



Registered charity no. (England & Wales) 1103202



ANNUAL REPORT
2022/23

Foreword

John Leigh Pemberton, Chair of Trustees



Dear Supporters,

It is with great pleasure that we present to you the annual report of Future Trees Trust. This year has been an incredible one for our organisation, and we are thrilled to share our achievements with you.

We would like to take this opportunity to thank our small team of staff and board members for their incredible efforts over the past year. The achievements and impact of the work they do are set out later in this report.

The forestry sector faces many challenges. Sir William Worsley, Chair of the Forestry Commission, has called for landowners and forest managers to consider planting more diverse and resilient tree species and better designed woodlands in the face of a changing climate. Their long-term prosperity will depend on their resilience to threats caused by climate change, such as stronger gales, drought, emerging pests and diseases, evolving weather patterns and more frequent, severe weather events.

Since our inception, we have been committed to promoting resilient, healthy and productive forests and woodlands by creating genetically

diverse breeding populations of commercially important tree species. The importance of the work we do has never been more vital and increasingly organisations across the sector are looking to Future Trees Trust to help deliver the very ambitious tree planting targets set out by the government. This has led to more opportunities to also work in partnership with a variety of different organisations to help deliver our new 10-year strategy and broader sector-wide strategies. We will in the very near future be announcing major strategic partnerships with both statutory, non-statutory and corporate organisations.

Our outreach efforts have been equally successful. We have engaged with many organisations and individuals in the sector and beyond. The analysis of all our communication channels shows that awareness of who we are and what we do is increasing year on year.

None of this would have been possible without the support of our dedicated donors and partners. Your generosity has helped us continue our vital work, and we are immensely grateful for your continued support.

As we move forward, we remain committed to our mission and vision of tree improvement and ensuring that improved planting stock is available to all those who have an interest in forests and woodlands.

Thank you for your continued support.

Sincerely,

A handwritten signature in blue ink that reads "John Leigh Pemberton".

Increasingly organisations are looking to Future Trees Trust to help deliver the very ambitious tree planting targets set out by the government

CEO Update

John McLaughlin



Firstly, can I say how privileged I feel to have been appointed as the new Chief Executive of Future Trees Trust. I would like to thank my predecessors for their work in getting Future Trees to its current high standing within the sector. As many of you will already be aware I am completely new to the sector, having spent most of the last 20 years working in mental health and supported housing charities. However, the challenges charities face, particularly smaller charities, are not sector specific and include short term contracts, difficulties attracting funding for core costs (essential for the running and governance of any organisation) and the requirement for employees to be exceptionally flexible, dedicated and resourceful as they are required to fulfil a number of roles.

I would like to take this opportunity to thank partners, donors and others across the sector who have been incredibly welcoming and supportive as I learn more about the sector and challenges we all face. I would particularly like to thank Jo and Joe and our Board of Trustees for the patience and understanding they have shown as I become more familiar with the role.

Future Trees Trust may be a small organisation but the impact and importance to the forestry and woodland sector cannot be underestimated. Some of our key achievements this year include:

- Over 17,000 trees planted in trials from Perthshire to Kent
- Awarded a Tree Production Innovation Fund grant – Supersizing Broadleaves

- Awarded a Seed Sourcing Grant to work with three new species. This will mean an additional member of staff joining the team
- Continued support for the Patsy Wood Scholar
- Supporting two PhD students at the University of Reading and Trinity College Dublin.

In addition to the progress being made against our 10-year strategy, we have also embedded significant systems and structures within the charity that will mean we are better prepared to deal with challenges and grasp opportunities of the next few years. These include:

- Changing the legal status of the charity to a Charitable Incorporated Organisation (CIO)
- Launching new finance and customer relationship systems
- Adding additional fundraising resources
- Increasing our reach considerably through our various communication channels
- Development of significant partnerships which will help us achieve our ambitions over the next 10 years.

We are really excited about the future and the key role FTT can play in delivering significant improvements across the sector and we look forward to keeping our supporters informed of our developments over the coming months.

A handwritten signature in black ink that reads "John McLaughlin".



