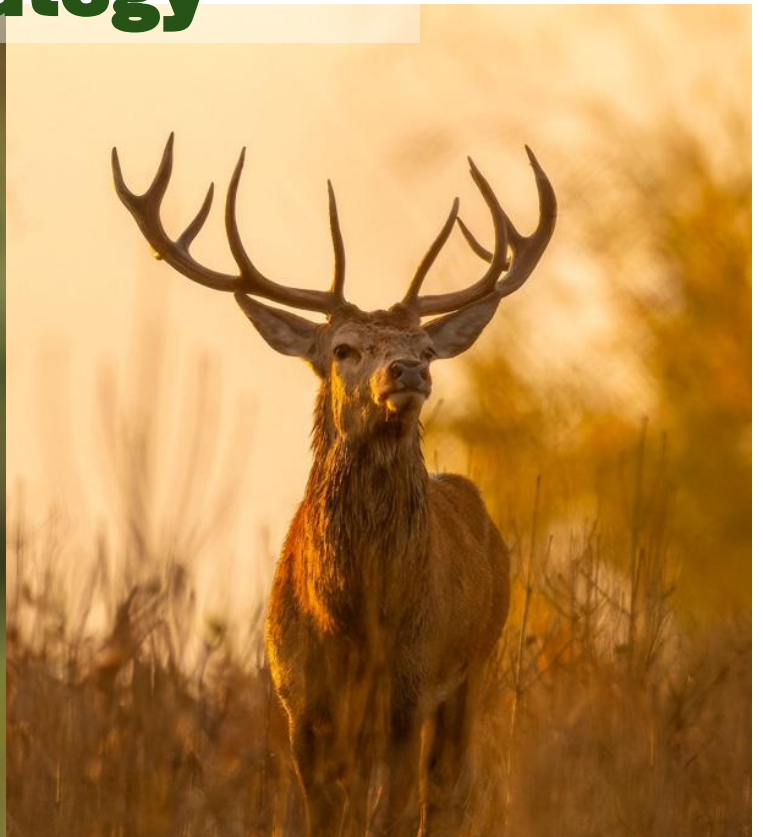




Surrey
Wildlife Trust



Species Reintroductions Strategy



July 2026

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Surrey Wildlife Trust: Species Reintroductions Strategy

1. Introduction

Unless it is globally extinct the possibility has always existed for directly returning a species to its perceived¹ former area of occupation, but the enthusiasm for this would never seem to be quite so strong as now. Driving this popularity are several factors: the state of the global ecological 'crisis' is one, and the examples shown by several successful high-profile projects is another, often without the clear blessing of the appropriate regulatory authorities. The emergence of key new legislation and policy directives that now require nature's recovery - not simply to stop further losses, also plays a role.

The appetite for species reintroductions is also intrinsically associated with the concept of 'rewilding' and the limited intervention in land management that this implies². Instead, revived ecosystem function would replace human intervention, but this requires a reasonably full complement of keystone 'player' species, many of which have long been absent from the system in question and must be returned. Moreover, a re-wilding approach can relatively quickly restore the habitat conditions at the required scale for a successful reintroduction of locally extinct species. Re-wilding has also captured its own zeitgeist, again inspired by an increasing number of successful examples, especially here in the UK where we are something of a late starter in the European context. An appealing element to re-wilding is the relative lack of funding required, compared with conventional nature conservation management and the related obligations on owners of statutory protected sites. With the present hiatus in state agricultural subsidy, land is increasingly likely to be taken out of production and given new purpose, hopefully involving nature recovery. The steady emergence of nature markets in the form of land or habitat banks, offers further incentive in this, although a fully rewilded approach is an unlikely objective in this case.

