

# Nature-based solutions





Valuing nature ● Delivering solutions ● Planning for nature

£5.6bn

60

The annual financing gap for UK nature

The UN estimates the planet has 60 harvests left, based on the current rate of soil depletion

# Investing in nature to tackle the challenges facing society

We look at how restoring natural ecosystems can provide solutions

The year 2022 was notable for all the wrong reasons. An onslaught of winter storms brought some of the most damaging winds on record, the UK endured its hottest summer temperature yet and incidents of water pollution significantly increased, all while global wildlife populations continue to decline. The complex and interrelated impacts of the biodiversity and climate crises are now being felt in our fields and on our doorsteps. Former prime minister Margaret Thatcher famously said we have only a full repairing lease on the planet, and the evidence suggests there is a big dilapidations claim coming.

Business is starting to look at the investment case for nature in a different way. Economic growth has been reliant on the extraction of resources from nature, yet

natural systems can provide valuable services as well as resources. Increasingly, investment in these services, known as nature-based solutions, are proving to be a cost-effective method of tackling the environmental challenges we face.

This Spotlight examines the leading examples of nature-based solutions for land managers in the UK, plus the underlying drivers for environmental action, sources of finance and the services that nature can offer in both urban and rural settings.

### **GLOSSARY OF TERMS**

- Natural capital The world's stock of natural resources, including geology, soils, air, water and all living organisms.
- Ecosystem services The benefits to

society that flow from natural capital, for example food and fibre, carbon sequestration, pollination, water regulation, recreation and wellbeing.

- Nature-based solutions Actions to protect, restore and sustainably use ecosystems and natural resources to address social, economic and environmental challenges.
- Net zero Cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere.
- Nature positive Creating more biodiversity than is destroyed, so that species and ecosystems begin to recover.
- Climate positive Business action, policy decision or personal action that has a positive effect on the climate's carbon balance.

# Multiple nature-based solutions can be delivered in one landscape



Source Savills Research

- 1 Woodland creation
- 2 Agroforestry/ silvopasture
- 3 Water cooling/ filtering
- 4 Food production
- 5 Adopting regenerative agriculture principles
- 6 Renewable energy generation
- 7 Hedge planting
- 8 Biodiversity provision
- 9 Species protection
- 10 Nutrient reduction
- 11 Building soil fertility
- 12 Access to green space (public access, engagement and education)
- 13 Wetland creation
- 14 Flood management
- 15 Peatland restoration

savills.com/research

figure 1

66 The complex and interrelated impacts of the biodiversity and climate crises are now being felt in our fields and on our doorsteps 99

# **OPPORTUNITIES**

Nature-based solutions are as diverse as the landscapes themselves. Here are some key ones relevant to UK land managers, which we score out of five.

### RENEWABLE ENERGY GENERATION

Using wind, solar, hydro and biofuels to generate renewable power. This energy is then sold to the grid or through local district energy networks.

Customer demand	
Accessibility	2
Policy support	3
Profitability	5
Market maturity	

# HABITAT ENHANCEMENT

Restoring or building new habitats to create resilient ecosystems that support a diversity of species. This can be monetised by selling biodiversity units to developers or offsetters.

Customer demand	
Accessibility	3
Policy support	4
Profitability	
Market maturity	

# REGENERATIVE AGRICULTURE

Adopting regenerative agriculture principles, which increases carbon sequestration and environmental resilience. This can be financed through agri-food supply chains that value sustainable production, public grants, or by selling certified carbon credits.

Customer demand	
Accessibility	3
Policy support	4
Profitability	3
Market maturity	2

# NATIVE WOODLAND CREATION

Planting new woodland can be monetised by selling verified carbon credits for the carbon sequestered by the growing trees. There is the possibility to sell other additional ecosystem services bundled with these credits, for example flood management, water cooling and biodiversity uplift.

