

Forestry in the UK

A case study on the UK as a location for forestry investment

Not investment advice. Capital at risk.

Past performance is not necessarily a guide to future performance. Target returns are not guaranteed.

Gresham House
Specialist investment

Executive summary

The United Kingdom has one of the fastest conifer growth rates in the world, combined with strong domestic demand for timber, underpinned by a highly modernised processing sector.[1]

Growth rates and species suitability are favourable, driven by a temperate maritime climate, and yet forest cover and timber availability remain low after centuries of import reliance. This, set against decades of under-development in the housing sector, has resulted in one of the most pronounced timber supply/demand imbalances globally.[2]

In addition to these market fundamentals, forestry investors in the UK benefit from deep capital markets, sophisticated transaction and management infrastructure, cross-party pro-forestry governmental support, secure land and title, and a variety of higher business use opportunities in renewable energy and natural capital.

Greham House is the largest forestry investment manager in the UK.

1. FAO 2022
2. FAO 2022



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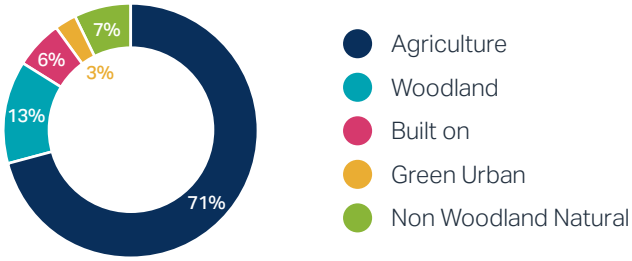
Woodland history

The UK has a comparatively short forest history, with much of the country being ice-locked until the end of the last glacial period c.10,000 years ago.

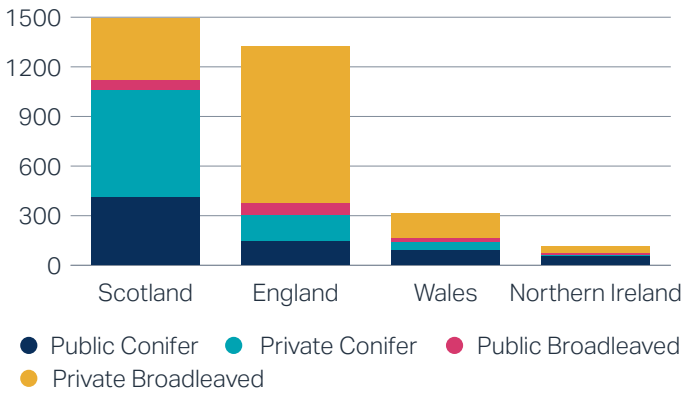
Following plant colonisation and succession, substantially all native woodland established in this period has been subject to some form of human management, with settled agrarian communities clearing forest for grazing and cropping. The remaining woodland was relied on for hunting, fuel, construction of dwellings, and latterly for the development of the British Navy.

At the turn of the 20th century woodland cover had fallen to around 5%. This was further reduced during the first and second world wars, which increased demand for timber and reduced imports. This highlighted the importance of a reliable timber reserve, spurring the creation of the Forestry Commission and the beginning of the reforestation effort that continues today. Forest area has since increased to 13%, though this remains comparatively low (European average: 39%).

UK land use



Types of woodland ('000s Ha)



Source: Forest Research 2024



The Forest sector today

Woodland cover is split quite evenly between broadleaved and coniferous species. The main commercial species are conifers, selected for higher growth rates, a variety of end uses, and superior strength and form.

The private softwood estate in the UK has an average mean yield class (YC) – a measure of the volume of wood a hectare is able to grow per year in m^3 – of YC16, though there is considerable variability with some areas growing as fast as $30m^3$ in a year. This compares favourably to the largest European forest sectors in Sweden and Finland, where growing seasons are shorter and growth rates average circa $5m^3$ per year.[3]

The UK has only one native coniferous tree present in commercial forestry – the Scots Pine. The majority of trees planted for the softwood processing sector are exotics – having been experimented with since the 1600s when European larches were identified as hardy, fast growing, and with timber resistant to rot.

