Wild Ken Hill

Land use model

16th May 2020

Field Woundwort at Wild Ken Hill. Credit: Graeme Lyons

Introduction

Wild Ken Hill, based in west Norfolk, combines rewilding, regenerative agriculture and traditional conservation in a single, radical land use project of around 4,000 acres.

This document seeks to illustrate the Wild Ken Hill 'model', and to explain the benefits of such a model as part of our ongoing commitment to sharing thought leadership on land use, rewilding, and regenerative farming in the UK.

Summary

Land managers face a highly dynamic UK policy environment, which increasingly incorporates Natural Capital and Biodiversity Net Gain principles. But policy must also grow further in response to the significant, interconnected challenges of climate change, biodiversity loss, and public health. In addition, public attitudes toward our natural environment – which were already evolving at a fast pace prior to the outbreak of Covid-19 – are now being comprehensively redefined by the pandemic. The accompanying lockdown measures are also reframing working and living patterns, elements of which will perpetuate into the post-coronavirus era. Overall, these present a significant set of challenges and opportunities for land managers; we believe our Wild Ken Hill project can help in the constructive response to many of these.

We hold a balanced approach to land use. We seek to maximise the benefits derived from the land and water that we manage by employing the most appropriate land choices for different areas of land. In practice, we perform regenerative agriculture on land with high agricultural productivity, we rewild land that is better suited for carbon sequestration and ecological restoration than it is for productive agriculture, and we use traditional conservation techniques on features of existing wildlife interest.

Each of these three undertakings is significant in its own right: our regenerative agriculture integrates a variety of cutting-edge techniques in a complete package, our rewilding project recently joined the constellation of Europe's leading projects comprising the European Rewilding Network, and our traditional conservation techniques have delivered what has been described as the most significant piece of nature conservation in Norfolk in 2019 – a new high-level water system for 500 acres of freshwater marsh.

What is more exciting is the combination of these tools in a three-pronged approach. Not only does this approach offer the connectedness that truly makes space for nature, we believe it also has real potential for scale-up in lowland UK because of the blend of that it benefits. The three-pronged approach will produce healthy food, improve soil fertility, sequester carbon, boost biodiversity, and provide our local communities with greater opportunities and better access to nature – all from one site.

The balanced approach of regenerative agriculture, rewilding, and traditional conservation also can help mediate an all-too-often polarised debate on rewilding by demonstrating these land choices can readily coexist, and showing that the threat of rewilding to farming's economic and cultural importance is often perceived, rather than real.

We are passionate about what we can do for our environment and for society. This will present us many challenges and opportunities; no doubt, our project will evolve and adapt. You can expect us to continue sharing our approach, work, and outcomes, and we hope in return all variety of stakeholders will engage with our platform. We hope that by doing so, we can become an exemplar in land management for lowland areas in the UK, and potentially beyond.

Context

UK policy setting

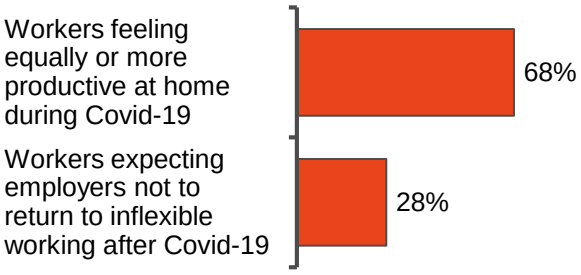
The UK policy setting for farming, the environment, and rural wellbeing appears to be at its most dynamic for decades. Brexit has precipitated a policy re-write; the Agriculture Bill, Environment Bill, and (paused) online consultation of the new Environmental Land Management Scheme all suggest that Natural Capital, Biodiversity Net Gain, and Polluter Pays principles are beginning to gain traction in UK land use policy. However, there is still plenty of uncertainty and debate around the policy detail, as well as to what extent the £3.5bn in CAP payments received by the UK in 2018 will be "replaced".