Customer demand 5 Accessibility 4 Policy support 5 Profitability 2 Market maturity 3		
Policy support 5 Profitability 2	Customer demand	
Profitability 2	Accessibility	4
	Policy support	5
Market maturity 3	Profitability	2
	Market maturity	3

# Nature-based solutions: markets and practical applications

# **Market opportunity**

# Biodiversity net gain (BNG) means that all developments in compared to their pre-development new planning applications and its introduction is expected in

biodiversity units to developers,

# **Carbon sequestration**

Nutrient neutrality

levels beyond current levels

Developers can purchase offsite

Water catchment management

implements nature-based solutions

along river systems to reduce risks of flooding, pollution, overheating and

companies or other organisations may fund land managers to

implement actions to increase the

nutrient credits, generated through mitigation techniques such as taking

through woodland creation or peatland restoration, and increasingly good soil management, can be quantified and verified and then sold purchasing carbon offsets.

## Target habitat type

Species rich grassland, mixed scrub. locally relevant habitat



Rewetted/restored peatland, new woodland, well managed soil with increasing organic matter levels, new hedgerows



The Hampshire and Isle of Wight

# Case study

Alscot Estate is delivering habitat creation and enhancement across 19 hectares of land. This involves enhancing lowland meadows and increasing the biodiversity value via a 30-year management plan and agreement secured with Warwickshire County Council in 2020. This agreement created 60 biodiversity units that Alscot has been able to sell as required by developers. The price of the offset is negotiated between the Estate and the developer.

Savills Forestry advised on a woodland creation project for an organisation to offset the carbon emissions generated from its construction projects through woodland creation on its own land. The scheme for 8,000 new trees was then registered with the Woodland Carbon Code and the carbon credits verified. Further tree planting is planned to continue to meet the organisation's net zero targets.

Wildlife Trusts purchased Little

Duxmore Farm to restore chalk

and woodlands. This land use

change will remove 848kg of

downland and create new wetlands

nitrogen per year from the Solent

ecosystem. Local developers will

be able to purchase nitrogen units for approximately £3,000 per kg.

# Woodland. wetland, ungrazed

grassland

Flood plains. naturally restored

Savills advised Pitmain and Glenbanchor Estate on the restoration of the River Calder, an upland tributary of the River Spey. The aim of the project was to establish 15 hectares of riparian woodland along 3.5km of the river. The woodland will help to control water temperature by shading, providing natural flood management benefits and sequestering carbon. The project involved collaboration with a neighbouring estate, the Woodland Trust and the Spey Catchment Initiative.

figure 2 Source Savills Research 66 Farmers need to be sure that they are entering into opportunities with the right long-term intentions 99

# MAKING SENSE OF NATURE-BASED SOLUTIONS

The UK's rural sector has a new and valuable role to play in delivering environmental improvements. However, the line between opportunity to deliver and liability for not delivering is thin. Rural businesses are facing a rising environmental baseline from supply chains and from financiers such as banks, as a condition on being able to do business (see figure 3). Delivering nature-based solutions for other businesses, such as developers, water companies or investors, provides rural businesses with an opportunity to tap into revenue streams and support farm incomes, but it also introduces constraints on the land. Farmers need to be sure that they are entering into opportunities with the right long-term intentions. The best strategy is to ensure that any income generated by grants or nature-based services provided to others is invested back into sustainable land management and restoring natural capital across the whole farm, to increase long-term business resilience and ensure the farm is fit to meet rising compliance baselines.

# Policy incentives (Environmental Land Management schemes) Supply chain requirements (to increase environmental efficiencies) Private investment (for ecosystem services) RURAL BUSINESS Conditional finance (sustainability linked loans) Environmental regulation (cross compliance, Environmental Act legislation)

Compliance/regulatory

figure 3

Source Savills Research

# SCOTLAND'S PRINCIPLES FOR RESPONSIBLE INVESTMENT IN NATURAL CAPITAL

The Scottish government has committed to developing a "values-led, high-integrity market for responsible investment in natural capital". As part of that commitment, the government has launched six core principles to guide those developing and investing in nature-based solutions. The interim principles promote high environmental integrity, community benefit and integrated, productive land use. They provide clarity and direction for stakeholders, helping to grow this emerging marketplace. The recent Rock Review of agricultural tenancies recommends that England does the same.