The main species used now is Sitka Spruce, originally imported in the 1800s from Alaska where its ability to grow well in wet conditions made it suitable for the coastal areas of Scotland. The processing sector has developed around this species, which is responsible for c.60% of the volumes delivered to market. Alternative conifer species such as Douglas Fir, Norway Spruce and Western Red Cedar are a growing part of the forest sector, with specialist processing increasingly taking advantage of their varying structural and aesthetic characteristics.

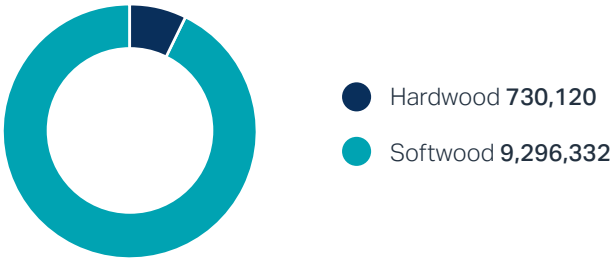
Woodland creation in the UK reached highs of 30,000ha per annum towards the end of the 1980s – encouraged by favourable tax treatment – and has since fallen back to around 10-15k ha per annum, against a target set by the UK government of 30,000.

3. State of Europe's Forests 2020, FAO and UNECE

Part of the challenge is that creation involves significant investment in land and planting expenditure, and faces a heightened risk profile associated with the approvals needed to plant and uncertainty in establishment success.

The compounding shortfall of planted area against the targets and the predicted growing demand, further compounds the UK's large and growing timber deficit.

Hardwood v Softwood production (2022 m^3)

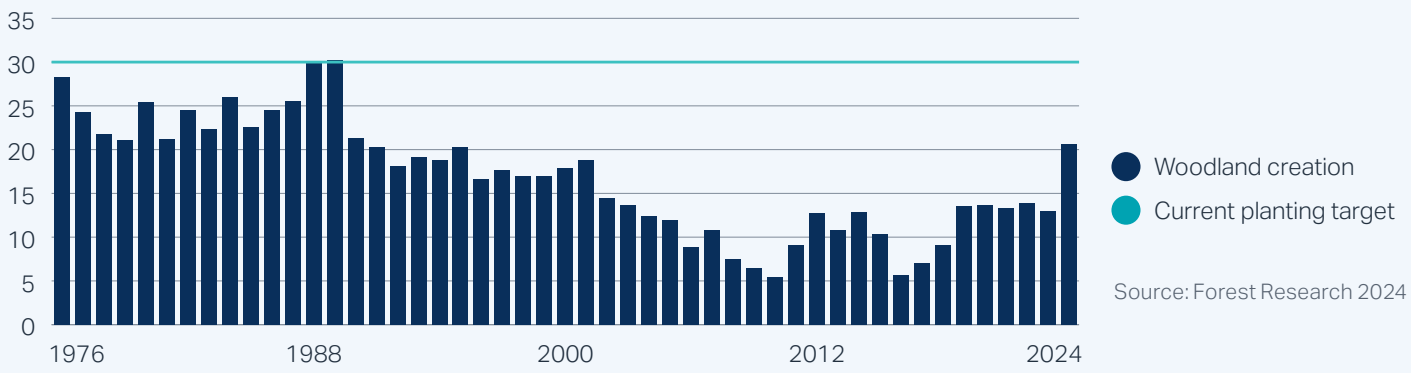


Source: Forest Research 2022

Woodland Cover



New Woodland creation in the UK



Source: Forest Research 2024

Past performance is not necessarily a guide to future performance. Target returns are not guaranteed. Tax status subject to individual circumstances. May be subject to change.

Improved Sitka Spruce

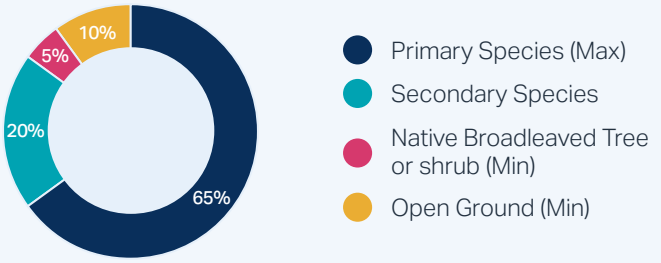
Since the 1960s there has been a coordinated effort within the industry to deliver improved genetic material for growing trees. This has followed a process of selecting 'plus' trees with the desired attributes, and allowing pollination with others likewise selected.