At the same time, we are now absolutely in the midst of a climate and biodiversity crisis here in the UK, not just globally. The UN Intergovernmental Panel on Climate Change has warned that we may soon pass "the point of no return" to avoid 2 degrees Celsius of global warming by 2100; many scientists believe we have passed it. In the UK, the *State of Nature* report highlights climate change as a key negative pressure on biodiversity, which continues its long-term downward trend. The agriculture sector is highlighted as another, direct, negative pressure on biodiversity, in addition to its emission of 11% of the UK's Greenhouse Gases (GHGs). The precise future of land use in the UK is therefore both undecided and critical.

Public perception

Public attitudes toward nature were already changing prior to the spread of Covid-19: Greta Thunberg's school strikes, Australian bushfires, Extinction Rebellion, the growth of veganism. The Covid-19 crisis is now redefining our social fabric and our relationship with nature. The national lockdown is redefining our relationship with nature and also the way we work and live. We recognise more than ever that access to green space is a key driver of our wellbeing, and we are starting to understand natural systems' role in regulating viruses like Covid-19. Lockdown has also shown the feasibility and benefits of remote working, often flexibly from the countryside. We expect many of these new attitudes to perpetuate into the post-coronavirus era, placing a greater emphasis on us to manage land for public good.

Worker survey, April 2020, *source: Vesier*




'Tip of the iceberg': is our destruction of nature responsible for Covid-19?

Coronavirus positive: good news round-up - a nation turns to nature

Coronavirus

Covid-19 exposes our arrogant relationship with nature

Implications for landowners and farmers

The changes afoot represent a huge challenge to the economic viability of many UK farms – the National Audit Office calculates 42% of farms are unprofitable without CAP. They also bestow a huge opportunity for the government, local communities, and farmers to derive greater, more sustainable benefits from our land. ***We believe that our Wild Ken Hill project – in a microcosm – offers a number of insights and solutions as we grapple with these problems.***

Curlew wading at Wild Ken Hill. The Ken Hill wood in the backdrop

The Wild Ken Hill Model

Background

Ken Hill is a family-owned holding in west Norfolk of 4,000 acres. The holding has a long history of supporting nature conservation in tandem with commercial arable farming.

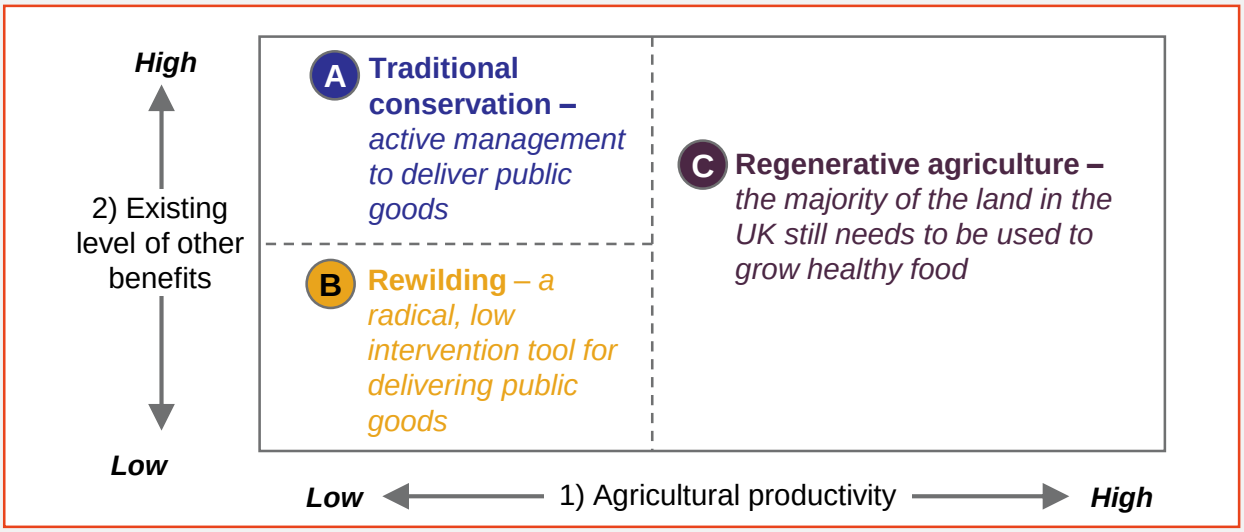
In 2018, we embarked upon the "Wild Ken Hill" project – an effort to derive greater benefits from the land that we manage. There were two principal motivations for this change of course:

1. To address the worsening biodiversity and climate crises in a more radical fashion – the existing national approach is clearly not working – and support improvements in public health by satisfying societal needs for access to nature
2. To future proof our operations from Brexit and other commercial challenges

Our framework for land use

Ken Hill sits at the intersection of several soil types. The holding consequently takes in a diverse set of habitats and landscapes: undulating terrain with good, base-rich soils capable of supporting arable farming, sandier soils where arable farming is possible but difficult, deciduous woodland, acid heathland, grazing meadows, freshwater marshes, and areas of coastal park. Indeed, many of the UK's major lowland habitats can be found at Ken Hill.

We are managing this diversity with an approach designed to be simple, scalable, and highly beneficial to all of our key stakeholders *(more on pp.11-13)*.



We classify land based on two simple dimensions: 1) its potential agricultural productivity, and 2) existing level of other benefits. For us, the latter mostly takes the form of conservation interest, but could appear in the form of carbon sinks, or other areas of public value that must be maintained through traditional conservation techniques. Based on this classification, we employ traditional conservation, rewilding, or regenerative agriculture techniques to manage the land.

We believe that this approach – in particular the combination of these three tools – could be scaled across lowland UK for society to derive greater benefits from our land.

Our approach in action

A Traditional conservation

Freshwater marshes, with high levels of existing conservation interest: *we manage water levels and grazing patterns to boost target species*

B Rewilding

Formerly unproductive arable land: *we have stopped farming unproductive, sandy soils, instead allowing natural processes to return, improving biodiversity and sequestering carbon*

C Regenerative agriculture

Productive arable land: *we have adjusted our farming practices toward regenerative agriculture techniques; we aim to repair soil health to sequester carbon and boost biodiversity, whilst also delivering good, sustainable yields with minimal use of chemical inputs*

A. Traditional conservation

Approach

We apply conventional active management approaches to areas of Wild Ken Hill where intervention is required to support existing sites of high public value. For us, this mostly comprises existing areas of conservation interest and landscapes associated with the North Norfolk AONB (e.g. freshwater marshes), but also public footpaths, roadsides and other areas.

Motivation

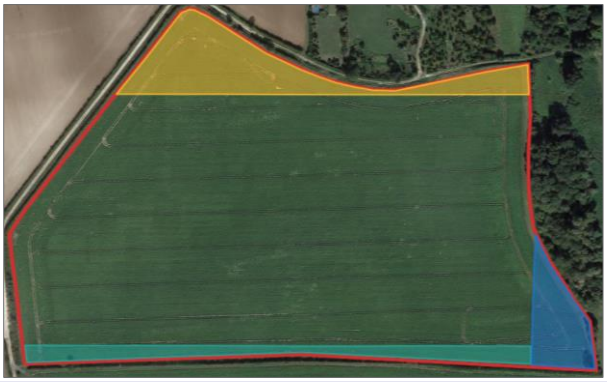
When considering how best to serve the needs of the future, it is critical we also ensure that we look after what we already have. There are many sites of outstanding value to the public in the UK that are well-managed, and would not benefit from more radical forms of land use such as rewilding or regenerative agriculture.

Examples

Delivery of a new high level water system on ~500 acres of freshwater marshes

In autumn 2019, we created a new set of earth works to increase the water level on ~500 acres of freshwater marshes by about 1 foot. Since the completion of the project, we have been managing the water levels and grazing patterns to support the breeding of target species, such as lapwing. The project was funded with support from Natural England.

