TWT 2015)

was regarded as the ultimate tool for achieving the required reforms to best serve society, there was initially a long-term aspiration for all SSI to become the first suite of National Nature Reserves, and although many did this was never destined to be complete. This site-centric identification and protection approach characterised the period as a reaction to rapidly escalating habitat and species losses, but the basic inadequacy of the 1949 Act forced its eventual upgrade in the passage of the *Wildlife & Countryside Act* (WCA) in 1981.

The WCA strengthened protection for the now-coined, Sites of *Special* Scientific Interest, in part-recognition that they could never all be secured as nature reserves and must rely on the incentivised good-will of their, for the most part, private landowners. Serving their legal re-notification was an opportunity to extend and establish some new SSSIs (for example Blackheath, Charleshill (SWT Thundry Meadows), but also required the deletion of those destroyed outright as well as the part-damaged sections of others, witness to the weaknesses of the original legislation. As a target, the Nature Conservancy Council (NCC)'s aim was to have the new 1981 Act brought into effect as soon as possible, from fear that individual landowners could wantonly destroy the special interest of their sites ahead of such, and a not inconsiderable number did just that. The majority of current SSSI were fully legally notified by 1986, which was no small task, with their essentially *voluntary* management agreements pending (largely as a do-nothing lost profit compensation scheme). It must be remembered however, SSSI then and still as now occupy only 8% of total English land-use (7.4% in Surrey). The NCC, next English Nature and now Natural England, have long ceased the active SSSI designation programme. Surrey's most recently designated SSSI included a suite of open waterbodies in 1999, synchronous with their EU designation for the South-West London Waterbodies Special Protection Area. The WCA also for the first time afforded legal protection to listed very rare species, or those vulnerable to persecution (see **Figure 2**).

In open acknowledgement of the exemplary representation approach of the SSSI system, non-statutory site systems gathered developmental momentum within a broadly parallel timeframe, partly to 'mop-up' all those additional contenders for their respective SSSI crown. As essentially local phenomena, these systems varied widely in nomenclature, consistency in criteria for selection, and the available effort put into their defence across counties³. By 2008, the percentage jurisdictional extent of their 'positive management' (sic.) had been taken into use by the Office for National Statistics as an indication of local authorities' performance for the National Indicator Set (2008–2010). In Surrey these sites have always been called Sites of Nature Conservation Importance (SNCI), and at last count there are 775 of these.

It was soon realised that these developments alone of the important sites and rare species safeguarding system, were also evidently lacking and ultimately unfit for purpose in supporting an efficient biodiversity conservation system. By the late 1990s, there was ample evidence that pressures on habitats were universal and persistent, and that tipping points were already in effect such that local and regional extinction rates were escalating, with the pressures on biodiversity increasing relentlessly.

Meanwhile, the United Nations Conference on Environment & Development had met inaugurally at the 'Rio [de Janeiro] Summit' in 1992, launching the Convention on Biological Diversity (CBD).

³ See; Waite, M. (ed.) 1992. Site designation review (commissioned by English Nature). London Ecology Unit

All signatories to the CBD pledged new efforts to conserve their biological diversity, where the condensed term ‘biodiversity’ first came into use. Member states were to develop and implement national Biodiversity Action Plans (BAP) to address their respective threatened habitats and constituent species, whereby further regional extinctions and declines were to be arrested forthwith, via a collective commitment to “..no further net loss”. Target setting – ‘SMART’⁴ ones – was an essential feature of these BAPs, with clear monitoring of delivery aligned to the decadal CBD reporting cycle. The UK’s national BAP was issued in a series of volumes over the latter half of the decade. The Surrey Biodiversity Partnership was formed to produce a county BAP, and two Surrey local BAPs - for Epsom & Ewell and Spelthorne respectively, were also adopted.

2000 saw the passage of the *Countryside & Rights-of-Way Act*, indirectly introducing formal condition monitoring of the state of SSSIs and directly strengthening their protection by enabling English Nature to make landowner management agreements obligatory. The Act also obliged public bodies to observe the existence and purpose of BAPs, but it was later in 2006 with the *Natural Environment & Rural Communities Act* that this became the ‘Biodiversity Duty’ in respect of listed Section 41 Habitats and Species of Principal Importance.

2.3 Nature ‘for people’

The landmark review of the state of the UK conservation ‘system’ - *Making Space for Nature* (Sir John Lawton, 2010⁵), which followed an overall disappointing set of outcomes from the first two decades of the collective BAP enterprise to end further biodiversity losses, gave rise to a re-constructed national CBD commitment, launched as *Biodiversity 2020: A strategy for England’s wildlife & ecosystem services* (HM Govt. 2010). This new strategy carried forward all of Lawton’s 22 recommendations (active across England; newly devolved Scottish, Welsh and Northern Irish strategies were similar). Abandonment of the previous site and species population-focussed safeguarding approach was its key generic message, in favour of less parochial and more coherent ‘landscape-scale’ conservation, to reconnect habitats for the restoration of grossly eroded inter-site ecological function. Nature’s *recovery* was very much now the mission – no longer just holding-the-line against further losses but seeking restoration and repair of the damage done to date.

A new ‘Nature for people’ phase followed in consequence of this adjusted conservation mission, embodied in the globally emergent ‘Ecosystem Services’ concept⁶, which hoped to dispense fresh ecological enlightenment to human societies (especially in the global north) via a bold and insistent demonstration of the scale of their existential dependencies on the natural environment. Sub-divided into provisioning, regulating, supporting and cultural services, CBD signatory states set-to producing their national Ecosystem Assessments, designed to audit and quantify consumption versus net supply of these essential services.

In this, the potentially sustainable rate of supply in services is defined as that generated via the sum-total ecosystem function deriving from the constituent habitats (quantifiable by area/length/volume) of the total ecosystem(s) making up the natural environment of a national

⁴ Specific, Measurable, Achievable, Relevant, and Time-bound.

⁵ See: <http://archive.defra.gov.uk/environment/biodiversity/index.htm>

⁶ See: [UN Millennium Ecosystem Assessment 2005](#)

jurisdictional territory, translatable in economic terms into its ‘Natural Capital’. Nature ‘recovery’, viewed as created or restored habitats and their ‘healthy’ ecosystem function, will thereby increase the quantum flow of ecosystem services - equivalent to an investment opportunity for achieving capital growth. This in turn serves to enhance and guarantee overall ecosystem resilience, equivalent to increased market share and commercial competitiveness. Conceptually this was a deliberate and conscious shift, particularly for acolytes of the *Nature for itself* mindset, causing some degree of schism within the conservation community, and beyond it as well.

In Surrey, its Local Nature Partnership (LNPs being a further initiative of this phase), proactively presented a set of ‘objectives’, with associated SMART targets, as a regional contribution to the national strategy’s high-level aspirational ‘Outcomes’ in *Biodiversity 2020*. The latter introduced a formal goal for achieving the 50% favourable status condition of all English SSSI by 2020 (measured either by their % total area, or the total number of sites - the units were never made clear). A further goal sought the creation or restoration across England of 200,000 ha of additional Priority habitat(s). Concerning species conservation, the relevant target was to “..see an overall improvement in the status of our wildlife.. [preventing] further human-induced extinctions of known threatened species” (ie. Priority species). The new policy objective to promote a landscape-scale conservation approach had already established strategic Biodiversity Opportunity Areas (BOAs)⁷ across the wider south-east region (50 of these in all in Surrey, covering 39% of the county by area). The Surrey LNP then dis-aggregated a minimum proportion, by locally appropriate habitat type, of the 200k ha creation/restoration target, across the Surrey BOA series, for delivery by December 31st 2020. A typical example of how this was presented, for one example BOA, is as **Figure 1** (below). A report that summarises overall progress against these targets is available⁸.

Figure 1. Example objectives and targets for Chobham Common (BOA TBH01), derived from the national *Biodiversity 2020* Outcomes 1 & 3.

TBH01/O1: SSSI units to achieve favourable condition. T1: 50% by 2020 (by area)
TBH01/O2: SNCI protected by planning policy & in positive management. T2: All by 2020
TBH01/O3: Priority habitat restoration & creation: • Heathland/ T3a: 6.5 ha by 2020 • Acid grassland/ T3b: 5.75 ha by 2020 • Wet woodland/ T3c: 1.75 ha by 2020 • Mixed deciduous woodland (restoration only)/ T3d: 75% by area • Fen/ T3e: 3.25 ha by 2020
TBH01/O4: Priority species recovery. • T4: By 2020, evidence of at least stabilisation & preferably recovery in the local populations of listed Priority species [-list-]

2.4 Nature ‘and people...’

The main lesson to be learned from this mixed legacy of arguable achievements and outright failures in mission combined, was that some form of conciliation between the chief adversaries here was necessary, to enable what Georgina Mace calls the final and ongoing ‘Nature and people’ stage. This is seeking to blend the best of the previous phases, fundamentally in recognising humanity as unequivocally *part of* (and essentially not *apart from*) nature. We are,

⁷ See; *Biodiversity Opportunity Areas: The basis for realising Surrey’s ecological network* (Surrey Nature Partnership, December 2019)

⁸ See; https://surreynaturepartnership.org/wp-content/uploads/2022/03/biodiversity-action-reporting-project-2011-20_surrey-nature-partnership_march-2022_v.2.pdf

by definition, ecologically dependent on our environment and its life-preserving ecosystem services, in which role nature *is no less an equal* and must be duly and fully respected. A subsummation of the notional Gaia Hypothesis maybe, but from a genuine desire to move beyond seemingly irreconcilable tensions arising from humanity's persistent over-exploitation of our environment, while also embracing the wonder of evolution and the earth's abundance of riches. Sustainability, holism and ecological resilience are all eminently available to us, given appropriate societal enlightenment, humility-in-ignorance (versus hubris-in-leadership), and adoption of a fundamental principle of mutual respect for each and every being's dignity and self-worth. Since Mace's untimely death in 2000, some have even suggested that a fifth state – people *with* nature – is now emergent, with an emphasis on the sheer inescapability of mutual inter-dependence in people-nature relationships⁹.

And so, to the conservation objectives and formal targets of the present. Globally, we are working to the United Nations' set of 17 Global Sustainability Goals, aligned with the CBD's most recently agreed Kunming-Montreal Global Biodiversity Framework. A key component of the latter is its Target 3, the '30% by (20)30' charter; a global initiative committing national signatories to dedicate at least 30% of the world's lands, waters, and oceans for protection of their biodiversity by 2030. The full list of the GBF's 23 targets is appended (**Appendix 3**). At home, the original *25-Year Environment Plan 2018-42* ('25-YEP'; HM Govt. 2018), and its two successive revisions – the Environment Improvement Plan 2023 and then in 2025; the *Environment Act* 2021; the UK National Biodiversity Strategy & Action Plan (NBSAP) for 2030; as well as Natural England's *Recovering Nature for Growth, Health and Security* (NE, 2025), are all theoretically pulling in the same broad direction in pursuit of Mace's *Nature and people* approach - our contemporary conservation stratagem.

A key delivery mechanism is now the *Environment Act*'s statutory requirement for Local Nature Recovery Strategies (LNRS), developed by and published at the county scale, which must carry all the actions as formulated by national policy for meeting our international biodiversity commitments. The Surrey LNRS is now adopted (SCC 2026)¹⁰ and contains 67 high-level actions presented as its agreed 'measures' (plus 28 supporting measures). The 25-YEP carries two clear SMART biodiversity targets; one for 500,000 ha of restored or created additional priority habitats (superseding the former 200k ha target); and its tree-planting target to increase English woodland cover to 12% by 2050. This includes a specific sub-target to plant one million 'urban' trees. There has been no disaggregation guidance offered to regions or counties, however. The *Environment Act*'s requirement on development planning permissions to condition at least 10% Biodiversity Net Gain is to be a key delivery mechanism, which may eventually replace all former systems for achieving compensatory planning 'gain' for nature. The English SSSI condition aspiration has been elevated to 75% by area in favourable status by 2042.

