Forestry England

Rooted in History

MOLA

Our Historic Environment Story.

Contents

Introduction

As the largest land manager in the country, Forestry England oversees a vast and diverse network of more than 1,500 forests and woods, spanning over 250,000 hectares. We often celebrate our landscapes for their natural beauty and ecological significance, yet they also harbour some of England's most extraordinary historical sites, monuments, and stories. Beneath the leafy canopies and towering trees lies a rich tapestry of human history, preserved and intertwined with the very roots of the land.

Our nation's forests are not merely collections of trees; they are living archives, safeguarding nearly 100,000 known archaeological sites and close to 1000 protected monuments, buildings, parks, and gardens. From prehistory to the modern era, we can find evidence everywhere of how humans have interacted with and shaped these landscapes. The unique nature of forestry, compared to other land uses, means that these records of our past are often remarkably well-preserved, offering us a window into the lives and practices of our ancestors.

In this publication, *Rooted in History: Our Historic Environment Story*, we embark on a journey to uncover and share the remarkable stories hidden within the nation's forests. We explore the nationally and regionally important sites and monuments that lie beneath the trees, each one a testament to the diverse and enduring relationship between humans, woodlands, and landscapes. Forests have played an integral role in human existence for millennia and their influence can be traced through activities that have left a lasting mark on the archaeological record.

Rooted in history and branching out into the future, this book sets out to illustrate the significant themes, stories, and narratives that define our historic environment. By doing so, we aim to not only promote a deeper appreciation of our woodland heritage but also to support goals outlined in Forestry England's Historic Environment Ambition, and contributing to the organisation's larger strategy of *Growing the Future*.

As you turn these pages, you will discover that the nation's forests are not just spaces of natural wonder but also living bridges between our past and a thriving future. They are places where 100 years of history meet 300,000 years of stories, where the echoes of ancient human activity still resonate beneath the rustling leaves, and where the roots of our shared heritage run deep, grounding us in a collective narrative that continues to grow.

Dr Lawrence Shaw
Lead Historic Environment Advisor, Forestry England

Bedgebury Pinetum in Autumn

A vast canopy of Archaeology

Across seven districts, Forestry England manages more than 1,500 forests and woodlands, spanning over 250,000 hectares of World Heritage Sites, National Landscapes, and Sites of Special Scientific Interest.

Our forests are home to nearly 100,000 archaeological sites and monuments, spanning a vast range of time periods and functions. These include humble rock shelters and caves inhabited by early humans 20,000 years ago, imposing Neolithic and Bronze Age burial mounds constructed 12,000 – 4,500 years ago, elaborate Iron Age hillforts built 3,000 years ago, Roman pottery industries established 1,800 years ago, Medieval hunting lodges, and even more recent histories such as the site of the largest bomb Britain has ever dropped on itself, only 80 years ago. While some site types and time periods can be found within all of our districts, we also see regional and cultural variations which are unique to each district.

Of these 100,000 sites, 750 are scheduled monuments, legally protected due to their national significance. These range from extensive archaeological complexes to ruined structures or individual prehistoric stone circles. We also manage nearly 100 listed buildings, recognised for their special architectural and historic interest. These include royal hunting lodges in Northumberland and the New Forest, humble milestones, and even a telephone box.

Beyond individual monuments and buildings, we also care for elements of 30 registered parks and gardens. These designed landscapes, shaped by pioneering figures such as Capability Brown, tell stories of family legacies, plant collections, the Sheriff of Nottingham, the sale of the world's largest diamond, and even links to the Yale family and the oldest professional graduate school in the United States (Forestry). Each chapter within this publication draws upon just some of the unique sites and monuments found in each of our seven districts.

Themes

The following chapters present regional examples of unique stories and histories found within the nation's forests. Each case study also aligns with broader themes such as historic land use, resource utilisation, cultural practices, technological advancements, military influences and more. Six overarching themes have been identified, illuminating the complex, multifaceted relationship between people, forests and landscapes.

Seeds of change

How and why our landscapes have been used and transformed over time is key to understanding their significance. As we step back through thousands of years of history, we encounter evidence of redevelopment, natural changes, and societal shifts – from the Roman invasion to the Industrial Revolution. Witness how landscapes of conflict grew into peaceful pastures, and explore how entire villages were built to support the creation of new forests like Kielder in Northumberland and Thetford on the Norfolk-Suffolk border.

Blossoming industries

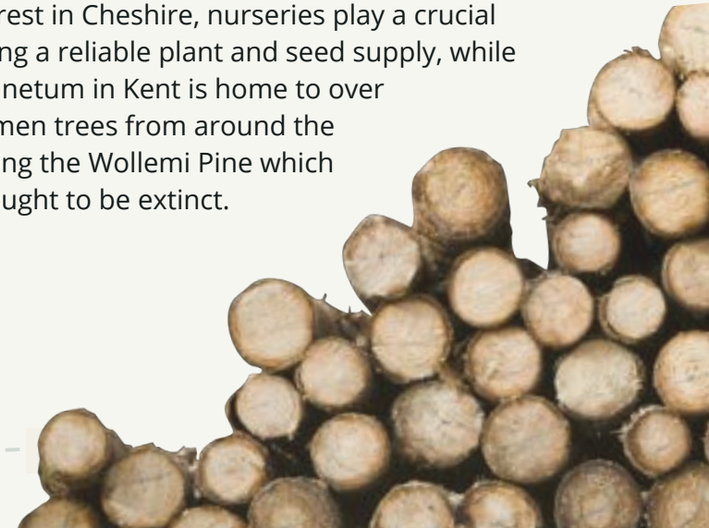
From quernstones, the essential tools for Prehistoric breadmaking, to Medieval ironworking and rabbit farming, these landscapes weren't always forests, nor were they valued solely for their timber. Discover how Guisborough Forest in North Yorkshire was at the centre of the first chemical industry in England and how dangerous experiments in the Forest of Dean in Gloucestershire led to technological advances in steel production, pre-dating other sites which claim to have pioneered this technique.

Canopy of culture

Discover the landscapes which have inspired some of the world's greatest artists, writers and thinkers – from J.R.R. Tolkien to William Wordsworth. Our forests haven't just inspired. Uncover how Robert Stayner Holford, one of the original creators of Westonbirt National Arboretum in Gloucestershire, drew on W. S. Gilpin's 'picturesque' principles to transform the remains of Roman fields and Medieval woods into a botanical wonderland of parks and gardens, making it one of the best examples of this style in the world today.

The living forest

Planting programmes to renew the timber supply have been taking place on our land since at least the Medieval and Post Medieval periods. This continues today, but with very different aims. Links to the distant past are being renewed in the present, with the reintroduction of native trees, such as alder, birch, elm and willow to Kielder Forest, and conservation grazing in Ennerdale, Cumbria, echoing Medieval use of the landscape. Today, sites which were once practice battlegrounds and centres of industry are being put to work to ensure future sustainability. Within Delamere Forest in Cheshire, nurseries play a crucial role in securing a reliable plant and seed supply, while Bedgebury Pinetum in Kent is home to over 12,000 specimen trees from around the globe, including the Wollemi Pine which was once thought to be extinct.



Timber and tensions

Today our forests, woodlands and heaths are peaceful places, but that hasn't always been the case. Find out how the contested Medieval and Early Modern border between England and Scotland made the area which is now Kielder Forest in Northumberland a hotbed of violence and raiding. Defensive houses called Bastles can still be seen here, a testimony to the area's dark past. Sometimes these landscapes brought larger conflicts much closer to home. Discover Cannock Chase training ground in Staffordshire, one of the best-preserved First World War landscapes in England, where recruits from Britain and across the Empire trained. Also uncover the crucial role played by Britain's forests in the Second World War, providing vital timber for victory, with contributions from groups such as the 'Lumberjills' working in North Yorkshire's Dalby Forest.

Ancestral roots

For thousands of years, ancient communities were drawn to these landscapes by the wealth of natural resources they offered. Beneath the shelter of trees, they lived, buried their dead and carried out rituals that have since been lost to time. These include our ancient cousins the Neanderthals, who were taking advantage of Norfolk and Suffolk's watery landscape at Lynford during the last Ice Age, along with mammoths, woolly rhinos, reindeer and bears. In the more recent past, a mere 4,500 years ago, discover how Bronze Age groups living around the forests and heaths of South-West England created stone monuments and circles, including links to the most famous of them all – Stonehenge.

Central England

Forestry England's Central District covers a vast area stretching from Milton Keynes in the south and Hull in the east, to the Mersey Belt in the Northwest. With woodlands ranging from the coniferous plantations of Delamere, to the ancient oaks of Sherwood, this is a landscape that has been exploited and shaped by humans over millennia.

Our Central District is also a landscape of contrasts, where monumental 2,500-year-old hillforts sit alongside rapidly constructed First World War training camps. Many of these features can be easily missed at first glance but, using modern archaeological methods and historic records, traces of past human activity can be found everywhere.

Ancestral roots

The living forest

Timber and tensions

Eddisbury Iron Age hillfort *(Peter Vardy)*

Quick facts!

- There are 13 scheduled monuments, 7 listed buildings, and 4 registered parks and gardens managed across the central district.
- J.R.R. Tolkien, trained at Cannock Chase during WWI and is said to have taken inspiration from the forest for his Lord of the Rings trilogy.
- Eddisbury Iron Age hillfort in Delamere Forest is the largest and most complex of the seven hillforts in Cheshire.

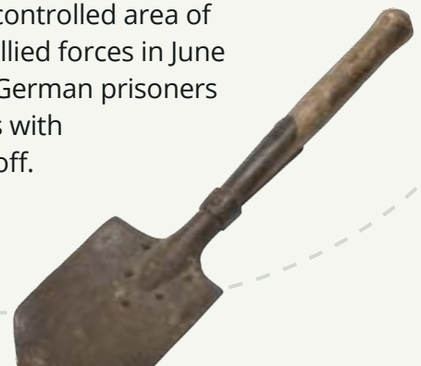
Cannock Chase & Clipstone Camp

In 1914 Europe stood on the brink of war. Lord Kitchener, recently appointed Secretary of State for War, launched a massive recruitment campaign calling upon men across Britain to join the army. The response was extraordinary and over 750,000 soldiers enlisted – far more than had been expected. Kitchener was now faced with a problem – how to train so many in such a short space of time? New facilities were urgently required, and the heathlands of Cannock Chase in Staffordshire and Clipstone in Nottinghamshire were about to enter the war.

Modelling the battlefield

In 1915, two new military training camps were created at Cannock Chase – Rugeley and Brocton. As the war progressed both camps became more permanent facilities, providing training in the use of rifles and machine guns, as well as scouting, signalling, and gas warfare. Together the two camps could have housed around 40,000 men, with a constant stream of new recruits coming from both Britain and countries forming part of the wider Empire at the time.