Unlike annual crops such as wheat, the rotation length of forestry results in a naturally extended improvement cycle of c.25 years. Nonetheless yield improvements can be made in a similar regular manner, driving increased returns for forestry as subsequent generations outperform.

Sustainable forest management

The 5th Edition of the UK Forestry Standard (2023) is the technical standard for sustainable forest management in the UK. Along with international certification under FSC and PEFC, this provides the framework for sustainable practices within the sector, aligning forest landowner's interest with local stakeholders and environmental needs. 44% of woodland in the UK is currently certified.

UK Forestry Standard area guidelines



Source: UK Forest Standard, 5th Edition



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Domestic production

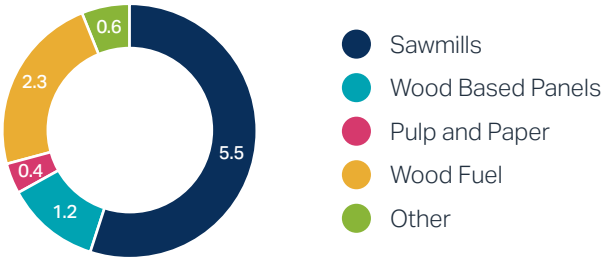
As the land area dedicated to forestry has grown, the processing industry has increased capacity, with a number of wood processing hubs developing in the west, east and south of Scotland, as well as in Wales.

These hubs are typically built around a core sawmilling operation, with the secondary and co-product producers located in close proximity, or with ready access to economical logistics infrastructure. These sawmills and the harvesting infrastructure needed are often key employers for rural areas where the forests are located.

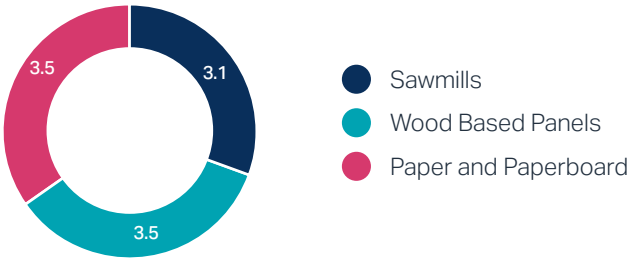
The majority of harvested logs are delivered to sawmills, with around 50% of this volume ending up as sawn-wood – the residuals are collected and delivered elsewhere in the chain, mainly for the manufacture of panel board and for the pulp and paper markets.

This zero waste approach is essential for a profitable forest products sector, ensuring the highest value to the forest owner, with minimal waste.

Deliveries (million m³)

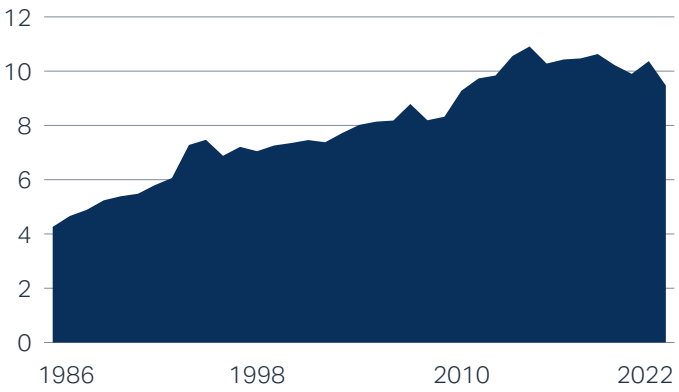


Production (million m³)