Fundraising and Finances

Sustainable long-term funding for FTT is a key aspiration for the charity. Despite the change in Chief Executive and the loss of fundraising capacity during the year, income for 22/23 was £180,221, which is marginally down on the previous year.

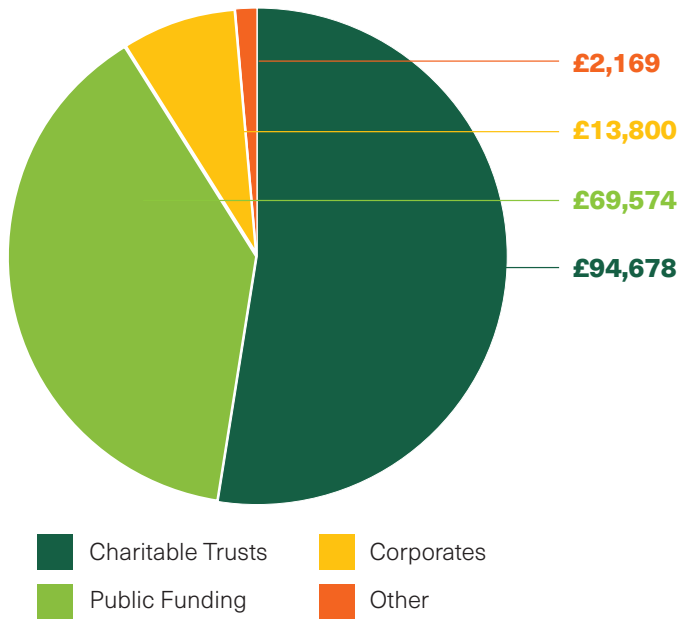
Spending for the year totaled £281,608 (£233,902 21/22) of which £99,64 was drawn down from restricted funds and £65,854 (23%) was spent on core operating costs down from 33% last year. This includes the significant cost of legal fees to set up the new CIO.

Looking forward we expect income from public funding to increase but we will also be adding to our fundraising capacity to ensure that we have the necessary resources to increase the impact we deliver for the sector.

* Provisional data as we await yearend figures

Income 2022/2023

In 2022/23, our income was **£180,221**, as illustrated below.



Outreach and Comms

Communications and marketing are essential for Future Trees Trust to raise awareness, engage with our donors, advocate for change, manage our reputation and ultimately achieve our mission and goals.

Since July 2018, when Future Trees Trust first engaged a communications and marketing officer, our online presence has grown steadily to where we now have over 5,500 followers across Twitter, LinkedIn, Instagram and Facebook. A mailing list launched in 2021 has grown to 281 email subscribers and our new YouTube channel has over 40 subscribers.

As well as growing our social media presence, FTT staff have spoken at several workshops and conferences including the Institute of Chartered Foresters annual conference in Glasgow in 2022. We attended workshops held by Defra on the future of ash in the UK and presented to the Association of Public Service Excellence on the work of the Living Ash Project. We continue to liaise with all



major UK nurseries to encourage them to promote the use of improved planting stock where timber is an objective. We have produced guidance on the use of this material and where it can be deployed to maximize gains and reduce risks of maladaptation. This guidance is available on our website: [Guidance on the use of Future Trees Trust seed orchard material](#)

Strategic Aims and Progress

We were excited to launch our new 10-year strategy in 2022. It has helped us focus our attention to really key research questions. Although we have made great progress in previous years in bringing together base populations for species of major interest, we had not really focused on resilience and adaptation to any great extent. We set ourselves targets in three key areas: increased research, resilience and outreach.

Increased Research

- We planted over 17,000 trees in sycamore (*Acer pseudoplatanus*) and silver birch (*Betula pendula*) progeny trials. Progeny trials are a crucial step in understanding the contributions of selected plus trees to future breeding programmes. They will identify which are the best timber trees (by assessing form and growth) and can also inform about adaptive traits such as timing of budburst.
- Progress has been made in identifying and grafting plus trees for downy birch (*Betula pubescens*). In 2022, downy birch was the most widely planted broadleaved tree in the UK and seed can be tough to source as both downy and silver birch can occur together. A genetically diverse seed orchard of pure downy birch will be a significant step forward.