Surrey Wildlife Trust is the county's primary environmental NGO operating to a wholly Surrey remit. Our membership expects us to remain contemporary with current thinking in nature conservation, and to take full advantage of the opportunities on offer. We are already involved in several conceptual reintroduction projects, and **this strategy is necessary to fully explore the expectations, practicalities and various options available to us, and to set out our intended approach going forwards**³. We will be a key player in implementing Surrey's Local Nature Recovery Strategy (LNRS) - 'Surrey Nature Recovery'⁴, which requires a short-list of species to be prioritised for urgent conservation action. A number of these will require reintroduction to former sites, either to regain a species that is presently extinct within the county, or where there is now only a single remaining population in Surrey. The *State of Surrey's Nature*⁵ (Surrey Nature Partnership 2017) listed some 486 native Surrey species, or an estimated 12% of the total species sample analysed, that could now be locally extinct.

¹ As opposed to 'evidenced'. Species distributions as indicated strictly by historic records can be at odds with the extent of former suitable habitat. Other factors are involved in limiting a species' distribution; dynamism in presence of potential competitors, degree of isolation, stage of occupation (inc. possible 'relict' status), etc.

² See; Rewilding Britain (<https://www.rewildingbritain.org.uk/>) & Rewilding Europe (<https://rewildingeurope.com/what-is-rewilding/>)

³ And see; *A Re-wilding Case for Surrey: Finding the Local Ecological 'Sweet-spot'*: Surrey Wildlife Trust, 2026

⁴ See; <https://www.surreycc.gov.uk/land-planning-and-development/local-nature-recovery-strategy-lnrs>

⁵ See; https://surreynaturepartnership.org/wp-content/uploads/2014/11/state-of-surreys-nature_web.pdf

2. Theory & justification

2.1 Biodiversity and ecosystem function

As a first principle, nature conservation has traditionally sought to preserve biodiversity - the full diversity of biological life - at all costs, in something akin to the Hippocratic Oath sworn by human health professionals. To this aim, the easiest way to quantify biodiversity is by viewing the relevant units as full species, although the Convention on Biological Diversity (CBD) definition also includes the variability within species (inc. recognised sub-species, biogeographic races and clinal ecotypes); between species (full species and hybrids); and indeed, of the ecosystems formed by these assemblages of lifeforms.

However you choose to measure it, the biodiversity of a place is not static. Rather it is in a continuous state of flux, and this may change infinitesimally slowly or relatively quickly, depending largely on an ecosystem's stage in its natural succession. In theory, the final climax state of an ecosystem is relatively stable, until something changes among its physical characteristics to take it in another successional direction. The point here is that an ecosystem's biodiversity, in terms of its total sum of species, is likely to be changing quite naturally, confusing the use of any estimated total quantum as a baseline optimum.

Thus, we are immediately faced with the possibility of a basic misconception, which is linked to the fundamental debate concerning the human relationship with the rest of Earth's myriad occupants. Can we view ourselves simply as a natural and conscionable competitor, or are we duty-bound to be interventionist preservers of the natural order? And if the latter, how do we then judge our impact in this?

Perhaps a more indicative role of biodiversity can be assumed from a theoretical relationship with its inherent ecosystem's bio-abundance. At any stage in its succession, the species making up an ecosystem will exist at varied abundances, from the very rare to the ubiquitous, with their importance to the overall health of the ecosystem arguably highest for the naturally most abundant. As the changes caused by an external impact erode the total biomass of the ecosystem, the rarer species disappear first, as there are simply fewer of them. The size of this 'missing' element from the ecosystem's total biodiversity can then provide some indication of the severity of the diminution of the whole. It is bio-abundance that buffers major erosive impacts, and delays the inevitable collapse of an ecosystem. When it is claimed that biodiversity provides ecosystem resilience, this may be true by way of ensuring the availability of potential replacement parts, but it is the red flag signalling the decline in bio-abundance that should really concern us here.

