

Seed Sourcing Case Study

Oxley Wood, Halstead, Essex

Developing a small-leaved lime seed stand



Bringing home grown tree seed into the market

Tree seed is a vital, but often overlooked part of tree production. With the government's ambitious tree planting commitments, and the introduction of legally binding targets to increase tree and woodland cover in England to 16.5% by 2050, demand for trees and therefore tree seed is more important than ever.

Clive Ellis, a woodland manager working with ancient woodlands across Essex and Suffolk, is determined to support the drive for more tree seed.

One of the woods Clive manages is Oxley Wood in Halstead, Essex. Here, the focus for the last 16 years has been on removing over-mature poplar and establishing a new generation of oak in coppiced areas. The ancient woodland is predominantly small-leaved lime which provides coppice for firewood, pole making and attracts a large number of insects.

In October 2022, Clive decided to apply for the government's Seed Sourcing Grant (SSG). The grant is designed to enhance the quantity, quality and diversity of tree seed sources in England to support availability of planting stock, meeting tree planting needs and boosting domestic tree seed production.

"I'd already been thinking about how important lime was in terms of a national resource. When the funding became available, I decided to apply to help bring more British home-grown seed to the market, as well as improve the ecological vision of Oxley Wood."

Clive Ellis, land manager, Oxley Wood



Improving lime-dense compartments of woodland

Clive was successful in his application and funding was awarded to help improve lime-dense compartments of woodland in Oxley Wood (compartments are individual woodlands, or parts of larger woodlands) and register it as a seed stand on the National Register of Basic Material. With funding, these compartments could be improved for seed production, through thinning and coppicing, with seed to be made available in the future for collection in years of good pollination. When the project began in 2023, there were concerns around limited UK supply of small-leaved lime seed. There were only three other small-leaved lime seed stands registered in the UK meeting Forest Reproductive Material (FRM) standards.

Thinning and Coppicing

Thinning and coppicing work began at the end of May 2023 using a combination of hand felling, a tracked excavator for handling brush, a processor, and a forwarder. By developing crown depth and some open coppice, the sun is able to raise temperatures for flowers in the open canopy, improving production of viable seed. Thinning and coppicing is also important as pollination of small-leaved lime is by insects, notably bees, with pollen tube growth and nectar secretion requiring temperatures above about 20 degrees.

This work was completed in dry conditions with no damage to the soil. A number of management visits were made to discuss ongoing work, issues and decisions.

In compartment 2d of Oxley Wood (0.73 hectares of predominantly lime containing overstood stools and maidens), woodland was thinned, allowing crowns and a flowering area to develop, exposing the woodland to warmer temperatures resulting in greater viable seed. The thinning was sensitively executed, leaving a much lighter structure, with sufficient space around the crowns to allow for development over the next 10 years.

In compartment 3a of the wood (1.36 hectares), the land contained largely mature poplar, planted in the 1950's with a height of up to 35m growing amongst overstood lime stools and maidens. Here, sufficient lime was coppiced to be able to fell and remove the poplar as well as to thin the remaining lime. This resulted in a more diverse, open height structure with plenty of space for coppice development, and allows a variety of seed collection methods, such as collecting from both the ground and hanging large nets under trees which were previously thinned.



Use of the excavator for managing logs and brush



Compartment 2d before thinning



A lighter structure in compartment 2d



Compartment 3a after partial coppicing, poplar removal and thinning



Collecting dry seed in thinned area



Highlights

- More than 8 hectares of structurally varied lime-dense woodland has been registered as a seed stand on the National Register of Basic Material for collection of lime seed
- An area of almost pure lime has been thinned to allow for development of crowns
- 1.36 hectares of land has been partially coppiced to allow removal of poplar, and has had a matrix thin, which will allow development of crowns
- Damage to the ground has been avoided by operating in dry conditions
- Trees and stools will now develop in the lighter, warmer conditions needed for successful pollination and over time, should produce greater quantities of fuller seed. Successful pollination does, however, depend on prevailing conditions and temperature



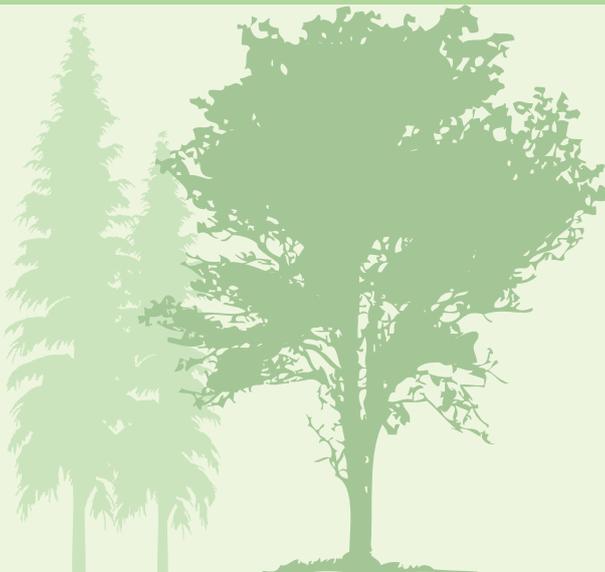
The Future

"I have already been working with a colleague who is starting a tree nursery for the local County Council"

Says Clive Ellis, land manager, Oxley Wood. He has also been in contact with another nursery who have plans to grow and hopes to be in touch with them within a year to take this forward.

Top tips for managing a woodland for seed collection

- Think about whether the woodland is suitable as a seed stand. Ideally, select stands of predominately one species. Stands should have a large number of trees and be selectively thinned at regular intervals to give remaining trees space to develop their crown and get more light
- Clear dense undergrowth such as bracken and bramble to improve access for seed collections
- Consider grey squirrel control and fencing to exclude deer and wild boar to maximise the amount of seed at collection time
- Consider developing or installing wide rides where suitable to allow hanging branches for collection from the ground and improve the layered structure of compartments



For more information

If you would like to find out more about the funding available for managing or planting Seed Stands and Orchards, please visit Seed Sourcing Grant - on GOV.UK www.gov.uk/guidance/seed-sourcing-grant

You can find more information about the National Register of Basic Materials on the Marketing forest reproductive material for forestry purposes GOV.UK page. www.gov.uk/guidance/marketing-forest-reproductive-material-for-forestry-purposes