As a final twist, it should be noted that current world events, and related national responses, have recently caused an ideological backlash to environmental concerns generally and nature conservation specifically, expressed in proposed reforms to several areas of national policy and particularly in the development planning arena. And yet to date, progress against any of our

⁹ See; Reyers B, Bennett EM. 2025 [Whose conservation, revisited: how a focus on people-nature relationships spotlights new directions for conservation science](#). Phil. Trans. R. Soc. B 380: 20230320

¹⁰ See; <https://www.surreycc.gov.uk/land-planning-and-development/local-nature-recovery-strategy-lnrs>

current environmental targets is decidedly underwhelming. The Office for Environmental Protection's most recent report (their 4th) for 2024/25¹¹ finds that “..Government remains off track to meet its environmental commitments, and its actions now will determine whether or not key targets for biodiversity and the protection of land and sea by 2030 will be met”. The Government's recent water environment White Paper¹², under pressure for action to tackle pollution from fresh public outrage and related grass-roots campaigning in recent years, finds that “..The water system is in need of fundamental reform - For too long [any] changes have been piecemeal or disjointed, pulling regulators and companies in different directions – not delivering better outcomes, but adding to regulatory complexity and burden”. A water industry Transition Plan is promised that will deliver the systemic change required.

In February the Government published the alarming ‘National security assessment’¹³. This draws on both scientific literature and expert judgement, aiming to support national security planning by identifying our short- and long-term security risks. Two key findings, afforded the highest degree of confidence, include; “Global ecosystem degradation and collapse threaten UK national security and prosperity; and “Ecosystem degradation is occurring across all regions. Every critical ecosystem is on a pathway to collapse (=irreversible loss of function beyond repair).” It confirms that biodiversity loss impacts national security, but equally that nature is indeed at the foundation of national security. World food production driven by global population increases is the *most significant* cause of terrestrial biodiversity loss, yet the UK's food security is unlikely to be maintainable if ecosystem collapse drives geopolitical competition for food.

The independently funded National Emergency Briefing (on the climate and nature crisis) has recently offered a freely accessible film to community venues countrywide to energise public support for the necessary step-change to “..encourage UK decision-makers to step up their response to the escalating climate and nature crisis.”

2.5 Conclusion to chapter

This overview of the evolving aspirations in UK nature conservation is presented here to provide context for the arguments advanced across the remaining sections of this document, as a positioning statement and advocacy manifesto. The conclusive, overall impression is a legacy of repeatedly attaining too little too late, where each new exposé showing escalating depletion of global natural assets is met by a predictably ineffective *de minimis* response.

This is certainly not unique to the United Kingdom; in fact, for a long time, we led the way in scientific data collection standards and innovation in the emergence of new and improved, relevant legislation. But for the present at least, this would appear to have gone into reverse. Our departure from the European Union has played a significant part, as while theirs continues to develop as a high-bar in compulsory standards, for example in addressing marine and freshwater pollution, landscape-scale safeguarding, applied research funding and nature recovery, we no longer need to comply.

¹¹ See; [Progress in improving the natural environment in England 2024/2025 | Office for Environmental Protection](#)

¹² See; [A new vision for water: white paper - GOV.UK](#)

¹³ See; [Global biodiversity loss, ecosystem collapse and national security: A national security assessment](#) (HM Govt. 2026)

In the UK we have allowed our environmental regulatory system to become increasingly disjunct between responsible government departments, and weaker despite the increasing critical relevance of their briefs. Funding across the conservation sector has always been diminishingly minor in its scale; which is forever reflective of nature and the environment's perceived importance relative to all more perceptively immediate public and societal issues. Another new report from the UN Environment Programme - *State of Finance for Nature 2026*¹⁴ - confirms the stark imbalance in global financial investment specific to environmental recovery compared to that driving generalised economic growth directly harmful to nature. Using 2023 figures this concluded a staggering US\$ minimum 1:30 ratio in favour of the latter (3% versus 97%), which explains the dire urgency for the GBF finance-related targets 18 & 19 (in Appendix 3).

We are living in the Anthropocene epoch, and one could argue that the latent irreversibility of this is bound to be confusing the strategic priorities for nature conservation in the 21st century. In this document, we now argue for a re-evaluation of what this means in terms of developing our future thinking and the prioritisation of resources for nature recovery. We believe there is little point in continuing to aspire to return to past baselines pertinent to various outmoded ecological parameters and use these as an indicator of conservation success. In many cases this is now eminently impossible and indeed for some, the evolving scientific methodology for ascertaining such baselines is challenging our former confidence in them.



Figure 2. This 1st-day cover issued in 1986 celebrating UK nature conservation depicts vertebrates on our Red-List that remain highly threatened today. Three are extinct in Surrey.

¹⁴ See; UNEP [State of Finance for Nature 2026: Nature in the Red - Powering the Trillion Dollar Nature Transition Economy](#).

3. The emergence of Re-wilding

3.1 Full-circle return to feudalism?

A growing number of practitioners and thinkers are recognising the limitations of conventional biodiversity conservation - particularly its slow pace of recovery and its reliance on intensive, small-scale management. In response, a more action-focused, less risk-averse movement has emerged. This group is willing to test new approaches at scale, challenge assumptions that constrain progress, and demonstrate that nature recovery need not be limited by the narrow scope or funding model of traditional conservation. At the same time, major shifts in agriculture are reshaping the debate about land use across Europe. The partial unwinding of long-standing subsidy systems, changing dietary habits, and rising awareness of the environmental impacts of industrial farming have highlighted the disproportionate amount of land devoted to agriculture. This conversation has gained most traction in countries with the greatest nature depletion, including the UK. Climate change is now making it even clearer that large areas of marginal land were only ever farmed under the incentives of public subsidy, and that food security is not simply a function of the total area under cultivation. High levels of food waste¹⁵, the globalised nature of supply chains, and the fact that more than half of arable production is used to feed livestock or for biofuels all complicate the picture. The UK's cereal market illustrates this: despite importing 12% of all we consume, we still export 8% of domestic production¹⁶. Agriculture, like any private enterprise, must remain profitable - yet it has long depended on public financial support to do so.

The traditional rationale for public support of agriculture has rested on the contribution of domestic farming to national food security. Today, patterns of imports and exports suggest a more complex relationship, and this link is increasingly difficult to interpret in simple terms. At a county scale, such as here in Surrey, productive farmland has always been limited, and local agriculture now plays only a modest role in supplying essential nutrition. Diversification has become an important part of the rural economy. Growth in artisanal production, viniculture, distilling, and commercial equestrian livery reflects evolving markets, changing consumer preferences, and the need for landowners to adapt to new economic conditions. These activities support rural livelihoods and community identity, even though they do not correspond directly with the traditional basis for agricultural subsidy. This shift is shaped by a combination of farming practice, societal expectations, and long-standing patterns of land use.

Land ownership introduces further complexity. While the historical origins of many large estates are well documented, contemporary discussions focus more on how land is managed, how decisions are made, and the transparency of those processes. Public investment in land-based activity remains significant, yet proposals to enhance access or increase public benefit can generate differing perspectives, often reflecting legitimate concerns about stewardship, responsibility, and long-term viability. Reform of land ownership remains politically sensitive, not least because those with most influence are also most affected by potential change. These historical and structural factors are important when considering how future land use might evolve. They shape the balance between voluntary approaches and more directive

¹⁵ See; <https://www.fao.org/family-farming/detail/en/c/1681058/>

¹⁶ Source: AHDB Defra, 2020-25 data averaged.

mechanisms, and they influence how land managers, public authorities, and communities can work together to support nature recovery at the scale required.

More broadly, the UK finds itself navigating a period of social and economic uncertainty. Wealth disparities have widened, regulatory confidence has weakened, and rapid shifts in communication technology have made it harder to maintain shared facts and trust. Regarding land procurement and its intended use, a high degree of opacity is becoming normal. Concerns for environmental degradation, resource security, and geopolitical instability are increasingly visible. It has become an open secret that invisible, powerful vested interests exert considerable influence over state governance, limited only by their competing peers. Urbanisation continues to shape public priorities, often distancing people from the ecological systems that underpin their wellbeing. Government has made ambitious environmental commitments, but delivery has struggled to keep pace with the scale of the challenge.

Against this backdrop, it is understandable that many people feel unsettled about the future. The science on climate change and ecological decline is clear, yet no single institution holds the authority or capacity to drive the level of action required. This can create a sense of inevitability or fatalism. But while the risks are profound, the response need not be resignation. The long-standing human instinct to improve conditions for future generations remains a powerful motivator - and reframing our relationship with the natural world is central to restoring that sense of purpose and possibility.

3.2 Modern land use in Surrey

The Government published the national Land Use Framework¹⁷ (LUF) in March 2026, influenced by a preparatory consultation from January through April 2025. Interestingly, of 7,138 public responses to this in total, the Rewilding Britain campaign (see 3.3, next) was responsible for 83% of these. The Trust was one of 562 responding organisations, and a summary of our response is appended (see **Appendix 4**). Feeding into the LUF was “*..the most advanced spatial analysis ever undertaken in this country*”, but this is presented as an aggregation into the English regions. Surrey is part of the South-East region. Under *Defining the challenge*, the LUF states: “*We know that the United Kingdom is one of the most nature depleted countries in the world.. Creating and restoring a range of wildlife-rich habitats in a connected way will be needed to provide the foundations for nature’s recovery.*”

Since land use pressure is correlated with human population density and its associated economic aspirations, it is important to consider Surrey’s position from within this context.

Figure 3 is a population density map of England (source: 2011 census). From this it is obvious that we are relatively heavily populated, with most of the county within the 5-20 persons/hectare bandings. Our total population is c.1.2 million, which is the sixth largest in England. Other key statistics include a land area of 642 miles² (=1663 km²; fifth smallest in England); the longest distance of dualled-carriage roadway in England, but with the best access to international airports; the most golf courses (at c.3% land-use), and the most horse-racing courses. This speaks of an intense competition for land use, but also a propensity and readiness for change. The question is – in which direction?