Beyond the more traditional wartime training facilities, such as those already mentioned, Rugeley saw a model of a 'typical' trench system built at the eastern end of the camp based on the Manual of Field Engineering, published by the General Staff of the War Office in 1911. Now a nationally protected monument (list no. 1021326), the model measured just over 40 metres in length and 18 metres across, which was roughly a quarter life size. Similarly, at Brocton, a scale version of the Messines Ridge – a German controlled area of strategic importance in Belgium, captured by the allied forces in June 1917 – was recreated in concrete. Constructed by German prisoners of war, these models were designed to aid soldiers with planning assaults. Their use appears to have paid off.



Following the war, the camps were decommissioned and dismantled. Today, however, evidence of these past activities can be spotted as lumps, bumps, and scattered concrete foundations, surviving as a lasting memory of the men who trained here – many of whom lost their lives on the battlefields of Europe. More recently, an airborne laser scanning technique (LiDAR) has enabled archaeologists to see beneath the vegetation which now surrounds these sites, and map one of the best preserved First World War landscapes in England.

Reconstructed First World War trenches, Sherwood Pines ***(Emily Crookshank)***

From colliery to conflict

In Clipstone, Nottinghamshire, the army made use of an area originally set aside for a colliery (coal mine). The camp, which opened in February 1915, was built in a 'V' shape, and included training trenches, rifle ranges, and sentry posts. Astonishingly, at its peak Clipstone could train around 30,000 soldiers – making it one of the largest British training camps of the First World War. After the war, the northern part of the camp was demolished, whilst the south became the colliery it was originally intended to be. A new village was built in place of the old camp to house the mine workers. The forest plantation known as Sherwood Pines was also planted in 1925 across a large part of the old training area. Today, the remains of more than 60 kilometres of the original training trenches dug by the soldiers over 100-years-ago can be found hidden beneath the trees, at a level of preservation which is hard to find elsewhere in the country.

Restoring peace

During the First World War, trees and forests across the UK were felled to be used in the war effort. Their timber would have been used as pit props, for trench construction, rifle manufacturing, ammunition crates, fuel, and much more. Consequently, at the end of the war only 5% of the UK's land was covered with woodland – an all-time low. The Forestry Commission was established in 1919 in response to this impact, with the aim of replenishing UK woodlands and creating a sustainable timber supply for any future conflicts. Through the creation of new forests and woodlands, sites such as Cannock Chase and Sherwood Pines were planted, and this legacy of the First World War now ensures these important areas are preserved and remembered for centuries to come.

LiDAR image showing the Clipstone trenches

Wharncliffe Rocks

Just 12km north-west of Sheffield, today Wharncliffe Woods is a haven for hikers and climbers. However, this stunning landscape in South Yorkshire has a secret industrial past. The area has seen human activity for over 12,000 years, with a Mesolithic (10,000–4100 BCE) camp found nearby. Yet, it is in the Iron Age (750 BCE–CE 43) and Roman (CE 43–410) periods that activity in the area really exploded. Around 2,500 years ago, Wharncliffe supported a massive prehistoric factory, producing quern stones on an industrial scale. Almost half a meter tall and shaped like a beehive, these quarried quern stones would have been used to process grains into flour. The fine-grained texture of the sandstone found at Wharncliffe made it the ideal material for this task. Over 2,300 unfinished querns have been recorded across the area, highlighting the scale of activity which would have once taken place at this now tranquil site. The recognition of the site's significance has endured through time, with records from the 1200s referring to the area as 'Quernclife', and its importance continues to be recognised today, with 72 hectares designated a nationally protected monument (list no. 1004802).

Wharncliffe Rocks

Delamere Forest Nurseries

Today the nurseries within Delamere Forest play a crucial role in securing a reliable plant and seed supply for Forestry England. A cutting-edge glasshouse, with computerised systems to control the environment and rainwater harvesting, grows four million trees alone! However, this centre of forestry excellence has its roots in a rich history of human activity and experimentation. There have been woodlands of some shape and form across the Delamere area for over 8,000 years. During the Norman period (CE 1066–1154), the Crown created vast areas of forest for the purpose of raising and hunting deer and other wild animals. However, over the centuries, game hunting became less important and the need for timber as a resource increased. Gradual deforestation meant that by the 1700s the Delamere area had largely reverted to heathland. But this was all about to change.

A sinking feeling

At the start of the 1800s, Delamere Forest was handed to the Department of Woods and Forests. Their first task was to respond to the Navy's concerns about the shortage of oak trees, by planting 100,000 acres of oak woodland mixed with scots pine. However, by 1851 they realised they'd made a big mistake. The oak trees were still 60 years away from being ready to fell and poor management of the pine meant it was growing badly. By 1908, Delamere was littered with stunted trees mostly unsuitable for producing timber. Desperate to see the forest thrive, the Department of Woods appointed E.P Popert to provide expert advice on how to improve the forests. Popert took account of the variety of soil types within Delamere, which is an unusual mix of dry, sandy areas, and wetter, peat-filled patches. Based on this analysis, he suggested planting scots and corsican pine on dry areas, and sitka spruce on the wet areas. This approach was more successful, and thanks to Popert the forest began to show more promise.

Lessons from the past

The Forestry Act of 1923 transferred 1,804 acres of Delamere to the Forestry Commission. Following in Popert's footsteps, foresters continued to improve the management of Delamere Forest – resulting in the healthy population of trees found here today. Lessons learned from the past made Delamere Forest the ideal place to establish nurseries, and these continue to be places for experimentation in arboricultural practice – carrying on the legacy of those who came before. Today, Forestry England Plant and Seed Supply, known as Delamere Nurseries, provide approximately seven and a half million plants from around 45 species to the nation's forests.

Delamere Forest Nursery

North England

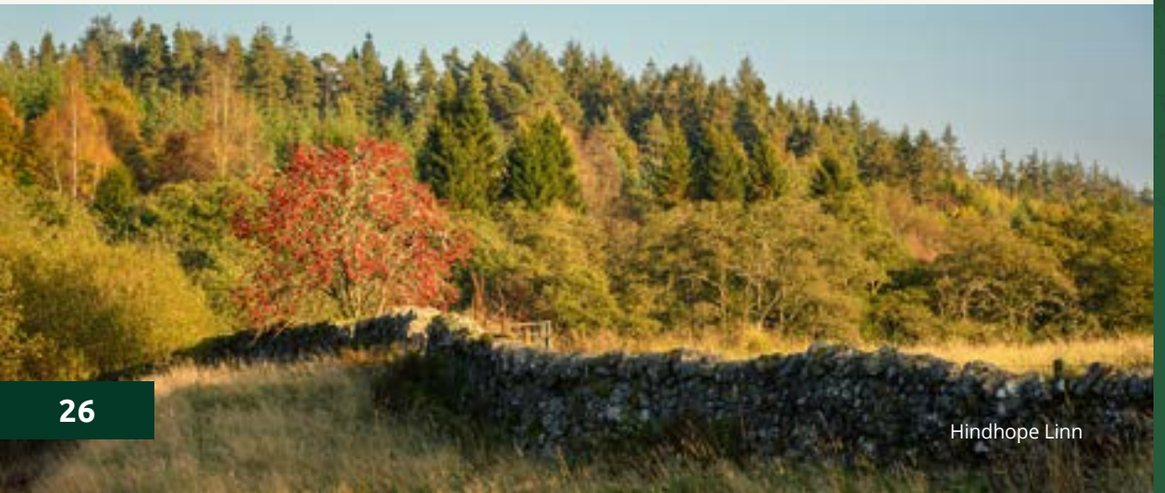
Forestry England's North District is home to red deer, ospreys, and thriving populations of red squirrels. From the dramatic fells and peaks of the Lake District to England's largest forest, its landscapes have inspired many of the world's greatest artists, writers, and thinkers.

Today these landscapes produce a large amount of sustainable timber. They are also undergoing restoration and enhancement. However, hidden inside their leafy groves lie fascinating clues as to how these landscapes were previously used. Stories range from local industries to some of the most dangerous places to live in Post Medieval England.

Timber and tensions

Blossoming industries

Seeds of change



Hindhope Linn

Quick facts!

- There are 31 prehistoric scheduled monuments across the region, mostly funerary.
- Grizedale in the Lake District contains the UK's first forest sculpture trail, established in 1977.
- Border Mires peat bogs on the Kielder Forest estate in Northumberland were used as the testing ground for the Blue Streak missile in the 1950s.

Kielder Forest Bastles

Contested borders

Today the peaceful woodlands of Sidwood, part of Kielder Forest in Northumberland, are often called a hidden gem. But for almost 2,000 years, it had a much more turbulent history. Hadrian's wall might have marked the frontier of the Roman Empire, but it sits well below the current border between England and Scotland. From the Prehistoric period until the late 1750s, this contested border region was a dangerous place. From the defended settlements of the Iron Age, with their steep ditches, banks and palisades, to Post Medieval fortified farms, the threat of warfare was never far away.

Storming the bastles

In the late 1500s tensions were high in the Scottish Marches. This buffer zone along the England-Scotland border, created in 1249 by Henry III of England and Alexander III of Scotland, was a hotbed of violence and raiding – from both sides of the border. Reivers (raiders) would attack farms without warning, stealing cattle, horses and whatever else they could get away with. Many of the wealthy and powerful Border families (similar to the Highland clans) were heavily involved in these activities. The solution for the farmers who could afford it was simple. Replace their ordinary houses with miniature castles. Most of these fortified farmhouses, called bastles, were built between 1575 and 1650. With incredibly thick stone walls, the ground floor of a bastle was dedicated to stables for the valuable animals. The living space was on the first floor, accessed by a ladder which could be pulled up from the inside if the reivers came calling. The bastle's windows were small and barred, often no more than slits. It was surrounded by an outer wall called a barmkin.

Less than 300 bastles are known to survive, with their owners gradually abandoning them as border tensions calmed. Sidwood Forest contains some of the best-preserved examples. After almost 500 years, one bastle in the valley of Tarset Burn (list no. 1008992) is missing little more than its roof. This helps archaeologists and historians understand the development of these buildings, and how they continued to be used and modified long after the need for their defensive features was over.

Sculptures in Grizedale Forest ***(Jonny Gios)***

Ennerdale

Medieval Ennerdale

Located on the Northwestern edge of the Lake District National Park, Ennerdale is home to one of the longest-running wild land restoration projects in the UK and was designated Cumbria's largest National Nature Reserve in 2022. The Forestry Commission began planting trees here in 1926. Before this, there had been a small amount of mining in the 1800s, but it was 500 years earlier that industry in the area had reached its peak. In the Medieval period (1066–1485), people were drawn to Ennerdale by its natural resources, taking advantage of everything the native woodland had to offer. Mining along Clews Gill produced iron ore, the trees supplied them with plenty of charcoal to process it, and settlements were established around this growing industry. And on areas of open ground, wealthy landowners established an agricultural industry of their own.

