Surrey Wildlife Trust

Research Prospectus

2026-2027

Red Deer
Jon Hawkins - Surrey Hills Photography

Foreword

I am delighted to introduce this prospectus. It highlighs the importance of continually identifying and implementing key areas of research which support our decision making.

Surrey Wildlife Trust was established over 60 years ago and is a member of the Royal Society of Wildlife Trusts. One of our main objectives as a charity is for the benefit of the public through the advancement of science and natural heritage; to promote research in all branches of nature study and to publish the results.

Now annually reviewed, this prospectus is a significant step forward in meeting this mission objective and follows the publication of our *Research and Monitoring Framework* in 2019.

We know that we're facing complex challenges with ongoing biodiversity and bio-abundance losses as well as the impact of climate change. We also know that the restoration of biodiversity through a range of nature-based solutions is essential to achieve targets such as 30% of land protected and managed for nature by 2030.

In Surrey we have been building our knowledge and evidence base through work such as the State of Surrey's Nature, published in 2017. We know that over a third of species in Surrey are lost or in decline, mirroring the national picture. The role of research in guiding our work to halt and reverse this trend is vital.

Our strategic direction acknowledges that collaboration with a wide range of partners is essential, not only to implement but also to evaluate the interventions we make. This is where our relationships with academic partners and other specialist groups are so vital and this prospectus will encourage even more of these activities.

We look forward to working with you.

Sarah Jane Chimbwandira
CEO, Surrey Wildlife Trust

Introduction

We are committed to finding the long-term solutions to ongoing biodiversity declines in Surrey.


Great Crested Newt

Science is at the heart of our decision-making, and we strive to use sound scientific evidence to inform both our policy and our actions. Building this evidence-base is a continually iterative work-stream, ever growing with advancements in applied science and conservation experience.

As part of this goal, we have signed an agreement to be an '**Evidence Champion**' with **Conservation Evidence** to formally commit to contribute to this process, and use research outcomes to inform both ourselves and others. We are also a key member of **The Wildlife Trusts'** '**Evidence Emergency**' project, which aims to improve the use of research, data and evidence 'in-house' across the federation of Wildlife Trusts.

We are keen to work with external partners to further our collective understanding of the natural world.

Our hope is that the work produced, and the collaborative relationships that develop through this Research Prospectus, will move us closer towards bridging the gap between academia and biodiversity conservation practice.

We are also committed to investing in successor generations of scientists and researchers, and ensuring they are involved in worthwhile and meaningful projects during their secondary and tertiary education.

Through our research placements, we aim to provide vital experience in the sector for young people and help them develop new skills in real-world research, monitoring and conservation work. By working as part of The Wildlife Trusts national movement, there will be ample opportunity for networking to promote future employment prospects.

Conservation Evidence
Providing Evidence to Improve Practice

The Wildlife Trusts have an EVIDENCE EMERGENCY
Let's tackle it, together.


Ecological survey
Surrey Wildlife Trust

Our work with universities

Surrey Wildlife Trust has been working with universities for many years.

We have a close relationship with the University of Surrey, with which we have had a variety of joint endeavours. Most recently, our flagship Space4Nature project is partnered with University of Surrey's Centre for Environment and Sustainability, where we are also hosting two PhD students.

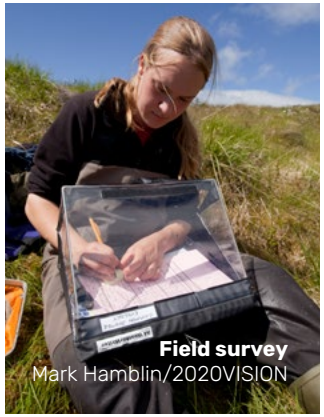
We also work closely with our other local university, Royal Holloway University of London, with whom we have hosted several joint events and many research placements, including one of their academic staff who investigated nature positive behaviour change on a year-long funded fellowship.

Additionally, Imperial College London visits the Trust annually as part of its Environmental Management MSc course, where students receive talks from our various departments and partake in practical conservation experience.

The University of Surrey's Biological Sciences BSc students also join us for similar visits, where they learn about balancing the human and environmental demands on nature reserves.

Since the launch of our first Research Prospectus in 2021, we have continued to build strong relationships with other local universities including the Universities of Kingston, Reading, Sussex, and University College London.

Gathering data
Tom Marshall



Field survey
Mark Hamblin/2020VISION

Past students

Rosa Singh - MSc Ecology, Royal Holloway, University of London

Cultural & demographic differences in conservation engagement

I recently completed my Master's in Ecology at RHUL, where I investigated why people like or dislike certain animals and landscapes and how that can be useful in conservation.