"The freshwater marsh is in superb condition. There are double figures of avocet, lapwing, redshank nesting pairs. Scarce Norfolk breeders on site include Curlew, Bittern, Little Ringed Plover, plus many scarce wildfowl and summer visitors" --Bird Surveyor, May 2020



Integration of traditional conservation techniques into farming practices

The field opposite (red boundary, Hazel's field) is a good example of this approach. In this irregular shape, we have integrated cultivated areas for arable plants (yellow), flower-rich margins and plots (blue), and winter bird food (light green). These are actively managed for target species. The process also allows more efficient farming on the remaining area.

B. Rewilding

Approach

There is considerable debate around the definition of rewilding, but fundamentally it is about scale, connectivity, natural processes, long-term thinking, and the involvement of communities. As land managers, it is perhaps best to consider rewilding as a low-intervention, natural process-focused variant of conservation. Contrasting the active management approach of traditional conservation, the aim is to repair natural processes and let them do the work. As such, we consider rewilding another land choice available to land managers.

Motivation

We are rewilding this land because it neither has high levels of agricultural productivity, nor currently provides other benefits to society. As land managers, rewilding provides better economics than arable farming, a divergence that will grow post-Brexit. Rewilding this land provides an opportunity to provide greater public goods, and redefine our business.

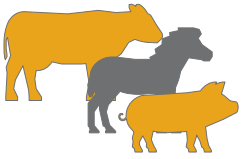
Recently rewilded field. Credit: Les Bunyan

Building blocks of a lowland UK rewilding project

In the context of lowland UK in the Anthropocenic era, not all natural processes will return of their own accord. The extinction of certain species and the extent of human presence in the countryside necessitate a more practical approach, with small interventions to kick-start these natural processes. The following highlights the key actions we are taking to catalyse the site.

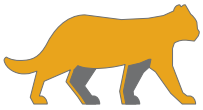
Understand ecology of the site

We designed a rewilding scheme to maximise the site's ecological potential



Natural grazing

We will add wild herbivores such as feral cattle, horses, and pigs from 2021



Species reintroductions

We have reintroduced beavers and are considering others

Fencing & signage

We are building a perimeter fence and signage to reduce human-wildlife conflict

End old practices

We are ending hedge trimming, commercial forestry, and other former practices

Community engagement

We engage with local Parishes, societies and conservation groups, as well as speaking at events

Organisational partnerships

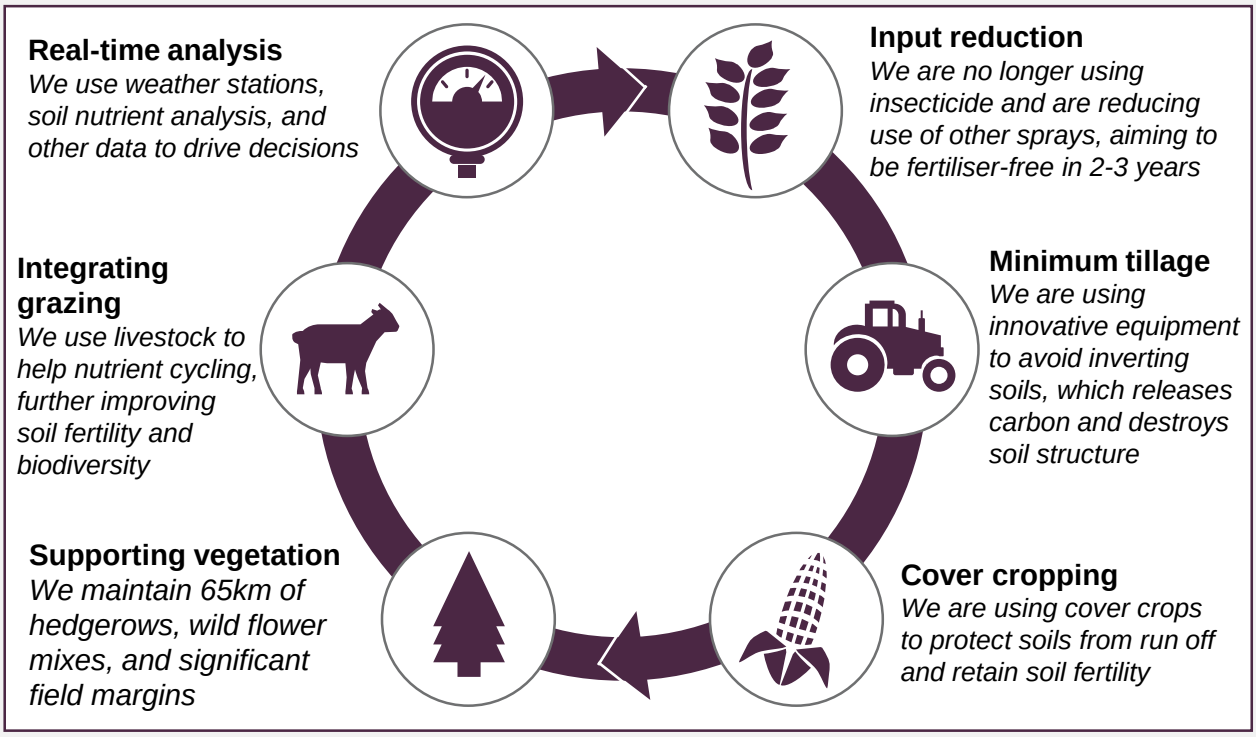
We are working with local NGOs and universities such as UEA and the RSPB