Most ecosystems consist of a complex stratigraphy of trophic layers, each containing multiple species with inter-dependencies of their own and with a cumulative intra-regulatory function in total. The rarest species may well owe that rarity to their position on the dependency-spectrum, as for the 'apex' predators in far lower abundance relative to that of their prey. There can be 'keystone' species at any level. These have a significant role to play in the stability of the system, be it in the generation of multi-functional, physical habitat features, or a crucial, super-regulatory function over potentially over-exploitative elements of the system (see **Box 1**). We see an example of this in the present abundance of deer populations in the UK, with no predatory pressure from long-eradicated Wolves, Lynx, Brown

Bears and Eagle-owls. Even the former impact of hunting by humans on native deer is vastly diminished from its historic zenith in earlier times.

Box 1. Examples of 'Keystone species' include:

Eurasian Beaver *Castor fiber*. The Beaver was wiped-out in the British Isles in around the 14th century, through over-exploitation. This large rodent is wholly aquatic, living in rivers and in-line waterbodies on a largely vegetarian diet. Beavers live in family 'lodges' that they construct from living and dead wood, both collected and generated by their own volition. These lodges and attendant, cumulative disturbance of bank-side woody vegetation can, over time, block and cause significant diversions within river systems, simulating the desirable outcomes of artificial dams installed as flood protection features.

Wild Boar *Sus scrofa*. Were similarly hunted to extinction in Britain, by around the late 16th century. They exist in extended family groups and were a ubiquitous, adaptable, omnivorous mammal that was once common in all forested habitats, where they had an important ground-disturbance role when foraging for buried fruits, nuts, tubers, fungi, earthworms and other invertebrate life-stages, as well as nesting vertebrates. This would have had an extensive and essential soil aeration, horizon-mixing and re-burying role on the woodland floor, essential to ecosystem function.

Wood Ant *Formica rufa*. This and related species can be very common in lower pH mixed woodland and open heathland habitats, where they can assemble large nest-colonies of up to 0.5 million individuals. Colonies can also be inter-linked. These ants are both carnivorous and indirectly nectivorous. Their claim to keystone importance is both physical and regulatory in that nest construction re-distributes many fruits and seeds, while the cumulative predation of so many worker ants exerts significant but essential regulatory pressure on other invertebrates lower in the food-chain. In turn, certain specialised predators can be partially dependent on them, including woodpeckers and Badgers.

Wild Horses *Equus* species. In pre-history herds of wild horse species, genetically closest to the Tarpan and still extant Przewalski's Horse, are here representative of the collective grazing and browsing pressure (together with deer, wild cattle and Bison) applied by large herbivorous vertebrates on forested, and more open habitats that were at least partly of their own making. In Britain this is today reduced to deer only, and locally, feral horses as in the New Forest and on Exmoor. Elsewhere in Eurasia, this pressure was part-responsible for maintenance of the open steppes and semi-deserts, and more significant to us, the ever-shifting boundaries of the wooded-heathland interfaces. Thus, these herbivores had a keystone bio-geographic function over vast areas of the continent.

Alien species introduced by human agency, either by accident or intention can be highly disruptive to ecosystems, where they exist without the natural regulatory associates that would operate in their native ecosystems. They also add to the predatory pressure on their local prey staples and thus compete with native niche equivalents, and may eventually replace them.

For the most part, modern ecosystems in the UK represent such a vast departure from any notion of their pristine state, that attempts to repair complex ecosystem function towards achieving autonomous sustainability by yet more piecemeal human intervention, can be argued as a lost cause. Abandonment to nature and natural processes can thus be viewed as good a strategy as any and, moreover, is far less expensive to implement. In reality, a blended approach between these two extremes is likely to be preferred and finding an appropriate balance for the prevalent circumstances is the purpose of SWT's *Re-wilding Case for Surrey: Finding the Local Ecological Sweet-spot*³ document.