I also investigated the motivations and behaviour of SWT volunteers to see how we could engage even more people, something I hope to do with other Wildlife Trusts in the future!

Alexander Bayley – BSc Biology, University of Southampton

Moth pollination on grazed versus ungrazed chalk grassland

It has been a great experience working with Surrey Wildlife Trust. I loved spending a lot of time in wonderfully biodiverse calcareous grassland reserves, sampling a staggering variety of moth species (62 species).

The results are valuable, as they uncover important research gaps which could have a big impact on current understanding and conservation practice.

This is also the first study to create the first novel live moth pollen sampling method, which should be applied to future Lepidoptera studies aiming to minimise their impact.

Regina Cervantes Ramirez – MSc Environmental Management, Brunel University

Tracking cattle movement to ground truth remote sensed grazing patterns

For my Master's dissertation, I had the opportunity to collaborate with Surrey Wildlife Trust investigating grazing conservation strategies with the use of new technologies such as Virtual Fencing.

One of the reasons for which I chose to work with them was the fact that they had clear vision on where each of their research projects was heading. They also offered support and hands on experience, with examples of previous success cases when collaborating with academia.

Although I was new to the field of zoology and hadn't had much experience in performing spatial analysis, SWT staff were very helpful in advising me which paths I could take to meet the desired goals. Furthermore, they resolved any query that I had and provided all the information that I needed to complete my study, allowing me to expand my knowledge in the use of software like QGIS.

Overall, this experience provided me with a great amount of knowledge and allowed me to connect with other professionals. For that I am greatly appreciative.

Small Fleabane
Mike Waite

Project 1

Reviving Small Fleabane: a restoration project for *Pulicaria vulgaris*

Small Fleabane *Pulicaria vulgaris* is a protected plant species of principal importance, listed under Section 41 of the NERC Act 2006. It has dramatically declined in the UK due to habitat loss and deteriorating conditions of remaining habitats (JNCC, 2019). Once common in south-east England (as the name suggests - *vulgaris* meaning 'common'), this species now survives only in a few locations in Hampshire's New Forest, having disappeared from neighbouring counties over the past 50 years (FWHT, 2013).

It thrives in seasonally-flooded pond margins, track ruts and hollows, and grazed acidic grassland; all habitats that have suffered from reduced management practices associated with the decline of traditional 'commoning' (Lousley, 1976).

In Surrey, Small Fleabane is now believed to be locally extinct, following the failure of several attempts at recovery since its disappearance in the early 2000s, at its last remaining site on Backside Common. This Surrey Wildlife Trust-managed nature reserve is now the focus of a crucial recovery project aimed at reintroducing this plant.

By implementing appropriate site management to revive the seedbank, and conducting ongoing monitoring, there is potential to restore this modest but significant species - serving as a key indicator for the positive management of former common land.

Evidence suggests that Small Fleabane can recover from dormant seed-bank populations, which could provide the basis for an importation and/or ex-situ propagation and reintroduction programme (Chatters et al., 2014). A feasibility study for reintroduction or recovery on other sites would be an important first step in restoring this plant to its former range.

This student project will combine fieldwork and desk-based research, including ecological surveys of Backside Common and potential reintroduction sites. Support will be available for survey work, species identification, and collaboration with other bodies including the Surrey Botanical Society and Plantlife, to offer a hands-on experience in plant conservation and habitat restoration.

KEY REFERENCES

- Chatters, C., McGuire, C., Rand, M. and Sanderson, N. (2014) *Small Fleabane in the New Forest*. Available at: https://www.hlsnewforest.org.uk/app/uploads/sites/3/2018/03/Small_Fleabane_report_140213_Final_Report_CC_CM.pdf
- FWHT (2013) Creating ponds for Small Fleabane *Pulicaria vulgaris* [online]. Available at: https://freshwaterhabitats.org.uk/wp-content/uploads/2013/09/Small-Fleabane-new-logo.pdf
- JNCC (2019). *Report on the Species and Habitat Review (UK BAP) | JNCC Resource Hub*. [online] Available at: https://hub.jncc.gov.uk/assets/bdd8ad64-c247-4b69-ab33-19c2e0d63736

To enquire about this project please contact us at
surreywildlifetrust.org/enquire

Craneflies
Les Binns

Project 2

Exploring cranefly diversity at Bay Pond, Boldermere & Eashing

The craneflies (family *Tipulidae*) are an under-recorded invertebrate group and yet they represent an important ecological indicator of the quality of wetland ecosystems. Relatively little research exists around these insects, but their essential role in the diet of various bird species (Rhymer et al., 2012) is well understood.