¹⁷ See; HM Government, March 2026. [The Land Use Framework for England](#)

The *State of Surrey's Nature* report of 2017¹⁸ referenced a then-draft land use dataset – the Surrey Habitat Framework – which is still broadly indicative today (see **Figure 4**). This showed 17% of Surrey in ‘urban uses’, including developed land and land transport infrastructure. Importantly, not all this land is composed of artificial surfaces as residential and community gardens are included – estimated at c.25% of this category (=4.25% of Surrey). Surrey contends as the most wooded county in the UK. Around 24% of land is composed of various sub-types of woodland cover, including softwood plantations over potential heathland. A minimum of 37% is in rural and peri-urban agricultural uses, mainly as permanent pasture (ie. ‘grassland’). Although it is derived from a different analysis, the recently published Surrey Important Grassland

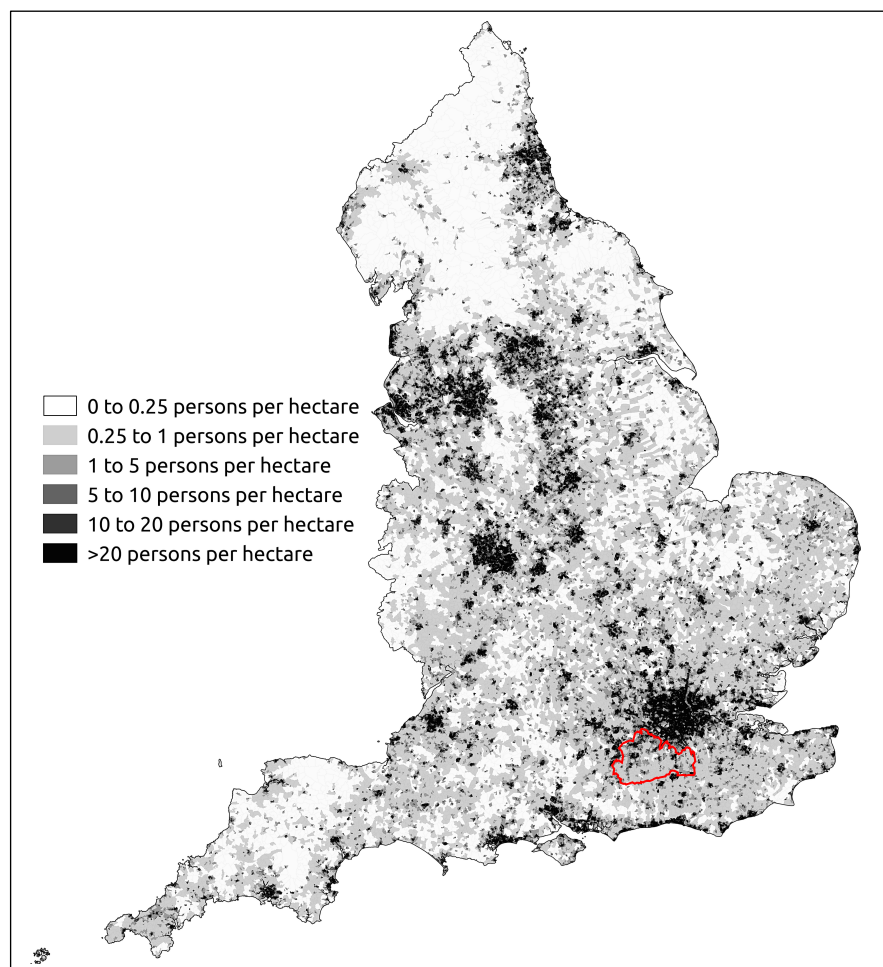


Figure 3. Population density – England (2011)

Inventory (SIGI)¹⁹ has identified 2.34% of the county as composed of essentially un-intensive grassland types, not in productive ‘agricultural’ land use. This is actually the case for a far larger proportion of the permanent pasture, used as it is for equestrian livery. Surrey supports a significant area of lowland heathland and bog habitats, at 2.4% of our land use. Incredibly, this represents c.2.6% of all the estimated remaining global resource; clear witness to our international responsibility for these habitats. Open water and other wetland habitats account for 2.1%. There is at least 15% in ‘unknown’ uses; likely including golf courses, formally landscaped estate grounds, open-cast quarrying (for aggregates, chalk and brick-clay), non-

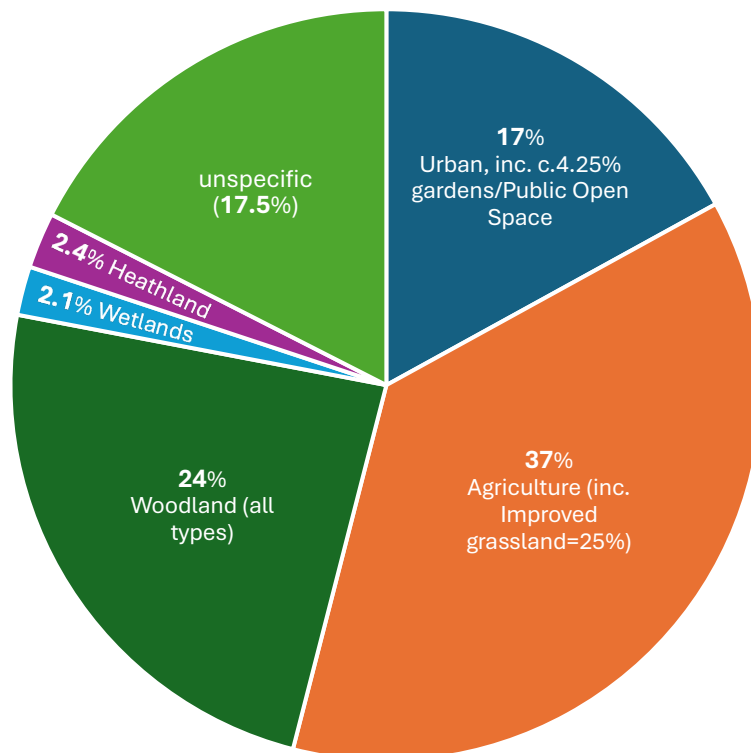
¹⁸ See; Waite M. (2017). *The State of Surrey's Nature*. Surrey Nature Partnership

¹⁹ See; Waite M. (2026). *Surrey Important Grassland Inventory 1.0*. Surrey Nature Partnership

specific waste transfer, and all other non-descript hard-standing. A conservative estimate would therefore indicate that a minimum of around 30% of the county supports usefully performing wildlife habitat(s) of over a certain quality. But remember here that only 7.4% of land is statutorily protected in SSSI.

Since 2017, the Surrey Habitat Framework has been superseded by other land use datasets (including that from which the SIGI is derived), but none of these offers either full coverage of the county or more accuracy to improve confidence against significant assumptions regarding some uses. These include those of the Office for National Statistics and whatever datasets were used in the Land Use Framework. To an extent, over-precision here is somewhat superfluous in that land use is forever in flux. However, broadly accurate, relative proportions are certainly essential to enable comparisons, both intra- and inter-county.

Figure 4. Surrey Habitat Framework (extract).



For the first time anywhere in England, and in collaboration with Surrey, Coventry and Reading Universities, SWT has modelled a broad land use (or ‘un-used’ to be more precise) reconstruction for a large proportion of pre-historic and historic west Surrey, at three distinct time periods using a palaeoecological, mainly palynological approach²⁰. We have then translated this estimated extent of the broad habitat(s) of their periods into a modern natural capital context, to quantify former ecosystem service provision as an indication of the scale of the implied, notional *Paradise Lost*. The periods are 7200-6700 years ago (pre-heathland as a semi-natural habitat, within the late Neolithic or ‘New Stone Age’); 3600-3100 years ago

²⁰ See; Siggery, B. et al. (in prep.) *Combining ecosystem service metrics and pollen-based land-cover modelling to understand the value and function of historic landscapes*.

(spanning the transition from the Bronze into the Iron Ages, marking a proximal advent for heathland); and 1600-1100 years ago, within the 1st millennium when heathland was fast becoming a fixture of the Surrey landscape. Climatically, these periods progress from the warm, wet Atlantic post-glacial through the markedly cooler, drier Sub-Boreal, and finally into the Sub-Atlantic's return to even cooler and wetter conditions. **Figure 5** shows the estimated split into broad habitat types for each of the three time periods, and the respective proportional variation in Provisioning, Regulating and Cultural ecosystem service provision. The total extent of the grouped broad natural habitats underpinning this analysis has roughly halved across this time, and the Regulating ecosystem services combined show an averaged 33% loss in their supply (range =10-58%). The most acute losses effect water quality and in bio-abundance of pollinators.

To help with understanding this; the established hominid was by then *Homo sapiens*, who was in our earliest period still very much a nomadic hunter-gatherer supported directly, but at essentially low impact, from the land. Next, now definitively sedentary within fixed settlements



Figure 5. Pre-historical/Historical Broad habitat reconstruction for West Surrey (after Siggery *et al.* in prep.)

(more in the lowlands as most likely transhumant in the harsher uplands) and by then able to smelt increasingly stronger metals, humans were sourcing considerable nutrition from early agriculture - chiefly through pastoralism rather than arable - for which at least temporary fields were created, being hewn from the naturally wooded habitats. Wetlands were by and large avoided for habitation purposes (although a specialised island/rafting style was locally attempted, mainly for defence, for example in the Fens). But proximity to clean freshwater remained critical. The most recent period, in the early Medieval, has most staple nutrition provided from organised agriculture (thus escalating forest clearance), albeit still significantly supplemented by the hunting of game, both of which required heavy, localised predator control. Hence this was when the Brown Bear, Wolf, Lynx, Beaver and Wild Boar were lost to us, certainly in lowland Britain.

3.3 Principles of re-wilding

The emergence of pre-conceived, intentional ‘re-wilding’ as a land use option is a relatively recent phenomenon. This belies the fact that it has at least been part-prompted by failing agricultural business models, which can also be causative. There are various possible interpretations of what a re-wilding strategy may constitute. Perhaps the best working definition, issued alongside a set of principles to characterise an overall management approach, is presented by the IUCN Commission on Ecosystem Management (CEM) Rewilding Thematic Group²¹:

Rewilding: “the process of rebuilding, following major human disturbance, a **natural ecosystem** by restoring **natural processes** and the complete or near complete food-web at **all trophic levels** as a self-sustaining and resilient ecosystem using biota that would have been present had the disturbance not occurred. This will involve a paradigm shift in the relationship between humans and nature. The ultimate goal of rewilding is the restoration of **functioning native ecosystems** complete with fully occupied trophic levels that are nature-led across a range of **landscape scales**. Rewilded ecosystems should - where possible - be **self-sustaining** requiring **no or minimum-intervention** management (ie. natura naturans or “nature doing what nature does”), recognising that ecosystems are **dynamic** and not static.”

The ten rewilding principles are summarised in **Appendix 2**. These were established from a combination of research and consultation within a growing global community of rewilding experts; “...to develop an internationally recognised definition and establish a set of universal guidelines for rewilding, based in part on journal papers currently under review with Conservation Biology and British Wildlife”. They are adopted by the UK Natural Capital Laboratory and were used to help develop principles in the Global Charter for Rewilding Earth (Wilderness Foundation, 2020).

Rewilding Europe²² is a pan-European, financially independent collective of like-minded activists, committed to working at a trans-jurisdictional, European level. Local partners take the lead in rewilding initiatives in various states adapted to a local context. Key projects are located in the Danube Delta (Romania-Ukraine), the Italian Apennines, eastern Alps/Carpathians, and elsewhere. Its mission can be summarised as “*Rewilding breathes life back into our*

²¹ See; [principles_of_rewilding_cem_rtg.pdf](#)

²² See; <https://rewildingeurope.com/about-rewilding-europe/>

landscapes. It helps us reconnect with the wonders of Europe's spectacular wild nature. It is our best hope for a future where people and nature not only co-exist, but flourish."

In 2018 Rewilding Europe's Rewilding Monitoring Framework²³ introduced a three-axis framework for monitoring rewilding. This condenses ecological recovery into three key components: 1) Trophic complexity: a measure of the complexity of relationships in a food web; 2) Random natural disturbance: caused by natural events such as wildfire or flooding; and 3) Dispersal: how easy is it for species to spread out across landscapes. In 2020, this framework was used to evaluate rewilding impact across seven of Rewilding Europe's operational areas. A total of 19 indicators (10 relating to human intervention and nine to ecological health) were selected to measure the ecological impact of rewilding approaches across each of the three framework components, plus an additional socio-ecological component.

In terms of mission aims, much the same may be said (to a more restricted geographic remit) of Rewilding Britain²⁴. It is certainly political and actively campaigns to lobby the UK Government on its environmental policy and performance. It is also an essential advisory network to promote use of a rewilding approach wherever the opportunity arises. Its Rewilding Network links rewilding projects countrywide, great and small, nascent or long-established: *"..Rewilding offers hope. In a nutshell, it is the large-scale restoration of nature until it can take care of itself – and us – again... Rewilding Britain wants to see rewilding flourishing across Britain, reconnecting us with nature, sustaining communities, and tackling the climate emergency and extinction crisis."*

An immediate impression from many of these celebrated initiatives is their strict relevance to near natural, 'wilderness' ecosystems, that are generally devoid of significant human influence from the outset. Possibly appropriate for some of the UK's remoter National Parks, but regarding the vast majority of lowland England – hardly an exact fit. But we have seen that many of the coinciding forces that have concluded it necessary for adopting less interventionist approaches in wildlife conservation, linked to low-cost re-purposing of increasingly obvious, marginal agricultural land, are now operating universally. The danger for us in Surrey is that our socio-economic context, high land values, and splintered land ownership will always present a temptingly viable alternative intention for redundant farmland, as being ripe for new built development.