Although we laudably hold the maintenance of biological diversity as sacrosanct, it may also be reasonably assumed that the full complement of species, at least all those contributing within largely the same broad trophic level, must not be of equal necessity for maintaining healthy ecosystem function. Neither will their vulnerability to extinction vary greatly, other than in basic relation to their comparative rarity. That first principle requiring all biodiversity to be preserved is arguably of no more importance than as an aspiring ‘blanket’ warranty, to ensure against any future, as yet unsuspected, implications. Thus, there must also be operating a viscerally anthropogenic, squander-phobic element to this philosophy, that simply views the loss of any currently extant, evolved species to be both emotionally regrettable and ultimately, morally reprehensible.

So finally, there could be added one further justificatory outcome for returning formerly extinct species to Surrey. This might also be as a flagship or banner-waving, engagement opportunity to raise the morale of human society, by showing what can be achieved if we really commit to the cause. And if nothing else, to attempt to address that burdensome sense-of-loss described above, as a means of boosting our mental health and wellbeing.

2.2 Reintroduction: policy & guidance

Government policy promoting species reintroductions includes that within the 25-year Environment Plan (*A Green Future: Our 25 Year Plan to Improve the Environment*⁶), where it explicitly supports reintroduction of native species as key to nature’s recovery:

“We have lost many formerly native species from England - such as the white-tailed eagle, the orange-spotted emerald dragonfly and the beaver. As well as lost species, others, such as the pine marten, fen orchid or hen harrier, are found in only a few sites within their former range. Their reintroduction, when carefully planned and managed, can enrich our natural environment and provide wider benefits for people.”

Natural England has issued specific guidance for planning reintroduction projects; *Reintroductions and other conservation translocations: code and guidance for England* (v1.2 July 2024)⁷. Their document contextualises reintroduction(s) thus;

“Conservation translocations are the deliberate movement and release of plants, animals or fungi into the wild for conservation purposes. This includes reintroductions, which are one type of conservation translocation covered by this code and guidance. Where they are well-planned and executed, conservation translocations can reverse biodiversity declines caused by habitat loss, climate change, or other human influences on the environment.”

The document sub-divides ‘conservation translocations’ into four categories (see **Box 2**) and then sets out its ‘conservation translocation code’ as a series of principles, followed by further detailed guidance.

⁶ See; <https://assets.publishing.service.gov.uk/media/5ab3a67840f0b65bb584297e/25-year-environment-plan.pdf>

⁷ See; https://assets.publishing.service.gov.uk/media/66fd6a1430536cb927482b2d/Reintroductions_and_other_conservation_translocations_code_and_guidance_for_England_v1.2.pdf

Box 2.

Population restoration (conservation translocations within a species' natural range).

- i) Reinforcement (additional individuals to an existing population);
- ii) Reintroduction (translocation of a species to areas from which it has been lost).

Conservation introduction (conservation translocations outside the species' natural range).

- iii) Assisted colonisation (translocation to benefit a species' conservation status – eg. to where the current/future conditions are more suitable than those within the current natural range);
- iv) Ecological replacement (for the purpose of performing a specific ecological function lost through extinction).

The longer-standing set of international guidelines are those published by the International Union for the Conservation of Nature (IUCN). The IUCN is an international organisation working in the field of nature conservation and sustainable use of natural resources, founded in 1948. It has observer and consultative status at the United Nations, and plays a role in the implementation of several international conventions on nature conservation and biodiversity.

The IUCN guidelines define reintroduction as aiming; *"..to establish a viable, free-ranging population in the wild, of a species, sub-species or race, that has become globally or locally extinct, or been extirpated, from the wild. It should be re-introduced within the species' former natural habitat & range and should require minimal long-term management."* The purpose of which should be *"..to enhance the long-term survival of a species; to re-establish a keystone species to its ecosystem; to maintain and/or restore natural biodiversity; to provide long-term economic benefits to the local/national economy; to promote conservation awareness, or ideally as a combination of these."*

The IUCN guidelines categorise re-introduction (note hyphen) as follows;

- **Re-introduction:** An attempt to establish a species in an area which was once part of its historical range, but from which it has been extirpated or become extinct.
- **Translocation:** a deliberate & mediated movement of wild individuals to an existing population of conspecifics.
- **Re-enforcement/Supplementation:** addition of individuals to an existing population of conspecifics.
- **Conservation/Benign Introduction:** an attempt to establish a species, for the purpose of conservation, outside its recorded distribution but within an appropriate habitat and biogeographical area. This is a feasible conservation procedure only when there is no remaining area left within a species' historic range.

