

PHC2025/05: Whole of Scotland LiDAR: Analysing the opportunities for plant health benefits and potential barriers to exploitation

Background and knowledge gap: Commencing in November 2025, Scotland will be generating aircraft-based LiDAR surveys of all land within high-tide boundaries, at a resolution of 10 points per m², with most data collected in the summer months. The surveys will be repeated on a 4-year cycle. This will provide structural data on Scotland's land cover and plants at a greater resolution than previously available. There will also be tandem aerial photography (flown in separate missions).

This project aims to evaluate the opportunities for plant health that will arise from the forthcoming availability of this resource, including potential synergies with other remote sensing methods and data. The project will also aim to identifying potential barriers to exploitation (including the need for key data handling tools, and/or other contextual data). We encourage applications that approach this from an interdisciplinary perspective, as there is potential for social research exploring barriers.

There are clearly potential opportunities to use the forthcoming LiDAR data to monitor or predict plant health issues/risks in Scotland, but this requires a full assessment of options and their feasibility. Outputs from the project will be presented to the governance board of the Scotland LiDAR mission to provide advice on the potential plant health applications of the LiDAR data, and the tools that should be invested in (especially those that are multi-use), through use case examples.

Impact: The outputs of this project will provide information to the Scotland LiDAR governance board and other PHC stakeholder groups on potential opportunities for improving plant health outcomes in Scotland arising from this upcoming data set. A longer-term impact from this project would be the operational utilisation of the LiDAR data set for plant health monitoring and risk assessment.

Objectives and research required for this call:

- Gather data on potential use cases for plant health support arising from whole-country LiDAR data sets. Also identify existing projects with similar approach/aspirations to provide a synthesis of progress and identification of opportunities and barriers.
- Assess the strengths, weaknesses and complementarity of this data set with regards to plant health investigations, including how combined approaches (other remote sensing data sets from different sensing technologies, whether satellite-, light aircraft- or drone-based) can yield greater plant health insights.
- Engage with experts to further identify opportunities to build toolkits for plant health in Scotland, including advice on ground-based data collection requirements to realise these opportunities.
- Identify a small number of case studies to more deeply explore the potential economic cost and benefits of tools identified through use-cases.
- Present the knowledge synthesized to the governance board of the Scotland LiDAR mission.

Deliverables required from individual project:

- Develop and run a knowledge exchange stakeholder workshop with the Scotland LiDAR governance board exploring opportunities and barriers for utilisation of the forthcoming country-wide LiDAR dataset for plant health applications.
- Final Report with executive summary on investigations, to contain key sources, analysis, findings and recommendations for implementation or further work. Reports should be a maximum of 20 pages of text (30 pages including figures but 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.

Meetings

- Project meetings throughout project lifecycle to include PHC manager, PHC Sector Lead, and Scottish Government policy contact.
- 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: **5pm on Thursday 21st August 2025**
- Project start: **27th October 2025**
- Overview of plans and project start-up meeting with PHC Directorate: **7th November 2025**
- Final report and policy summary: **27th February 2026**
- Project outputs signed off by PHC Sector Lead: **20th March 2026**

Detailed milestones to be confirmed by bidder.

Date all work needs to be completed by: 27th February 2026

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

*Please note that costs should be submitted net of VAT recovered by the applicant. Applicants should seek advice on appropriate VAT treatment of proposed funding.

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 5pm on Thursday 21st August 2025. Successful applicants will be notified by 19th September 2025, 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.

Review of application

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

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 expertise and experience	<p>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:</p> <ul style="list-style-type: none">- general research experience and expertise- specific experience and expertise relevant to the call
Risk	<p>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.</p>

Plant Health Centre

C/o James Hutton Institute, Invergowrie, Dundee DD2 5DA

Phone: +44 (0)1382 568 905

Email: info@planthealthcentre.scot; Web: www.planthealthcentre.scot