- FTT were awarded a Seed Sourcing Grant to work with three new species: beech (*Fagus sylvatica*), hornbeam (*Carpinus betulus*) and blackthorn (*Prunus spinosa*).
- We were also awarded a Tree Production Innovation Fund grant for a new project called Supersizing Broadleaves aiming to help trees get established more quickly and thereby reduce the need for chemical inputs.
- We continue to support a PhD student at the University of Reading to study drivers of masting in oak, and a MRes student at Trinity College Dublin to investigate oak genetic diversity.

Progeny trials are a crucial step in understanding the contributions of selected plus trees to future breeding programmes



Increased Resilience

- Resilience is crucial if populations are to thrive and produce valuable timber under increasing stresses of climate change and pest and disease pressures. One of the best ways to combat these stresses is through genetic diversity which is why we ensure all our populations contain a broad genetic base.
- The Living Ash Project is concerned with finding trees tolerant to ash dieback and bringing them together in archives for further breeding work. We will continue to work with project partners to better understand the degree of resistance to ash dieback in our selected trees.

Resilience is crucial if populations are to thrive and under increasing stresses of climate change and pest and disease pressures



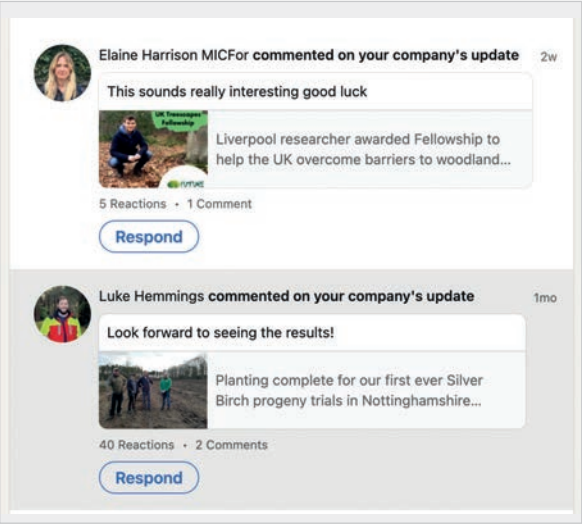
- Understanding the genetic diversity captured within our populations is key. We have already carried out fingerprinting of our cherry and chestnut plus trees and are now supporting Eamonn Cooper, an MRes student with Trinity College, Dublin, to study our oak population. There are many questions that could be answered and Eamonn is keen to convert to doctoral research. We continue to seek funding to support Eamonn in this crucial work to further oak breeding in the UK.
- Resilience also occurs at the landscape level, so we have started work on additional species to help bring seed to industry and augment woodland species diversity.

Increased Outreach

- We assessed all the demonstration plots we established last year. These sites will allow foresters to compare the difference between improved material from seed orchards and typical stock from seed stands.
- We planted more trees at our grafted oak orchards which will provide *Qualified* acorns to the sector.
- Our Annual Supporters Day was held with our corporate supporter Vastern Timber. It included presentations on our recent achievements and a tour of their sawmills and the kiln used to produce thermally modified Brimstone timber.
- We continue to work on large projects with many diverse partners from nurseries, universities and government agencies.
- Our social media and online presence continues to grow. Our website has 20,000 unique visits a year and our total digital activity receives 30,000 impressions each month.
- We continue to run the Patsy Wood Scholarship scheme supporting young people in forestry and research.



Timber harvesting in resilient, mixed deciduous woodland



Our social media presence has helped the trust attract new and continued supporters, partners and funding



The Living Ash Project

Background to the project

With the confirmed arrival of ash dieback to the UK in 2012, Defra leapt into action, supporting Forest Research to establish 14 **Mass Screening Trials** across East Anglia and a consortium of researchers to commence the **Living Ash Project**. With five years funding, Forest Research screened 155,000 ash trees and the Living Ash Project (LAP) assessed 40,000 trees in research trials and revisited FTTs plus trees across the UK. From these two projects, we selected almost 1000 individual tolerant trees and grafted them to establish the National Archive of Tolerant Material.