Paramount here, **is the need to control perceptions of translocation as a regular and standard conservation solution**, that could undermine the protection of a species' original habitat and the site(s) where that habitat occurs, at all costs as the first line of defence in preventing a species' extinction in the wild. To this effect, it should always be reiterated that any type of (re)introduction has a poor record of long-term success. Initial impressions may well be encouraging, but far too often ongoing monitoring reveals an inclination for the inevitability of a gradual decline of the re-established population, requiring subsequent releases to extend the duration of the project. That is not to say that there have been many perceived high-profile 'successes' globally; but only time can tell how genuine these will be.

Salient recommendations emerging from this compiled guidance include:

- i. A reintroduction must be fully **justified**, against criteria that eliminate all other intervention options as likely to fail to achieve adequate conservation of the species.
- ii. **Translocations** at least, should be seen as a **strategy of last resort**, when all means of conserving the population *in situ* are exhausted.
- iii. Attempts to establish **artificial range extensions** should be similarly cautioned.
- iv. All projects should be **thoroughly costed** (including their monitoring) and the procurement of necessary resources should be assured, prior to starting.

2.3 Anthropogenic motivations vs. justified guidelines

The literature contains both overt and inversely expressed caution against reintroduction projects that in all conscience can only be justified ingenuously, if indeed using the above criteria at all; and as such are basically anthropogenically motivated. Criticism for such projects can generate tensions within the conservation sector, which can then undermine the sector's credibility both within and externally. A feature of projects of tenuous or only marginal justification is that their promoters often do not advocate for support, are essentially self-financed and may largely be indifferent as to the opinion of their peers. Conversely, and even in tacit support of such attitudes, provided all the legal issues are observed these projects are achieving implementation within a sector that can be notorious for its prevarication and risk aversion, that is often symptomatic of an undue hyper-sensitivity.

There are circumstances when agencies are genuinely placed in a dilemma as to the best action to take, including for example, following welfare interventions when rehabilitation of wild animals becomes necessary. Remarkably, there are very few legal restrictions associated with this, beyond those that prohibit the release of non-native *Wildlife & Countryside Act* 1981 (as amended) Schedule 9 species; and an insistence on observing all normal assumptions regarding landowner permission. Here, responsible actors must consider what in effect could be viewed as a 'reinforcement translocation': is the species already present on the release site, and could there be territorial stresses for the current occupants from the release? Might there be additional predatory pressure on a sensitive local prey species? There can be significant genetic variation within populations of the same species across their range, which may even reflect in their behaviour inter-racially. Although genetic diversification of an isolated, in-bred population to enhance declining reproductive success can be an objective of a reinforcement project, conversely the donor individuals for reintroduction projects should on principle, be taken from extant populations geographically local to the extinct population. This is to avoid dilution of racial distinctiveness and also the risk of unpredicted behavioural consequences.

Reintroductions justified as 'ecological replacements', ie. as preferred habitat management solutions, generally attract the least criticism *per se*. and this can, it must be said, forgo all other cautionary reservations. Were a creature to be proposed for reintroduction whose local extinction is so lost in the mists of time as the Beaver, but lacking that species' obvious eco-engineering applications, it would be difficult to justify this purely for conservation reasons alone.