# Delivering naturebased solutions

Innovative thinking and astute decision-making will help businesses build long-term success and resilience

Exploring new markets can offer new income streams, but land managers still have a lot of questions around the practicality of delivering nature-based solutions. In *figure 5* (far right), we examine the decision flow experienced by land managers, exploring whether they may have land suitable for the creation of nature-based solutions.

### WHAT'S THE RISK?

Many of the markets for nature-based solutions are in their infancy and lack standardised regulation. However, early adopters are achieving success and the income associated with these new ideas means that problems are not as insurmountable as they may first appear. We summarise some of the barriers in *figure 4*, to demonstrate how many of them are within the land manager's control to resolve.

# WHO MIGHT HELP FUND THE CREATION OF NATURE-BASED SOLUTIONS?

Changing land uses and creating habitats can be an expensive process. To help farmers manage the costs and risks of this process, it is possible to get financial backing from investors.

Government wants the private sector to invest in nature-based solutions and has a target to raise at least £500 million in private finance to support nature's recovery every year by 2027 in England, rising to more than £1 billion by 2030. This is just under half of the current annual government farming budget for England (£2.4 billion per year).

The appetite to channel private finance into nature-based solutions means that farmers may have sophisticated stakeholders on both sides of their scheme (see *figure* 8), which speaks to the need to have good advisors on board from the outset.

## RISE OF THE ESG INVESTOR

Environmental, Social and Governance (ESG) investors were once considered niche. However it is now the single fastest growing investment type.

According to Dow Jones, sustainable fund growth is projected to double over the next few years as investors are becoming increasingly concerned that extreme weather, climate change and ecosystem breakdown will impact business operations as well as the planet.

Bloomberg reported that money held in ESG-focused funds grew by 53% last year, to £2.7 trillion. ESG-motivated investors are looking to invest in nature-based solutions and their appetite is likely to grow.

### **GETTING THE HOUSE IN ORDER**

It is advisable even if not strictly necessary that rural businesses calculate their own emissions and environmental impact and then put in place strategies to reduce and mitigate this impact before they sell environmental offsets to an external buyer. This is particularly important in the case of carbon emissions.

# POLICY SUPPORT FOR NATURE-BASED SOLUTIONS

The UK is undergoing a transition away from the Common Agricultural Policy, towards new devolved support policies for the rural sector. The English, Welsh and Scottish governments are each at different stages of policy development, adopting varying approaches to supporting farmers and land managers to deliver nature-based solutions.

England has the most developed funding schemes for nature-based solutions, through its Environmental Land Management schemes.

Scotland has slower timelines, but is adopting a more joined-up approach, with an emphasis on responsible investment. Both governments want to support the development of a private environmental marketplace and have schemes that provide blended finance.

Wales lacks detail on support schemes for large-scale innovative nature-based solutions, instead focusing on enabling farm level solutions.

# MINDSET SHIFT

Farming mindsets will have to change as direct payments disappear. Astute and forward-looking land managers recognise that change is coming and will adapt and innovate their land management practices and strategies to preserve the long-term success of their businesses.

53%

£500m

growth in money held in ESG-focused funds

UK government target to raise from private finance to support nature's recovery every year by 2027 in England



**Decision flow:** Questions for creating a nature-based solution

What is the current land use type?

Conventionally farmed, marginal arable land often has the most potential for delivering environmental uplift

What is the ecological/environmental baseline? The lower the current ecological baseline, the

Are there any existing land use or tenure restrictions? This may determine whether you are able to deliver a permanent land use change or a change to operational management practices

What will the cost be? Baseline surveys, ongoing professional fees, capital costs of implementing the scheme, and ongoing management costs all

Who pays? Investors, offsetters and public grants can provide the initial investment. Option agreements may be needed to secure buyers. Some land managers may want to finance the nature-based solutions themselves

Which legal framework best suits the context? Private contracts, Section 106 agreements, conservation covenants, joint ventures or connecting structures may be ampleyed.