Research & monitoring

We are investing in tracking changes to biodiversity and carbon emissions over time

C. Regenerative agriculture

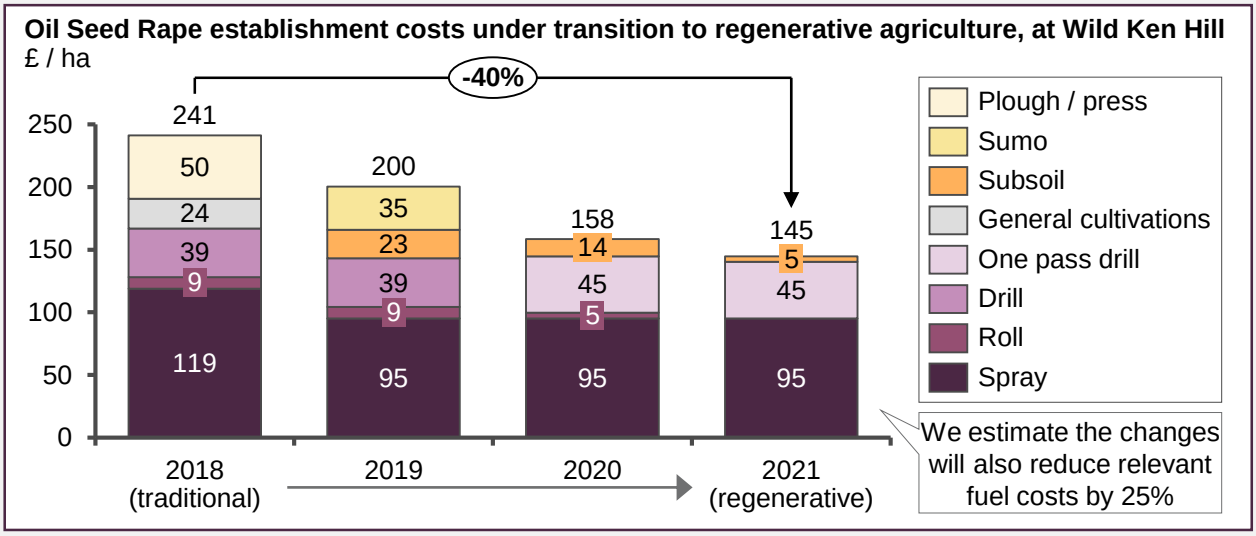
Approach



Motivation

We are switching our farming operation to a regenerative model because we believe it is the right thing for the climate, biodiversity, quality of food, and the long-term sustainability of our farming business. We aim to boost soil organic matter, increase fertility, and transition our farming operation into net carbon storage. We hope to provide greater public value with this approach, and ensure we can still farm here in 30, 50 and 100 years' time.