As with many insect taxa, recent studies have shown that the phenology and distribution of the *Tipulidae* is likely to be impacted by climate change, which could have trophic impacts on dependent predators (Devlin et al., 2022).

At least two Trust-managed SSSIs (Boldermere at Ockham Common and Bay Pond near Godstone) include important cranefly assemblages within their notified features. A further privately-owned SSSI (Charterhouse to Eashing) located close to a Trust-managed SANG also has this feature.

These sites all support Alder-dominated wet woodland, which is known to be an important habitat for craneflies. However, these assemblages have not been formally re-assessed since the early 1980s. As discussed above, it would be prudent to update our understanding of their present status to establish continuity of their exemplary importance, to effectively help monitor these SSSIs in the coming years under the impacts of climate change.

This project would review the three SSSI datasets; design a suitable monitoring protocol and begin the necessary fieldwork for at least one; and prepare a report summarising findings, with recommendations for conservation management. It would be endorsed by Natural England and conducted with permission from relevant partner landowners (at Bay Pond or Charterhouse to Eashing).

This research project could be an entry into professional entomology for students, and would also boost the flow of much-needed records into the UK Cranefly Recording Scheme.

KEY REFERENCES

- Devlin, J.J., Thomas, R.J., Long, S.E., Boardman, P. and Dupuis, J.R. (2022). Impact of climate change on the elevational and latitudinal distributions of populations of *Tipulidae* (Diptera) in Wales, United Kingdom. *Biological Journal of the Linnean Society*, 137(1), pp.30–46. doi:10.1093/biolinnean/blac079.
- Rhymer, C.M., Devereux, C.L., Denny, M.J.H. and Whittingham, M.J. (2012). Diet of Starling *Sturnus vulgaris* nestlings on farmland: the importance of Tipulidae larvae. Bird Study, 59(4), pp.426–436. doi:10.1080/00063657.2012.725026.
- Stubbs, A.E. (2021). British craneflies. *The British Entomological and Natural History Society*.

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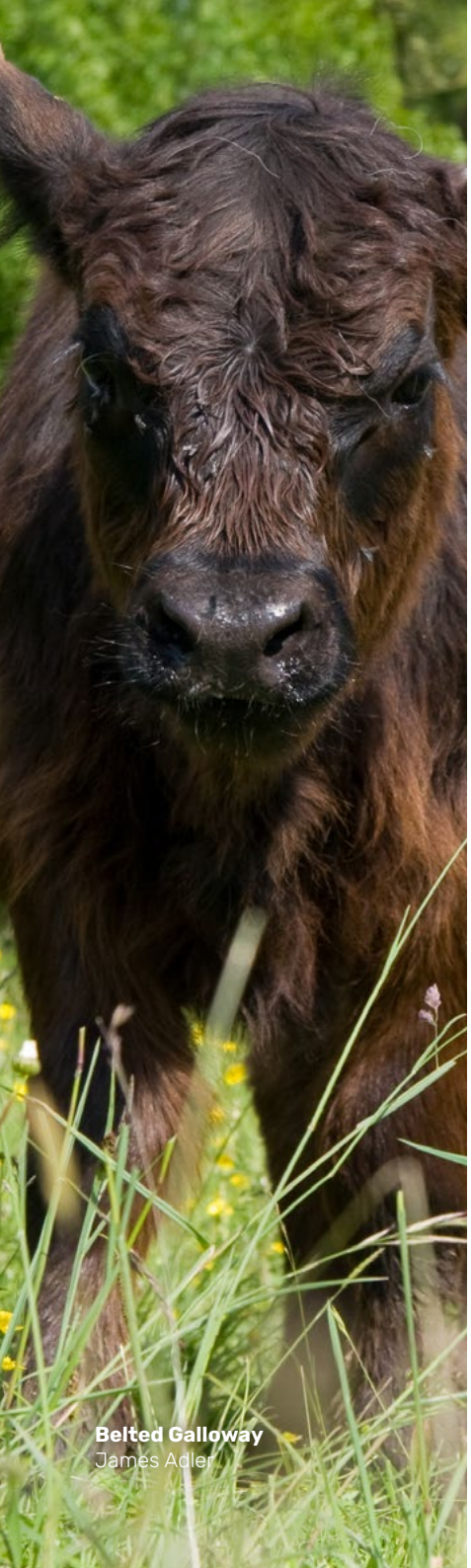

Belted Galloway
James Adler

Project 3

Ecological responses to mixed grazing versus cattle-only grazing on chalk grasslands

The continuity or re-establishment of grazing is vital for the maintenance of open habitats such as heathlands and semi-natural chalk grassland. Much of the flora and fauna that exists within these landscapes now relies on this type of management to survive.