We suggest therefore, that the IUCN re-wilding principles could in theory be no less applicable, or might at least be tested, over significant part(s) of Surrey. **To justify this, we now present the case in Surrey against each of those principles** (and see **Figure 6**):

● **Principle 1 (Rewilding utilizes wildlife to restore trophic interactions)**: essentially that which recommends the reintroduction of absentee prime-movers (keystone species) in driving natural processes. This is currently ongoing, as a key demonstration project, using Red Deer *Cervus elaphus* on the SWT-managed Ministry of Defence-owned estate. Currently, Pirbright Ranges represents the largest rewilded landscape project in England (at c.680 ha).

²³ See; Segar J. et al. (2021). [Expert-based assessment of rewilding indicates progress at site-level, yet challenges for upscaling](#), in Ecography Vol. 2022, Issue 4.

²⁴ See; <https://www.rewildingbritain.org.uk/about-us/our-vision>

There are proxies in the form of herds of hardy domestic cattle in effect on many others of our sites. Despite their hardiness, these remain subject to strict livestock welfare legislation, which elevates a preference for using essentially wild grazers (deer, boar etc.). Partners elsewhere in Surrey are already quietly proceeding with re-wilding approaches largely under-the-radar (see **Figure 7**). Natural predation to limit populations of non-native, or to re-balance those of native species could also be trialled, as in reality the risk to potentially vulnerable commercial livestock is not so significant in the context of Surrey's agriculture (containment of reintroduced predators to within our county is another matter, however). At a different trophic scale, small arboreal carnivores (for example, Pine Marten *Martes martes*) and avian raptors could be very effective limiters, at least locally, on Grey Squirrel *Sciurus carolinensis* populations. Non-native Invasive Species (NNIS) generally (as this North American mammal), cost foresters many thousands of pounds per annum to 'control', resulting in local containment at best. Deer populations (both native and NNIS) cost even more to contain.



Figure 6. Applying the IUCN Rewilding Principles to Surrey.

Eradication of NNIS is difficult and expensive, and for many higher plants, such as Himalayan Balsam *Impatiens grandiflora* is now quite impossible. Rewilding helps us to mentally assimilate these, as yet further factors to observe their response to more assured recovery in abundance of native competitors.

In wholly wetland ecosystems and the damper parts of others, the Eurasian Beaver *Castor fiber* has elsewhere now proved its value in delivering a Natural Flood Management solution for in-line watercourse applications. The Surrey experience is still in its infancy, with a single example on the National Trust's Swan Barn estate in Haslemere. Surrey Wildlife Trust has produced a separate but integrated policy statement and strategy on the general topic of species re-introductions²⁵, both for practice and advocacy. It is notable that the support of the public is far more easily procured for species recovery projects than those presented purely as habitat restoration (even if they are both part of a related outcome). Apparently, 80-85% of the British public are in approval of appropriate, local species reintroductions (source: YouGov/Rewilding Britain).



Figure 7. Rewilding at West Horsley Place.

● **Principle 2 (Rewilding employs landscape-scale planning that considers core areas, connectivity and co-existence):** Concerning the application of a landscape-scale approach for achieving nature recovery in Surrey. The strategic prioritisation of the county, to focus our conservation effort for its cost-effectiveness in nature recovery, was first established over 15 years ago. This was presented as the Biodiversity Opportunity Area framework, and Surrey's Nature Partnership championed its comprehension and adoption within local strategic planning far more effectively than in other counties^{7, 26}. From this, it emerged that our habitat fragmentation was particularly severe for a relatively small jurisdictional territory (most recently compounded by an ever-denser transport infrastructure network), and to prioritise habitat re-connection within and between the BOAs was all-important. This remains a priority today,

²⁵ See; Waite, M. (2026). *SWT Species Reintroduction Strategy* (Surrey Wildlife Trust)

²⁶ See; Waite, M. (2012). [SWT Living Landscape Strategy](#) (Surrey Wildlife Trust)

although landmark projects to address this in the interim have included the recently completed ‘Habitat Bridge’ reconnecting core heathland habitats at Ockham and Wisley Commons SSSI over the A3(M) trunk road. The Hindhead Tunnel project further south served as an earlier habitat connective measure, now celebrating its 15th anniversary.

To see this as county-wide would be a fallacy, however. The North Downs marks a significant transition within the county, dividing the Thames Basin from the Wealden anticline and their very different landscape characters. South of the Downs there exist extensive sub-regions of Surrey as wild and seemingly continuous in natural character as anywhere in lowland and indeed, some of upland England. The Greensand ridge is one such, especially the broad 18km section between Shalford and Dorking, including the landmark Leith Hill. The extensive spread of heathlands from Milford west to Frensham, comprising the Thursley, Hankley & Frensham Commons SSSI (Surrey’s largest), is another. Even within the Thames Basin, the combined Ash and Pirbright Ranges in north-west Surrey represent the UK’s largest single block of continuous lowland heathland beyond those in the New Forest and Dorset’s Poole Basin.

● **Principle 3 (Rewilding focuses on the recovery of ecological processes, interactions and conditions based on reference ecosystems).** Reference ecosystems can be misleading in their cognisance and require careful interpretation. This field was specifically considered in recent research undertaken by the Trust here in Surrey. In brief, significantly opposed visualisations of past ecosystems may be suggested from the various ecological parameters available for use in examination. Several mainstream assumptions, persisting both in the literature and affecting conservation practice in certain ecosystems, may be inconsistent with the findings of say, a palaeoecological study for a given site. A case in point is the now established challenge to the concept of extensive closed-canopy ‘wildwood’ versus that suggesting a far more open, dynamic, often scrub-dominated landscape across at least much of lowland England in pre-history, created by the heavy browsing pressure from large, nomadic herds of wild herbivores. Suffice to state here, that the Trust is currently at the forefront of the possibilities for referencing past ecosystems in this regard, especially around heathland biotopes and their comparable degrees of freshwater saturation and pH values, and plans to continue in this role.

● **Principle 4 (Rewilding recognises that ecosystems are dynamic and constantly changing):** emphasises a need for recognition and acceptance of the fundamental dynamism in nature, and in corresponding goals for its recovery and use of indicators for monitoring success. This may be anticipated as being additionally challenging for managers of more human-influenced landscapes, in that their dominant, traditional economic exploitation implicitly seeks stability and consistency in its outputs to remain viable. By extension this has translated itself into relatively fixed concepts for the state and condition of, for example semi-natural grassland habitats, where comparatively high levels of maintenance are required to arrest natural succession. We will need to acknowledge that the ratio of open to wooded habitats may well shift under a re-wilded management approach, leaving the conservation of ever-rarer, artificially sustained biodiversity to chance in a thus widened, more dynamic environment.

● **Principle 5 (Rewilding should anticipate the effects of climate change and where possible act as a tool to mitigate impacts)** concerns the above especially in relation to the implications of climate change. That climate change is global in its effect is clearly obvious. It

implies different consequences both in its immediacy and geographically, and hence also socio-politically but is of no less concern to all. For us in Surrey, with greater exposure to the socio-economic impacts, the relevance of nature-based adaptation solutions in ameliorating these impacts is of correspondingly heightened importance. The inevitability of the worst impacts of climate change, however much delayed, can be acutely demoralising to the planning of any human endeavour, to say the least (ref. p.16). But it is essential here to maintain perspective, and to think sequentially whilst also avoiding any regrettable decision-making, as human innovation in problem-solving is historically proven to be sufficiently reliable to provide enough grounds for optimism.

● **Principle 6 (Rewilding requires local engagement and support)** is strongly relevant for geographic jurisdictions with high and diversely educated human populations, like ours. Adequate and appropriate advocacy is critical for gaining local engagement and support, and indeed, is a prime objective of this document. That we consider a need to articulate our detailed position on rewilding to progress Surrey's nature recovery is testament to this. Although not unique, counties like Surrey suffer a highly splintered spectral range in public opinion, that can serve to stall consensus on taking initiatives and experimentation across many progressive ventures.

● **Principle 7 (Rewilding is informed by both science and indigenous and local knowledge)** is seeking to ensure that all stakeholders involved in rewilding projects can contribute with equal weight and legitimacy. As an independent eNGO, we are well placed to act as an honest broker, helping to reconcile differing viewpoints and support constructive dialogue. Our role includes working through areas of disagreement and, where necessary, helping stakeholders move beyond long-standing positions so that shared outcomes for nature recovery can be achieved.

● **Principle 8 (Rewilding is adaptive and dependent on monitoring and feedback).** Regarding this, the Trust's record has shown considerable improvement since the publication of our Research & Monitoring Framework in 2019²⁷. We can certainly offer the best advisory service on its application within Surrey at the current time, even if we cannot always dedicate sufficient resources to it. Our intent is always there, however. Our presence, since 2023, as accredited Conservation Evidence²⁸ 'champions' is further evidence of this. We have also recently published our Citizen Science Strategy (SWT 2025). Principle (8) reiterates the need to maximise observational awareness, as far as is possible, of the state of the natural processes ongoing within a rewilded project, in order to learn from it and adapt accordingly. By implication, it is certainly not simply a case of 'Do nothing and walk away...'

● **Principle 9 (Rewilding recognises the intrinsic value of all species and ecosystems)** harks back to Georgina Mace's evolution of nature conservation as described in the opening section of this document. In effect, the principle represents the learned conclusion that has brought us presently to the 'Nature *and* people' trope (see p.11).

● **Principle 10 (Rewilding requires a paradigm shift in the co-existence of humans and nature)** is a condensation of rewilding's overall manifesto, as the only possible, logical way forward within the circumstances we presently find ourselves, no matter where we are in the

²⁷ See; Waite, M. (2019). [SWT Research & Monitoring Framework](#) (Surrey Wildlife Trust)

²⁸ See; <https://www.conservationevidence.com/>

world. It is incumbent upon us to believe that through rewilding we can achieve the *“..transformative change, providing optimism, purpose and motivation for engagement alongside a greater awareness of global ecosystems that are essential for life on the planet”*. The anticipated paradigm shift in activism necessary for changing political will remains as a requisite outcome for all forms of governance, at every scale.

3.4 Realpolitik for wildlife in the 21st Century – mending a broken system

The question of how far we can go in delivering meaningful nature recovery on privately owned - or in our case, charitable trust-owned - land is far more complex than statute alone suggests. The interplay of legislation, policy, interpretation, and precedent creates a landscape full of nuance and contradiction. This complexity is itself a symptom of the wider systems failures that have long constrained conservation.

For organisations like ours, the challenge is even more pronounced when managing land on behalf of third parties. Decisions must navigate varying layers of governance, accountability, and public expectation. These dynamics can slow progress, even when all parties share the same broad ambition for nature recovery. The potential complexity is notably visible in the North Downs, where much of the land is protected for relict pockets of species-rich Chalk grassland as the historic legacy of formerly widespread sheep husbandry, but where the tensions between policy intent, practical management, and public use are particularly visible (see **Box** below). The individual sites can be subject to a varied patchwork of by-laws and statutory protections, yet enforcement is minimal and the regulatory framework often feels disconnected from the realities of day-to-day management.