Example

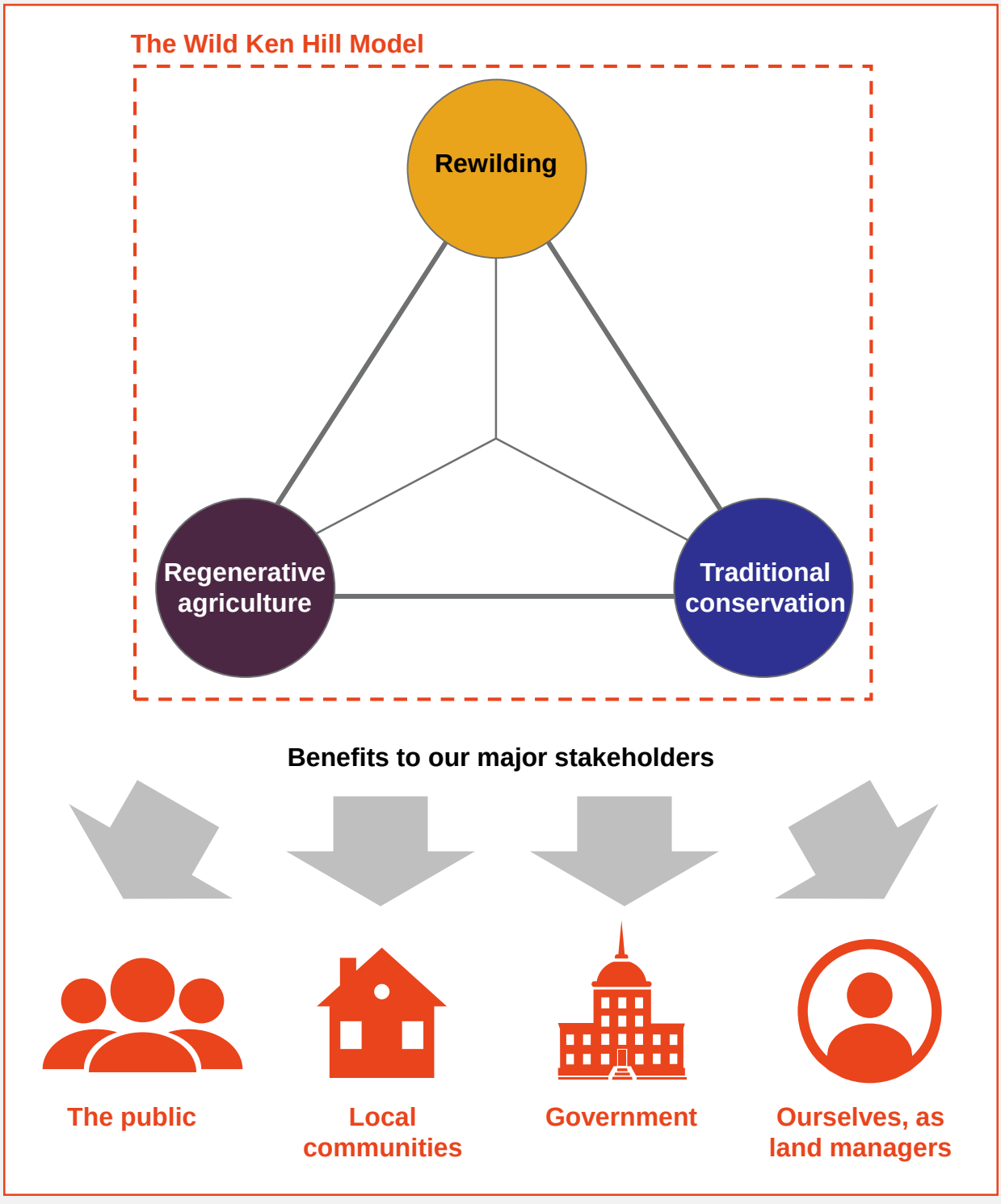


The Ken Hill wood. This wet area forms part of the new, 55 acre beaver enclosure.

Benefits of the model

Introduction

We believe that the combination of these three components provides the right mix of benefits to our major stakeholders – we outline this in further detail in the following pages.