What measurement, reporting and verification will be used? This will depend on the service being provided. Monitoring and risk of failure needs to be considered

What will the timescale be and what is the management commitment? Agreement terms can vary from one year to over 125 years

What can I do after the agreement ends? In some cases, the land use/habitat change will have to be maintained in perpetuity. If not, there may be flexibility for new uses once the agreement ends

figure 5

Source Savills Research

# Barriers to delivering nature-based solutions

	Within the land manager's control	Requires industry innovation or government intervention	To be resolved
Easy to solve	■ Site management ■ Timescales ■ Accreditation and validation process ■ Interaction with the enforcing body ■ How will success be monitored ■ Risk of failure ■ Length of agreement	■ Standardised metrics ■ Resolving who owns natural capital assets ■ Principles for responsible investment (beyond Scotland) ■ Interaction with government schemes	What happens at the end of the agreement  Sometimes this can be dealt with at the outset, but high-quality habitats may need long-term investment. Government has a role to underwrite risk here
Harder to solve	■ Landlord/tenant relationships ■ Credentials of purchaser ■ What is being paid for – actions vs outcomes ■ Value of ecosystem services	■ Principles of additionality ■ Clarification of income and capital tax status ■ The definition of agriculture to ensure the environmental activities and value uplift receive the same tax benefits as agriculture ■ Recording what has been delivered where	Long-term impact on land values  It is unclear how the market will value assets that have been improved by a nature-based solution. If the scheme has long-term income, it is likely to be viewed positively

figure 4 Source Savills Research

66 Exploring new markets can offer new income streams, but farmers still have a lot of questions around the practicality of delivering nature-based solutions 99

£90

Research proposes that prices need to be closer to £90 per tonne of CO2e by 2030

86,000

football pitches - the size of the area in the UK under Woodland Carbon Code projects



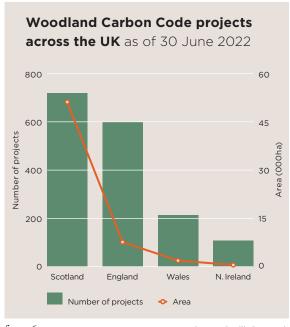


figure 6 Source Savills Research

# Valuing nature

The marketplace is beginning to put a price on the value of nature's resources

Mark Carney, the former governor of the Bank of England, said that many of nature's resources are not valued unless they have a price tag attached. With the nascent nature-based solutions marketplace, we are beginning to gather more evidence of what these natural resources might be worth. Comparables are slowly emerging as the markets mature.

VOLUNTARY
CARBON MARKET
The value of the global

The value of the global voluntary carbon market nearly quadrupled in 2021 compared to 2020 and is now worth approximately two billion dollars. It has been estimated that this market needs to grow by more than 15-fold by 2030 in order to support the investment required to deliver the Paris Agreement. The London Stock Exchange has recently launched a voluntary carbon market in order to accelerate the availability of financing for carbon reduction projects, demonstrating the appetite to scale this marketplace.

The Woodland Carbon Code (WCC) and Peatland Carbon Codes (PCC) are the recognised accreditation and verification standards for woodland creation and peatland restoration projects in the UK.

- As of June 2022, there are in total 1,640 WCC projects covering 61,419 hectares, which equates to 86,000 football pitches.
- There are currently 55 PCC projects in the UK.

# Putting a price on carbon

Not all carbon is the same and it is important, to know what you are buying (or selling).

- Across the past five Woodland Carbon Guarantees in England, which set a government-backed price for woodland carbon, the average price for woodland carbon credits was £20.69 per tonne CO2e.
- According to Ecosystem Marketplace, across the globe voluntary carbon prices for forestry and land use carbon credits increased to just under £5 per tonne CO2e in 2021, which is a 4% increase on 2020 prices and a 34% increase on 2019 prices.
- Significantly higher prices are paid for projects that deliver additional societal and environmental benefits.