SSSI designation provides important broad safeguards against development but offers limited tools for addressing the pressures that undermine ecological condition. The informed opinion remains that the various schemes targeted at this have proved ineffectual. Certainly worth applying for as the only specific public support for addressing biodiversity conservation but remaining inadequate to effect meaningful nature recovery.

This current situation illustrates a broader truth: our existing system was not designed for the scale or urgency of the transition now required. The Trust’s *Transition Plan to 2030* recognises this and sets out a more coherent approach - one that aligns statutory duties, local priorities, and practical delivery so that land managers, public authorities, and communities can act with greater clarity and confidence.

In post-Brexit Britain we are currently left with an untidy mix of retained but contested EU-derived environmental laws, plus clumsy reforms pursued largely for political effect. In Surrey, local governance is also about to change sharply, with the current 11 local authorities to be merged into two new unitary authorities for East and West Surrey, apparently without strategic oversight. Whether this will improve or further hinder the relationship between planning policy and the statutory nature conservation system remains unclear. What is already clear, however, is the depth of current dissent and disconnection, which only strengthens the rewilders’ claim to the moral high ground as they press ahead with ‘real’ nature recovery, as far as practical circumstances allow.

Box: Managing Chalk grassland in the North Downs:

Surrey's Chalk grassland occurs within a restricted range limited to the scarp and dip slopes of the North Downs. The best-known sections, but notably not all of the habitat, has been chosen for statutory protection within SSSIs. A still more restricted area is of elevated distinction as a Special Area of Conservation (SAC) formerly designated under the EU Habitats Directive. Any realistically appreciable variance between these sites is not immediately apparent, however. The SSSI are all notified for the rarity of their habitats, including ancient woodland stand-types, as well as the semi-natural calcareous grassland (always with its associated scrub). Most also have species criteria among their notification features, including plant, invertebrate and



breeding bird assemblages, plus exemplary representative populations for individual species (especially certain higher plants, butterflies and moths, beetles, true flies and grasshoppers). The notified features are summarised on their formal 'citations' but because they have never been reviewed the latter are typically in a state of obsolescence, whereby many of the species are now known to be locally extinct or their status since notification is simply unknown. Responsibility for any losses is not wholly on the landowners here as larger forces are often to blame, including climate change. Such is the lapse since any review that other important species populations of national or regional significance have often emerged. SSSI condition may only be assessed on the state of the original features, however.

Meanwhile, the growth rates of grassland and scrub have accelerated appreciably due to localised and most probably also generic atmospheric eutrophication. Drift of pesticides from upwind agriculture may also be marginally impactful, especially on invertebrates and plants. Ash Dieback has thoroughly infected the broadleaved woodland, with large areas previously dominated by Ash now effectively without a live tree canopy. The recreational visitor footfall throughout the North Downs has increased notably, particularly within the current decade, related to ever-more built developments adjacent, spiking dog-ownership, an explosion in amateur sport-cycling, post-Covid exploration of the county, as well as illegal trespass. This is evidenced by various agencies, including the Surrey Hills National Landscape and the National Trust. Enhanced concern for public safety due to Ash Dieback has required highly controversial adjustments to management plans in the accessible woodland sites. The multiplicity in land ownership makes achieving a unified, coherent approach to restorative management a further difficulty.

The socio-economic origins of open Chalk grassland as a semi-natural habitat are now plainly anachronistic. Grazing (preferably by sheep) at the pressure needed to meet habitat condition expectations is today almost impossible to achieve. A combination of factors is involved, all raising the potential costs to become unaffordable to modern income streams, as the cost recovery potential is negligible. Local access and essential infrastructure challenges, incompatible public usage of sites, and the threat of rural crime (equipment theft, vandalism) are all serious considerations. In most cases, the default solution is to use mowing equipment on at least the flatter grassland sites, annually if possible – although it is acknowledged that this will likely be inadequate. Frustratingly minor impacts on successional scrub invasion can be achieved manually through voluntary labour, but guaranteeing continuity of the required cyclical effort under such arrangements is again prohibitive. At least the desirable precision in terms of gradation and nuance to maximise habitat diversity is made possible by this approach, but accusations of this as “gardening” or at best “artificial”, relevant to the semi-natural origins of the habitat are not unfounded. Many locally extinct flagship species are now so rare that habitat restoration alone is extremely unlikely to facilitate recolonisation of sites, and any attempt at recovery demands a formal reintroduction attempt at a landscape scale.

This conundrum is in direct contrast to the situation presented by management of extensive lowland heathland in the Thames Basin and western Weald in Surrey. Here, the protected sites are nearly all significantly larger and their internal heterogeneity, in terms of their mosaic of sub-habitat types, is viewed as desirable for the purpose of condition assessment. Although many are not, a significant proportion of the sites are strictly inaccessible to the public. The exceptions are often Common Land, posing fencing problems for would-be graziers, but new No-Fence technology has improved this situation. The notified interest features of lowland heathland are generally less localised, allowing more extensive management solutions. Although potentially devastating for vulnerable species, the regularity

of wildfires has ironically served as consistently the most significant management tool at scale here. Because all the sites involved were implicated by former EU legislation, possibly the most sophisticated protective strategy ever achieved for legally designated nature sites in the UK was instigated for them and is still in operation today. This addresses the potential danger of incrementally increasing recreational visitor impacts resulting from new developments in a wide zone surrounding the heaths involved. Most sites are owned by a single landowner, often in the public sector with the legal obligations of the 'Biodiversity Duty' that this entails. All-in-all, a re-wilded approach with its inherent extensive scale, may be viewed as a far more suitable option under these circumstances, compared with those operating in the North Downs.

4. Vision for a re-wilded, enlightened Surrey...

4.1 ` Summary of issues

To initiate a debate on the future direction of wildlife conservation management approaches across Surrey, and especially for those adopted by the Trust going forward, we consulted a group of practitioners with long experience of working in the conservation sector across the county. We also consulted our internal Business Development Forum, and the Youth Action Committee. From these workshops, the following 'summary of issues' emerged.

In order to identify an appropriate **re-wilding strategy** that is likely to be **bespoke to Surrey**, the following issues are of demographic relevance:

- Surrey's population density and the range of opinion and influence exerted by its demographic;
- Public resistance to reforms and change (reinforced by misplaced lay confidence in the relative efficiency and operational success of the current system);
- The inherent higher-than-average land and property prices in Surrey, with its high proportion of land in private ownership and the quantum of individuals concerned;
- The extent of Common Land with its associated legal restrictions, for example on maintaining unrestricted public access and absence of permanent fencing;
- Other legal constraints, particularly flood-risk and the *Reservoirs Act* 1975;
- Established, committed deliverables, for example, to Natural England, Environment Agency plus other sponsors.

In addition to perennial, generic problems to which all regions are subject:

- Future funding uncertainty;
- Inconsistencies in long-term datasets (when these are available);
- Exponentially shifting biodiversity baselines between generations; and
- Skills gaps in the current, available specialist workforce.

Identified opportunities:

- Advent of new technological solutions to assist in remote but increasingly accurate site monitoring and appraisal, for example UAV ('drones'), ever-cheaper high-resolution LiDAR and satellite imagery, & data interpretation by Artificial Intelligence (AI);
- Increased demand in domestic eco-tourism market (and other novel income streams);
- Innovation in management of extensive grazing applications, for example NoFence virtual fencing systems;

- New but unpredictable partnership opportunities, linked to cultural shifts in attitudes by landowners;
- Increasing trust from government in the surety of Nature-based Solutions to address (Natural) Flood Management and Climate Change adaptation, including involvement of reintroduced Eurasian Beaver.

4.2 Re-wilding strategy for Surrey

The re-wilding ‘fit’ for Surrey will require a flexible approach, whereby an essential suite of factors must be considered – akin to a standard Risk Assessment – to ascertain an appropriate point along a continuum, as between 100% ‘re-wilded’ and a 100% ‘traditional interventionist’ management approach. **Wherever this point alights, it will be:**

- Place-based and adaptive, negotiated with all necessary stakeholders and not as prescribed by a single agency.
- Representative of a balance between reliance on self-organising, ecological processes, and requiring targeted, solution-focussed interventions where needed.
- Influenced by the following 5 key, weighted, consideration ‘Factors’;
 1. The time horizon it will apply to;
 2. A risk analysis and tolerances thereof (including reputational and financial);
 3. Complexity of its governance, reflecting the various stakeholders and their role;
 4. A socio-economic context (including the potential for wider investment opportunities); and
 5. Clarity of its own, obligatory monitoring system, set out to trigger adaptation where/when required.

A ‘Re-wilding Consideration Arc’ (see **Figure 8**) could then be presented as having 3 principal ‘Zones’, albeit spaced along this continuum:

Zone 1. Re-wilding / Design-led Rewilding, likely exhibiting:

- Passive restoration, reliant on natural succession and colonisation
- Large herbivores, as primary ecosystem engineers
- Minimal mowing/domestic stock grazing
- High governance autonomy, long time horizons

Zone 2. The Transition Zone (= prime area of ‘Ecological Sweet-spot’):

- Hybrid, or ‘blended’ approaches
- Targeted invasive-species removal
- Strategic planting
- Rotational extensive grazing (using domestic stock) to mimic natural regimes
- Adaptive, negotiated, dynamic

Zone 3. Interventionist Management (‘traditional’):

- Active, cyclical habitat maintenance, creation & restoration
- ‘Nature-for-itself’-inspired species translocations (re-introductions)
- Predator control (where justified)/attempted Non-native species eradication
- Engineered hydrological adjustments

Appendix 1 forms an ‘Action Plan’ to structure the detailed consideration for appropriateness of adopting a re-wilding approach, or derivations thereof, across our six **Landscape Recovery Areas** (LRA) identified for prioritised, strategic spatial attention during the remaining *Transition Plan to 2030* period.

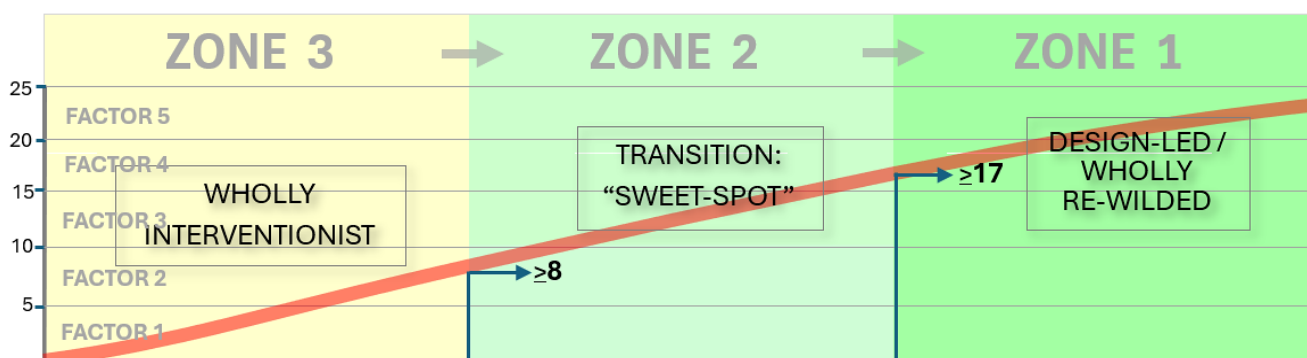


Figure 8. The ‘Re-wilding Consideration Arc’ (see p.33 for essential explanatory).

6. Conclusion

Given the growing interest in re-wilding and the related reintroduction of keystone species, we determined it necessary to undertake the necessary research to gather sufficient evidence to inform our position on the matter. We hope that this document delivers a thorough treatise into this dynamic topic area. This is essentially just the *planning* stage, however, and it is only by carefully but boldly implementing the principles and actions hereby required that we would bring about the desired outcomes for nature recovery in Surrey.