Living Ash Project 2 – securing tolerant material for seed production purposes

In 2019, Defra again provided five-year funding to extend this research. Forest Research continue to monitor their remaining seven mass screening trials and FTT monitors the National Archive and the wider ash population. Since 2017, the number of healthy trees remaining in the mass screening trials has dropped significantly, as it has in other research trials. This means that the remaining trees will have been exposed to much greater disease pressure and that these selections are more tolerant to ash dieback.

We are testing the tolerance of these selections in two ways: Fera are using mass spectroscopy to ascertain the health status of each tree. Should this prove successful, it will be a quick and relatively cheap method to test new selections. Forest Research are carrying out controlled inoculations through direct stem and leaf infections.

Currently, we graft all tolerant selections on to normal ash rootstocks. However, ash dieback could enter our grafts through the rootstocks. As part of the project, Kew investigated various methods to propagate ash via cuttings, thereby avoiding the need to graft trees. Unfortunately, this has proved unsuccessful with anything other than very juvenile material. Getting hardwoods to root directly is very difficult for some species.

This year, we will carry out final assessments of all existing ash trials and revisit many plus tree estates to select the most healthy remaining ash trees from a wide geographic distribution. These will be grafted this winter to replace and augment trees in the National Archive. The best selections may go on to form part of a breeding population that will bring tolerant ash back to British forestry.

Support our Oak Breeding Programme!

Oak has been a focus at FTT for many decades. With our clonal seed orchards nearly completed and our 20-year-old progeny trials soon to be converted into seed orchards themselves, understanding the genetics of our oak plus trees and, thereby, the seed they produce is really important. We are supporting Eamonn Cooper, an MRes student at Trinity College Dublin, to undertake a genetic analysis of the oak plus trees selected across the UK and Ireland.

By collecting leaves from grafted copies of our plus trees and studying their DNA, Eamonn is investigating the following important topics:

- The genetic diversity within our selected plus trees and comparing this to the diversity of the wider oak population. Retaining high genetic diversity in our plus tree selections ensures that acorns produced in the seed orchards will show good resilience to future threats, pests and diseases.

We are supporting Eamonn Cooper, an MRes student at Trinity College Dublin, to undertake a genetic analysis of the oak plus trees selected across the UK and Ireland

- The species identity of our plus trees. The two species of oak native to the UK and Ireland are morphologically similar and are known to hybridise. Confirming the correct species for each plus tree is essential when creating seed orchards and undertaking tree breeding.

Eamonn has made fantastic progress during his 1-year MRes, but to fully investigate these vital questions he is hoping to convert to a longer PhD. Part of this extended work would be to use his findings to improve the design of our orchards for maximum genetic diversity.



APPEAL

At Future Trees Trust we believe that by supporting today's students we are developing capacity for future research into tree breeding, tree improvement and tree resilience. To support these students, including Eamonn, we rely upon very generous donations from Trusts and individuals.

Its costs around £35,000 a year to support Eamonn's student stipend, University fees, travel and lab consumables. We urgently need funding for this academic year and the following academic year.

Please consider supporting Eamonn Cooper in his doctoral research by making a donation to Future Trees Trust. Any funding donated in support of Eamonn will only be used for his research project.

If you are interested in Eamonn's work and would like to support him, please go to www.futuretrees.org/support-us to donate.

Highlights of our work

Planting New Trials of Sycamore and Silver Birch

The research team have had a busy winter planting new progeny trials of sycamore and silver birch. These trials compare the trees currently producing seed in our orchards and with the results we can remove the poorest performing trees to improve the quality of the seed being produced. There are eight trials in total, four for each species, planted right across the country from Kent to Perthshire. All together they contain over 17,000 trees.

We want to thank Forestart for stratifying the seed for these trials as an in-kind donation, all the landowners for hosting the trials and all the tree planters who helped us get the trees in the ground!

We have been busy planting new experimental trials of sycamore and silver birch



Tree planting a silver birch trial in Perthshire

Starting Work on Beech, Hornbeam and Blackthorn

As part of the Forestry Commission's Seed Sourcing Grant, FTT were successful in applying for funding to begin programmes of work on beech and hornbeam. These are two underused species in forestry that are important components of diverse and resilient treescapes.