Grazing management significantly influences the health of pasture ecosystems, impacting soil properties, biodiversity, and overall land productivity. While cattle-only grazing is common, mixed grazing-where cattle share the land with other herbivores such as sheep or goats-has been suggested to offer various ecological benefits.

These benefits may include improved soil structure, enhanced nutrient cycling and increased plant species diversity due to the varied grazing habits and dietary preferences of different livestock species (Fraser et al. 2013). Understanding the comparative impacts of mixed grazing versus cattle-only grazing on soil health and floral composition is crucial for developing sustainable land management strategies.

Traditional cattle grazing and worse, intensive liveried horse grazing can lead to issues such as soil compaction, reduced plant diversity, and localized overgrazing, particularly when not managed effectively. Mixed grazing systems, on the other hand, may mitigate some of these issues by promoting more uniform grazing pressure and fostering a more diverse plant community.

However, the effectiveness of mixed grazing compared to cattle-only systems in improving soil health and promoting floral diversity needs further investigation, particularly in different environmental contexts. Much of Surrey's remaining chalk grassland is on steep slopes, so sure-footed animals are a more successful management tool than vehicles.

This project will assess and compare soil health and floral responses in areas subjected to mixed grazing versus those grazed solely by cattle on a suite of chalk grassland sites managed by Surrey Wildlife Trust. The study will involve fieldwork to collect soil samples and conduct plant species surveys. Data from this project will provide insights into the relative benefits of mixed grazing systems and inform best practices for grazing management.

KEY REFERENCES

- Teague, R. and Kreuter, U. (2020). Managing Grazing to Restore Soil Health, Ecosystem Function, and Ecosystem Services. *Frontiers in Sustainable Food Systems*, 4. doi:https://doi.org/10.3389/fsufs.2020.534187.
- Willems, J.H. (1983). Species composition and above ground phytomass in chalk grassland with different management. *Vegetatio*, 52(3), pp.171–180. doi:https://doi.org/10.1007/bf00044994.
- Xu, S., Jagadamma, S. and Rowntree, J. (2018). Response of Grazing Land Soil Health to Management Strategies: A Summary Review. *Sustainability*, 10(12), p.4769. doi:https://doi.org/10.3390/su10124769.

To enquire about this project please contact us at
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Grazing pony
Ross Hoddinott/2020VISION

Project 4

Exploring options for using large herbivores for conservation grazing in Surrey

Large herbivores, such as bison, ponies, cattle and deer, can play a role as "ecosystem engineers" in the environment to restore habitats naturally, and indeed did so in prehistoric Britain prior to their extinction or domestication (Wieren, 1995). The reintroduction of large herbivores into British landscapes has gained momentum in recent years, with projects such as the Wilder Blean run by Kent Wildlife Trust, who introduced a small herd of European Bison into a woodland alongside other herbivores to improve the management of the area (Rewilding Britain, 2025). The use of these animals in modern conservation grazing is still relatively new, and there is a need for researching aspects such as age/sex structures, herd dynamics, grazing periods and mixed herd behaviours.

These animals require large-scale land units to support them, particularly to enable a more 'hands-off' approach to the land management. Surrey is a densely populated county with a lot of development pressure, which inevitably limits the available opportunities for large herbivore introductions. It would be pertinent to understand what areas, if any, of Surrey may be suitable for grazing herds of this nature and which habitats they are comprised of.

Regardless of the outcome, alternatives need exploring to trial other grazing species, compared with alternative sustainable manual land management interventions – and the cost/benefit of these weighed against the use of standard large herbivores.

This project would be a desk-based approach utilising GIS and spatial analysis tools to understand where, and if, large herbivore grazing may be appropriate in Surrey. Support would be provided in accessing appropriate datasets, as well as support with understanding the local context.

KEY REFERENCES

- Van Wieren, S. E. (1995): "The potential role of large herbivores in nature conservation and extensive land use in Europe." *Biological journal of the Linnean Society* 56.suppl_1 11-23.
- Rewilding Britain (2025) *Wilder Blean - Restoring keystone species and ecosystem engineers to one of the UK's largest ancient woodland*. Available at: https://www.rewildingbritain.org.uk/rewilding-projects/wilder-blean

To enquire about this project please contact us at
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Project 5

How can we spark ‘domino effects’ with actions for nature?