Appendix 1. Action Plan 2027-30

SWT Landscape Recovery Areas:	Surrey BOAs:	Surrey Nature Recovery LNRS habitat categories:	SWT nature reserves (major):	SSSI:
HEATHLAND CONNECTIONS (inc. WEST SURREY HEATHLAND ARC)	TBH03-04, 07, TBL01, ND01, WG01-05, LW01	Grassland, Scrub & Heathland; Woodlands & parklands; Urban	Barossa Common/Poor's Allotments; Pirbright Ranges/Brentmoor Heath; Ash Ranges; Worpleton Commons; Broadstreet/Backside Commons; Seale Chalkpit; Thundry Meadows; Elstead/Royal/Bagmoor Commons; Runfold; Rodborough Common; Fir-tree Copse, Hambledon Common	Colony Bog & Bagshot Heath ; Basingstoke Canal; Ash to Brookwood Heaths; Whitmoor Common; Smarts & Prey Heaths; Broadmoor to Bagshot Woods & Heath; Seale Chalkpit; Puttenham & Crooksbury Commons; Charleshill; Gong Hill; Thursley, Hankley & Frensham Commons; Devil's Punch Bowl ; Blackheath; Chiddingfold Forest
HOLMESDALE-LINGFIELD (EAST SURREY ARC)	WG11, R02	Grassland, Scrub & Heathland; Wetlands & Rivers; Farmland & the wider countryside	Nutfield Marshes; Spyne's Mere; Kitchen Copse; Blindley Heath; Graeme Hendry Wood; Bay Pond; Hedgecourt Lake	Godstone Ponds; Blindley Heath; Lingfield Cerns; Hedgecourt
NORTH DOWNS (& ST MARTHA'S-THE CHANTRIES)	ND02-08	Grassland, Scrub & Heathland; Woodlands & parklands; Urban	Pewley Meadows; Sheepleas; Colekitchen Down; Hackhurst Downs; Norbury Park; Nower Wood; Dawcombe-Fraser Down; Fames Rough; Shabden Park; Priest Hill; Howell Hill; Quarry Hangers	Sheepleas; Colyers Hanger; Mole Gap to Reigate Escarpment; Hackhurst & White Downs; Coombe Bottom; Ranmore Common; Banstead Downs; Chipstead Downs; Quarry Hangers; Woldingham & Oxted Downs
NORTH-WEST SURREY (THAMES CORRIDOR)	TV01-05, R06	Woodlands & parklands; Wetlands & Rivers; Urban	Thorpe Hay Meadow	Windsor Forest & Great Park; Langham Pond; Staines Moor; Wraybury Reservoir; Thorpe No.1 Pit; Thorpe Hay Meadow; Dumsey Meadow; Knight & Bessborough Reservoir
RIVERS & CANALS	R03-05 (+LW07)	Wetlands & Rivers; Urban; Farmland & the wider countryside	Papercourt Marshes/Meadows; Manor Farm; Ashted Rye Meadows	Papercourt; Wey Valley Meadows; Charterhouse-Eashing; Moor Park
CRANLEIGH 'SMILE'/LOW WEALD	LW02-06	Grassland, Scrub & Heathland; Woodlands & parklands; Farmland & the wider countryside	Vann Lake; Cucknell's Copse; Newdigate Brickworks; Wallis Wood	Glover's Wood; Vann Lake & Ockley Wood

(- continued...)

RE-WILDING CONSIDERATION FACTORS (SCORE 1-5 each)									
Species issues	Principal mgmt. (current):	Natural Capital evidenced/NBS	RE-WILDED THEME:	1	2	3	4*	5	SUMMATION
Marsh Clubmoss; Marsh Gentian; Spreading Bellflower; Small Fleabane; Small-flowered Catchfly; Tower Mustard; Veilwort; Rusty Fork-moss; Wood White; Grayling; Silver-studded Blue; Shoulder-striped Clover; Betony Case-bearer; Window-winged Caddis; Large Marsh Grasshopper; Red-barbed Ant; Heath Tiger-beetle; Great Fox-spider; Natterjack; Sand Lizard; Smooth Snake; Adder; Curlew; Grey Partridge; Nightingale; Turtle Dove; Barn Owl; Beaver; Otter; Harvest Mouse	conservation grazing; wildfires; manual scrub removal; conifer extraction; re-wetting; NNIS control	partial	RE-WETTING; LARGE HERBIVORES; NATURAL PEST CONTROL; STRATEGIC CONNECTIVITY; COMMUNITY ENGAGEMENT; SYSTEMS CHANGE	5	4	2	(3)	5	19
Corn Buttercup; Green-winged Orchid; Great Crested Newt; Lapwing; Yellowhammer; Starling; Kingfisher; Grey Partridge; Corn Bunting; Turtle Dove; Barn Owl; Brown Hare; Hazel Dormouse; Water Vole	conservation grazing; manual scrub removal; woodland coppicing; hedgerow restoration; woodland creation; NNIS control	partial	CATCHMENT RESTORATION; LARGE HERBIVORES; STRATEGIC CONNECTIVITY; COMMUNITY ENGAGEMENT; SYSTEMS CHANGE	3	2	2	(3)	3	13
<i>Calonarius elegantissimus</i> ; Ground-pine; Narrow-leaved Helleborine; Starfruit; Broadleaved Cudweed; Red Hemp-nettle; Man Orchid; Musk Orchid; Frog Ochid; Fly Orchid; Lesser Butterfly-orchid; Juniper; Spreading Hedge-parsley; Duke of Burgundy; Adonis Blue; Small Blue; Straw Belle; Large Scabious Mining-bee; Stag Beetle; Hazel Pot-beetle; Shining Pot-beetle; Pine Marten; Serotine; Barbastelle; Bechstein's Bat; Alcah��e Bat; Hazel Dormouse; Goshawk; Barn Owl	conservation grazing; mowing; manual scrub removal; woodland coppicing; Ash-dieback H&S; woodland non-intervention; conifer extraction; hedgerow restoration; NNIS control	partial	LARGE HERBIVORES; NATURAL PEST CONTROL; STRATEGIC CONNECTIVITY; COMMUNITY ENGAGEMENT; SYSTEMS CHANGE	2	1	2	(3)	4	12
Oak Polypore; Tooth fungi (various); Brown Galingale; Greater Water-parsnip; Downy-fruited Sedge; Little Whirlpool Ram's-horn Snail; Depressed River-mussel; various saproxilic invertebrates; European Eel; Otter; House Martin; Redshank; Lapwing	conservation grazing; mowing; Ash-dieback H&S; woodland creation; woodland non-intervention; hedgerow restoration	none	RE-WETTING; CATCHMENT RESTORATION; STRATEGIC CONNECTIVITY; COMMUNITY ENGAGEMENT; SYSTEMS CHANGE	2	5	2	(3)	2	14
Brown Trout; European Eel; Desmoulin's Whorl-snail; dragonflies; craneflies; Barn Owl; Kingfisher; Harvest Mouse; Otter; Water Vole; Beaver; bats (all)	conservation grazing; mowing; woodland non-intervention; bankside recreational; NNIS control	partial	RE-WETTING; CATCHMENT RESTORATION; COMMUNITY ENGAGEMENT; SYSTEMS CHANGE	5	3	1	(3)	5	17

Eagle's Claws (lichen); Great Crested Newt; Hazel Dormouse; bats, various; Pondweed Leafhopper; Barn Owl; Nightingale; Turtle Dove; Pine Marten; Beaver	mowing; woodland coppicing; conifer extraction; woodland creation; woodland non-intervention; equestrian grazing; NNIS control	partial	RE-WETTING; WOODLAND NON-INTERVENTION; LARGE HERBIVORES; CATCHMENT RESTORATION; NATURAL PEST CONTROL; STRATEGIC CONNECTIVITY; COMMUNITY ENGAGEMENT; SYSTEMS CHANGE	5	4	3	(3)	4	19
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FACTOR 1: Time-scale ('change horizon') (short 1<5 long)

FACTOR 2: Reputational risk (high 1<5 low)

FACTOR 3: Multiplicity of stakeholders/governance (complex 1<5 simple)

FACTOR 4: Financial risk (cost savings>lost income) (high 1<5 low)

...*here pre-populated @ '3', as requiring detailed scrutiny

FACTOR 5: Monitoring framework (observable gain diffuse 1<5 recognisable)

= SUMMATION SCORE (≥ 17 = theoretically fit for Rewilding)

Appendix 2. IUCN CEM Rewilding Thematic Group: The Ten Rewilding Principles

1. Rewilding utilizes wildlife to restore trophic interactions. Successful rewilding is nature-led, and relies on accommodating predation, competition and other biotic and abiotic interactions to sustain an ecosystem that self-regulates populations that comprise the biotic system. It is crucial that consideration be given to the role large herbivores and apex predators play in maintaining and enhancing the biodiversity within landscapes, together with the value of keystone species in securing the integrity of the ecosystem and thus enhancing ecosystem resilience. Where appropriate, interactive keystone species that have roles in maintaining the ecosystem should be reintroduced or depleted populations reinforced to an ecologically effective level.

2. Rewilding employs landscape-scale planning that considers core areas, connectivity and co-existence. At the landscape scale, it is crucial that core areas provide a secure space that accommodates the full array of species that comprise a self-sustaining natural ecosystem. These areas may be either legally designated or under private management. Restoring connectivity between core areas promotes movement/migration across the wider landscape and improves resilience to the impacts of climate change. Rewilding can build on existing core areas such as designated wilderness areas, national parks or privately managed natural areas. Plans for rewilding at the landscape scale should accommodate the need for coexistence between wild species and humans (and livestock) through careful integration of cores and connectivity in functioning ecological networks and zoned systems of compatible low-intensity human land use (e.g. buffers and extensive multiple-use landscapes).

3. Rewilding focuses on the recovery of ecological processes, interactions and conditions based on reference ecosystems. Rewilding should aim to restore the complete or near-complete food-web of a self-sustaining and resilient ecosystem and specifically the natural patterns and dynamics of abundance and distribution of native species. To do this rewilding should make use of an appropriate ecological reference which can be based on: contemporary near-natural reference areas with relatively complete biota where these still exist; and/or scientific evidence supported by expert indigenous and local knowledge. Rewilding should allow for natural disturbance within an evolutionary relevant range of variability and take environmental change into account. Key native species that have become globally extinct can be replaced by suitable carefully selected wild surrogates where legislation permits, their ecological role is deemed important. The surrogate should, where possible, be phylogenetically close to and have similar ecological and trophic functionality as the extinct species and careful management and monitoring be put in place.

4. Rewilding recognizes that ecosystems are dynamic and constantly changing. Temporal change, both allogenic (external) and autogenic (internal), is a fundamental attribute of ecosystems and the evolutionary processes critical to ecosystem function. Allogenic factors include storms, floods, wildfire and large-scale changes in climate. Equally as important are changes from autogenic processes such as nutrient cycles, energy and genes flows, decomposition, herbivory, pollination, seed dispersal and predation. Conservation planning for rewilding should consider the dynamic nature of ecosystems and be responsive to individual species range shifts, and the disaggregation and assembly of genes, species and biotic communities. Rewilding should facilitate the space and connectivity needed for these processes to have free reign, allowing the wider processes of succession, disturbance and biotic interactions to determine ecological trajectories without impediment or constraint. Rewilding programmes must take effective population size into account and employ strategies (e.g. connectivity) that ensure there is sufficient reproduction in every generation.