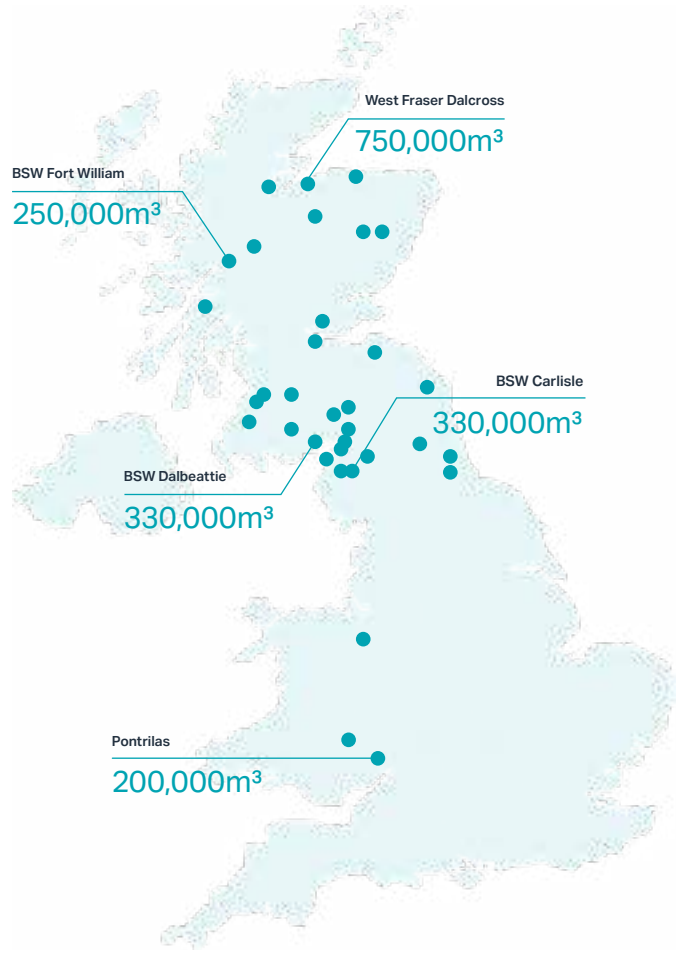
Source: Forest Research, 2022

UK Softwood deliveries - million green tonnes



Source: Forest Research, 2022

Key Processing Locations and Annual Production Statistics



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Consumption and imports

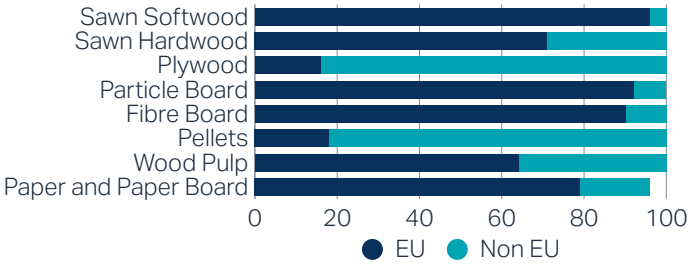
The UK relies on imports for over 80% of its wood product consumption, with the main trading partners being closely located European countries.

These imports tend to be higher value end products in the form of sawnwood or finished paper coming from nations with well-established processing sectors and direct sea routes to international trading partners. Approximately 75% of sawnwood imported into the UK comes from Sweden, Finland and Latvia.

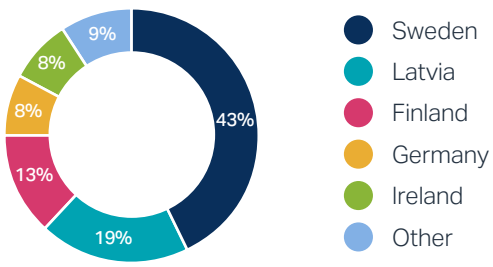
This proximity to trade partners benefits both parties with the cost to transport kept low and minimises transport emissions. Timber is a global commodity, however, so this relationship must be viewed in the context of a global supply gap in wood products. The World Bank has forecast a quadrupling of demand for wood in the period to 2050[4], with many populous countries following a well-established path of increased wood consumption alongside development.

In the last twenty years the average import price for sawnwood in the largest importing countries has risen at a compounded annual growth rate of 3.25%. The UK's import price trend is slightly ahead of this, with an import price CGAR of 3.80%. This real (above inflation) price growth in the context of a commodity is indicative of a long lasting supply/demand imbalance, in this case arising from both lack of historical planting with the long time frame for plantations to mature and the macro drivers for a growing timber demand.