One of our key strategic goals in SWT is empowering people to take actions for nature and inspiring nature connection. The most effective way of doing this is to create “domino effects” where a small-scale intervention causes a cascade of positive environmental actions and behaviours on a large scale.

For example, a successful rewilding or conservation project can serve as a catalyst for neighbouring landowners or communities to adopt similar measures, expanding the scope of conservation efforts across a broader landscape.

These strategies promote sustainable environmental practices that, once initiated, can expand through community involvement and policy support, driving a widespread positive impact on biodiversity and ecosystem health.

A fantastic example of this in Surrey is the Bookham Blue Hearts campaign. This community-led project started with the aim of encouraging wildflowers to grow on road verges in the local village and has since spread across the county. People marked areas of their gardens and public spaces with a wooden blue heart to show that it was not being mown. Local communities were engaged through peer-to-peer contact, where neighbours observe and learn from each other’s conservation efforts, which helped to build momentum.

Case studies like Bookham demonstrate how localised successes in habitat restoration or species recovery can inspire nearby areas to replicate these efforts.

This project would analyse which elements helped the Blue Hearts to be so successful, to determine how this effect could be replicated in other areas. This would also help us identify key limiting factors in creating domino effects and how to overcome them.

We can provide a wealth of knowledge about previous projects (successful and unsuccessful) and access to community group contacts to assist with this project.

KEY REFERENCES

- Surrey County Countil (2024) The Blue Campaign - increasing biodiversity in grass verges. Available at: https://www.surreycc.gov.uk/roads-and-transport/roadworks-and-maintenance/trees-grass-and-hedges/grass/the-blue-campaign-increasing-biodiversity-in-grass-verges [Accessed December 2024]

To enquire about this project please contact us at
surreywildlifetrust.org/enquire

Solitary bee
Jon Hawkins - Surrey Hills Photography

Project 6

Understanding charitable giving behaviour in Surrey

The way individuals support charities is evolving, with a shift from focusing on a few select organizations to supporting a diverse range of causes through various methods. This trend poses both a challenge and an opportunity for charities like the Wildlife Trusts, which have traditionally depended on a subscription-based model of support.

The need to adapt to these changing behaviours is becoming increasingly urgent, especially in the context of the ongoing cost of living crisis in the UK. This crisis has significantly impacted many charities, including the Wildlife Trusts, which have experienced a notable rise in membership cancellations. To mitigate this potential loss of income, the Wildlife Trusts are exploring ways to diversify charitable support options and more effectively target potential supporters.

This project aims to explore the following key research questions: How has charitable giving behaviour changed, and what factors are driving these changes? How does charitable giving vary across different demographic groups? Which charitable giving options resonate most with various demographics? Are people more inclined to give one-off donations, make ad hoc contributions, commit to regular donations, or join membership schemes?

The research will involve a combination of desk-based research and surveys targeting various demographic groups within Surrey. Statistical analysis will be used to identify patterns and preferences in charitable giving behaviour. The findings will be instrumental in helping the Wildlife Trusts and similar organizations tailor their outreach and fundraising strategies to better align with the preferences of current and potential supporters.

KEY REFERENCES

- Bekkers, R. and Wiepking, P. (2010). A Literature Review of Empirical Studies of Philanthropy: Eight Mechanisms That Drive Charitable Giving. *Nonprofit and Voluntary Sector Quarterly*, 40(5), pp.924–973. doi:https://doi.org/10.1177/0899764010380927.
- Kessler, J.B. and Milkman, K.L. (2018). Identity in Charitable Giving. *Management Science*, 64(2), pp.845–859. doi:https://doi.org/10.1287/mnsc.2016.2582.
- Bekkers, R. and Wiepking, P. (2011). Who gives? A literature review of predictors of charitable giving Part One: Religion, education, age and socialisation. *Voluntary Sector Review*, 2(3), pp.337–365. doi:https://doi.org/10.1332/204080511x6087712.

To enquire about this project please contact us at
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Campaign supporter
Matthew Roberts

Farming
Paul Harris/2020VISION

Project 7

How does Natural Capital reward good farming practice in England?

We are currently in a biodiversity and climate crisis. Ecosystem services such as production of food and water, climate regulation, nutrient cycling etc. are finite resources that have been increasingly threatened from human activity over the past century.

The quantification of global stocks of these natural assets, termed 'Natural Capital', allows a monetary value to be assigned to them. This is crucial for showing the impact of losing these ecosystem services to the global economy which in turn, incentivises the redirection of funding into nature recovery to mitigate for the economic repercussions of the loss of these natural systems.

