

NIA Project Registration and PEA Document

Date of Submission

Aug 2026

Project Reference Number

NIA_SHET_0064

Project Registration

Project Title

DEEP-PEAT: Drone-Based Electromagnetic and Geophysical Peat Depth Surveys

Project Reference Number

NIA_SHET_0064

Project Licensee(s)

Scottish and Southern Electricity Networks Transmission

Project Start

September 2026

Project Duration

0 years and 9 months

Nominated Project Contact(s)

Brant Wilson – Innovation Portfolio Manager -
transmissioninnovation@sse.com

Project Budget

£856,558.00

Summary

Accurate peat depth data is required for site selection, micro-siting of assets within sites, planning ground investigations, and planning civil works. Currently, this data is obtained through manual peat probing, which is unsafe for the operatives taking measurements, often produces inaccurate measurements, is dependent on agricultural and ecological factors for site access, and is slow and labour-intensive with high associated costs and a frequent need for repeated surveys.

The proposed solution is to develop a method of surveying peat depth using geophysical sensors mounted on drones (including frequency-domain electromagnetic (FEM), photogrammetry, LiDAR, radiometric, and ground penetrating radar (GPR) sensors). This method aims to produce peat depth heat maps that are accurate to $\pm 2\text{m}$ or better without ground truthing and $\pm 0.5\text{m}$ or better with ground truthing, estimating the presence of peat up to 8m below ground level.

Third Party Collaborators

Zetica Limited

Nominated Contact Email Address(es)

transmissioninnovation@sse.com

Problem Being Solved

Accurate peat depth data is required for site selection, micro-siting of assets within sites, planning ground investigations (to avoid traversing over deep peat, etc.) and planning civil works (e.g. peat excavation, selecting foundation type and depth). Currently, this data is obtained through manual peat probing, with inconsistent approaches between sites – some have very high-resolution data,

some have low-resolution data, while others have no peat probing completed and only collect peat depths through later stage ground investigation (GI) using trial pits and boreholes.

Traditional peat probing has a number of downsides and limitations:

- **Safety:** Requires people to walk long distances through bogs and undulating terrain, and perform physically demanding measurements, often in remote areas where emergency services or other necessary assistance may be slow to arrive.
- **Accuracy:** Data quality is dependent on grid spacing of the measurements, and it is easy to get false measurements from obstructions or the presence of other soft sediments. Inaccurate depth measurements result in inaccurate peat volume estimates, meaning that projects budget for one quantity of peat to excavate and manage, and encounter another. Such discrepancies invalidate Peat Management Plans, create storage and disposal problems, and force costly mid-construction redesign.
- **Environmental/Community Impacts:** Seasonal land use activities can dictate site access, requiring extensive engagement with landowners, and probing can disrupt ecosystems.
- **Efficiency/Cost:** Probing and data processing is slow and labour-intensive with high associated costs, and surveys often have to be repeated with reduced spacing once site layout is confirmed, further increasing delays and costs.

Method(s)

The technical geophysical methods to be trialled are as follows:

Drone photogrammetry and LiDAR

The pre-survey photogrammetry and LiDAR flight is conducted as a single mobilisation before any geophysical acquisition. Two outputs are produced simultaneously:

- **Photogrammetric DSM:** processing of overlapping aerial images produces a digital surface model (DSM) at typically 5–10 cm ground sampling distance. The DSM captures the top-of canopy or ground surface and is used to plan terrain-following flight profiles for GPR and FEM.
- **LiDAR point cloud and bare-earth DTM:** the LiDAR system acquires a dense point cloud that penetrates vegetation to resolve the ground surface beneath rushes, heather, and scrub that photogrammetry cannot. The bare-earth digital terrain model (DTM) provides accurate ground clearance control for GPR antenna height and FEM coil separation during subsequent drone flights; slope and aspect maps for geomorphological context; drainage network delineation to understand peat catchment boundaries; and microtopographic mapping of peat hummock hollow structure relevant to accumulation pattern interpretation.