It is likely that carbon prices will continue to increase as businesses come under more pressure to decarbonise – research supported by the World Bank has argued that the carbon price needs to be closer to £90 per tonne CO2e by 2030 to reach the goals of the Paris Agreement.

# Sell now or later?

For farmers looking to participate in carbon markets, the question should be whether the current market price meets their needs for investment; there is no guarantee that prices will go up as technology to remove carbon from the atmosphere may be proven at scale in the next 10-20 years.

6

BIODIVERSITY MARKET
Biodiversity net gain (BNG)
Despite being one of the most regulated markets for nature-based solutions, BNG deals are taking time to emerge. This is in part because BNG is not yet mandatory for developers, but also because the government has run multiple consultations on the practicalities of delivering the policy. From limited market evidence, we see a wide variance in Biodiversity Unit prices (from £10,000 to £50,000 per unit). Once it becomes a legal requirement, we are likely to see demand and corresponding values take off. However, the

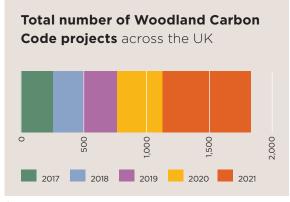


figure 7 Source Savills Research

66 According to the latest report from Ecosystem Marketplace, the value of the global voluntary carbon market nearly quadrupled in 2021 compared to 2020 99

market does have a limited size as it is only applicable to England and developers are the gatekeepers to demand.

■ The market for offsite biodiversity units in England is estimated to be worth between £135 million to £274 million per year.

# A global biodiversity market

The voluntary biodiversity market may, in the long run, offer land managers greater potential. As more organisations are required to disclose and offset their impact on nature in line with the Taskforce on Nature-related Financial Disclosures (see page 9), a voluntary market for biodiversity credits is likely to grow. There are several initiatives underway to design and test biodiversity credits – "sustainable development units" in New Zealand, "voluntary biodiversity credits" in Colombia and "EcoAustralia"  $^{\rm TM}$  credits.

**NUTRIENT NEUTRALITY** Comparables are still hard to come by for nutrient credit trading given the nascent state of the market. ■ Indicative values have been published suggesting nutrient credits could be worth from £2,500 to as much as £150,000 per kg, paid to the landowner as a one off fee. ■ However, given that offsetting schemes are site specific, it may be that values are based on the ability to unlock development and could be between £5,000-£10,000 per property built. ■ The offsetting pathway for phosphates and nitrates is different, with phosphates harder to remove. Schemes that offer effective phosphate removal may prove to be worth more.

# WHAT IMPACT IS THE TRANSITION TO NATURE-BASED SOLUTIONS HAVING ON LAND VALUES?

Land values have been tracking up in recent months, despite the turmoil of the agricultural transition. One of the key reasons for this is competition between traditional buyers of land and new investors seeking land on which to deliver nature-based solutions, such as tree planting and regenerative agriculture. The value of poor livestock land, most suitable for woodland creation and renewable energy, has increased 13% since September 2021, outperforming increases across all other land types. The core challenge with considering land values in the context of the ability to deliver nature-based solutions is to ensure that the potential to realise a capital gain (such as through sequestering carbon) is distinct from the potential to generate long-term income returns (such as through managing flood risk). It could be argued that it is only the latter that should truly be priced into the value of land.

# MAXIMISING VALUE

The key to really profitable rural businesses is layering different enterprises on top of each other. There are two approaches that land managers might take relating to nature-based solutions. The first is "stacking", where different beneficiaries of nature-based solutions invest

in different services from the same piece of land. Provided each service is "additional" to the next, this should be feasible. A good example might be selling soil carbon storage to a supply chain, over which a species-rich meadow is managed for a water company, cattle grazed for a local farm shop and public access offered through a local health scheme. The other route is

pricing one service to include the advantages of another. Known as "charismatic" pricing, different co-benefits can be bundled together and sold as one higher value service. Often, customers prefer projects with a story and identity to them. Land managers can make use of their negotiating power when it comes to determining the value of their nature-based solutions.