Import origins by product



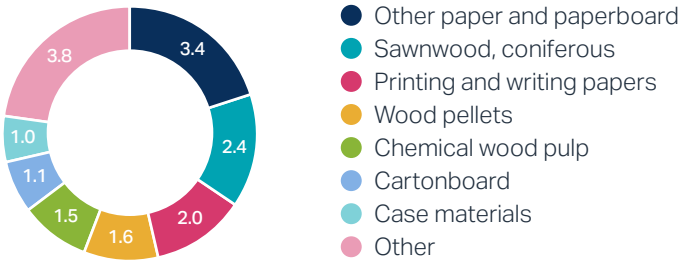
UK sawn Softwood import origin



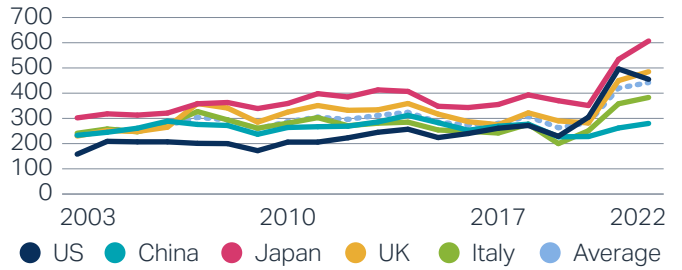
Source: FAO

4. FAO, 2022

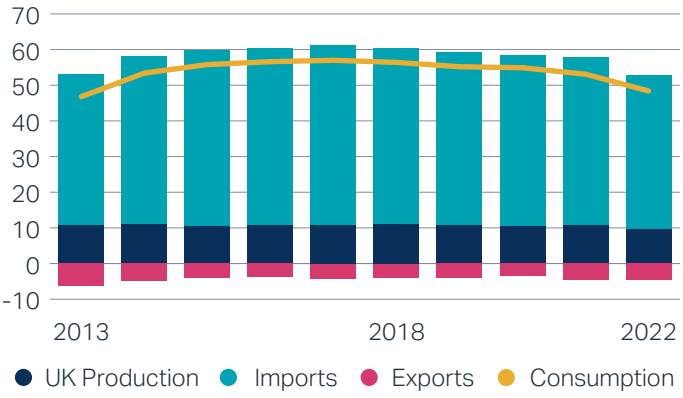
2022 UK wood product imports by value ($bn)



Import price for Sawnwood in wood products ($/m³)



Production and consumption
Million m³ equivalent



Source: FAO 2022

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Forestry investments

Over the past 20 years the returns to UK forestry have been notable at 17.0%[5] per annum. Forestry investments are a long-term commitment, so this must be balanced against a level of illiquidity built into the asset class. The committed nature of the asset class, however, contributes to a relatively low volatility of return.

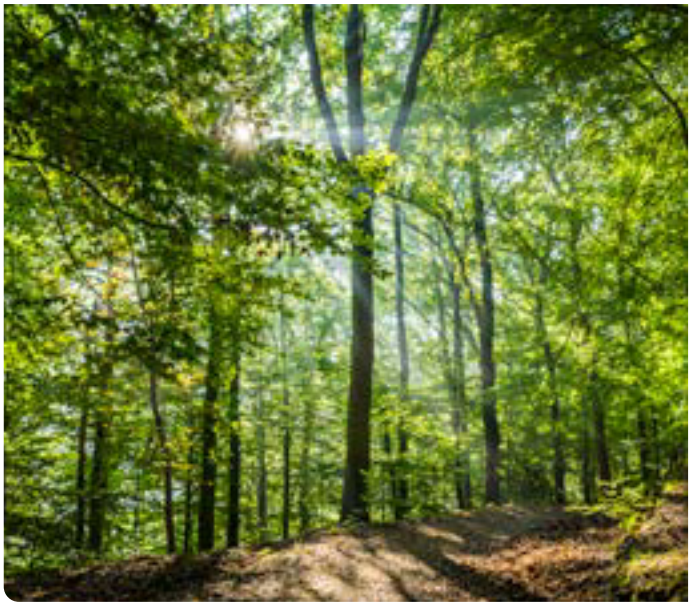
Over this period a relatively constrained supply has driven a real increase in timber prices above inflation, and above the internationally traded sawnwood noted above. This constraint is forecast to continue – with total harvest volumes rising slightly over the next 20 years before falling back to the current level. There is cyclicality in pricing, driven by activity in the construction sector, though this variance has not fed through into forestry asset returns. Well managed forestry portfolios tend to avoid selling into down markets, with the option to simply wait while the trees continue growing being a key appeal of the asset.

A rising price for wood products has driven investment[6] into the sector, resulting in a more efficient and competitive supply chain able to offer a reliable market for mature timber, in significant quantities and of varying product types. This has improved the risk profile for forest owners who have a broader set of options during the harvesting phase.