Together, the DSM and DTM provide the spatial framework for all subsequent geophysical data collection and interpretation.

Radiometrics (gamma-ray spectrometry)

Gamma-ray spectrometry measures natural terrestrial radioactivity (K, U, Th and total count rate) emitted from the near-surface (sensing depth approximately 30-50 cm). Peat, being organic material, has very low intrinsic radioactivity relative to mineral soils and bedrock, producing a distinctive low count radiometric signature.

Radiometrics cannot directly measure peat depth, but some research has shown a relationship between gamma count rates and peat thickness enabling the creation of predictive maps. Its principal role in this programme is to rapidly map the lateral extent of peat across the survey area, defining boundaries and guiding the deployment of GPR and FEM. The low radioactivity of peat relative to mineral soils provides a clear lateral boundary signal. Radiometric data may also assist interpolation between GPR depth transects in areas where peat/no-peat boundaries are complex. Both ground based and drone-mounted gamma spectrometers will be evaluated:

- **Drone-based radiometrics:** rapid areal coverage; well-established in mineral exploration and increasingly used in geotechnical mapping applications.

Radiometric data will be processed using standard spectral window extraction and background removal techniques. Correlation analysis with peat probe data will be included.

Frequency-domain electromagnetic induction (FEM)

FEM measures the secondary magnetic field induced in the subsurface, providing an apparent electrical conductivity profile. Peat is typically characterised by elevated conductivity relative to granular mineral substrates and bedrock, producing a strong lateral contrast at peat margins and a vertical contrast at the peat-mineral substrate boundary.

Both ground-based and drone-mounted FEM systems will be evaluated:

- **Ground-based FEM:** offers high lateral resolution and multiple depth-of-investigation windows through simultaneous multi-coil measurements.

- Drone-based FEM: rapid areal coverage at low cost per hectare. The CMD Explorer provides continuous gridded lateral coverage on a 15 m line spacing and discrete 1D soundings to potentially > 6 m depth. The 1D soundings would be acquired at 100 m intervals — equivalent to a standard peat probe spacing — providing depth-sensitive conductivity profiles across the full survey area. Data will be processed and assessed against available ground reference information to evaluate its suitability for peat thickness estimation under a range of site conditions.

Ground penetrating radar (GPR)

GPR transmits high-frequency electromagnetic pulses into the ground and records travel times of reflections from subsurface dielectric interfaces. The peat-mineral substrate contact is typically a strong GPR reflector due to the contrast in dielectric permittivity between organic and mineral materials. GPR is well-established in peatland research and can resolve depth to substrate with high vertical resolution. Both ground-based and drone-mounted configurations will be assessed:

- Ground-based GPR (70-300 MHz antenna frequency): continuous profile mode along survey transects; capable of resolving peat depths of 0.5-8 m with vertical resolution of 5-15 cm depending on frequency and peat condition.
- Drone-based GPR: airborne GPR profiling over inaccessible terrain; lateral resolution and depth performance dependent on platform altitude and antenna frequency; to be evaluated against ground-based performance.

GPR datasets will be processed using industry-standard methods to derive peat depth information and evaluate survey performance. Results will be cross-validated against peat probe data to quantify prediction accuracy.

Ground-truth: Russian auger peat profiling

Russian-type hand augers will be deployed at selected calibration stations to retrieve near-continuous peat cores, enabling:

- Confirmation of peat depth at geophysical calibration stations;
- Identification of peat stratigraphy, including major layer boundaries such as fibric, hemic, and sapric horizons, fen to bog transitions, and basal lake sediments or wood layers;
- Ground-truth validation of GPR reflection horizons.

Russian auger profiling provides substantially more stratigraphic information than standard T-bar peat probing and is critical for interpreting layered geophysical signatures in FEM and GPR data.