Financial flows and motivations for nature-based solutions



figure 8 Source Savills Research

66 Many traditional institutional investors in land, such as pension funds, charities and public bodies, have made net zero pledges, but they are also facing tougher environmental regulation and social accountability 99

# The nature of tenancies

To achieve nature-based targets, a new level of collaboration and partnership is required between landlords and their tenants

Land ownership motivations are changing, requiring a rethink in relationships with tenants. Many traditional institutional investors in land, such as pension funds, charities and public bodies, have made net zero pledges, but they are also facing tougher environmental regulation and social accountability. Owners are being nudged out of traditional "financial only" investment approaches into becoming responsible or even sustainable investors by new disclosure requirements (see figure 12). These frameworks are challenging rural asset owners to start thinking about what services they might be able to supply both to other parts of their business or to third parties. For many, this will mean a re-think in their relationship with their tenants.

# **GETTING DOWN TO BUSINESS**

Many rural asset investors will be operating a mostly tenanted land model, offering opportunities to farmers to specialise in running land-based businesses without the expense of buying land. Tenancy structures offer a level of security to farmers to run independent businesses. However, a standard net zero carbon assessment for the landowner will include the emissions from the tenant farmer. Rural asset owners are therefore beginning to look at how they can work more closely with tenant farmers to reduce impacts and in some cases start to become net sequesterers of carbon.

Carbon is not the only nature-based solution of interest though. Food itself is the foundation on which our economy is fuelled, and without clean air and water, and space for nature to thrive, we cannot function as a society. The challenge is therefore to avoid "carbon myopia" and to set a strategy for rural

64%

of England's farmable land is whole or part tenanted

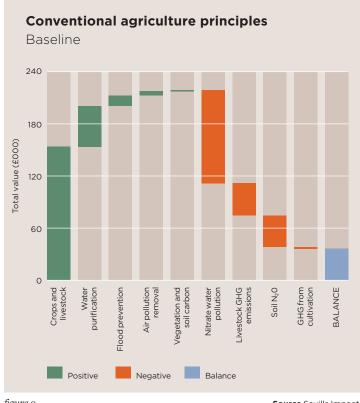
land ownership that accounts for and manages all of these services in partnership with the occupier of the land.

## **VALUING IMPACTS**

The total societal income and costs from the occupation of land can be assessed through environmental economics. The graphs below, created by Savills Impacts team, indicate the comparative performance of a 395 hectare farm under a more environmentally-focused management protocol.

■ Farm facts: 395 hectare, of which 200 hectare cereals, 25 hectare temporary grass, 40 hectare permanent grass, 130 hectare rough grazing. In the alternative scenario, there is no change to these areas but the farm is managed in accordance with regenerative agriculture principles. The total value of the baseline scenario is £34,800 per year, and the alternative scenario increases to £66,700.

It is clear from this type of analysis that the total financial, economic and social value from agriculture can be substantially improved by



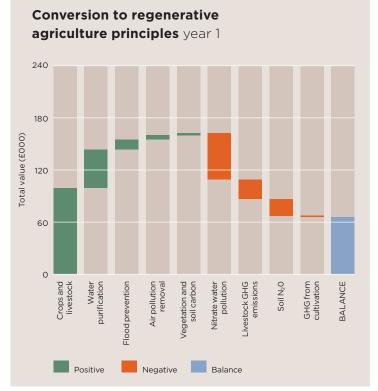


figure 9 Source Savills Impacts figure 10 Source Savills Impacts

15x

£150

The voluntary carbon market needs to scale 15-fold by 2030

per tonne is the negative cost of carbon to society

considering environmental outcomes. The negative "costs to society" of carbon used in national estimates is up to £150 per tonne, and around £34 for each kg of nitrogen lost to water systems. The financial returns available from the market in food prices or rent can be low, but should improve over time as soil health recovers. By including the positive value of services such as flood prevention and air pollution removal and by reducing the negative costs of nitrate pollution and greenhouse gas emissions through management changes or investment, a positive balance can be improved, or a negative balance corrected.