A blooming industry

The fells above Ennerdale Water were a focus for iron mining during the Medieval and Post Medieval periods. It wasn't long before the iron industry spilled down the hillside onto the now peaceful shores of Ennerdale.

A type of furnace known as a bloomery, now a scheduled monument (list no. 1007235), was established on the edge of the water, and the exploitation of Ennerdale's natural resources began.

The first stage of iron working is smelting. From the earliest beginnings of the industry during the Iron Age (750 BCE–43 CE) until the late 1600s CE, this was done through a process called bloomery smelting. The iron ore was heated to very high temperatures. This removed impurities and waste material known as slag. Left behind was a small lump of metallic iron called bloom, which could be worked by blacksmiths into all sorts of everyday objects. A geophysical survey carried out in 2000 suggests there were two other furnaces here, now long buried under the smelting waste. Smelting on this scale needed lots of charcoal to fuel the furnace to such high temperatures. The native woodland at Ennerdale was an excellent source. Close to the remains of the bloomery are the remains of four earth platforms used for making charcoal. While these platforms date to the Post Medieval period, there is also a rare late Medieval charcoal pit (list no. 1007235).

Just uphill from the bloomery, nestled within the planted forest is the settlement of Smithy Beck (list no. 1413845). Now in ruins, with walls standing less than half a metre high, this was once home to Ennerdale's miners and ironworkers. These cosy double-walled long houses were excavated in the early 1960s, when pottery dating to the Medieval and Post Medieval periods was uncovered.

Medieval longhouse remains, Ennerdale, Lake District ***(Emily Crookshank)***

Cows past and present

Slightly further around the head of Ennerdale Water from Smithy Beck, a very different type of industry was already well established. Since the 1320s, Woundell Beck had been home to a cattle farm called a vaccary. In 1322, John de Multon, the 2nd and last Baron of Egremont, owned two vaccaries in Ennerdale. Medieval documentary evidence, combined with archaeological surveys of the settlement and an enclosure at Woundell Beck, suggests this was one of the baron's holdings. In 2006 farming returned to the valley, as year-round grazing by native Galloway cattle was introduced. This process brings ecological benefits, helping the area return to the same sustainable and beneficial processes used by our Medieval forebears.

Alongside the cattle were the community who looked after them. They also farmed the land on agricultural terraces leading up the hill from the valley floor, which meant they had to clear the area of a huge number of stones. These can still be seen today, piled randomly in long forgotten and overgrown fields. In total, a group of 11 Medieval houses made up this farming community, now a scheduled monument (list no. 1408266). The community here also had their own animals and would have paid the landowner for the right to graze them high on the fells during the summer months. The remains of their shelters, called shielings, can still be seen at Great Cove, near Low Gillerthwaite (list no. 1408243).

View over Kielder Forest

Kielder Forest

The creation of Kielder Forest

Kielder is England's largest forest, but its immense size doesn't reflect its age. In 1920, this was open moorland, used for grazing sheep and shooting grouse. Small areas of native woodland clung to the sides of streams and isolated crags, and their restoration was one of the Forestry Commission's biggest success stories. The creation of Kielder Forest not only supported natural ecosystems, but the development of new villages and communities, which continue to thrive today. Kielder's redevelopment began in 1926. There was a national shortage of timber after the First World War, so this was part of the Government's solution. 800 hectares (three square miles) of conifers were planted, as part of a nationwide plan to ensure a steady supply of timber. By 1932, the Kielder foresters has increased to the 190,000 hectares (73 square miles).

That's where the Ministry of Labour stepped in. While the traditional industries of mining and shipbuilding had been prioritised during the First World War, by the early 1930s they were in severe decline. Communities in North East England had unemployment rates of over 45%. Workers from these dwindling industries were offered jobs creating new forests like Kielder. Initially they were housed in 'instructional centres' created by the Ministry of Labour. However, as time went by, new purpose-built villages were created for the workers and their families. These include the villages of Stonehaugh and Byrness, as well as Kielder village itself – designed by town planner Thomas Sharpe. In 1963, renowned landscape architect Dame Sylvia Crowe became the first Landscape Advisor for the Forestry Commission. Her vision for the potential of Kielder's rolling hills had a huge influence on the design of the forest. Development of Kielder Forest continues today. Plans have turned towards the reintroduction of native trees, such as alder, birch, elm and willow, as well as establishing wild areas – diversifying the ecosystem to ensure the forest's future sustainability.

Yorkshire

Forestry England's Yorkshire District covers an area equivalent to 30,000 football pitches, from Guisborough Forest in the north to the developing York Community Woodland at Knapton, Bishop Wood near Selby and across to Stainburn Forest near Harrogate. Its forests are home to regionally important birds including nightjar and turtle dove, 19 Sites of Special Scientific Interest (SSSI), and 238 scheduled monuments.

This landscape has also played an incredibly important – but sometimes forgotten – role in some of the nation's most significant moments, from the arrival of early humans to the women who felled trees during the Second World War.

Seeds of change

Timber and tensions

Blossoming industries

Kilburn White Horse

Quick facts!

- Wykeham Forest contains 61 scheduled monuments, including tens of rare Iron Age square barrows.
- 10,000 years ago, at the end of the last Ice Age, the Vale of Pickering was filled with glacial lakes.
- Kilburn White Horse is the most northerly turf-cut figure in Britain. It was created by the local village schoolmaster and his pupils in 1857.

Wykeham & Dalby Forests

A landscape through time

Wykeham and Dalby Forests, in the heart of the North York Moors, are home to a huge variety of wildlife species, including bats, deer, honey buzzards and the European nightjar. But for more than 6,000 years these now serene woodlands were shaped by a vast amount of human activity. These two forests are home to thousands of years of nationally significant history. Dalby and Wykeham forests combined cover an area of just 18 square miles, but they contain 137 scheduled monuments and many more unscheduled. Dalby was once part of the Pickering Royal Hunting Forest, but some of its most intriguing archaeological stories come from the lives of ordinary people. They left traces of their daily activities, from Prehistoric burial mounds to Post Medieval animal management practices. Today, these important archaeological records are preserved and protected through thoughtful planning and careful management.

Making their mark

Throughout history, communities have set out their land boundaries and divided their territory from their neighbours' using stones, earth banks, walls, fences and ditches. When Britain's first farmers took up residence in North Yorkshire, over 6,000 years ago in the Neolithic period (4100–2500 BCE) they dug rows of pits (called pit alignments), built long earthen banks and used standing stones to signify the edges of different territories. Spaced carefully apart, these earthworks can still be seen today, with pit alignments (list no. 1020217) running almost completely uninterrupted for over 200 metres. In the Medieval period (1066–1485), as well as dividing land from one another, some of these markers were intended to guide people across often difficult landscapes, helping them travel from one village to the next. These include the Mauley Cross in Cropton Forest (list no. 1011745), which has been interpreted as a wayside cross.

Ritual centres

With beautiful natural landscape and awe-inspiring views, it's no surprise ancient communities chose to lay their dead to rest in Dalby and Wykeham, within earthen burial mounds (barrows) or beneath piles of rocks (cairns). In the past, unforested areas on the edge of cliffs and valleys seemed to be a popular place to raise monuments in honour of the dead. Expanding forest cover has played its part in protecting these ceremonial sites from damage or destruction over time.

While there is only one recorded Neolithic (4100–2500 BCE) long barrow (list no. 1020330) in Yorkshire Forest District, it is a hotbed of Bronze Age (2500–750 BCE) and Iron Age (750 BCE–CE 43) burial sites, with 195 Bronze Age and Iron Age barrows, and 15 stone cairns. This tells us the area was an incredibly significant place for prehistoric communities. Iron Age square barrows are now incredibly rare, usually lost to ploughing. But in the 18 square miles of Dalby and Wykeham forests there are 33 preserved among the trees and moorland.

The fact these features still exist in the landscape suggests they remained important to people for long periods of time. One theory is that communities returned to visit these burial sites to carry out ceremonies and rituals, or simply to meet with other groups from nearby areas.

Neolithic pit alignment in Dalby Forest

Rabbit warrening

For hundreds of years, from the 1100s, Wykeham and Dalby Forests were home to a very specific animal industry – rabbits. These rabbit warrens are just some of 17 scheduled warren sites found across the country. In the Medieval period rabbits were prized for their meat and fur – so they could make landowners a lot of money. Kept in purposebuilt warrens and farmed like sheep or cattle are today, rabbit fur was sent across the country to make fancy hats and cloak trims.

Rabbits were kept at Dalby and Wykeham until the early 1900s, by which point it was no longer fashionable for wealthy people to eat rabbit. As land was turned to other uses, many purposebuilt warrens were lost, but not here. The remains of these warrens are nationally protected because they are so rare. Today the rabbit capture pits have been incorporated into an installation by artist Layla Khoo, entitled Custodians.

The forests today

The Forestry Commission purchased land around Dalby in 1919 and began planting trees in 1921. During the 1930s, unemployed men were set to work in Dalby Forest, breaking ground, building tracks and undertaking other heavy labour. During the Second World War, when timber was required for the war effort, the Women's Timber Corps moved in to get the work done. Now, this is an area of sustainable forestry and wildlife protection, with more than 450,000 visitors a year taking in the sights and sounds of the woodlands.

Custodians at Dalby Forest *(Layla Khoo)*

Dalby Sawmills

The Lumberjills

Timber was a hugely important resource during the Second World War. It was vital for building railways, mines and making charcoal gas mask filters, as well as boats, and even aircraft. In 1942, the German occupation of Norway meant Britain could no longer rely on imported wood. They had to turn to their own forests, but with most young men already away at war, the Government had to find new sources of labour.

Battling gender stereotypes

The Women's Timber Corps was founded in 1942 as part of the Women's Land Army. 18,000 young women aged 17–24, known as the 'Lumberjills', signed up to carry out hugely important and dangerous work in Britain's forests. These women didn't let gender stereotypes of the time hold them back. They quickly took on all aspects of forestry work. From felling trees and driving trucks and tractors, to operating the sawmills, surveying and identifying trees for felling – the Lumberjills did it all. They worked alongside lumberjacks recruited from Canada and – as the war progressed – 48,000 Italian and German prisoners of war. Together they cut down any timber which could be of use, felling over 46% of Britain's trees. Although the war ended in 1945, the Women's Timber Corps continued until August 1946. Some were even sent to Germany to help restore sawmills. But as the male forestry workers returned, the Lumberjills and their incredible contributions were swiftly forgotten.

A fight for recognition

After the Women's Timber Corps was disbanded, the Lumberjills had to hand back their uniforms and give up their work in the forest. Apart from a letter signed by the queen, their work went almost entirely without recognition. It was only in 2000, over 50 years later, that the Women's Timber Corps and the Women's Land Army were finally allowed to march in Remembrance Day parades. In 2008, more than 60 years after the end of the war, the government finally presented surviving members of the Women's Timber Corp with a veteran's badge. In 2013, the Lumberjills were honoured with a sculpture by Ray Lonsdale in Dalby Forest. Their story, long forgotten and ignored, is finally taking its rightful place in the nation's history.