5. Rewilding should anticipate the effects of climate change and where possible act as a tool to mitigate impacts. Anthropogenic impacts of climate change are rapid and pervasive creating the need to anticipate the likely impacts on rewilding. Rewilding projects have medium to long-term timescales that inevitably span the predicted scales and magnitudes of global climate change as regards warming trends,

ice sheet collapse, sea level rise, storm events, etc. and thus climate change needs to be considered when planning such projects. Rewilding can also be considered as an example of a Nature-based Solutions approach (NbS) with the potential to ameliorate and/or tackle the effects of climate change. This includes mitigating the impacts of climate change on ecosystems and increasing the capture of atmospheric carbon (e.g. through natural regeneration following land abandonment and replacing livestock with wild herbivores) as well as providing connectivity along environmental and climatic gradients to enhance opportunities for species movements.

6. Rewilding requires local engagement and support. Rewilding should be inclusive of all stakeholders and embrace participatory approaches and transparent local consultation in the planning process for any project. Rewilding should encourage public understanding and appreciation of wild nature and should address existing concerns about co-existing with wildlife and natural processes of disturbance. Stakeholder engagement and support can reinforce the use of rewilding as an opportunity to promote education and knowledge exchange about the functioning of ecosystems.

7. Rewilding is informed by both science and indigenous and local knowledge. Practitioner, researcher and indigenous and local knowledge collaborations can generate benefits, maximising innovation and best management guidance through knowledge exchange, transparency and mutual learning. All these forms of knowledge are important for the success of rewilding projects and can help inform adaptive management frameworks. Local experts can provide detailed knowledge of sites, their histories and processes, all of which can help inform rewilding outcomes. It is important to acknowledge knowledge gaps and be aware of shifting baselines and the implications of these for rewilding projects. Projects themselves can form the basis for knowledge generation, data and information of use to further projects.

8. Rewilding is adaptive and dependent on monitoring and feedback. Monitoring is essential to provide evidence on short and medium-term results with long-term rewilding goals in mind. This is required to determine whether rewilding trajectories, such as a particular treatment, are working as planned. Participatory monitoring using simple crowd-sourced methods with local volunteers coupled with more detailed scientific monitoring can be used to provide the necessary data and information. Rewilding projects should use these data to identify problems and possible solutions as part of an appropriate adaptive management framework. These need to be adequately resourced such that further interventions can be implemented without loss to project budgets and resources.

9. Rewilding recognises the intrinsic value of all species and ecosystems. Whilst there is increasing recognition that natural ecosystems, and the species within them, provide valued goods and services to humans, wild nature has its own intrinsic value that humanity has an ethical responsibility to both respect and protect, emphasising values of compassion and co-existence. Rewilding should primarily be an eco-centric, rather than an anthropocentric, activity. Where management interventions are required, these should be the absolute minimum required and use non-lethal means wherever possible.

10. Rewilding requires a paradigm shift in the co-existence of humans and nature. In alliance with the global conservation and restoration communities, rewilding means transformative change, providing optimism, purpose and motivation for engagement alongside a greater awareness of global ecosystems that are essential for life on the planet. This should lead to a paradigm shift in advocacy and activism for change in political will and help shift ecological baselines towards recovering fully functioning trophic ecosystems, such that society no longer accepts degraded ecosystems and over-exploitation of nature as the baseline for each successive future generation. This change in paradigm will also help to create new sustainable economic opportunities, delivering the best outcomes for nature and people.

Appendix 3. CBD Kunming-Montreal Global Biodiversity Framework

1. Reducing threats to biodiversity

TARGET 1: Plan and manage all areas to reduce biodiversity loss

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

TARGET 2: Restore 30% of all degraded ecosystems

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

TARGET 3: Conserve 30% of Land, Waters and Seas

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

TARGET 4: Halt species extinction, protect genetic diversity, and manage human-wildlife conflicts

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

TARGET 5: Ensure sustainable, safe and legal harvesting and trade of wild species

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

TARGET 6: Reduce the introduction of invasive alien species by 50% and minimize their impact

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

TARGET 7: Reduce pollution to levels that are not harmful to biodiversity

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account

food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

TARGET 8: Minimize the impacts of climate change on biodiversity and build resilience

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

2. Meeting people's needs through sustainable use and benefit-sharing

TARGET 9: Manage wild species sustainably to benefit people

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

TARGET 10: Enhance biodiversity and sustainability in agriculture, aquaculture, fisheries, and forestry

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

TARGET 11: Restore, maintain and enhance nature's contributions to people

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

TARGET 12: Enhance green spaces and urban planning for human well-being and biodiversity

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

TARGET 13: Increase the sharing of benefits from genetic resources, digital sequence information and traditional knowledge

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

3. Tools and solutions for implementation and mainstreaming

TARGET 14: Integrate biodiversity in decision-making at every level

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

TARGET 15: Businesses assess, disclose and reduce biodiversity-related risks and negative impacts

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

- (a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;
 - (b) Provide information needed to consumers to promote sustainable consumption patterns;
 - (c) Report on compliance with access and benefit-sharing regulations and measures, as applicable;
- in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

TARGET 16: Enable sustainable consumption choices to reduce waste and overconsumption

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

TARGET 17: Strengthen biosafety and distribute the benefits of biotechnology

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

TARGET 18: Reduce harmful incentives by at least \$500 billion per year, and scale up positive incentives for biodiversity

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least \$500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

TARGET 19: Mobilize \$200 billion per year for biodiversity from all sources, including \$30 billion through international finance

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by:

- (a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030;

- (b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;
- (c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;
- (d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;
- (e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;
- (f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;
- (g) Enhancing the effectiveness, efficiency and transparency of resource provision and use;

TARGET 20: Strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

TARGET 21: Ensure that knowledge is available and accessible to guide biodiversity action

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.

TARGET 22: Ensure participation in decision-making and access to justice and information related to biodiversity for all

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

TARGET 23: Ensure gender equality and a gender-responsive approach for biodiversity action

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

Appendix 4. Summary of SWT response to Land Use Framework consultation, Jan-Apr 2025

By email to: landuseconsultation@defra.gov.uk

Formal response from the Surrey Wildlife Trust, submitted 25/04/2025.

To whom it may concern:

"We welcome the aspiration as outlined in your Foreword. For too long Town & Country Planning has struggled to balance the equally important but competing societal needs required from the ultimately finite extent of available land in the UK, England, and as epitomised here in Surrey.

At 'A long-term view of land use change', you observe "England's total land area,.. 67% of England's land is agricultural, made up of 38% arable land and 29% grassland...". Surrey's contribution to this is a mere 5.6% in arable, plus a more comparable 26% grassland. In Surrey however, a not insubstantial proportion of land in 'permanent pasture' has for long held no practical agricultural function, being subject simply to the minimum annual maintenance to claim (formerly) Basic Farm Payment... In 2014 around 250ha of former arable land was bought by the Woodland Trust to plant the Langley Vale WW1 Centenary Wood, which further illustrates the declining stake held by Surrey's farmers as claimants for time-honoured 'food providers to the realm'. The Land Use Analytical Annex states that woodlands cover 10.2% of England, but 'leafy' Surrey is blessed with c.25% of its area in woodland, 21% of which is native broadleaved. Much is neglected or long forgotten as a silvicultural asset, however.

We know that equestrian husbandry will form a highly significant land use in Surrey (no statistic available), and a proportion of the kind of fields described above will at least be occasionally used for rented livery, while more is used to grow and harvest winter [forage]... Some 3% of Surrey's area is taken up by golf courses – their most significant total cover in England. Former agricultural land was sold and re-purposed to accommodate these, but their temporary, perhaps ill-advised popularity has either waned or the market long become saturated, and we are now seeing several courses in closure having been declared bankrupt. ..these will likely be viewed now as 'previously developed' with a default outcome for re-development. They could of course also present perfect opportunities for fusing a retention of informal public recreation with nature recovery and related climate resilience... The Surrey Hills, one of the oldest National Landscapes (first established as an Area of Outstanding Natural Beauty in 1958), is well-evidenced to be the most visited by non-residents for informal recreational pursuits. Our highways infrastructure has continued to host Olympic-style cycle-sporting events long after London 2012, while fascinatingly, we host more miles of motorway and dualled trunk road proportional to our area than any other English county.

And yet despite all this, Surrey has managed to retain most of its vernacular biodiversity, which was always uniquely rich for a relatively small, inland county. Although a report published by the Surrey Nature Partnership in 2017 provides evidence for some 12% of this having been lost (ie. locally extinct), with a further 21% threatened or in long-term decline, our biodiversity remains the envy of many other counties, especially for its specialist plants and animals of lowland heathland and ancient woodlands.

All these statistics point towards a uniquely atypical county in terms of its land use, even in our regional South-Eastern context, with a vast intrinsic wealth invested in its cultural ecosystem services that are quite fundamental to the local economy. So, in terms of its land use and the uneasy tensions long arguing for or against any scale of change, it might be considered that Surrey has unintentionally reverted to a state of anachronism; but one where its clearly important, economically existential natural assets are continually under threat from urbanisation and all its negative impacts, both perceived and real.

If nothing else, this summary of the Surrey situation supports a conclusion that it will be of paramount importance to closely observe, and respect, the extreme regional and local differences in comparative land uses when developing the national Land Use Framework. It will also be important to adequately consider the indirect but far-reaching, blighting effects of land use change, especially from rural to urban,

that are not particularly well understood in terms of their informal recreational impacts on the natural environment, including illegal waste disposal, poor air quality, noise and lighting disturbance, and both wilful and accidental arson, etc. Both as the Trust and via the Surrey Nature Partnership, we have undertaken significant research into the relative socio-economic worth of our Natural Capital assets, including the recreational use and value of our woodlands. Much of this has been co-funded by the then-active Local Enterprise Partnerships of relevance (Coast-to-Capital) and more recently, the various Natural Capital investment programme funding opportunities.”

Detailed responses to the Land Use Consultation questions 4-24:

Question 4: What are the policies, incentives and other changes that are needed to support decision makers in the agricultural sector to deliver this scale of land use change, while considering the importance of food production?

Firstly, it is important to state that we are only indirectly part of the agricultural sector, in that we do own and manage livestock devoted to conservation grazing across our estate, that is culled with the resultant meat being marketed. The simplistic and obvious answer to this question is through significant financial rewards for producing food in a way that benefits the local environment and biodiversity, whilst reciprocally disincentivising practices that harm it. However, it is difficult to see what might offer fresh incentives to change a widely embedded inertia when engaging with landowners to re-purpose their non-productive agricultural land for meaningful biodiversity habitat. Their confidence in the offer of genuinely competitive returns from nature markets will obviously be key. The essentially temporary (eg. BNG’s 30-year minimum) change-of-use commitment must be emphasised here, but incentives to continue projects beyond this must certainly be available. Taxation relief on income derived from nature markets could be considered. Government subsidised (wholly or part-claimable) land management advice for nature recovery, as well as its available incentivisation (including Green Financial advice), could also be considered. Use of exemplary, relatable project case-studies in promotion of incentives should be considered.

Question 5: How could Government support more land managers to implement multifunctional land uses that deliver a wider range of benefits, such as agroforestry systems with trees within pasture or arable fields?

Again, tax incentives to nature market suppliers, brokers and advisers; subsidised advice and capital costs.

Question 6: What should the Government consider in identifying suitable locations for spatially targeted incentives?

For nature recovery, the aggregated presence of static, unproductive agricultural management systems. Also, within National Parks and National Landscapes, and other marginally ‘difficult’ (compromised) farming locations, such as floodplains, downland and naturally nutrient-starved landscapes. Areas where the enhancement and maintenance of a naturally connected infrastructure will deliver the most benefits in the form of public goods.

Question 7: What approach(es) could most effectively support land managers and the agricultural sector to steer land use changes to where they can deliver greater potential benefits and lower trade-offs?

Again, tax incentives to collaborators in nature markets; claimable (subsidised) land management/green financial advice and capital costs.

Question 8: In addition to promoting multifunctional land uses and spatially targeting land use change incentives, what more could be done by Government or others to reduce the risk that we displace more food production and environmental impacts abroad? Please give details for your answer.