Food security is one of the ecosystem services under threat. A recent review of the state of Natural Capital in the UK highlighted loss of cultivated crops, pollinator-dependent crops, and reared animals as significant risks to the UK economy.

The report suggests that these risks can be alleviated through sustainable farming practices such as creating species-rich nature networks within enclosed farmland and increasing the biodiversity of cultivated soils. Using this framing for these among other ecosystem services (e.g. Natural Flood Management) could help farmers attach value to the natural assets found on farmland and source funding to support sustainable agricultural practices.

Surrey Wildlife Trust's Nature-based Solutions team works closely with local farmers to encourage nature-friendly farming practices, and a better understanding of farmer's knowledge and perceptions of Natural Capital would help to support their work.

This project aims to explore farmers' understanding of Natural Capital, and assesses how it can be integrated into farming practices while maintaining business viability. It involves exploring farmer perceptions of Natural Capital, evaluating its integration into farming operations, and developing practical guidelines for implementation.

Additionally, the project could examine the relationship between tenant farmers and Natural Capital assets, exploring incentive structures and collaboration dynamics between landowners.

KEY REFERENCES

- United Nations. (2021). *System of Environmental-Economic Accounting—Ecosystem Accounting (SEEA EA)*. White cover publication, pre-edited text subject to official editing. Available at: https://seea.un.org/ecosystem-accounting.
- Natural England (2024) State of Natural Capital Report for England 2024: Risks to nature and why it matters. *Natural England Research Report*. Available at: https://publications.naturalengland.org.uk/publication/6683489974616064

To enquire about this project please contact us at
surreywildlifetrust.org/enquire

Placement projects

For students who are looking for more short-term, informal work experience opportunities, we offer short placement projects which support our work.

Identifying optimal use of leaky dams for Natural Flood Management

Literature review

'Leaky dams' are becoming a standard Natural Flood Management (NFM) intervention used to impede water flow in streams and rivers, alleviating the risk of downstream flooding. These semi-permeable barriers are designed to mimic natural wood jams, allowing some water to pass through while temporarily holding back the rest, reducing peak flows during heavy rainfall events whilst also enhancing opportunities for nature recovery. However, while leaky dams are effective, this efficiency depends heavily on their number, size, and placement within a catchment area. Over-reliance on leaky dams could lead to unintended consequences such as excessive sediment buildup or waterlogging, whereas insufficient use may not actually provide the predicted flood mitigation. Finding the "sweet spot" between effective NFM and over-engineering is essential for sustainable flood risk management.

Understanding the role of water storage areas in Natural Flood Management

Literature review

Storing water from rainfall events is an important technique in Natural Flood Management (NFM) to limit and slow run-off and mitigate flood risk. These water storage areas will intercept surface run-off and release it slowly over a much longer window of time, through a combination of infiltration into the soil, evaporation and slow release (e.g. through an inbuild pipe structure or dam).

They often trap sediment as well, which can prevent influxes of sediment (which may contain agricultural chemicals) from reaching more ecologically vulnerable areas. This can take a variety of forms, commonly features such as ponds, bunds and scrapes – all of which have secondary benefits providing water for wildlife and habitat for aquatic species. Optimising the placement of these interventions is important to maximise use of space, as is understanding when and where it is appropriate to have 'online' (with an inflow/outflow) or 'offline' (isolated) water storage.

Optimizing hedgerow placement for enhanced Natural Flood Management

Literature review

Hedgerows have long been recognized for their environmental benefits, including supporting biodiversity, soil stabilization and water retention. In recent years, their role in Natural Flood Management (NFM) has gained attention as a means to divert and mitigate downstream flooding, particularly from agricultural and rural landscapes.

Hedgerows can slow surface water flow, increase infiltration and evaporation rates, and reduce soil erosion, thereby helping to manage floodwaters more effectively. However, the effectiveness of hedgerows in flood management greatly depends on their strategic placement within the landscape. Given the increasing frequency of extreme weather events due to climate change, optimizing hedgerow placement is crucial for enhancing flood resilience in vulnerable areas.

Evaluating biodiversity uplift from grazing animal dung for coprophilous invertebrates

Literature review

Grazing with cattle and other herbivorous animals is a common conservation practice, particularly for open habitats such as heathlands and chalk grasslands – which are a key part of Surrey's ecological value. Whilst there are many understood pros and cons to conservation grazing, an aspect which has received less attention is their value for increasing the biodiversity of coprophilous invertebrates (e.g dung beetles), and the related ecological benefits of doing so.