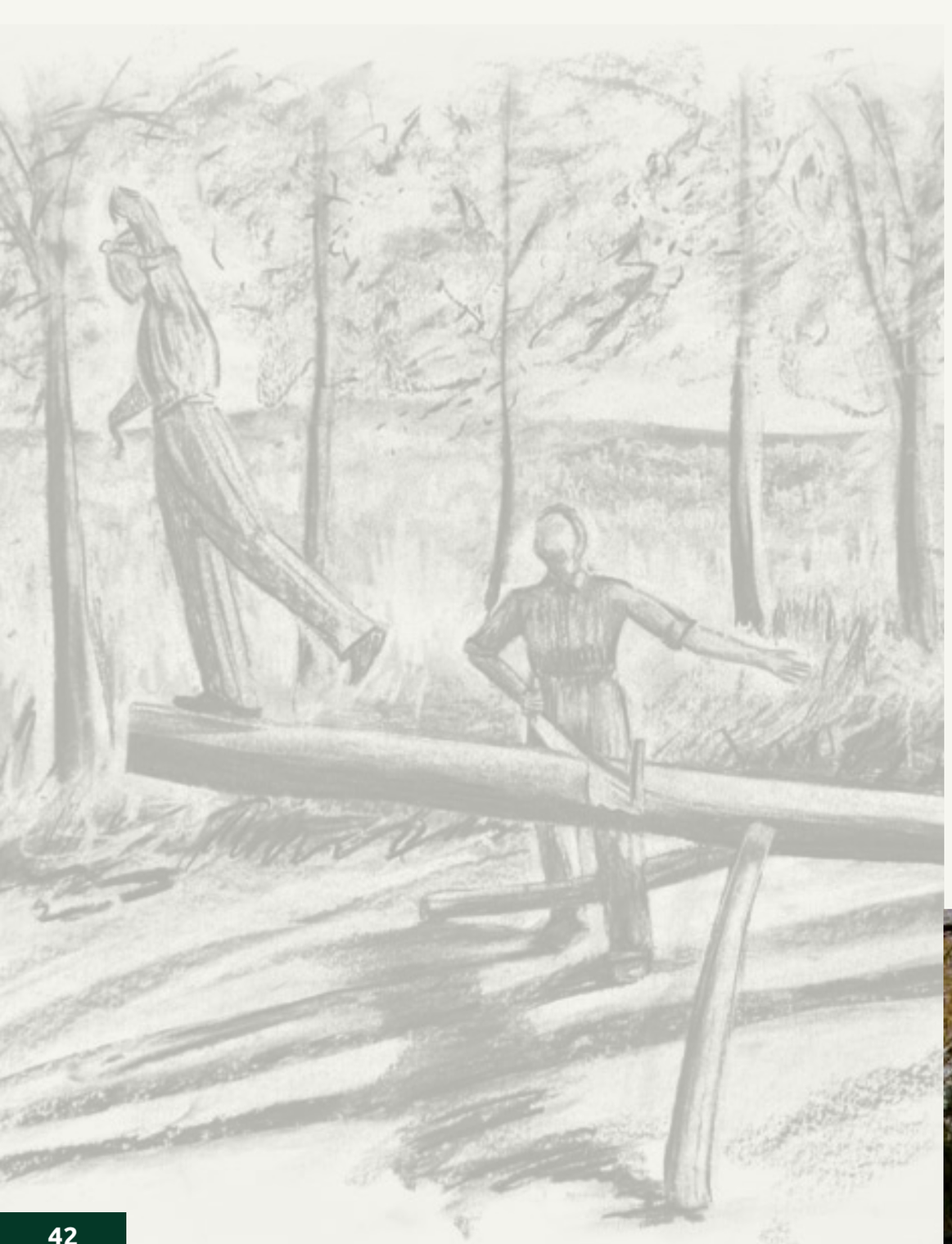
Guisborough

Guisborough Alum Works

When Henry VIII split from the Catholic church in Rome to divorce his first wife, Catherine of Aragon, in 1533, one unforeseen side-effect changed the course of industry in this part of Yorkshire for hundreds of years.

Alum is a chemical used in the cloth dyeing process. It stops colourful dyes from washing out of clothing. Until the 1500s, Britain imported all its alum from places like Italy. After Henry VIII's disagreement with the Pope in Rome, it was difficult to import Italian alum. So, Britain embarked on the process of making its own. The answer was shale rock, found right here in North Yorkshire.

Shale is a soft stone formed from clay and was mined from the Guisborough hills. The shale would be burnt and then soaked in water to create 'alum liquor', which took over a year to produce. Finally, it was heated and mixed with urine. This may seem like a strange ingredient, but in the 1600s urine was used in lots of scientific experiments, including trying to make gold! After some of the liquid had evaporated, it was left to cool into clear salt-like crystals. These were then ground up to make the final product. Evidence of this industry can still be seen in Guisborough Forest, with mine shafts, piles of waste material lumped up high and dotted air vents still



Lumberjill sculpture, Dalby Forest ***(Emily Crookshank)***

Slapewath Viaduct

East England

Forestry England's East District stretches from Norfolk down to the Southern coast of East Sussex, and as far west as Oxfordshire. It also includes the National Pinetum at Bedgebury in Kent. These tranquil forests are filled with stories about the past. Some, like the origin of St Leonard's Forest near Horsham in West Sussex, which is said to be named after a French hermit who fought and killed a dragon there, are the stuff of legend. However, others contain more than a grain of truth.

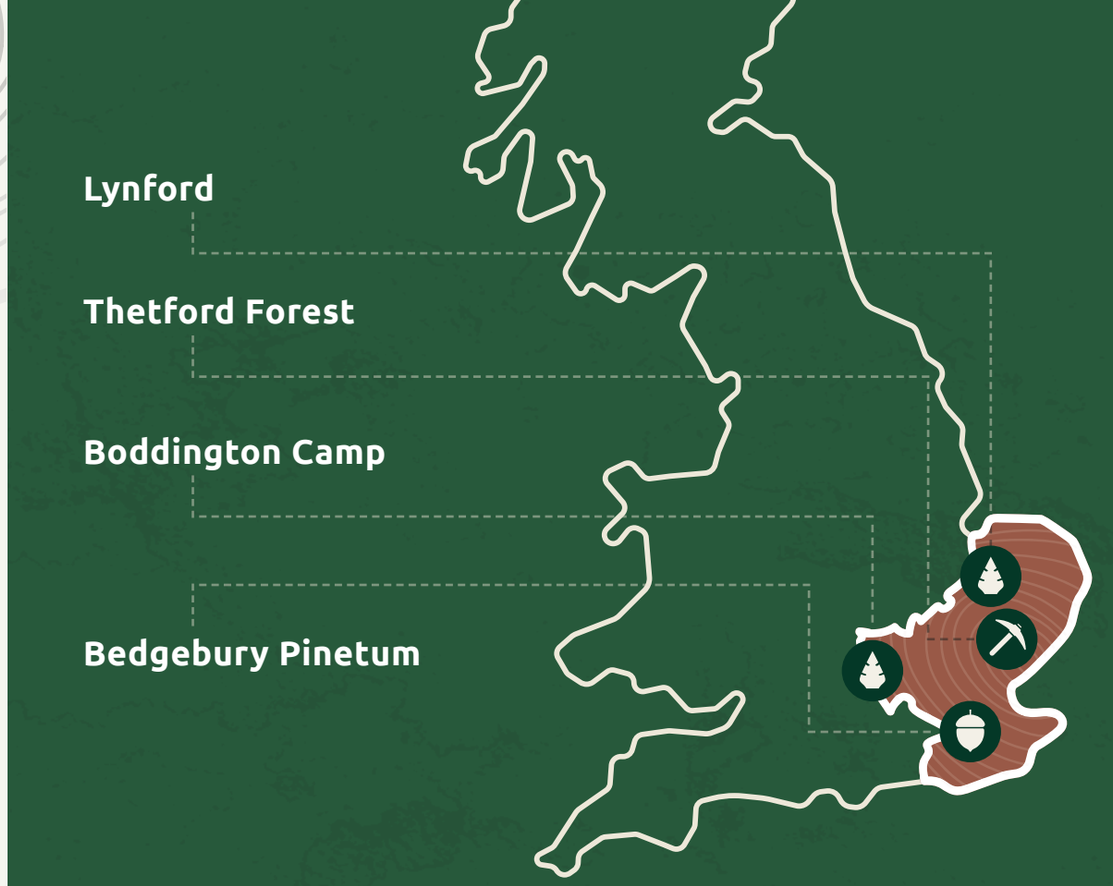
Archaeological excavations and surveys in this region have revealed landscapes which stretch back to the Ice Age. These woods were once home to creatures which have been extinct for thousands of years.

Ancestral roots

Blossoming industries

Seeds of change

Wendover Woods



Quick facts!

- Flint mining is one of Britain's oldest industries – it was carried out in Thetford Forest in Norfolk from 4000 BCE to the 1900s.
- Great Hockham is home to pingos. These might just look like ponds, but they were formed during the last Ice Age.
- Cely Woods in Upminster, Greater London are named after the Cely family, who fled here from London to escape the bubonic plague.

Lynford

Ice Age Lynford

The flooded gravel pits at Lynford Water in the Wissey Valley, on the border of Norfolk and Suffolk, are now a peaceful spot for wild swimming. But during the last Ice Age, this wetland landscape looked very different. Forget today's sandy beach, it was surrounded by swamps, marshes, grassland and a few birch trees. Drawn by the water and wild grasses were mammoths, woolly rhinos, reindeer, bears and even hyenas. And close behind were modern human's ancient cousin, homo neanderthalensis. The Neanderthals had arrived.

A mammoth discovery

Over 60,000 years later in 2002, archaeologists followed in the footsteps of Neanderthals. The gravel quarry had been known as an excellent place to find flint for many years, but no one could have guessed what lay just a couple of metres beneath the surface. The opening of a new gravel pit was about to make history. Buried under the gravels were the remains of mammoths, as well as stone tools in the style made by Neanderthals. This was an incredibly rare find of international importance, and English Heritage was quick to fund a full dig of the site, which was carried out by the Norfolk Archaeological Unit. In total, archaeologists uncovered 2,079 bones, tusks, antlers and teeth. They had found not only mammoth remains but also those of woolly rhinoceros, reindeer, horse, bison, wolf, fox and brown bear. They also discovered coprolites – fossilised poo – possibly from spotted hyenas.

