

PHC2023/07: A review of UK provenance seed supply capacity for tree production to meet tree planting targets in Scotland.

Background and knowledge gap: In 2022/23, 12,960 hectares of new woodland were created in the UK. Scotland leads the way in this area with 63% of the total new planting (8190 ha), 24% in England (3130 ha), 9% in Wales (1190 ha) and 3% in Northern Ireland (450 ha). Broadleaves accounted for 51% of UK new planting area in 2022/23.

In order to meet ambitious planting targets these planting rates will have to increase. For example, the Scottish Government's [Draft Climate Change Plan](#) (2017), proposes to increase Scotland's woodland cover from its current 17% to 21% by 2032. To deliver this, the draft plan proposes that the rate of new afforestation rises to 15,000 hectares per year by 2024. This is made significantly more challenging due to the increased probability of the sudden loss of woodland cover through severe weather events (e.g., storm Arwen damaged 8,000 ha of woodland in November 2021 in Scotland, the equivalent of around 16 million trees). The Scottish Governments' [Forestry Grant Scheme](#) provides funding for the creation of new woodland (and the sustainable management of existing woodland).

Meeting woodland creation targets is very heavily dependent on seed supply, particularly for broadleaf trees. Seed for commercially grown trees is required to go through a specific collection and treatment regime to ensure that the provenance of the material is known and that the seed performs to an expected standard. Therefore, ramping up tree planting requires a similar investment in seed production and supply.

Biosecurity is another important element of tree production. There have been a number of instances where tree diseases have been exacerbated by poorly understood supply chains, for example ash dieback. It is now known that the fungus which causes this disease, *Hymenoscyphus fraxineus*, was moved around Europe and the UK on/in infected ash planting stock which led to a nation-wide outbreak. Therefore, biosecurity is an important consideration for tree production and movement.

To address seed supply issues, Defra launched the Tree Production Capital Grant (TPCG) in England which is part of the wider package of measures under the Nature for Climate Fund and provides capital investment to improve, expand, automate, or mechanise tree nursery operations. Within the TPCG, the mechanisms for funding are the [Tree Production Innovation Fund](#) to build capacity in nursery production, and the [Seed Sourcing Grant](#) to provide funding to enhance the quality, quantity, and diversity of tree seed sources in England. Defra and Scottish Government also channelled £1.5 million through [Scottish Forestry's Harvesting and Processing Grant](#) to increase the capacity of Scottish and English nurseries by funding seed trays, seed storage and sowing equipment, poly tunnels, cold storage facilities and irrigation systems. With Scottish Government funding, Forestry and Land Scotland's Newton Nursery have started a major redevelopment to increase the number of tree seedlings they grow from 7 million up to 19 million each year.

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It is currently not clear a) how the TPCG in England will improve the availability of Scottish provenance material to Scotland, b) the biosecurity requirements of the nurseries producing the stock in Scotland, and c) whether Scotland could be doing more to improve the availability of biosecure Scottish provenance material, this should include a horizon-scanning element to predict upcoming changes to the diversity of species for which there will be planting demand.

Impact: Clarity on the provenance and availability of biosecure tree seed in Scotland would provide evidence on the risks to sensitive habitats in Scotland from non-biosecure tree planting and assess the validity of meeting tree planting targets in Scotland.

Objectives and research required for this call:

Stakeholder engagement:

1. to understand the current seed supply issues in Scotland
2. to assess whether the current grants in England will benefit Scotland seed supply
3. to clarify the biosecurity requirements for seed supply
4. to predict changes to the demand for different tree species

A literature review is required to fully explore seed supply across GB and its implications for Scottish tree planting targets.

Deliverables required from individual project:

- Develop and run/facilitate knowledge exchange stakeholder workshop(s).
- Final Report with executive summary on investigations, to contain key sources, analysis, findings and recommendations for implementation or further work (<30 pages of text and figures, excluding appendices and references). Cover image(s) with associated photo credits should also be supplied.
- Brief policy summary (2 pages maximum) explaining how the work has contributed to filling evidence gaps and the context in which the findings can be used by policy makers and practitioners.
- Presentation at Scotland's Plant Health conference and any other relevant stakeholder meeting(s) to disseminate findings and contribution to other KE output such as the PHC virtual poster room or blogs.
- 200 word lay summary for project overview at outset, and of findings at completion (for website and newsletter).
- Slide deck of the key project findings.

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Meetings

- Project meetings throughout project lifecycle to include PHC manager, PHC Sector Lead, Scottish Government policy contact and commissioning stakeholder.
- Meeting/s with relevant PHC Impact Officer and Communications Officer to plan dissemination of project findings and impact strategy.
- Attendance at briefing discussion with PHC Steering group to discuss findings and next steps.

Indicative key dates:

- Deadline for submission of applications: **12pm on 27th November 2023**
- Project start: **01st February 2024**
- Overview of plans and project start-up meeting with PHC Directorate: **by 16th February 2024**
- Final report and policy summary: **28th June 2024**
- Project outputs signed off by PHC Sector Lead: **26th July 2024**

Detailed milestones to be confirmed by bidder.

Date all work needs to be completed by: 28th June 2024

Maximum funding available exclusive of VAT (where applicable) and including any knowledge exchange activities: £25,000

Submitting an application form

Applicants should use the PHC Application Form when applying for projects and must ensure they are able to accept the PHC Funding Terms and Conditions before submitting an application.

Completed applications should be submitted to info@planthealthcentre.scot for evaluation by **27th November 2023**. Successful applicants will be notified by **18th December 2023** and we may request further clarification on any aspect of the application prior to contract award. You should highlight any potential conflicts of interest in your proposal.

Please contact the Centre Manager if you have any queries (info@planthealthcentre.scot). Answers to any non-confidential questions will be published on our website.

Review of application

Applications will be reviewed by a panel selected from the PHC Directorate, Scottish Government, PHC partners and/or commissioning stakeholder, as appropriate.

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Expectations for section 1 of the application form:

Expectation	Descriptor
Duration	The proposed duration will align closely to the details provided in the anticipated timescales section of the specification.
Staff time and effort	The proposed allocation of staff time and effort is appropriate and includes all deliverables. The proposal must also provide a commitment that named staff members will be available to work on the contract if the bid is successful.
Project costs	The estimated breakdown of project costs is realistic and inclusive of all deliverables.

Expectations for section 2 of the application form:

Expectation	Descriptor
Background	The proposal should include an introduction which demonstrates a clear understanding of the project requirements. This should include the need for this research; the project aim; and how the proposal will address this aim.
Proposed methodology and outcomes	The proposal should demonstrate a high quality and workable methodology, including: how the evidence will be identified, reviewed and assessed, consulting relevant stakeholders and/or experts where appropriate, to address the key questions and produce the deliverables in the timescales required.
Milestones	The project milestones are logical, practical and include all deliverables.
Project Management	The staff, resources and expertise are appropriate for conducting the proposed project. The proposal should name the project lead.
General and specific topic expertise and experience	The proposal should provide details of individual staff members who will work on this project and demonstrate how they will meet the project requirements, specifically: <ul style="list-style-type: none"> - general research experience and expertise - specific experience and expertise relevant to the call
Risk	The proposal should provide a risk assessment matrix detailing any risks identified in relation to the delivery of this contract, and proposed mitigation measures to minimise their probability and impact, focused particularly on risks to completion on time.

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