Projects that require specific thought and consideration are those as proposed to establish additional populations on new sites as ‘jeopardy insurance’ introductions. These may be viewed as ‘assisted colonisation’ translocations, but with regard for the strength and expendability of the donor species’ population involved. For some groups (invertebrates, for example) the status data used to justify this type of intervention may be acknowledged as likely to be inaccurate. Nevertheless, the reality of never correcting such inaccuracy may still be enough to recommend the intervention. As species likely to be considered for such will, by definition, be perceived of extreme rarity and possibly legally protected against collection and removal in consequence, the opinion of the regulatory authority (Natural England) must be sought and any reservations there satisfied.

3. Funding implications

Unless reintroduction projects are entirely privately self-funded, or delivered using unconditional donations, they must be funded by externally sought or collaboratively secured resources. Given the Trust’s central mission of nature recovery, our efforts in this regard would always pursue a full cost recovery (but not a profit-making) model.

Seeking external funding immediately introduces complications, commitments and timelines, which must be fully recognised and understood by all parties prior to acceptance. From the outset it is important not to over-promise with your project objectives, to manage funders’ expectations in the event of these not being met. The Trust’s ability to mobilise voluntary effort is a considerable attraction to would-be funders, but this must always be realistically managed and never abused.

A re-wilding approach, that is based around a re-/introduction of keystone species to replace an artificial, resource-heavy management intervention, can of course be cost-saving among its objectives in the long-term. The Trust, however, must approach the concept of ‘re-wilding’ carefully, with this having divisive connotations within the rural community (see **Box 3**). Such interventions typify the aim of extensive conservation grazing; although animal health and welfare costs, and bio-security considerations, are all new overheads to be factored-in. These are less at issue when ‘wild’ grazers are deployed, as for example with the Red Deer on Pirbright Ranges. Far cheaper than hard engineering in the form of sluices and modification to drainage outflows, would be a pair of Beavers delivering a re-wetting function. The Trust has recently commissioned a research report evaluating the cost-benefits of Beavers as generators of ecosystem services⁸, were they to be reintroduced to the River Wey catchment. Funding for the monitoring of time-bound, sponsored projects can often be inadequate, typically ending when the project closes. For obvious reasons, reintroduction projects will require long-term monitoring to be at all sure of their outcomes. In the worst case, project monitoring is omitted altogether – which often happens with rescue translocations of a species from its threatened to a new, ‘safe’ site. Monitoring is often best undertaken by volunteers with specialist knowledge of the species in question, not seeking remuneration and may then become cost-free. But again, such voluntary capacities must never become exploitative.

⁸ Endangered Wildlife OÜ (May, 2026). Eurasian Beaver Valuation, for Surrey Wildlife Trust.

Collaborative projects, where different partners can bring specialist knowledge, advice and experience to the fore, sometimes also with more generous funding capacities, are always to be considered over unilateral action plans, if and when this is appropriate.

Box 3. Re-wilding.

In the UK, especially here in the rural lowlands, re-wilding as a concept can still be a challenging land-use approach that represents a degree of radicalism beyond many traditionalists. Where the rural landscape has been so altered for the longest historical periods, a conscious effort to reverse this hard-won triumph of human endeavour over the elements could be viewed as nothing short of blasphemy. In terms of land ownership, conservative feudalism still reigns across great tracts of the UK, entwined with the hard-baked neophobia this has required. As a result, re-wilding may inevitably be seen as new-fangled, somewhat maverick and as likely belonging to the faddish, younger generations' provocative agenda, through which they must all pass to regain their senses. Presented by this, the Trust must tread carefully, especially in our advocacy role. We will need to listen and be both respectful and diplomatic, but also articulate, pragmatic and honest interpreters of the realities and opportunities offered by nature-based solutions, within a rapidly changing world. If for now this will sometimes require with-holding the titular use of the sensitive term 'rewilding', then so be it.