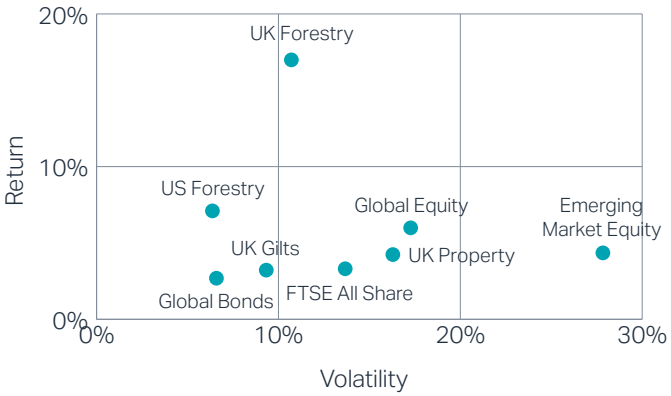
These and wider trends are explored in the Gresham House research paper "Defensive Characteristics of Forestry Investments".

5. GHAM Analysis

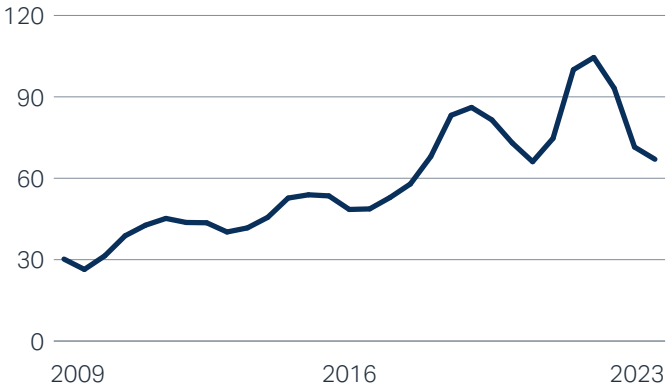
6. FAO



20 Year Return vs Volatility



Forest Research Conifer Standing Index (6.42% Real CGAR)



Softwood volumes forecast ('000s m³)



Source: Forest Research 2022 and 2023

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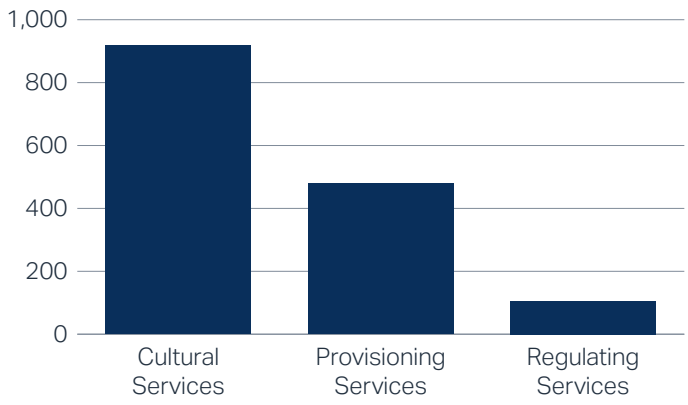
Natural capital

Land-owners in the UK are being encouraged to develop environmentally beneficial land management strategies, increasing biodiversity, sequestering carbon and delivering wider ecosystem services.

This is most developed in the carbon credit market, but with other nature markets gaining credence and investor appetite.

The total asset value of ecosystem services provided by natural capital was £1.5 trillion in 2021. These services have historically been undervalued, and a trend has been observed in recent years of institutional capital seeking to make a difference through deployments that work with natural capital and nature based solutions.

Asset value of natural capital in the UK (£bn)