Benefits to our major stakeholders

The public

Reduced greenhouse gas emissions

Through changes to farming techniques, particularly reductions in the amount of cultivation, we expect to emit fewer greenhouse gases. But more importantly, through soil regeneration, and the proliferation of vegetation in the rewilding area, we expect our project to sequester significant volumes of atmospheric carbon. These actions, which we expect to help mitigate the effects of climate change, stand to benefit us all.

Production of healthy food

Regenerative agriculture techniques require fewer inputs and chemicals. We expect to generate overall improvements in the healthiness of food produced at Wild Ken Hill that becomes available to consumers. In addition, the land being rewilded (25% of the holding) is gaining organic accreditation and will support the supply of grass-fed, organic meat.

Local communities

Jobs and volunteering opportunities

In the context of Covid-19's impact to the economy and the hiring freeze across numerous industries, it is especially important for resilient businesses to continue providing work and volunteering opportunities. We have a thriving, locally-based team at Wild Ken Hill with several volunteers helping with our Science & Research and education activities. We hope to add to this team as our business grows, providing further opportunities for local communities.

Access to greenspace

The positive impact of time spent in nature on mental and physical wellbeing is now well documented in studies by the University of Exeter and others. Covid-19 has placed a greater emphasis on this relationship – public natural spaces have been a critical relief for those fortunate enough to have access to them.

Education programme

*We run an education programme with local schools, and also a separate initiative called '*Wildlings'*. Both aim to educate "ecological citizens" that have a deeper understanding of and affection for nature.*

Reduced coastal flood risk

Through reinstating natural processes, we are hoping to reduce coastal flood risk by building resilient coastal landscapes that help insulate us from climate-induced sea level rise.

Government

Progress towards Government biodiversity goals

The UK government is committed to meeting international biodiversity goals, such as the Aichi targets. Wild Ken Hill is delivering ongoing growth in biodiversity and also providing larger, better-connected buffer areas, consistent with Sir John Lawton's recommendation for creating climate change resilient landscapes and increased biodiversity. Our baseline ecological survey shows Wild Ken Hill is already home to 2,000+ species; we expect significant increases as our rewilding efforts mature, to be tracked in future surveys.

Carbon sequestration tracking

The UK is now legally obliged to reach net zero GHG emissions by 2050. Significant changes in the agricultural sector – which is, unfortunately, responsible for 11% of UK GHG emissions – as well as better protection for carbon sequestering landscapes will be critical in achieving this goal. At Wild Ken Hill, we are working to track the effects in both of these areas with carbon audits, and will set ourselves goals for our emission reduction journey.

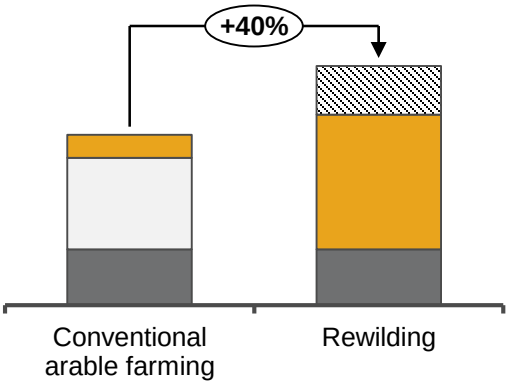
Ourselves, as land mangers

Greater, more diverse, and more sustainable income levels

Farmers and landowners are facing unprecedented economic challenges. Our own financial analysis in this area suggests that:

- *Regenerative agriculture is the only way to protect long-term fertility and therefore yields*
- *Rewilding offers a sustainable and less volatile alternative to conventional farming, with the possibility of a superior Gross Margin where land is unproductive for agriculture and a supportive Countryside Stewardship Scheme (CSS) can be designed with DEFRA*
- *Overall, an approach focused on nature provides the foundation for building a more diverse, and sustainable rural business with a nature-based tourism offering*

Gross Margin comparison (made by Wild Ken Hill before deciding to rewild 500 acres of arable land)



Well-positioned for future policy changes

As Natural Capital, Biodiversity Net Gain, and Polluter Pays principles gain traction among policy-makers and private funders, we believe farmers and landowners refocusing farming operations upon public goods – soil health, water quality, air quality, healthy food – will be well-placed to navigate the forthcoming changes in national and local government policy.

