

Registered charity no. (England & Wales) 1103202

ANNUAL REPORT

Foreword

John Leigh Pemberton, Chair of Trustees



2021 was another year of growth for Future Trees Trust. At a time when trees are so high on everyone's agenda, it is wonderful to be able to develop our work programmes in support of greater tree planting, and to support more young people as they embark on their careers as researchers and foresters.

Our Pasty Wood Scholarship programme continues to flourish, with last year's scholar James Cryer finding employment with Tilhill, and a new scholar Peter Borrowman placed again in the capable hands of William Hamer.

One of the highlights for the research team has been the establishment of demonstration plots this winter which illustrate the various categories of planting stock that are available to the forester. The plants are small and in their first growing season, but we expect the *Qualified* material coming out of our improvement programmes to show its superiority in the next few years.

Our CEO and fundraiser, Tim Rowland, left Future Trees Trust after more than 10 years in the role. We are very grateful to Tim for all the work he has done in raising the profile of the charity and welcome John McLaughlin as our new CEO. He brings with him a wealth of charity experience across a number of sectors. We have exciting plans to significantly increase the scope and depth of our work as the only UK charity dedicated to improving broadleaved trees by conventional selective breeding delivering environmental, economic and wellbeing benefits for current and future generations.

The year ahead will be challenging, with the completion of some projects and getting new research off the ground. We look forward to keeping our partners and supporters informed as we deliver our new strategy 2022 – 2030.

John Leigh Remberton.

Fundraising and Finances

We have had a good year despite challenges raising funds in a tougher funding arena due to Covid. We are extremely grateful to all our funders, many of whom support us each year with core funding which enables us to concentrate on research. Our income last year was £193,738 down £94,367 on the previous year. However, this was the first year without generous legacy funding from the Patsy Wood Trust so income from other sources has actually increased.

We spent £233,902 last year, of which £76,640 – or 33% – was on core operations and £157,261 on research.* Our research expenditure remains about the same as in previous years while our core operating costs increased slightly mainly due to expenditure on communications and outreach.

The majority of funding comes from charitable Trusts and Foundations (75%) and an increasing percentage from government (22%) and a small amount from individuals and corporates.

* Provisional data as we await yearend figures

Income 2021/2022

In 2020/21, our income was **£193,738**, as illustrated below .



Outreach and Comms



Georgina Thomas joined the team as a freelancer in 2019 to launch Future Trees Trust in the world of social media with 15 years' experience of marketing across various organisations.

Our work is shared across Twitter, LinkedIn, Facebook, Instagram and YouTube so there are many options for you to engage with us through social media. We also have a mailing list for anyone wishing to receive our quarterly news digests. You can sign up from our website's Support Us page. With ambitious government targets for new planting, we need to consider what trees we are planting and where they come from. To help us get this message across, we have produced a document called *Current Guidance on the Use of Future Trees Trust Broadleaved Seed Orchard Material in the UK*. It sets out all the genetic considerations a land manager should think about when deciding what to plant, and where it should be sourced from. It is accompanied by a series of maps for each seed orchard that arises from our work, and illustrates the orchard composition and where the trees from that orchard can be planted without risk of maladaptation.

The pdf document can be downloaded from our website.

We are the only UK charity dedicated to hardwood tree improvement.

Highlights of our work

Planting our First Demonstration Plots

This year we planted demonstration plots at four locations across the country. We've established these sites to show how improved seed from our orchards compares to non-improved material collected from seed stands. Each site has lines of sycamore, silver birch and wild cherry from these different seed sources to visibly show the positive effects of tree improvement.

Two sites are planted with Forestry England in Nottinghamshire and in Kent, another has been established at the Duchy of Cornwall's Hereford Estate and a fourth with a private estate in Perthshire. We hope that in several years' time forestry groups can visit the plots to see the difference tree improvement makes for themselves!

Planting the demonstration plot at Bolfracks estate in Perthshire





Expanding our Oak Seed Orchards

A major project over the last few years has been the establishment of four large oak seed orchards to improve the supply of high-quality British acorns for productive planting. These orchards are made up of grafted trees from parents displaying superior timber traits in terms of excellent form and vigour. Three orchards are of sessile oak (*Quercus petraea*) and one is of pedunculate oak (*Q. robur*).

In autumn 2021, we were awarded a grant from the Tree Production Innovation Fund, operated by the Forestry Commission, to continue this important work. The funding allowed us to graft 1,200 more trees with scions collected from archive sites and from mature oaks in the Forest of Dean and Herefordshire. The successful grafts will be planted out this coming winter and will almost complete these orchards.

Oak seed orchard at Whitfield Estate, Herefordshire

Our vision is for productive woodlands in the UK to contain a proportion of selected or improved trees...



Searching for Tolerance to Ash Dieback

The Living Ash Project is a DEFRA-funded programme to find, conserve and understand natural tolerance of ash trees to the devastating fungal disease ash dieback. A small percentage of trees exhibit a high degree of tolerance to the pathogen, and it is these trees we are looking to locate in woodlands and research trials across the country where ash dieback is prevalent.

This year Future Trees Trust conducted several assessments of the National Archive site where the first round of tolerant selections is planted. Over the next two summers we will be revisiting tolerant selections in the field and searching for new individuals with high natural resistance to the disease. If you know of any such trees, specifically in a woodland setting that has been hit hard by ash dieback, we would love to hear from you! Please visit the Report-A-Tree page at *livingashproject.org.uk.*

Controlled inoculations performed by Forest Research to test the tolerance of our selections

Seed Collection for Progeny Trials

Our demonstration plots are going to show how improved seed performs alongside seed stand material, but we are committed to going even further. The winter we will be planting progeny trials of sycamore and of silver birch to enable us to evaluate the excellent growth and form of our selected plus trees. With this information we can remove poorly performing trees from our seed orchards to improve the quality of the seed being produced.