Source: UK Government 2021



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Woodland carbon

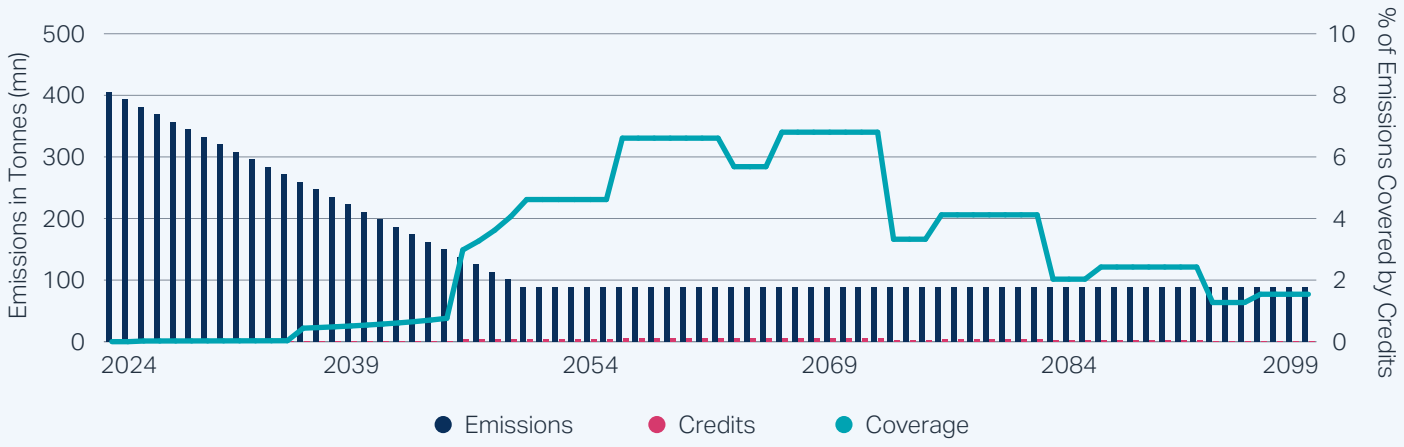
The UK has a domestic voluntary carbon market established via the Woodland Carbon Code, though international carbon standards do operate in the region. This is currently separate from the UK Emissions Trading Scheme (ETS) compliance market and as such woodland generated credits are not able to be used by the largest emitting sectors who are obliged to surrender credits.

This ETS currently covers 25% of emissions, which is likely to expand. There is scope for woodland carbon credits, currently in the voluntary market, being included in the future, which would increase both the scale of the woodland carbon market and carbon credit prices.

The ETS is a key pillar of the UK's Paris Agreement 2050 Net Zero target, designed to deliver net emissions reductions in an economical market driven manner. The current net zero strategy adopted by the UK government is based around gross emissions being reduced by some 80%, with a residual emission base of c1.2 tC02 per person to be met by emissions removals (achieving a net zero emissions balance).

Gresham House analysis suggests that if government planting targets are met, the country could see close to 5% of these emissions offset by woodland creation carbon credits by 2050, rising up to 7% when planted forests enter their highest growth phase. This relates solely to Woodland Carbon Code credits generated, though carbon is also sequestered by existing forestry out with the carbon code. Currently approximately 18MTC02 are sequestered by already established forests, equating to 20% of target residual emissions.

Emissions and Carbon Credits



Source: Based on the 30,000 ha Government planting target, estimated using representative sample Conifer and Broadleaved Woodlands (50%/50%), with credit calculations based on the Woodland Carbon Code

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Climate and conditions in the UK

The UK climate varies from warmer in the south to cooler in the north, with more rainfall in the west where the Gulf Stream dictates weather systems. This split is mirrored in the land uses today – with cereals grown in the south and east, and more pasture and plantation forestry in the west and north.

Climate modelling suggests that these conditions may become more pronounced over the coming decades, though all areas are expected to see an increase in temperature. As with all habitats experiencing this change, some species will thrive, some will migrate, and many will suffer. Trees have an inherent vulnerability to change due to their relatively long life spans and fixed locations, meaning as the environment changes around them they must be resilient.

There is a large degree of uncertainty regarding how each species will respond to warmer seasons, though initial modelling suggest that the main species (Sitka Spruce) planted in the core growing regions may see an increase in its yield from a longer growing season. This is predicated on sufficient rainfall, which is forecast to continue in the west. Forestry in the east will require increased attention on species selection so that more drought tolerant species are planted. As the region has always been drier this is already a well-developed part of practice.

The UK currently benefits from a relatively low incidence of pest and disease, with the help of lower temperatures, high rainfall and less drought stress. As with most island nations, the UK has robust phytosanitary measures which provide an additional barrier against invasive species and disease threats[7].

7. Forest Research Ecological Site Classification accessed 2024



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The UK as a forestry investment destination

Forestry investments in the UK benefit from a compelling core return driver through the current supply and demand imbalance for timber, alongside a relatively low risk profile and certified sustainability.

A highly sophisticated timber processing sector coupled with strong all-party government support provides additional security to investors. Beyond the core returns to timber production, investments in UK forestry benefit from exposure to wider natural capital value in energy and developing credit markets.