Neanderthal butchery

With 2,720 pieces of worked stone – including beautiful hand axes made from dark flint – and lots of animal bone, this looked like the remains of a Neanderthal butcher's shop. However, while this might have been an Ice Age animal graveyard, there isn't much evidence of hunting or butchery on the bones. In fact, these animals likely died hundreds or even thousands of years apart, all drawn to the same spot by the availability of food and water. Some of the bigger meaty mammoth bones are missing, but the only animal remains which show signs of being a Neanderthal snack were the reindeer and horses. These bones were cracked open so the nutritious marrow could be taken out.

Excavations of mammoth remains at Lynford, Norfolk ***(Nigel Larkin)***

Boddington Camp

Boddington Camp (list no. 1011304) in Wendover Woods in Buckinghamshire sits on the northern edge of the Chiltern Hills and is one of 30 scheduled Iron Age hillforts found in the nation's forests. This hillfort was built in the late Bronze Age or Early Iron Age (between 800–400 BCE). However, Mesolithic (10,000–4100 BCE) flints found just 500 metres to the east revealed the surrounding area had already been inhabited by humans for thousands of years.

The Chilterns are home to at least 22 Iron Age hillforts. Many, like Boddington, are buried deep within woodland, protected from farming or construction. Recent archaeological advances in LiDAR survey techniques mean more are only now being discovered. Unlike today, there weren't many trees here in the Iron Age, so Boddington Camp would have been an excellent strategic position. It sits high on a chalk spur and would have had open views over the Vale of Aylesbury. Two prehistoric routes, the Ridgeway and the Icknield Way, brought opportunities for trade and connections with other Iron Age communities. Boddington was only lightly defended with a single ditch and bank.

There hasn't been a big archaeological dig at the hillfort. However, in 1964, shortly after new trees were planted there by the Forestry Commission, a group from RAF Halton made their way up the hill to investigate. They found pottery dating to the mid-Iron Age (around 200–100 BCE). More recently, LiDAR imagery has revealed a field system to the north-east of Boddington Camp, thought to be the remains of an Iron Age farm connected to the hillfort.

Rabbit *(Gary Bendig)*

Thetford Forest

700 years of rabbit warrening

Mildenhall Woods near Thetford on the Norfolk-Suffolk border has been a site of human settlement and industry for over 500,000 years. But there is one particular use which has left its mark in the landscape and in local placenames – the Breckland warrens.

Rabbits were introduced to England in large numbers by the Normans after the Battle of Hastings in 1066. They were prized for their fur and meat, and by the late 1100s wealthy landowners – including monasteries – were setting up rabbit warrens to control their supply. Some of the best preserved can be found in Thetford Forest.

Mildenhall Warren (list no. 1485668) first appears in written records in 1323, when it made the monks at nearby Bury St Edmunds who owned it 15 shillings in a year (about £500 today). After the Dissolution of the Monasteries (1536–1541), the warren was sold off. Over the next 200 years, it supplied more than 20,000 animals a year to fur-processing factories at Brandon, Thetford and Swaffham. The meat was sold to Cambridge colleges, as well as in London.

While rabbit fur continued to be used in the hat making industry in the 1800s, and was sent as far as South America, the value of rabbits decreased over time. It wasn't worth keeping the warrens when rabbits were out of fashion and the land was eventually sold off. But the warreners who looked after them weren't out of a job. When the Forestry Commission bought Mildenhall Woods in 1934 they had to employ them to stop the large rabbit population eating all the newly planted trees!

Evidence of the old warrening banks can still be found running through our forests today. Their national significance has recently been recognised, making them some of the newest designated monuments in the country (scheduled in May 2024, list nos.1485668, 1485684, 1485683, 1485685 and 1485681).

The Old Keeper's Lodge

It wasn't just rabbits who lived in these woods. The most impressive house was used by the warreners themselves. Mildenhall Warren Lodge (list no. 1006023) was built in the late 1400s, possibly recycling stone from an earlier church which once stood nearby.

The lodge appears in historic documents, including the will of Nicholas Mey dated 1540 and the will of George Childerstone in 1662. The contents of the lodge are recorded in the later will, and include nets used to catch the rabbits.

Mildenhall Lodge was restored by Friends of Thetford Forest and the Forestry Commission in 2000–2002. In 2012–2013, they raised additional funding to protect the building with a new roof.

Mildenhall Warren Lodge, Thetford Forest ***(Emily Crookshank)***

Bedgebury Pinetum

In 1924, Royal Botanic Gardens at Kew wanted a place to start a National Conifer Collection, far away from the pollution of London. They joined forces with the Forestry Commission to begin planting at Bedgebury, Kent. This grand estate was already home to exotic trees thanks to its previous owners, the Beresford family, who had introduced lawson cypress and grand fir from North America. Hidden amongst the conifers, lakes and wider Bedgebury forest, lie the remains of over 2,000 years of human activity.

From prehistory to present

Bedgebury first appears in written records in the 800s CE, when much of the area was dedicated to farming pigs, who foraged happily amongst the trees. But this landscape was being used for its plentiful natural materials much earlier.

In the mid-2000s a community archaeology project uncovered evidence of Bedgebury Forest's Iron Age industry. A huge earthwork was identified, more than 60 metres wide in some places, with banks and ditches on either side. In the Iron Age, this was an incredibly important routeway that connected the Weald's blossoming iron industry with communities in the North Downs and North Kent. Although now mostly hidden in the dense undergrowth of the forest, it was still significant over 1,500 years later in the Post Medieval period, when it marked the boundary between two estates.

At this point, during the Tudor and Stuart eras, Bedgebury was owned by the Culpepers, who made their fortune mining clay-ironstone (a rock which contains about 30% metallic iron) on the wider estate. They used their money to build an ornamental park and host the rich and famous – including Queen Elizabeth I who visited in August 1573.

A burning issue

Iron was a great way for Bedgebury's Tudor owners to make money. The Culpeper family set up an iron works and made use of their woodland to provide water and charcoal for iron smelting. This had a big effect on the forest and the people who lived there. So much of the woodland was used for charcoal, that in the early 1600s the locals made a formal complaint. The remains of this industry can be found today in Bedgebury Forest. Circular charcoal burning areas – called hearths – have been recorded, measuring up to 10 metres across. Ponds and reservoirs, such as Lousia Lake, would once have fed water to the nearby ironworks and furnaces.

Bedgebury today

Today, the National Pinetum at Bedgebury is a thriving international centre of conifer conservation and scientific study. It is home to over 12,000 specimen trees from around the globe. And it's not just about serious science! Bedgebury welcomes tree lovers of all ages to explore its 350 acres – where they can play, relax, take in the awe-inspiring views and even enjoy a tree-top adventure.
The National Pinetum is also working to bring history to life. Partnering with Botanic Gardens of Sydney and Botanic Gardens Conservation International (BGCI), we're helping nurture trees which lived alongside the dinosaurs over 200 million years ago. Until 1994 everyone thought the Wollemi Pine had become extinct 70 million years ago, but it was hiding out in Australia! With less than 100 of these incredible pines still growing in the wild, and with increasing threat from wildfires, Bedgebury is helping to give these dinosaur trees a bright future.

Wollemi Pine ***(Brian Martin)***

South England

The landscapes of Forestry England's South District have inspired artists and writers for centuries, including author Jane Austen who drew much of her inspiration and ideas from these woodlands.

Within easy reach of London, this was also the ideal place for royal forests and hunting lodges. Our South District's royal connections have played a huge role in the remarkable amount of surviving archaeology within its forests. Strict laws around land use in the Royal Forests lasted in some parts until the mid-1800s.

Seeds of change

Timber and tensions

Blossoming industries

Barrow in Micheldever Wood, Hampshire

Quick facts!

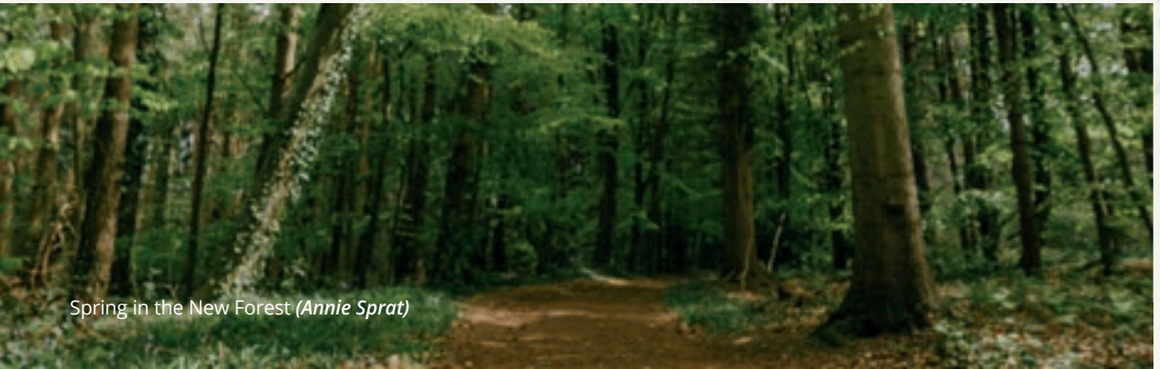
- Bourne Wood, in Surrey, has been used as a filming location for historical blockbusters such as Gladiator, Band of Brothers and The Crown.
- Creech Wood in the South Downs is one of the few remaining areas of the Medieval Forest of Bere. This was a Royal Forest where only the king could hunt.
- The South District contains 207 barrows (burial mounds) with 205 dating to the Bronze Age. Just two are Neolithic long barrows.