This includes potential ecosystem service uplift from provision of fresh, low-input, pesticide-free dung across the landscape and how these invertebrates may use different host dung. Dung beetles are widely monitored in tropical regions as a good bioindicator group to examine the impacts of human activities, as well as ecosystem functions such as seed dispersal, soil bioturbation and nutrient cycling. It would be useful to understand if they could act as a similarly valuable bioindicator in temperate open habitats, and how the use of conservation grazing may play a role in uplifting biodiversity and bio-abundance of these groups.

Partner opportunities

Surrey Wildlife Trust regularly works with partners who provide research opportunities for undergraduate and postgraduate students.

Surrey Amphibian & Reptile Group (SARG

SARG is a non-profit-making wildlife conservation organisation, based in the United Kingdom's county of Surrey. SARG focuses on the care and preservation of wild, native reptiles and amphibians. SARG was established in 1987 by people with an interest in Surrey's reptiles and amphibians. Surrey is very fortunate in being home to all of the UK's native species of reptiles and amphibians, including the very rare Smooth Snake and Great Crested Newt, and we want to see these creatures thrive in the County.

SARG is a mixture of hobbyists, scientists, and conservationists; amateurs and professionals, committed to sharing knowledge and understanding of these much-misunderstood and endangered animals. They are affiliated to Surrey Wildlife Trust, and form part of the national ARG-UK network. SARG work voluntarily to prevent habitat destruction and resist damaging planning applications. We give advice to residents and organisations, work with schools and educational bodies, and help with numerous "toad-crossing" sites throughout Surrey.

Projects with SARG would be focused on amphibian or reptile conservation; with options to look at rare species ecology and targeted habitat management, use of GIS and modelling approaches to monitor meta-populations and landscape linkages, any many more.

Contact: Jamel Geunioui
jamel@surrey-arg.org.uk

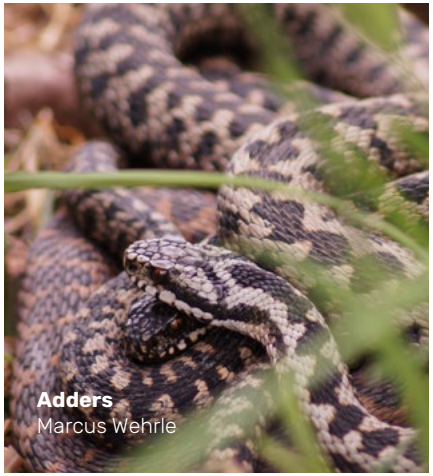
South East River Trust (SERT)

The South East Rivers Trust is a registered environmental charity working to restore and protect rivers across the South East of England. We help rivers thrive — for nature, people, and future generations. Through education, volunteering, and hands-on restoration, we inspire people of all ages to connect with and care for their local rivers.

SERT restores, renaturalises and reconnects rivers, removing barriers to fish migration and enhancing habitats. They work to improve water quality through wetland creation and construct natural flood management measures to protect communities and surrounding land. SERT also works in partnership with a wide range of stakeholders including local government, non-governmental organisations, landowners and businesses. Also, they work with farmers to promote sustainable land and water management ensuring healthy soils, tackling water scarcity, and boosting biodiversity.

Projects with SERT would be focused on freshwater conservation. This can involve investigating habitat management approaches and working with rare species (fish, invertebrates and others), with potential for more advanced scientific methods such as eDNA.

Contact: Josh Bowes
josh.bowes@southeastriverstrust.org



Adders
Marcus Wehrle

Please contact the respective organisations if you are interested in working with them for your project.

Past project examples

Please find a selection of recently-completed projects summarised below.

Exploring the challenges of combining public & private funding for farmers

Elva King (Imperial College London)

The UK Government's 25-Year Environmental Plan highlights the importance of sustainable agriculture in addressing environmental challenges and restoring ecosystems. Yet, the transition to sustainable farming practices is often hindered by financial constraints, as these methods can generate less income for farmers, particularly in the first few years.

Combining public funding schemes, like the Sustainable Farming Incentives (SFI), with private funding mechanisms, such as the Woodland Carbon Code (WCC), could provide a solution. However, the uptake of these combined mechanisms remains low. My research aimed to identify the barriers to combining funding schemes and provide actionable insights to help overcome them.

I conducted an economic analysis on a case study farm in Surrey which calculated the 'Net Present Value of the farm business under different funding scenarios. This allowed me to outline the financial feasibility of integrating SFI and WCC. I then interviewed a range of farmers and agricultural consultants to get a broader understanding of the barriers to combining public and private funding mechanisms.