In our three-year project we will be selecting plus trees of both species across southern Britain and grafting 50 of the beech plus trees to establish the very first seed orchard for the species. Beyond the project we intend to also graft the hornbeam plus trees and establish the



first seed orchard for this species too. These orchards will provide higher quality seed for timber production, and we hope this availability will increase the uptake of these minor species in the forestry sector.

A second part of the project is the establishment of a blackthorn seed stand with plants raised from seed stored at the Millennium Seed Bank. The seed stand will tackle the continual shortage of seed for this species which provides wildlife habitat and pollen and nectar resources.



Early mining bee (Andrena haemorrhoa) on blackthorn (photo credit: Liam Olds)

Supersizing Broadleaves

Alongside our successful Seed Sourcing Grant, we were also successful in a bid to the Forestry Commission's Tree Production Innovation Fund. Our project, in partnership with the University of Cumbria and Trees Please nursery, is titled Supersizing Broadleaves and will explore how three broadleaved species – silver birch, sycamore and pedunculate oak – can be established more effectively by using our improved seed and different nursery protocols and silvicultural interventions compared to standard practice.

Three research trials will be planted across central England at sites with varying levels of moisture and soil nutrients to test how the different approaches work in different conditions. The trials will be planted during winter 2023/24 and assessed for survival and height each year for two years. With 3,840 trees at each site there will be plenty of data to provide advice on broadleaved establishment for foresters and practitioners.



Cell-grown sycamore graded and ready for despatch (photo credit: Alice Snowden)

Oak Orchards

Oak is one of Britain's most important productive hardwoods, but issues with masting and acorn storage make sourcing enough plants each year very difficult. As one of our core species, we are committed to improving the quality and quantity of acorns available to the forestry sector.

One of our long-running projects is the establishment of clonal seed orchards and this year we planted a further 200 grafted plants at these sites. These orchards are now almost full and some final planting this winter will complete them.

As well as our major Seed Sourcing Grant outlined above, we are also partners with Earth Trust in Oxfordshire and Sotterley Estate in Suffolk on a smaller project to convert two oak research trials into productive orchards. These trials were planted in 2003 and now that all the data has been collected, the sites can be selectively thinned and managed for acorn production. The first round of thinning will take place this coming winter resulting in the first *Tested* oak for the UK.



Planting grafted Quercus petraea at a clonal seed orchard on the Whitfield Estate in Herefordshire

Partners and Supporters

We work with many of the principal stakeholders in the forestry sector. In addition to our long-term partnerships with Defra, the Forestry Commission, Scottish Forestry and Forest Research, we have formed working partnerships with:



Forestry England

Host a number of our new and upcoming trials.



Royal Forestry Society

Partners in our Patsy Wood Scholarship initiative.



Woodland Trust

Partners in the Sustainable Seed Source Project to find seed sources for important future species, not currently available.



Institute of Chartered Foresters

The Royal Chartered body for tree professionals in the UK.



Millennium Seed Bank

Partner in our Seed Sourcing Grant project, funded by the Forestry Commission.



Action Oak

Research, fundraising and communications support to help protect the iconic oak tree.



National Forest

Host a number of our trials and orchards.



Earth Trust

Hosting a number of our trials and orchards.



Confederation of Forest Industries

Partner in the National Tree Improvement Strategy.



Vastern Timber

Corporate sponsor of our sycamore programme.



Tilhill Forestry

Corporate sponsor of our core costs.



Forestart

Stratified all the seed for our sycamore and birch progeny trials as an in-kind donation.



Tubex

Provided all the vole guards to protect our new progeny trials as an in-kind donation.



Cheviot Trees

Specialist growers who raise trees for all our research projects, and a Trustee of FTT.



Our plans for 2023-2024

- Collect year 1 data from our newly planted sycamore and silver birch progeny trials
- Plant three trials for the Supersizing Broadleaves project
- Search for more healthy ash trees in diseased woodlands
- Select plus trees of beech and hornbeam
- Thin two oak progeny trials to begin their conversion to seed orchards
- Recruit a new member of the research team to deliver our Seed Sourcing project



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