Forests of Bere, Alice Holt & Woolmer

LiDAR: landscapes revealed

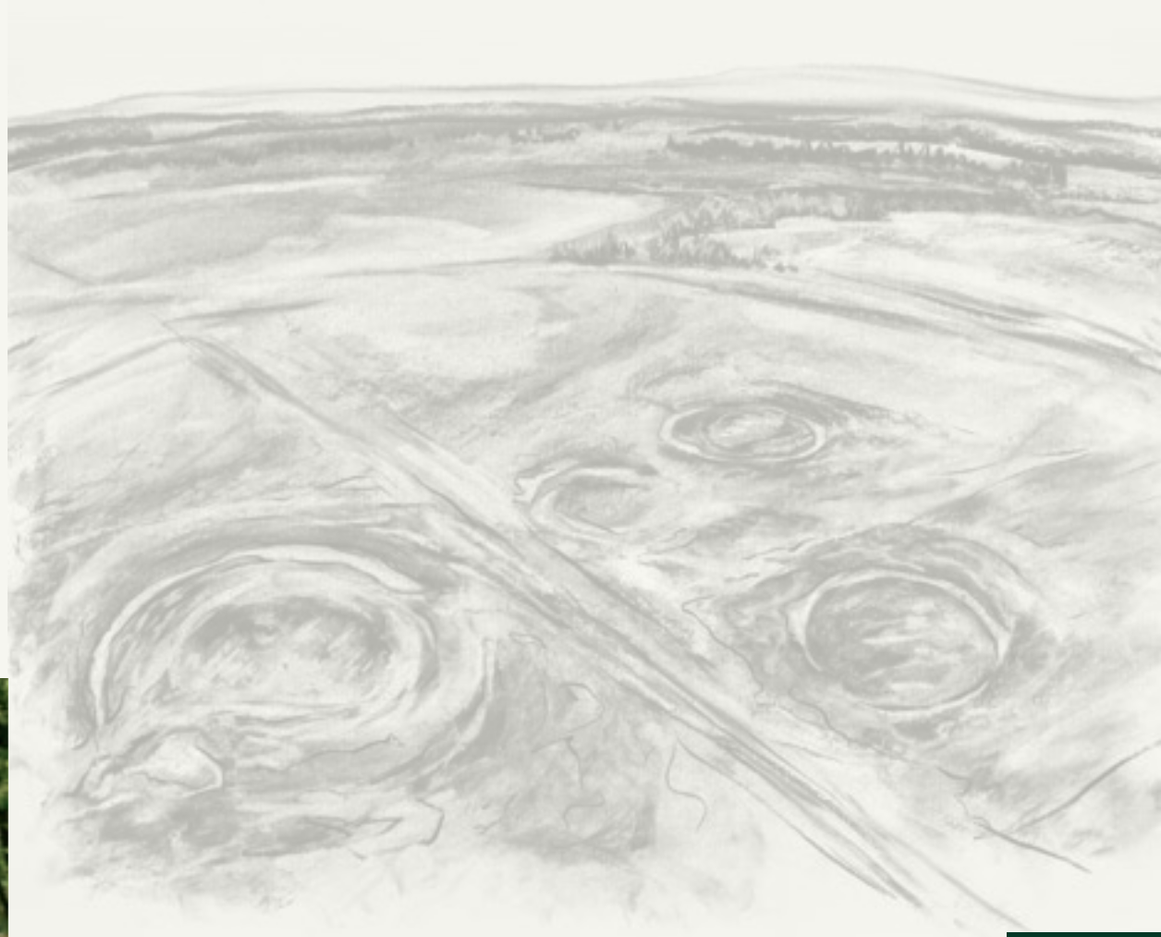
For more than 800 years, Bronze Age barrows, remains of long-lost Iron Age villages and Roman roads lay safe and sound deep inside the ancient Royal Forests of Bere, Alice Holt and Woolmer. From the Medieval period until as late as the 1800s in some parts of the District, these vast areas of heath and woodland were used for hunting. Land that might otherwise have been farmed or used for building houses was off-limits to anyone but the king and his nobles.

For many years, historic monuments within these forests were known about through local knowledge, historic land documents and ground-level surveys. However, few could have foretold how much more archaeology lay waiting to be discovered beneath the trees. Only recently with the use of airborne laser scanning surveys, known as LiDAR, have these secrets been revealed. This technology allows archaeologists to peel back the canopy, seeing entire ancient landscapes emerge in astonishing detail. Not only has this revolutionised our understanding of the past, but it has also emphasised the significant role forests play in preserving archaeological remains.



Spring in the New Forest ***(Annie Sprat)***

LiDAR has uncovered a diverse array of archaeological features within our forests, from Prehistoric earthworks and Roman field systems to industrial pits and 4,000-year-old boundary ditches known as cross dykes. Among the most remarkable discoveries revealed through LiDAR is one of these cross dykes at Eastdean Woods, located north of Chichester. Ancient field systems in this area were used from the Bronze Age (2500–750 BCE) to the beginning of the Early Medieval period in the late 400s CE. These were already designated as a scheduled monument (list no. 1005820) based on their significance as a reminder of a lost way of farming. However, LiDAR has now revealed they continue far beyond the originally designated area. Where later ploughing has slowly destroyed many traces on open ground, within the woodland these field systems survive as earthworks up to five metres wide and one and a half metres tall.



Hilltop Bronze Age round barrow group, New Forest ***(Emily Crookshank)***

New Forest

Claiming of the ‘New’ Forest

In the Middle Iron Age (between 250–100 BCE) and again in the Medieval period (1100s–1200s CE), the forest which covered much of Hampshire for millennia was cleared – and on a grand scale. Land was in high demand for farming and wood was needed for building. Today much of the only remaining evidence of these once expansive woodlands can be found in the New Forest.

Royal restrictions

After the Norman Conquest in 1066 the new king, William the Conqueror, declared the New Forest a Royal Forest. Back then the term forest didn’t just refer to large areas of woodland, it could be defined as any ‘wild land set aside for hunting’. Reserved solely for the king and his friends, this included forests, woods and open areas of heath and grassland. It is recorded in the Domesday Book (the first largescale survey of England in 1086) as Nova Foresta. In fact, it is the only forest the Domesday Book describes in detail.

Medieval chroniclers (history writers) claim William unleashed a curse by seizing the forest for himself. While this is the stuff of legend, it is true that two of his sons died in the forest – Prince Richard in around 1070, and King William Rufus in 1100.

Although forest law meant it was forbidden for people to graze animals, hunt or build in the king’s forest, the so-called ‘Commoners of the New Forest’ did have rights. These were officially recognised in the 1217 Charter of the Forest. Many of these still exist for people living in the New Forest today, giving them the right for their animals (including ponies, cattle, donkeys and occasionally pigs) to graze in the forest.

Naval negotiations

In the 1600s, more and more British ships were taking to the seas, but there was a real shortage of good timber for boatbuilding. Parliament decided to inclose (fence off) large parts of the New Forest, so the animals living there wouldn't eat the new trees being planted. In 1608, there were over 120,000 trees recorded in the forest. Over the next 100 years, so many were cut down to build ships that a Royal Navy survey in 1707 found there were less than 13,000 left. Marks carved into tree trunks by Navy surveyors selecting trees for felling can still be seen on trees today, deep within the forest.

However, just like William the Conqueror 700 years earlier, the land used by the Royal Navy was impacting the Commoners. By 1877, tensions had reached boiling point and parliament were forced to step in. The New Forest Act 1877 cemented the rights of the Commoners and ruled that only 25 square miles of the Forest could be inclosed at any given time.

Today the New Forest's spectacular woodlands, wetlands and heathlands are still grazed and shaped by the Commoners' animals – a tradition passed down over hundreds of years and protected by law.

Pony grazing in the New Forest ***(Liam Charmer)***

Cow Down Copse

Romanising the South

In the years after the Roman invasion of Britain in CE 43, the south of England was at the forefront of Roman expansion. With centres of Roman opulence including Fishbourne Palace close by, it is no surprise our South District is home to a wealth of Roman remains from villas and farms to nationally important pottery industries.

Roman houses and roads saw the landscape transformed. Where there had once been simple Iron Age dwellings, there were now villas with beautifully tiled mosaic floors, such as at Cow Down Copse near Micheldever in Hampshire (list no. 1001908). A farm at Holt Down Plantation at the Queen Elizabeth Country Park in Hampshire (list no. 1020135) was renovated in the latest style, with painted plaster, Samain Ware crockery and even oysters for dinner. Excavations here in 1923 also uncovered a small statue of Venus and Roman coins covering a 300-year period.

Stane Street, which runs through Eartham Wood in West Sussex is one of the earliest Roman roads in the country. It was built in CE 68–70, connecting this part of the country to the wider Roman world. It is one of four known Roman roads that run through Forestry England land in this District (list nos. 1016621, 1016747, 1008707, 1004562). They not only carried the Roman Army and Cursus Publicus (the Imperial postal service), but also brought the best goods the Empire had to offer.

In return, the locals made and traded their own pottery, inspired by the latest Roman fashions. Alice Holt Ware (list no. 1001867) might have been used for everyday kitchen vessels, but that didn't stop it being incredibly popular across the south of England. There were also small-scale pottery industries in the New Forest, taking advantage of the all the natural resources the forest had to offer to produce more refined and decorated pieces.

West England

Forestry England's West District is home to peaceful ancient woodlands and stunning National Landscapes, including swathes of wild daffodils and rare moths in the depths of Dymock Wood in Gloucestershire. These tranquil forests contain hidden landscapes reaching back to before the last Ice Age.

Thousands of years ago, ancient communities marvelled at the natural resources these landscapes had to offer. Under the shelter of the trees they lived, buried their dead and carried out rituals lost to time. Many things have changed since then – these forests have been private hunting grounds for royalty and hives of industry, but now the incredible histories they hold can be explored by all.

Ancestral roots

Canopy of culture

Blossoming industries

View over Bellever Tor

Quick facts!

- The 'Foresta de Wyre' (Wyre Forest, Worcestershire) is mentioned in the Domesday Book, a record of English landholdings commissioned by William the Conqueror in 1085 CE.
- Dating back to around 500 BCE, Bury Ditches in Shropshire is one of the best preserved hill forts in the country.
- One of the country's oldest trees, the Big Bellied Oak, can be found in Savernake Forest in Wiltshire. More than 1,000 years old, it has a girth of 11.8 metres.

Forest of Dean

Forest of Dean industries

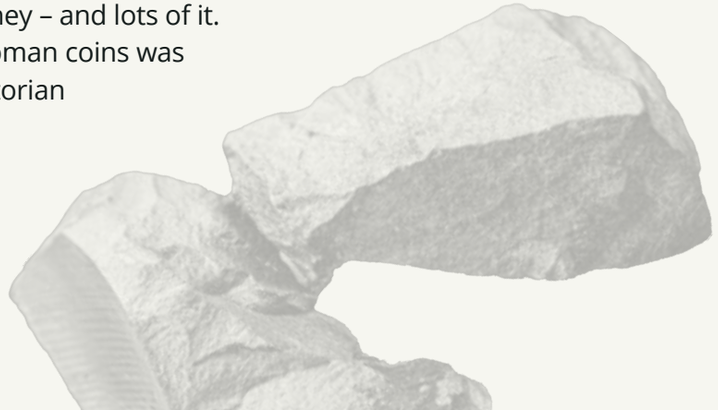
Since the end of the last Ice Age (around 8000 BCE), the Forest of Dean in Gloucestershire has been a centre of human activity. Hunter gatherers camped out in caves, crafting stone tools and weapons. One discovery would change this landscape forever – red and yellow ochre. Coloured by iron deposits, this mineral was in high demand by Prehistoric communities. They used it for everyday jobs, including painting, preparing animal skins, medicine making and ritual activities. Little did they know, this discovery of ochre would also influence millennia of industry in the Forest of Dean.

Secrets of the scowles

Scowles (list no. 1016899, 1016900 and 1016901) are natural hollows and crevices that come in all shapes and sizes. They were used for iron ore mining from the Iron Age (750 BCE–CE 43) until the end of the 1600s.

Some scowles are very shallow. Here the iron ore was carefully removed from the stone. Others are huge crevices, with the rock containing the ore hauled out to process nearby. Their utilisation and modification have left behind dramatic scars on the landscape, evidence of thousands of years of hard work and human industry.