Gresham House manages forestry investments on behalf of private and institutional clients in the UK and internationally.



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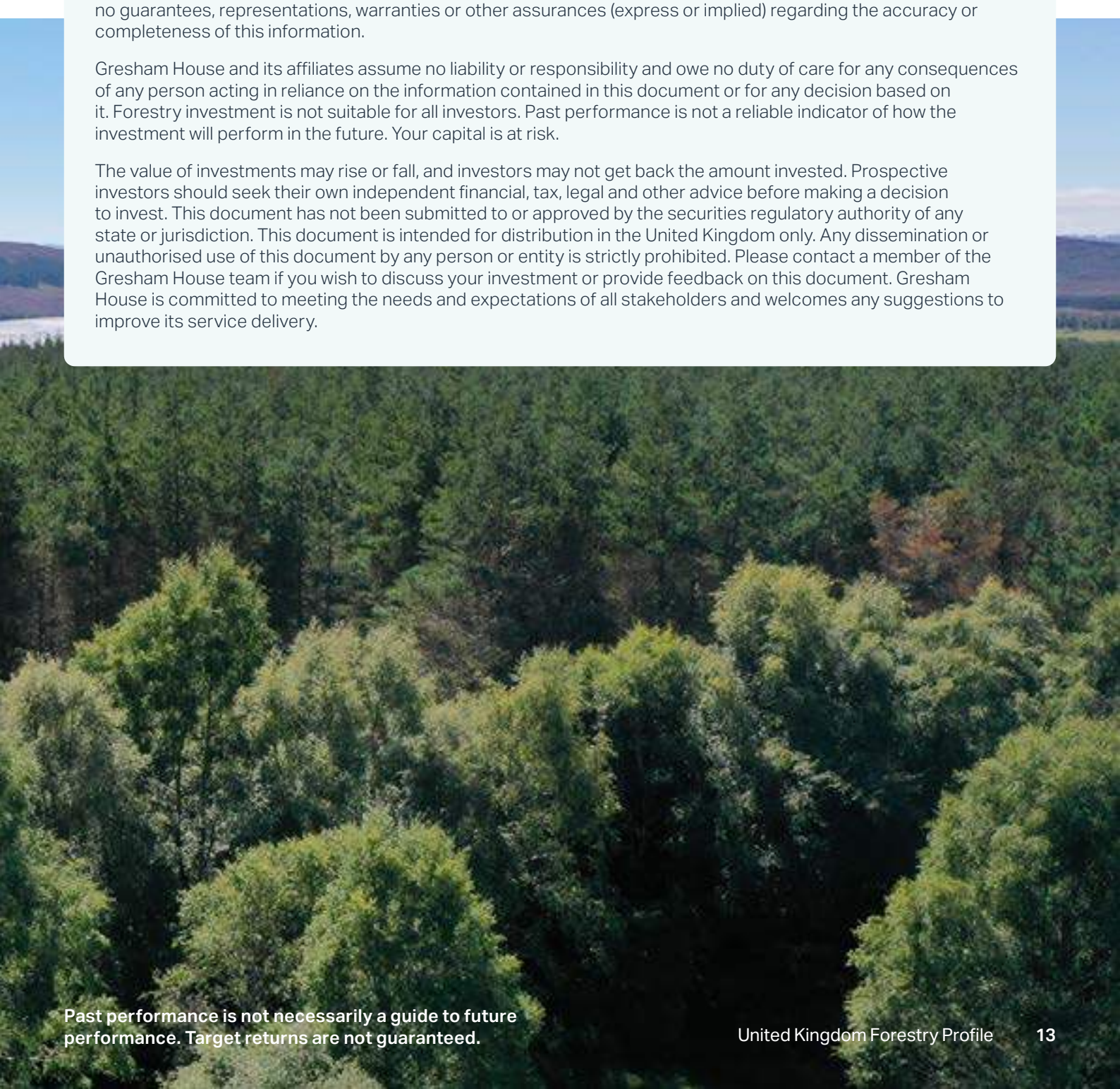
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UK Head Office

Gresham House, 80 Cheapside,
London EC2V 6EE

T: (0) 20 7382 0999
E: info@greshamhouse.com

www.greshamhouse.com

Gresham House
Specialist investment