Roe buck. Credit: Les Bunyan

The future of Wild Ken Hill

Our journey

We are passionate about what we can do for environment and for society, but we are only at the beginning of a long journey.

No doubt, our project and our thinking will change as we adapt to the evolving challenges and opportunities around us. You can expect us to continue sharing thoughts and information about our approach, our work, and our outcomes.

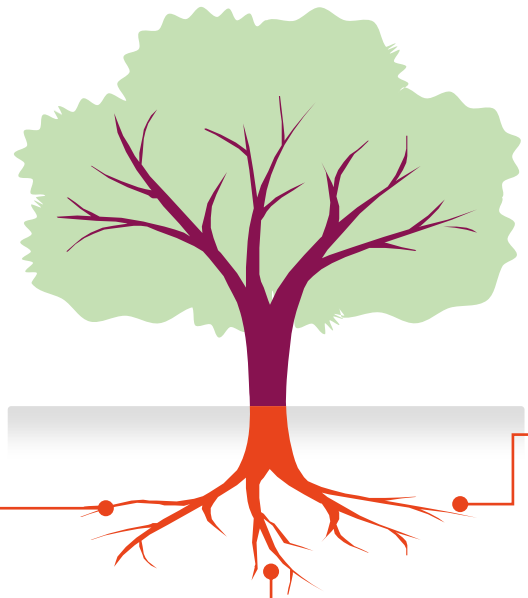
We hope that by doing so, we can become an exemplar in land management for lowland areas in the UK, and potentially beyond.

Our platform

Effective stakeholder engagement is a foundation for the success of our project – "the roots". Please consider our project as a platform to engage with, and do not hesitate to contact us to learn more. We hope that together we can ensure the project will grow and flourish.

Organisations engaged to date:

- Natural England
- Forestry Commission
- Norfolk Wildlife Trust
- Norfolk Rivers Trust
- Environment Agency
- Rewilding Britain
- Rewilding Europe
- Norfolk AoNB
- King's Lynn IDB
- RSPB Snettisham
- Norfolk Ponds Project
- University of East Anglia
- University College London
- Cranfield University
- University of Exeter
- Heacham Parish
- Snettisham Parish
- Heacham Wildfowlers
- Wash Wader Ringing Group
- Norfolk Barbastelle Study Group
- Norfolk & Norwich Naturalists' Soc.
- …and many others



Key touchpoints:

- www.wildkenhill.co.uk
- Monthly newsletter
- wildkenhill_Norfolk
- Wild Ken Hill

Open-book approach

- Research to be published on our website
- We actively encourage local organisations interested in working with us to reach out
- Open to sharing land management and commercial insights with other farmers, policymakers, and relevant private organisations

Acknowledgements

We have received considerable support and advice in both the design and early implementation of this project. In particular, we would like to offer our thanks to: our advisors at Natural England – John Ebbage and Emily Swann – who helped to house this project within CSS; Andrew Earl, for his expert design of the new high-level water system on the freshwater marshes; the Knepp team for their invaluable advice, and giving us the encouragement we needed to take the plunge with our rewilding project; Penny Green, Graeme Lyons, Dr. James Gilroy and his colleagues at UEA whom have all contributed greatly to the design of recording and monitoring programme; and our numerous volunteers, whom have helped in countless ways to make this project possible.

References to both publicly available material and Wild Ken Hill internal data can be made available upon request.

Contact details

Please do not hesitate to contact us to learn more about this document or our project

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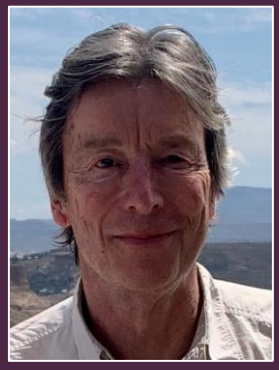

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