Scowles have also made their mark among the mossy rocks of Puzzle Wood, near Coleford. Here, iron ore has been collected since the Roman period, and possibly earlier. The Romans took away the iron, but they left behind money – and lots of it. A hoard of over 3,000 Roman coins was found in a scowle by Victorian workers in the 1840s.



The Freeminers of the forest

Scowles aren't the only thing that's unique to the Forest of Dean. It is also home to the tradition of Freemining. By the Medieval period, the mining of ochre, iron ore and coal was well established in the Forest. However, these Medieval miners had important duties which took them outside the forest, such as fighting for the king. Good deeds deserved a reward, and in the 1300s, they were granted exclusive rights to mine the area by Edward I, in recognition of their service in his wars against Scotland. However, it took a further 500 years for recognition of the 'Freeminers' to be formally laid down in law.

Today 70 active Freeminers are still working in the area. Although this is an ancient tradition, they aren't stuck in the past. The first female Freeminer was granted the right to mine in 2010.

Forest of Dean freeminer, Mike Howell

Internationally important ironworks

By the mid-1700s, the Forest of Dean was at the centre of the British iron industry. Innovators from across the country gathered here to revolutionise the transformation of raw iron ore into a metal which could make them millions.

Hundreds of sites associated with the iron industry lie deep within the Forest, including Darkhill Ironworks, near Coleford. Now a scheduled monument (list no. 1020803), Darkhill was not built by a local Freeminer, but a Scottish engineer called David Mushet (1772–1847). He carried out often dangerous experiments there as he tried to refine (purify) iron more efficiently.

The work carried out by Mushet, and his son, led to the creation of the first air-hardening, 'high-speed' steel, which could be used for tools even at very high temperatures. Their discoveries here pre-date sites often hailed as having pioneered this technique, such as Ironbridge. However, discoveries like this came at a cost. In 1846, Darkhill's furnace exploded, killing five workers.

The remains of Darkhill Ironworks

West Woods

Stonehenge quarry

Today the beautiful ancient woodlands of West Woods, near Marlborough in Wiltshire, are the perfect place for a peaceful stroll, but evidence of human activity here stretches back over 7,000 years to the Mesolithic period (10,000–4100 BCE). And among the beech trees and sun-dappled spring bluebells lies a connection to one of the most famous archaeological sites in the world.

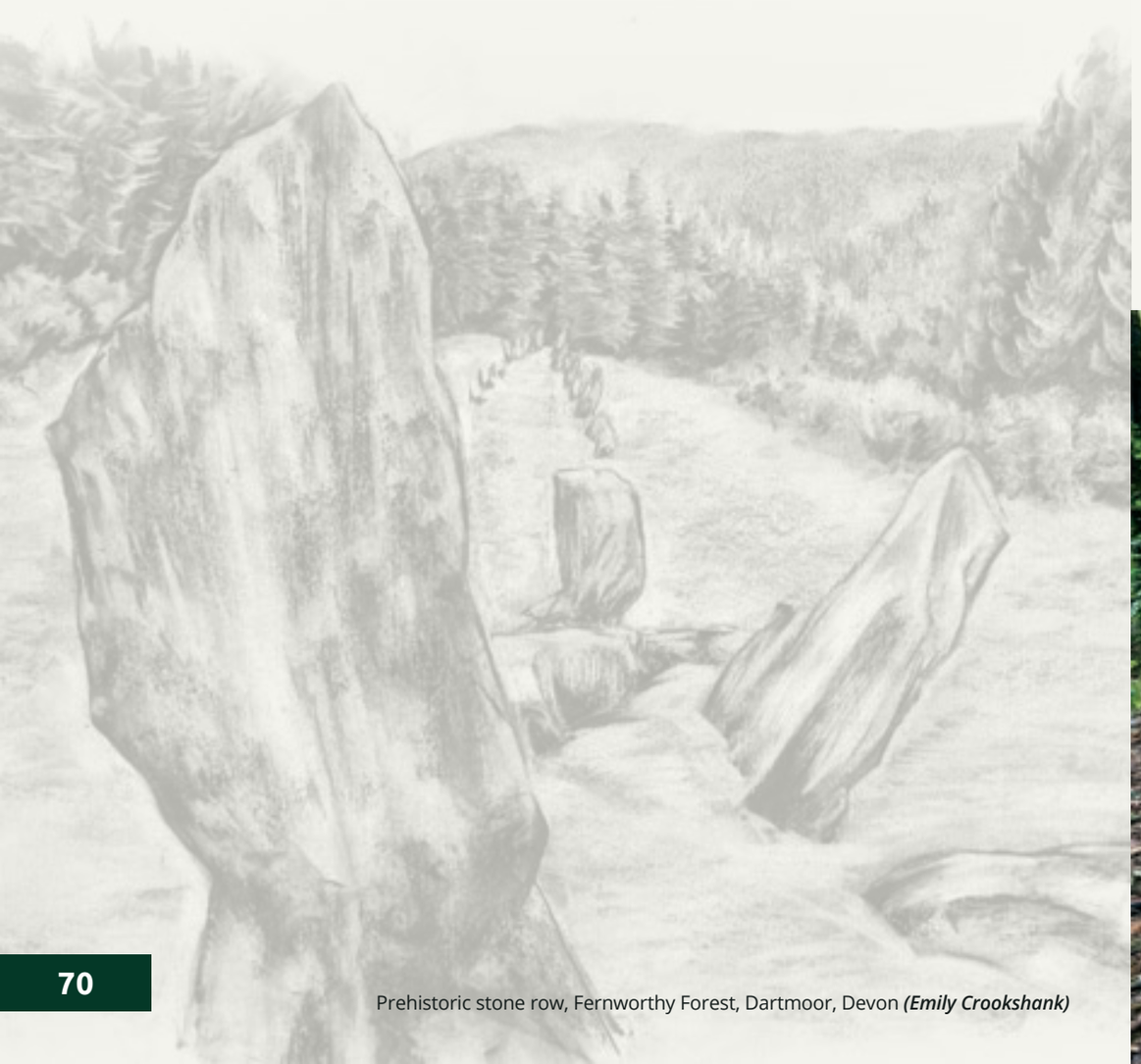
In the Neolithic (4100–2500 BCE) residents of West Woods had many uses for the sarsen stone boulders which littered their local landscape. They used them to construct huge chambered long barrows to bury their dead, like the one in Barrow Copse (list no. 1012429). They also sharpened their flint tools on the stones, leaving deep grooves in the sarsen which can still be seen today. All within walking distance of two of the most important ritual centres in Neolithic Britain, the World Heritage Site of Avebury and Stonehenge.

Recently, these boulders have put West Woods in the international spotlight. After hundreds of years of speculation, geochemical analysis of the giant sarsens at Stonehenge was compared to samples across the country. The only match was from this unassuming woodland, revealing West Woods as the location where the builders of Stonehenge sourced their materials for the iconic sarsen triathlons, over 4,500 years ago.

Dartmoor

The Bronze Age farmers of Dartmoor

Much of Dartmoor's forested areas are filled with conifers such as sitka spruce, planted shortly after the First World War. Among them lie some of the most important areas for Bronze Age (2500–750 BCE) archaeology in England, giving an incredible glimpse into what this landscape looked like over 3,000 years ago.



Prehistoric stone row, Fernworthy Forest, Dartmoor, Devon ***(Emily Crookshank)***

Talk of the tor

Above Bellever Forest stand the iconic stone stacks of Bellever Tor. These natural granite features, which attract many visitors today, must have been just as awe-inspiring to the Bronze Age community who called this place home.

Their settlement – including enclosures, field systems and houses – was one of the earliest on Dartmoor and is now a scheduled monument (list no. 1018512). These Bronze Age farmers certainly knew how to use the plentiful local stone to their advantage. Not only did they use it to build their circular huts, but excavations in 2011 revealed a paved yard and stone paths linking two houses.

This site wasn't just a place for the living, the dead were close by. The cairns (large piles of stones covering burials) and stone burial boxes called cists, found on the lower slopes of Bellever Tor, are part of a wider Bronze Age cemetery. And sometimes the worlds of the living and dead crossed over. Excavations between 2007–2014, 500 metres to the northeast of Bellever Tor, revealed a house from the mid-late Bronze Age (1500–750 BCE) reused as a funerary cairn.

Sarsen boulders at West Woods

Fernworthy forest

In the early 1930, plans were made to flood the valley at Fernworthy in Devon to create the reservoir which now provides water for Torquay, Totnes and Brixham. Richard Hansford (RH) Worth, a local civil engineer with a passion for archaeology and geology, knew there were lots of prehistoric remains in the area. Between 1934–36, he led the Dartmoor Exploration Committee on excavations – recording a series of Bronze Age huts. While the remains of some of these did end up at the bottom of the reservoir, the large stones which make up their walls can be seen during dry weather.