During autumn 2021 we collected seed for these trials from plus trees and seed orchards. This seed has been stratified and seedlings are now being cell-grown for planting of these trials this winter right across the country from Kent to Perthshire in Scotland. The trials will start to give important data after five years and be complete after 15 years, at which point they may be rogued (the culling of poor performing individuals) and converted into seed orchards.

Silver birch catkins collected at one of our seed orchards



... to ensure that woodlands are resilient to climate change, pests and diseases,

Supporting Young Foresters and Researchers

Patsy Wood Trust

Our legacy grant from The Patsy Wood Trust in 2017 enabled us to set up our scholarship programmes to support young foresters and researchers. We partner with the RFS to deliver the Patsy Wood Scholarship, designed to support young graduates in their first job and to introduce them to the work of FTT. The legacy fund also supports doctoral research into topics directly relevant to FTT's breeding programmes.

Here are the reports from all the scholars we support:

Ryan McClory



PhD student at Reading University 2020 - 2024 My doctoral research

focusses on the putative **Drivers of oak masting in the UK**, with the aim of enabling

better management of

consistent acorn crop and aiding the conservation and forestry industry. My research objectives focus on explaining variation in acorn production of individual trees within and between years, analysing how nationwide patterns of masting have been affected in the past and how they could be affected in the future. I will also be investigating what methods can be undertaken to maintain a more consistent UK acorn crop.

James Cryer



Patsy Wood Scholar 2020-2021

My year as Patsy Wood Scholar has been a golden opportunity for me. The role allowed one-to-one tuition with William Hamer throughout the course of the whole forestry year, and I was able to spend time with Dr Jo Clark researching Forest Genetic Resources. Having finished my year as Patsy Wood Scholar, I am now working in Dumfries & Galloway as an Assistant Forest Manager for Tilhill. The role is predominantly focused on commercial upland forestry and encompasses a new set of silvicultural and management practices.

Peter Borrowman

Patsy Wood Scholar 2021 - 2022

I was delighted to be offered the 2-year scholarship position of Assistant Forest Manager, working under



experienced forestry consultant William Hamer. Having not had a direct forestry background as such, the role has been a somewhat novel experience for me, but one which I am thrilled to have undertaken. It has provided me with the ideal platform for learning about all aspects of woodland management in Southern England and beyond.

Eamonn Cooper

MRes/PhD student at Trinity College Dublin March 2022

Eamonn Cooper has just started a Masters by Research programme based at Trinity College



Dublin looking at the **Genetic Characterisation** of oak for breeding and conservation. He will be investigating genetic diversity within the British and Irish breeding populations using morphometrics (the analysis of leaf features) and DNA tools. If funding can be sourced, Eamonn would like to take his studies further to undertake doctoral research, delving a bit deeper into the genetics of oak.

...and produce timber that is used in construction of net zero carbon buildings,

Meet the Landowners

Future Trees Trust is a small research charity, and we rely on partnership working with public and private landowners to host trials, orchards and archives. We are grateful to all our landowners for offering space, maintaining these sites and driving our research forward.

Here we are introducing a few of the landowners who we are excited to be working with when we plant silver birch and sycamore progeny trials this coming winter.

The Duchy of Cornwall

Established in 1337 to provide income for the Prince of Wales and his family, the Duchy of Cornwall has a long history of forestry with sustainable stewardship at the heart of its activities and objectives. A demonstration plot and a genetic archive of sweet chestnut are already established at their Hereford Estate, and they will kindly host one of the upcoming silver birch progeny trials.



DUCHY of **CORNWALL**





Bolfracks Estate

Bolfracks Estate is a private estate located near Aberfeldy in Perthshire. Now owned by LFI Silva, it is part of a portfolio of sites with forestry and land management at its core. Bolfracks is home to one of our demonstration plots and will be the northernmost silver birch progeny trial site. Interestingly, there is an impressive stand of improved birch on the estate from early tree breeding work conducted by Aberdeen University.



Bolfracks Estate & Gardens

Forestry England

A division of the Forestry Commission, Forestry England are responsible for managing the publicly owned woodlands of England for timber, people and wildlife. Future Trees Trust has been generously supported by the Forestry Commission for many years and Forestry England currently host and maintain the National Archive of Tolerant Ash planted through the Living Ash Project. New progeny trials of both silver birch and sycamore will be hosted in their Central and East England Forest Districts, respectively.



Forestry England

...thereby locking up carbon for decades to help mitigate impacts of climate change.

Partners and Supporters

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





DEFRA

Funding our input to the Living Ash Project, a five-year project to find ash trees resilient to ash die-back disease with which to create a breeding population.



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.

the Royal Chartered body for tree professionals in the UK.





Institute of Chartered Foresters





Action Oak

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



MILLENNIUM SEED BANK PARTNERSHIP

Kew/

National Forest and Earth Trust Hosting a number of our trials and orchards.

Confederation of Forest Industries

Partner in the National Tree Improvement Strategy.





We are very grateful to John Bennett who has volunteered much of his time to assist in fundraising and reporting to donors as we transition to our new CEO.

Our plans for 2022-2023

- Establish a series of three silver birch progeny trials
- Establish a series of four sycamore progeny trials
- Complete the final round of graftwood collection for our Qualified oak seed orchards and plant last year's grafts
- Launch our new strategy 2022 2030
- **Continue with the Living Ash Project**
- Undertake budburst phenology assessments at two sycamore progeny trials to compliment growth data







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