So how do rural asset owners rectify the balance of private and public goods provided on farms? Taking land back in-hand to maximise environmental returns might not be the right option for every owner (see figure 11). Most landlords will need to establish how they intend to work with their farmers to achieve new targets and expectations. This may require a level of collaboration and partnership that has not previously been present, particularly with pre-existing tenancies. Tenant farmers can be permitted to participate in private markets and public schemes under their occupation agreement. However, if the landlord wishes to claim the benefit of any natural capital improvements, it is in their best interests to fund the transition and measure the outcomes.

# To farm or to let?

	In-hand farming	Letting land
Pros	■ Profit from market returns ■ Control of the land management practices and taxation implications	<ul><li>Lower risk</li><li>Stable returns</li><li>Provides</li><li>opportunities for new entrants</li></ul>
Cons	■ Some charitable owners cannot farm in their own right	■ Less control over the land ■ Tenant's objectives may differ from owner's

figure 11

Source Savills Research



# FULL DISCLOSURE

The Taskforce on Climate Related Financial Disclosures was created in 2015 by the Financial Stability Board to develop consistent climaterelated financial risk disclosure for use by companies, banks and investors. In the UK it will become mandatory for companies to report on their climate-related risk by 2025. The Taskforce on Nature **Related Financial Disclosures** seeks to do the same thing, but for nature-related risks. The framework is currently in a pilot stage. Disclosure will mean that environmentallydamaging businesses become less desirable to investors and will find it harder to raise finance, driving exposed companies to reduce their negative environmental and social impacts.

# Where do you sit on the sustainable land investor spectrum? And how are you working with your tenants?

Investor type	Traditional	Responsible	Sustainable	Impact	Philanthropic
Motivation	Motivated by financial returns alone	Compliance driven; focused on avoiding harm and minimising risk	Sustainability factors drive land management strategy	Social and/or environmental returns take precedence over financial returns	Social and/or environmental returns only
Strategies for collaboration		deas for the future – prov who want to finance imp			
			ngage with tenants in coll enants to pursue investme	_	_
			tenant engaged to man	ner enables natural capita lage habitat or service, e.g but offer back "rent free" retaining uplift	. take less productive
				Collaborating for mutu opportunities such as e joint ventures with non	nvironmental FBTs or
				Full service – offer a fre to delivering on owner' to reflect costs of trans or regenerative outcom	s objectives, often ition to organic

figure 12 Source Savills Research

**71%** 

of the UK's land is managed by farmers and land managers

2023

the government has committed to publishing a rural land use framework



# How do we decide what to do where?

What a future land use framework might look like

The rural sector has the potential to deliver a suite of nature-based solutions for a variety of markets. However, with more and more pressures on land use, knowing what to do with land is not an easy decision. The need for guidance is particularly important for those who feel that the current occupation of land is unsustainable, or under threat.

The Scottish government has committed to the development of Regional Land Use Partnerships to deliver a more integrated approach to land use change.

The English government intends to publish a land use framework in 2023 in order to ensure the nation meets land use targets while continuing to produce high quality and affordable food. Neither government has yet committed to what a land use

framework might ultimately offer.

There have been several initiatives to design land use frameworks (*figure 13*). Our analysis of these concludes that none so far has the perfect answer as to how the UK's puzzle of land use fits together. We have therefore highlighted the core issues we believe government needs to address in order to create a land use framework that is genuinely useful in guiding decision-making:

- Scope the framework should include rural and urban areas and address the interactions between both.
- Scale the level of scale the framework applies to needs to be clearly defined. If the framework is too top-down, it risks becoming autocratic and missing local needs. However, bottom-up planning risks losing nationwide

vision and progress can be slow.

- Sensible the framework should avoid reinventing the wheel. It must work with existing targets and strategies and consider those already on the land.
- Succinct the framework must have a clear and cohesive vision in terms of what successful land use across the UK looks like, and how we can achieve it.

How much land use change are we likely to see over the next 50 years? The level of change will depend entirely on local context and demand. Careful, contextualised change that responds intelligently to market and policy pressures is important for a dynamic, thriving and

environmentally-resilient landscape.