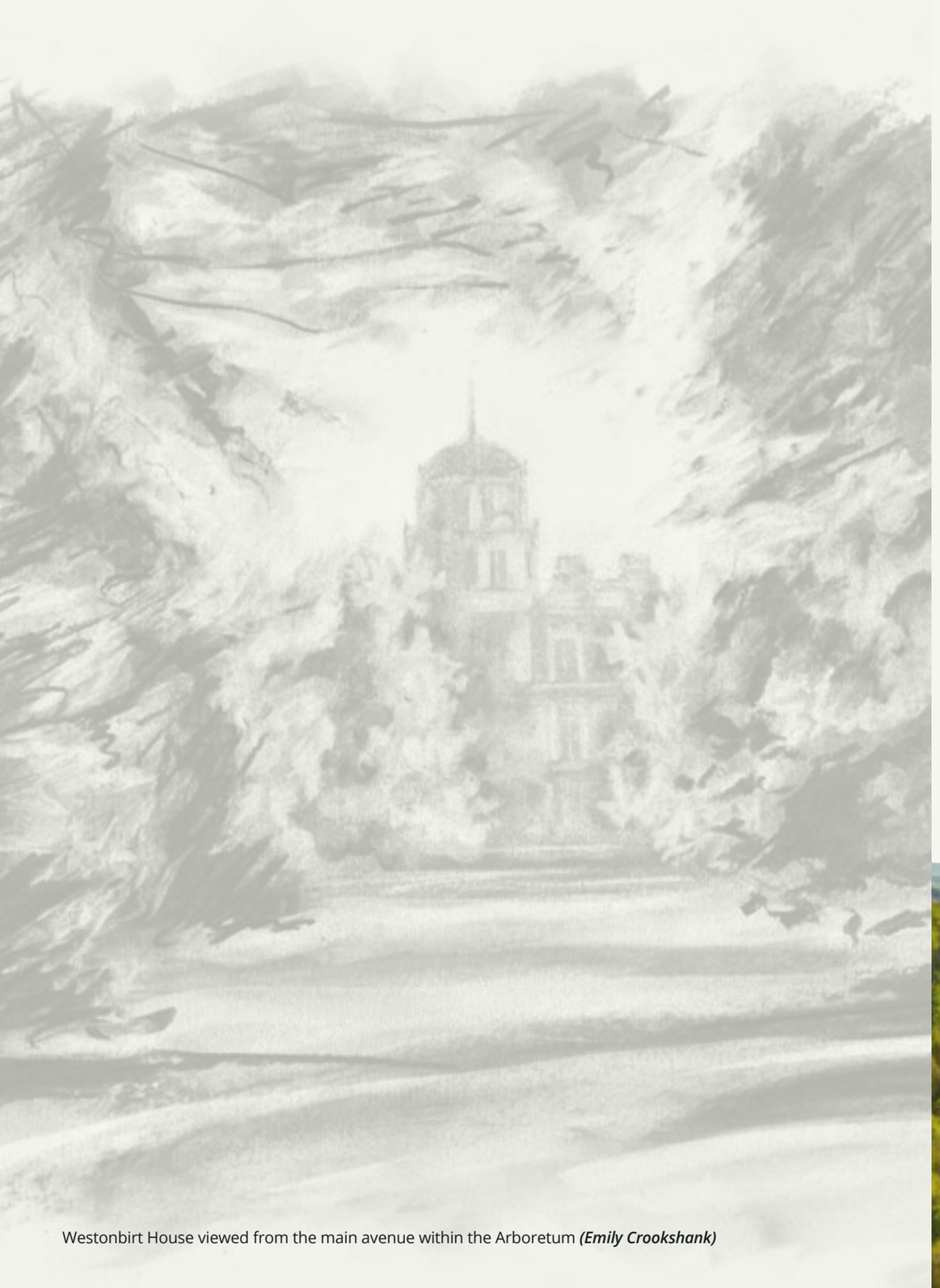
Further evidence for these Bronze Age communities can be found nearby in Fernworthy Forest. A total of six scheduled monuments in the forest date back to the Bronze Age. These ceremonial monuments, including the Fernworthy Circle (list no. 1017984), provide insights into past ritual activities and beliefs. Made up of 27 stones, each no more than 1.1 metres high, this stone circle is directly connected to nearby burial cairns by 20–30 metre long stone rows (called stone alignments). Less than a mile away at Hurston Ridge is another double stone row, measuring 143 metres long. These ritual pathways between the ceremonial and everyday places of the Bronze Age can still be visited today, connecting modern visitors to communities of the past.

Westonbirt Arboretum

Recognised for its significant heritage value as a Grade 1 Registered Park and Garden, today the woodland landscape of Westonbirt Arboretum in Gloucestershire houses over 2,500 different tree and shrub species from across the world. Now a hotspot for tree-loving tourists as an internationally important site, the Old Arboretum was set out in the 1800s on the Holford Family estate, including the ancient woodland of Silk Wood which has appeared on historic maps since the 1600s. But as with many of our forests, far older remains are preserved deep within its trees. Using historic maps and records, digital technology and walkover surveys, archaeologists can peel back the layers of time and reveal thousands of years of Westonbirt's past.

Early origins

Westonbirt has been home to dense woodlands for hundreds of thousands of years, as far back as 500,000 BCE. An idyllic scene greeted its first residents, who arrived here in the Neolithic period (4100–2500 BCE). A river flowed through the centre of the site, with the riverbanks and associated valley covered in trees. In the Bronze Age (2500–750 BCE), barrows (burial mounds) were built on higher ground to the north. But times changed. Lumps and bumps beneath the trees of Silk Wood are the only remains of a Roman agricultural site, where huge areas of woodland were swept away to clear land for farming. During the Medieval period, they turned back to the bounty of the forest. Silk Wood was replanted, supplying local communities with much needed timber for construction, as well as wood and charcoal for fuel. Farming still took place here, with the development of the Westonbirt estate.



Westonbirt House viewed from the main avenue within the Arboretum ***(Emily Crookshank)***

The transformation begins

In 1665, the Westonbirt Estate was owned by the Holford Family and the Old Arboretum was nothing more than fields, waiting to be transformed. This beautiful botanical landscape was only made possible by money, and lots of it. The Holfords were Georgian and Victorian millionaires, who married the sons and daughters of earls and baronets. They had well-paying legal careers and made a fortune in the 1700s providing fresh water to London via canal. Fast forward to the early 1800s, and plans were afoot. Robert Holford turned these former fields into a landscape park, where his family and their guests could take in the site's magnificent natural beauty. From 1829, this started with the planting of shelterbelts and copses, with specimen tree planting from the 1850s.

Development of the arboretum

The Holford family's wealth meant Robert Stayner Holford (nephew of Robert Holford) could pursue his many passions – including collecting plants from around the world. He transformed the landscape park into his botanical wonderland – starting with the Old Arboretum and then extending into Silk Wood. Robert was also an art lover. Not only did he acquire valuable pictures and manuscripts, but he was also influenced by the work of W. S. Gilpin to lay out the arboretum following 'picturesque' principles, making it one of the best examples of this style in the world today. Westonbirt isn't the only Forestry England landscape associated with W.S. Gilpin. Gilpin lived in the New Forest and his art and design were influenced by the landscape there and the Wye Valley.

View over Wye Valley

Robert Stayner Holford's son, George, didn't just inherit his father's land – he also picked up his love of plants, especially orchids. George worked tirelessly to develop the arboretum, bringing in maples and rhododendrons which Westonbirt is still famous for today.

When George died in 1926 the estate was divided up. In 1956, it was passed to the Forestry Commission who transformed it into the National Arboretum. Botanic interest in Westonbirt has continued ever since and this space now offers an incredible opportunity to view a vast number of plant species from around the world. And it's not just about looks! The collection also supports scientific study helping Forest Research, Forestry England and other partners, to inform future planning – for example by considering the impact of climate change on different tree species.

Westonbirt National Arboretum today

About the artist

Emily Crookshank is a multidisciplinary artist specialising in charcoal, traditional printmaking and ceramic sculpture. Her diverse body of work includes evocative charcoal depictions of mountains and birds of prey, hand-built ceramic sculptures, textured works on paper, and abstract etchings and monoprints. Drawing lies at the heart of Emily's creative process. For this Forestry England project, she began by sketching seven sites with soft willow charcoal, exploring composition and texture, before transitioning to larger, highly detailed final pieces. Emily's work breathes life into these historic environment sites, capturing their essence through dynamic contrasts and textures, evoking a deep connection to the landscapes and our shared past.

Emily's artworks can be found throughout this publication:

- Reconstructed First World War trenches, Sherwood Pines **(pg 19)**
- Medieval longhouse remains, Ennerdale, Lake District **(pg 30)**
- Lumberjill sculpture, Dalby Forest **(pg 42)**
- Mildenhall Warren Lodge, Thetford Forest **(pg 50)**
- Hilltop Bronze Age round barrow group, New Forest **(pg 57)**
- Prehistoric stone row, Fernworthy Forest, Dartmoor **(pg 70)**
- Westonbirt House viewed from the main avenue within the Arboretum **(pg 76)**

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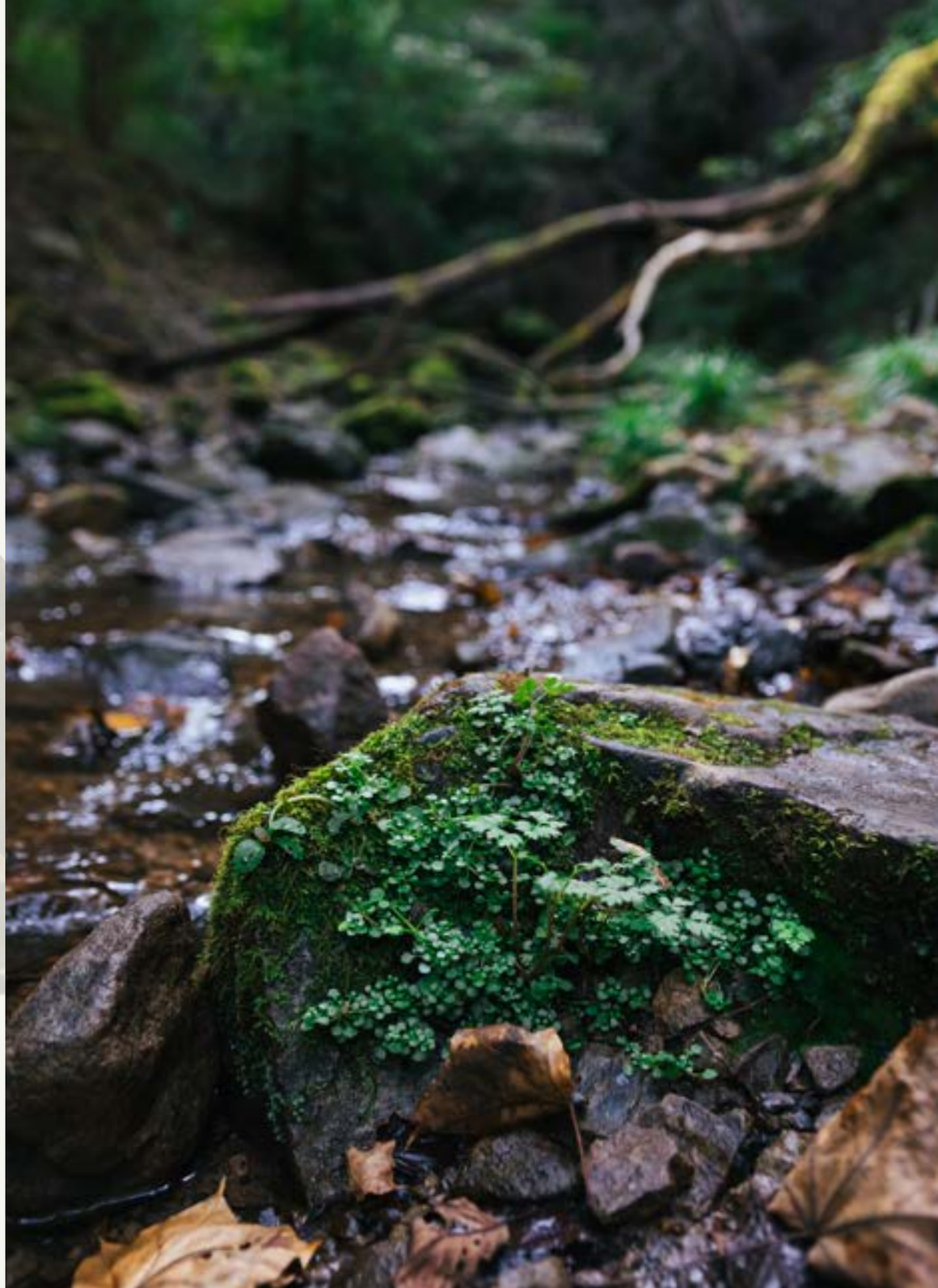
In memory of ***Mike Howell.***



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