These included: profitability challenges, scepticism towards carbon markets, administrative complexity, and site-specificity requiring expert advice. Combining public and private funding mechanisms in agriculture is crucial to farm businesses accessing the additional cashflows needed to transition to more sustainable systems. Therefore, it is essential to overcome these barriers, so that sustainable agricultural practices can become more widespread.

I hope this research can support SWT's Nature-based Solutions team in helping farmers navigate these challenges and integrate sustainable practices into their operations. By bridging the gap between public subsidies and private markets, hopefully sustainable agriculture can become more accessible and mainstream in the UK.

Tiny Forests: big solutions for urban biodiversity & community engagement

Parth Pardeshi (University of Surrey)

In recent years, urban areas have faced an increasing number of environmental challenges, including climate change, biodiversity loss, and a disconnection from nature. As cities expand and populations grow, the need for innovative solutions to these pressing issues has become more urgent. One promising approach that has gained traction is the concept of Tiny Forests.

Tiny Forests, also known as Miyawaki forests, are small-scale forests that can fit into spaces as small as a tennis court. Despite their limited size, they can accommodate up to 600 native trees and shrubs, creating rich ecosystems that support diverse flora and fauna.

These micro-forests are increasingly recognized as effective nature-based solutions for combating climate change by acting as a carbon sink and providing habitats for various species that may otherwise struggle to survive in urban environments. Beyond their ecological advantages, Tiny Forests serve as powerful tools for community engagement. As urbanization continues to disconnect people from nature, initiatives like Tiny Forests provide opportunities for individuals to reconnect with their environment.

My research project aimed to assess local perceptions regarding the establishment of Tiny Forests and identify factors influencing community engagement. I used a combination of surveys and interviews to assess their awareness of Tiny Forest projects, perceived benefits associated with these initiatives, willingness to participate in forest activities, and shifts in environmental attitudes post-implementation.

I found that community awareness of Tiny Forest projects is generally high among residents in Surrey. Many participants expressed positive attitudes toward the establishment of these micro-forests due to perceived benefits such as increased biodiversity, improved air quality, and enhanced recreational opportunities.

However, some concerns were raised regarding potential maintenance challenges and the need for ongoing community involvement to ensure long-term success. Addressing these concerns through effective communication strategies will be crucial for fostering sustained engagement among residents.

This research, conducted at Unstead Nature Reserve, underscores the importance of understanding local attitudes toward these initiatives—highlighting how effective communication strategies can empower communities while ensuring sustainable management practices are upheld over time.

Ultimately, embracing nature-based solutions such as Tiny Forests represents an essential step towards achieving resilient cities capable of thriving amidst ongoing environmental changes—ensuring future generations inherit healthy ecosystems filled with diverse flora and fauna.

Optimal conservation prescriptions for agricultural land

Peter Hewetson (Merrist Wood College)

The Wildlife Trusts are working towards the national and international target to move 30% of UK land into management which is beneficial for nature by 2030, as this is viewed as essential to reverse the biodiversity loss and environmental degradation which has taken place over recent decades. Former agricultural land will be a key element of this plan, as it has enormous potential to deliver space for wildlife to flourish, while still benefitting the economy, and being a valued component of a thriving holistic ecosystem.

This project is considering three Suitable Alternative Natural Greenspace (SANG) sites located across Surrey totalling 54 hectares, which previously had agricultural use, but are now managed by Surrey Wildlife Trust for conservation utilising 10 different prescriptions. During summer 2024 ecological surveys have been undertaken gathering primary data on flowering herbaceous plant species and invertebrate pollinators, to consider, species abundance and richness, flower-insect assemblages, and overall biodiversity.

Further research is required to determine the ecological functionality of agricultural land which has recently been restored for conservation, in terms of the improvement of biodiversity. The results of this research could be used to better understand the value of different conservation management regimes, including, mowing, grazing, seed sowing and natural plant succession.

Marbled White
Jim Higham

Dartford Warbler
Jon Hawkins - Surrey Hills Photography

About us

Surrey Wildlife Trust is a wildlife charity and is one of 46 Wildlife Trusts working across the UK

With the invaluable support of volunteers and members, we care for over 60 nature reserves in Surrey. We also work with other organisations and landowners to protect and connect wildlife sites across the county and inspire local communities and young people to care for wildlife where they live.

surreywildlifetrust.org

Cover image: Buff-tailed Bumblebee, Nick Upton/2020VISION

Surrey Wildlife Trust