- Monitoring land use change or production on agricultural land;
- Accounting for displaced food production impacts in project appraisals;
- **Protecting the best agricultural land from permanent land use changes;**
- **Other (please specify)**

This would seem the most effective way of ensuring that the best suited land is adequately protected from change. Secondly, by providing more support to those farmers pursuing eg. regenerative farming and other innovations to increase productive landscapes, which are also providing nature recovery. We would also add that the food accreditation system must be overhauled to take into account the true environmental cost of imported food; and that this is made maximally visible to consumers.

*[*We welcome your intention to publish a call for evidence on further opportunities to increase private investment into nature from economic sectors who impact upon or benefit from our shared natural capital.]*

Question 9: What should Government consider in increasing private investment towards appropriate land use changes?

Taxation relief and exemption, especially for specialist, charitable suppliers of nature recovery. Seed-corn state investment to support such landowners and managers willing to be early adopters of these market opportunities. Consistency of policy to build confidence on the part of private investors. Furthermore, incentives to build capacity across the supply chain are required to deliver private investment that will change land use for nature recovery at scale.

[Comment]: “Our Protected Landscapes (National Parks and National Landscapes) cover nearly a quarter of England’s land area and include half of our priority habitats and SSSIs ..are also working landscapes reflecting generations of farming systems.” It would be more important to emphasise their inherent proportion of poor, non-high quality agricultural land, that could be essentially expendable from national food production.]

Question 10: What changes are needed to accelerate 30by30 delivery, including by enabling Protected Landscapes to contribute more? Please provide any specific suggestions.

- Strengthened Protected Landscapes legislation (around governance and regulations or duties on key actors) with a greater focus on nature
- Tools: such as greater alignment of existing Defra schemes with the 30by30 criteria
- **Resources: such as funding or guidance for those managing Protected Landscapes for nature**

**Natural England must be properly resourced and re-energised to meet scale of what’s required.*

- **Other (please specify):** *Both carrot-&-stick incentives to force marginal farmers into serious, meaningful nature recovery within Protected Landscapes.*

Question 11: What approaches could cost-effectively support nature and food production in urban landscapes and on land managed for recreation?

Firstly, urban land use is officially at 17% in Surrey, ie. 2% over the 15% national cover described in the Analytical Annex (as in 2011). One of the most frustrating problems for nature reserve management in peri-urban and wholly urban situations is the inability to deploy conservation grazing. This is prohibited largely due to the presence of dog walkers, including commercially, that are unable to keep their dogs under adequate control. Enforcing even selective bans is difficult, and certainly not priority meriting assistance from the police. This is equally a problem for peri-urban livestock farming and is the cause of much tension where public rights of way provide access to fields. Elevating the importance of this, including provision of whatever powers Government feels able to transfer to landowners to confront this problem would be very welcome. The planting of community orchards and provision of adequate allotment land is also key here, both seated in the efficient planning of green infrastructure. Much of this provision could be required via the planning control system.

Question 12: How can Government ensure that development and infrastructure spatial plans take advantage of potential co-benefits and manage trade-offs?

Through enabling a more joined-up planning system. Presently agencies with varied essential responsibilities become involved in planning applications in the same public consultation timeframe as anyone else. Clearly this is too late to be able to realistically offer suggestions for strategic co-location opportunities. Pre-application discussions should be adequately resourced to enable this, or better still the new proposals for spatial planning should offer better coordination in this respect.

Question 13: How can local authorities and Government take better account of land use opportunities in transport planning?

New road infrastructure can often isolate parcels of land that then become unfeasible for continuing agriculture. Any such land should be used for nature recovery. Road surface run-off control should offer reedbed filtration systems, to benefit wetland biodiversity. Highways verges, central reservations, roundabouts and gyratories can all offer opportunities for nature recovery, through adjustments to their maintenance regimes. Options include whether to support woodland/street trees, or species-rich grassland, or a combination of both... Then there will be opportunities to construct new over/under-passes and bridges, offering the possibility for incorporating features to benefit wildlife passage and habitation as ‘green bridges’. Some existing infrastructure can be retrofitted with such features. Rail line-sides can be maintained under similar principles.

Question 14: How can Government support closer coordination across plans and strategies for different sectors and outcomes at the local and regional level?

The publication of this first round of LNRS comes at an unfortunate time within a key sector that is responsible for the cohesion of relatable/related plans across regions and sub-regions – that of local government (as the majority of responsible and supporting authorities). It is a very difficult time to ensure the cohesion of local plans, strategies and the delegation of responsibilities for delivery, when the structure of local government is to be reduced in resource by way of a consolidation (“devolution”), or at best rationalised to the same end. A positive suggestion here might be a requirement for responsible authorities to employ a local LNRS partnership co-ordinator role, statutorily funded perhaps via Local Nature Partnerships. Or the role could be fundamentally as a civil servant, perhaps line-managed out of Natural England, but with a clear remit for service delivery to all/any partner implicated by the published LNRS. Several LNRS-focused regional collaboratives are emerging currently, and this role might also have a regional remit.

Question 15: Would including additional major landowners and land managers in the Adaptation Reporting Power process (see above) support adaptation knowledge sharing? Please give any reasons or alternative suggestions [**Yes** / No / I don’t know]

Yes, of course it would. It would also give sharper teeth to the Climate Change Act. Their increased buy-in to their business dependencies would act as leverage for multiple other desirable outcomes, including investing in nature-based solutions as part of nature markets. A ‘lowland peatland code’ appears to have been overlooked as an incentive mechanism for sequestration initiatives (peatlands appear to be the sole domain of the uplands within Defra).

Question 16: Below is a list of activities the Government could implement to support landowners, land managers, and communities to understand and prepare for the impacts of climate change. Please select the activities you think should be prioritised and give any reasons for your answer, or specific approaches you would like to see.

• **Other** (please specify). **Reprising the SFI would obviously help here, but also a review of the entire agri-environment regime to explicitly address future habitat resilience to climate change, and for climate adaptation etc.*

Question 17: What changes to how Government’s spatial data is presented or shared could increase its value in decision making and make it more accessible?

- Updating existing Government tools, apps, portals or websites; • Changes to support use through private sector tools, apps or websites; • **Bringing data from different sectors together into common portals or maps**; **Greater trust is required in the data generated from beyond government. It is actually government data that is the least trustworthy on the part of non-government bodies.*
- **Increasing consistency across spatial and land datasets**; • **More explanation or support for using existing tools, apps or websites**; **Too many ‘toolkits’ are produced in expectation that they represent a panacea problem-solver, without sufficient support/back-up for their intended users.*

Question 18: What improvements could be made to how spatial data is captured, managed, or used to support land use decisions in the following sectors? Please give any reasons for your answer or specific suggestions. • Development and planning: such as environmental survey data; • Farming: such as supply chain data and carbon or nature baseline measurements; • **Environment and forestry: such as local and volunteer-collected environmental records**; **It is well-known that the government-held (Defra family) data on eg. wildlife habitats and species distribution is certainly not the best available... An example is the lack of the geographical location, and even minimal selection attributes, of the Local Wildlife Sites in most counties. A full and honest confessional on these matters is well overdue; there is blame across all quarters of the biodiversity sector for this perpetual disconnect to free-flow of available data. An entrenched resistance to sharing by the generators of data, and the unrealistic expectations of its compilers and managers are both involved, as well as insufficient recovery funding from the business models of these manager-bodies.* • **Recreation and access**: such as accessible land and route data; • Government-published land and agricultural statistics.

To ensure that the Agricultural Land Classification system supports effective land use planning decisions, Government is considering: • Updating the ALC system, including the underlying data and methodologies, to ensure that land quality data is accurate and comprehensive; • Enhancing the availability and accessibility of ALC data, including through improved mapping and databases; • Improving guidance on ALC surveys and the use of ALC grades in local planning policies.”

Question 19: What improvements are needed to the quality, availability and accessibility of ALC data to support effective land use decisions?

Their accuracy and resolution – at least in respect of field parcel level (even if this requires theoretical disaggregation and ‘GIS clipping’). Perhaps a modern fit-for-purpose take on actual land profitability, given evolved reliance on and requirements for agricultural inputs etc.; and therefore a refreshed realism in terms of agricultural sustainability.

For HM Land Registry, we want to do this by making more data free to access, with plans to change the structure of their fees. These proposals will explore options to increase transparency of land and property data to support innovation and enable citizen participation in co-design of land use policy.

Question 20: Which sources of spatial data should Government consider making free or easier to access, including via open licensing, to increase their potential benefit?

All of it. If the data has been generated or commissioned by the State, it should be open to all, on principle. Confidentiality around essentially private data is a further matter. There needs to be a full and frank parliamentary discussion on this. If landowners desire an involvement in such an important subject as the alternative uses our Sovereign territory can and should be put to, then their formal involvement in this arguably cannot and should not remain anonymous. Similarly, if landowners expect to be able to receive state (public) funds as incentives/rewards/compensation for certain land-uses or changes in land-use, again they cannot reasonably expect to remain anonymous.

Question 21: What gaps in land management capacity or skills do you anticipate as part of the land use transition? Please include any suggestions to address these gaps. • Development and planning; • Farming; • Environment and forestry; • Recreation and access; • **Other** (please specify). **UK ecology and biodiversity conservation; habitat restoration for priority species conservation.*

Question 22: How could the sharing of best practice in innovative land use practices and management be improved?

Clear, concise and consistent web-hosting of exemplary case-studies, including protagonists' contact details.

Question 23: Should a Land Use Framework for England be updated periodically, and if so, how frequently should this occur?

• Yes, every 5 years; • Yes, every 3 years; • **Yes, another frequency or approach.** Please provide details. *It should be reviewed and updated as necessary and in response to global, regional and local influences and issues. Even 5 years seems too frequent for this, however, especially given the current state of the resources of the civil service, and the rumoured prospects for it in the future.*

“Government will consider how best to co-ordinate and provide:

• A strategic oversight function to ensure the right information and policy is in place to enable delivery against a long-term land use vision; • A cross-governmental spatial analysis function to produce evidence-based advice on strategic implications across different demands on land; • Processes to embed land use considerations in strategic Government decisions; • Open policy-making processes in collaboration with research organisations.”

Question 24: To what extent do you agree or disagree with the proposed areas above? Please include comments or suggestions with your answer. [**Strongly agree** / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know.]

Who could disagree with these proposals? Government departments will need to be adequately resourced to undertake this consistently, professionally and openly, and by soliciting full collaboration of stakeholders and others best-placed to advise on certain crucial considerations around evidence.

Annex (our comments):

- **Figure 5:** Re. your map showing the locations where peat restoration could occur across England. This does not indicate the considerable peatlands within valley mires ('Lowland fen') present on many Lowland heaths; not even that in the New Forest, the Poole Basin, or here in Surrey.
- Re. **Methodology** Box 5: Systems analysis and research: “We received 529 responses,... resulting in an overall response rate of around 18%. Whilst the responses were not necessarily a representative sample...” *We would respectfully suggest that this is something of an understatement - 18% is certainly neither a good return nor to be considered therefore representative.*

Thank you again for this opportunity to comment on your proposals for the scope of the national Land Use Framework.

[signed]

for Sarah Jane Chimbwandira, Chief Executive Officer



Surrey
Wildlife Trust

A RE-WILDING CASE FOR SURREY: FINDING THE LOCAL ECOLOGICAL 'SWEET-SPOT'

Mike Waite, Director of Research & Monitoring

Registered Charity No. 208123

www.surreywildlifetrust.org

Cover photographic credit: Jon Hawkins, Surrey Hills Photography

Reference: Waite, M. (2026), A Re-wilding Case For Surrey: Finding The Local Ecological 'Sweet-spot'.