66 Careful, contextualised change that responds intelligently to market and policy pressures is important for a dynamic, thriving and environmentally-resilient landscape 99

# Land use framework

Land use framework proposal	What does it say?
The Climate Change Committee - Land Use: Policies for a net zero UK 2020	■ Suggests 25% land use change across the UK, with a sole goal of reducing emissions and increasing carbon sequestration ■ Significant increase in tree planting, peatland restoration and bioenergy crop cultivation. Requires a 20% reduction in the consumption of beef, lamb and dairy
Food Farming and Countryside Commission: A Land Use Framework for England	■ A guide for land use decisions, but does not dictate what should happen where ■ Encourages multifunctional land use and land sharing, with an emphasis on bottom-up action
Green Alliance: Land of Opportunity 2022	■ Prescribes areas for high yielding food production, areas for habitat creation and carbon removal, and areas that can produce a mixture of both ■ Land use trade-offs to be solved by parcelling land into different, discreet uses

figure 13

Source Savills Research

66 The rural sector has the potential to deliver a suite of nature-based solutions for a variety of markets 99

# UK targets with implications for land use



emissions by 2050 (2045 in Scotland)



30% of land and sea across the UK protected by 2030



300,000 new houses a year in England



Maintain current levels of domestic food production across the UK



100% "clean" electricity by 2035 across the UK



10% biodiversity net gain for all future developments in England



30,000 hectares of new trees planted each year across the UK

figure 14



50% of Scotland's overall energy consumption generated from renewable sources by 2030



100,000 new affordable homes by 2031 in Scotland

Source Savills Research

# **BRINGING NATURE INTO CITIES**

The United Nations estimates that around 70% of the world's population will be city dwellers by 2050, the same date that most countries aim to achieve net zero. Well-designed nature provides a plethora of benefits to cities – enhancing society's wellbeing, providing access to nutritious food and enabling natural shading and cooling.

# **URBAN FARMING**

Copenhagen has launched an urban farming programme, utilising roofs, unused gardens and vertical farms to grow organic produce, reducing food mile emissions and providing nutritious vegetables to kitchens, kindergartens and residential care homes. The city operates 1,000 kitchens that produce 70,000 meals a week.

# **COOL NATURE**

Heat-related deaths are becoming more common in cities. As temperatures rise, the urban heat island effect becomes more deadly. Urban heat islands are areas that are significantly warmer than their surrounding rural areas due to human activities. Planting trees and increasing green habitats within cities can mitigate urban heating. The government of Singapore is tackling the heat island effect with a combination of retrofit technologies and rooftop planting, reducing the ambient temperature around buildings in initial tests by 2°C.

# TRANSFORMING SPACES

Since its transformation for the 2012 Olympics, the London Olympic Park is now home to approximately 70 species of birds and seven species of bats.

The Canary Wharf Group and the Eden Project have launched a partnership to tackle biodiversity challenges in urban environments. Canary Wharf already contains more than 30 tree species, reedbeds, living roofs and extensive aquatic habitats. However, the intention is to build on this and create a green spine through the centre of the Canary Wharf estate, creating additional habitats and opportunities for recreation. The new partnership with the Eden Project will develop a blueprint for sustainable global cities to act on biodiversity loss.

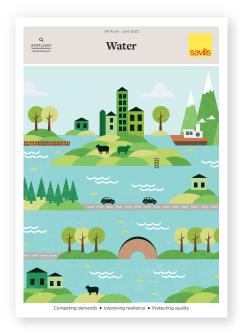
The social benefits of green space are well known. In England, the £9 million Levelling Up Park Fund aims to improve access to green space in the country's most deprived urban areas where green space is currently lacking.

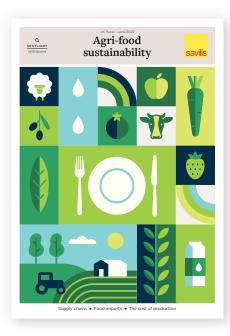


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