4. Surrey's biodiversity

Surrey is undoubtedly a biodiverse county, supporting major proportions of the total British lists for many taxonomic groups. The reasons for this include our unique bio-geographic context and related complex underlying geology at the western edge of the Weald. The county's biodiversity is also comparatively well-known, due to a strong tradition of biological recording conducted on the outskirts of the Capital. Despite this, re-discoveries of assumed local extinctions occur on a relatively frequent basis. This of course, is also achievable through a re-colonisation event and in many cases we will never know, although national trends for such species can inform a plausible theory if such a recovery is indeed suspected (see **Figure 1**).

As a working rule-of-thumb, more than casual evidence for local extinction must be required when reintroduction projects are being considered. Given that these above 'renaissance' phenomena could potentially negate the case for reintroduction of a previously assumed, locally extinct species: only the most immobile of species with restricted dispersal attributes, that have largely been extirpated directly through human agency (and not for example by local climatic shifts), ought to be considered for reintroduction. A complex life-history, perhaps involving inter-continental migration, will of course be far riskier to reproduce sustainably compared with that of a typically sedentary, resident species tied to a single habitat type year-round.

Natural and now accelerated, human-induced climate change is a relevant cause of extinction for us within Surrey. Our lowland heathlands, both in the Thames Basin and the Wealden Greensands, feature a significant relict element to their biodiversity, which is already at the limits of climatic tolerance. Ever-rising temperatures and variable rainfall are therefore likely to finally resign many of these species to history.

5. The Trust estate and our advocacy function

At the present time Surrey Wildlife Trust has direct management control over some 5000 ha of land use in Surrey (c.3%). This includes land owned by others, over which we legally retain a management responsibility. The latter estate represents a spectrum of independence in our relative autonomy in management decision-making. Key landowners for whom we manage their land include the Ministry of Defence (MoD) and Surrey County Council (SCC). We also manage some important ex-county land for the MoD in neighbouring Berkshire.

As the leading county eNGO for wildlife conservation, we have a significant advocacy function and agreed purpose, that seeks to influence and professionally advise other landowners and managers within Surrey, and in fact beyond. This capacity is presently organised and delivered primarily through our Nature-based Solutions (NbS) team, our Ecology Services consultancy, and more indirectly through the Ecological Planning Advisory Service (EPAS), and indeed the Environmental Education teams.

This range in management autonomy, ranging from full control to only minor influence and limited implementation, clearly dictates how we might approach our strategic thinking regarding potential reintroduction projects. Many of the sites across this range are Sites of Special Scientific Interest, where Natural England must be consulted prior to any significant intervention. Lastly, the Surrey LNRS is now legally adopted, ratifying certain commitments towards prioritised species recovery by the Trust. These include project leadership for several of the LNRS' selected priority species, and as a significant partner for others.

6. Internal decision-making on species reintroductions

A final decision as to whether to proceed with a proposed species reintroduction project, whether self-initiated or as a collaborative partner, must reside with the Chief Executive Officer. They will have been advised by the most relevant Directors across the Trust Leadership Team (TLT) in an open discussion involving the whole team. The former 'Technical Forum & Conservation Committee', consisting of members from the Land Management, Ecology Services and Research & Monitoring teams, as well as specialist Trustees of Surrey Wildlife Trust, if revived, could be the initial forum to debate candidate projects in depth. Their recommendations might then inform TLT, and ultimately the CEO's final endorsement or otherwise.



Figure 1. The Alder Leaf-beetle *Agelastica alni* was considered extinct in the UK but has since recolonised (first noted in 2004) and is now abundant in Alder woodland throughout Surrey.

7. A potential target species list

As mentioned in the introduction (p.3), Surrey's LNRS has prioritised a list of some 100 species requiring stand-alone actions ('measures') for their recovery. A proportion of these will require various levels of translocations, from a full reintroduction into the county to reinforcements of waning county populations. Taken largely from the LNRS, a following provisional short-list of threatened species, for which the Trust could consider appropriate forms of translocation to promote their recovery in Surrey, is as follows:

		A	B	C	D	E	F
PLANTS							
Ground-pine	<i>Ajuga chamaepitys</i>	ii	EN	EN	S8	●	Ns
Green-winged Orchid	<i>Anacamptis (=Orchis) morio</i>	i/ii	NT	VU			
Downy-fruited Sedge	<i>Carex filiformis</i>	ii					Nr
Deptford Pink	<i>Dianthus armeria</i>	ii/iii	EN	EN	S8	●	Ns
Red Hemp-nettle	<i>Galeopsis angustifolia</i>	iii	CR	CR		●	Ns
Marsh Gentian	<i>Gentiana pneumonanthe</i>	i-iii	NT	NT			Ns
Marsh Clubmoss	<i>Lycopodiella inundata</i>	i/ii	EN	EN		●	Ns
Pillwort	<i>Pilularia globulifera</i>	ii	NT	VU		●	Ns
Lesser Butterfly-orchid	<i>Platanthera bifolia</i>	ii	VU	EN		●	
Small Fleabane	<i>Pulicaria vulgaris</i>	ii	EN	EN	S8	●	Nr
Shepherd's-needle	<i>Scandix pecten-veneris</i>	ii	CR	EN		●	
Rusty Fork-moss	<i>Dicranum spurium</i>	ii	VU			●	Ns
Veilwort/Ribbonwort	<i>Pallavicinia lyellii</i>	ii				●	Ns
INVERTEBRATES							
Great Fox-spider	<i>Alopecosa fabrilis</i>	iii	CR			●	Nr
Duke of Burgundy	<i>Hamearis lucina</i>	ii	VU			●	
Grayling	<i>Hipparchia semele</i>	ii	EN			●	
Silver-studded Blue	<i>Plebejus argus</i>	ii	VU			●	
Large Marsh Grasshopper	<i>Stethophyma grossum</i>	ii	NT			●	Nr
Pondweed Leafhopper	<i>Macrosteles cyane</i>	ii		RDBIn		●	
Red Barbed Ant	<i>Formica rufibarbis</i>	ii		RDB1		●	Nr
Heath Tiger-beetle	<i>Cicindela sylvatica</i>	i/ii	EN			●	Ns
Kugelann's Green Clock	<i>Poecilus (=Pterostichus) kugelanni</i>	ii	NT			●	Nr
Noble Chafer	<i>Gnorimus nobilis</i>	ii	VU			●	Ns
Poplar Leaf-rolling Weevil	<i>Byctiscus populi</i>	ii		RDB3		●	
VERTEBRATES							

Natterjack Toad	<i>Epidalea calamita</i>	i/ii	EN		S5/A4	●	
Smooth Snake	<i>Coronella austriaca</i>	i/ii	EN		S5/A4	●	
Sand Lizard	<i>Lacerta agilis</i>	i/ii	EN		S5/A4	●	
Curlew	<i>Numenius arquatus</i>	ii	EN			●	
Grey Partridge	<i>Perdix perdix</i>	ii	VU			●	
Pine Marten	<i>Martes martes</i>	ii	CR		S5	●	
Water Vole	<i>Arvicola amphibius</i>	ii	EN		S5	●	
Eurasian Beaver	<i>Castor fiber</i>	iv	EX				
European Bison	<i>Bison bonasus</i>	iv	(NT)				
Wild Boar	<i>Sus scrofa</i>	iv	EX		S9		
Konik Pony	<i>Equus ferus ferus</i>	iv	-				
Red Deer	<i>Cervus elaphus</i>	iv					

Column Key:

A = type of translocation (see **Box 2**)

B = IUCN UK Threatened status (**CR**, **EN**, **VU** & **NT**). EX = extinct

C = IUCN England Threatened status (higher plants only)

D = Legal protection for/*against: WCA S5, S8, *S9. Habs Regs A4

E = UK BAP/S.41(SPI)

F = Nationally rare/scarce



Konik ponies conservation grazing in the Netherlands.

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