Ground Model Development

The innovative core of the project is the development of an integrated approach for deriving peat thickness information from multiple geophysical datasets. Advanced processing techniques will be developed and evaluated to derive peat depth estimates from GPR data. Advanced processing techniques will also be applied to electromagnetic data to derive information relevant to peat thickness estimation. Outputs from the different survey methods will be integrated to improve confidence in peat thickness estimates and to better understand the strengths and limitations of each technique under differing site conditions. The resulting methodology will be documented and assessed for future operational deployment.

Data Quality Statement (DQS)

The project will be delivered under the NIA framework in line with OFGEM, ENA and SSEN Transmission internal policy. Data produced as part of this project will be subject to quality assurance to ensure that the information produced with each deliverable is accurate to the best of our knowledge and sources of information are appropriately documented. All deliverables and project outputs will be stored on our internal SharePoint platform ensuring access control, backup, and version management. Deliverables will be shared with other network licensees through the closedown report on the Smarter Networks Portal.

Measurement Quality Statement (MQS)

The methodology used in this project will be subject to supplier's own quality assurance regime. Quality assurance processes and the source of data, measurement processes and equipment as well as data processing will be clearly documented and verifiable. The measurements, designs and economic assessments will also be clearly documented in the relevant deliverables and final project report and will be made available for review.

In line with ENA's ENIP document, the cumulative risk score is scored as **6 = LOW** from the sum of the risk thresholds below:

Technology Readiness Level (TRL) Steps – 3 TRL Steps – Medium (Score 2)

Cost – <£1m – Low (Score 1)

Number of suppliers – 1 – Low (Score 1)

Data – Assumptions known but will be defined within project – Medium (Score 2)

Scope

The project will consist of four work packages:

WP1: Field Acquisition

WP1 covers all data collection in the field: the pre-survey photogrammetry and LiDAR flight, drone-mounted radiometrics, drone GPR and drone FEM, and a ground-based sense-check of the airborne systems over an area of known peat. Russian auger profiling is undertaken at selected calibration stations. Optional targeted peat probing may also be deployed where geophysical interpretation requires additional confidence.

Data collection will be completed at three SSEN-T sites with existing peat probe data. Three sites are needed to provide a broad range of conditions and datasets to support development of the modelling methodology, representing the variation in geological and peatland characteristics across Scotland. A stage-gate will be held to check the quality of data collected at the first two sites before proceeding to the third.

WP2: Ground Model Development & Technical Guidance Document

WP2 is the analytical core of the programme and represents its primary innovation. The objective is to evaluate and integrate multiple drone-based geophysical datasets to produce a practical peat thickness assessment method. The key innovation of this programme is the evaluation and integration of multiple drone-based geophysical techniques to improve peat thickness assessment and support development of a practical field methodology.

A second stage-gate will be held to assess the quality of the model and its likelihood to meet the project aims before proceeding to WP3.

WP3: Trial Survey: Blind Field Deployment

WP3 is the validation phase. Having developed and tested the survey assessment approach in WP1 and WP2, the method will be deployed independently over an area of unknown peat extent. The purpose is to demonstrate that the approach delivers reliable peat thickness maps under field conditions. The trial survey will follow the same survey design parameters as WP1. The resulting peat thickness model will be compared against withheld reference data, such as probe records, existing survey data, or known stratigraphy, only after processing is complete. Accuracy metrics including RMSE, mean bias, and depth-range coverage will be calculated and reported against the target accuracy thresholds of $\pm 2\text{m}$ without ground-truthing and $\pm 0.5\text{m}$ with limited ground-truthing.

WP3 will involve surveys at two sites with locations to be confirmed during the project. A final stage-gate will be held to assess the results of the blind tests and determine whether any additional development is needed to achieve the project aims.

WP4: Project Management

WP4 will involve the following tasks:

- Maintain and track the project schedule, actions, deliverables, and expenditure.
- Monitor and manage the risk register.
- Draft communication plan and implement through the project.
- Review and update cost-benefit analysis according to any new learning during the project.
- Plan for deployment of the innovation.
- Produce final report and upload to ENA Portal.

Description of benefits can be found in Section 2.

Objective(s)

The objective of the project is to develop a method of surveying peat depth using drone-based geophysical techniques. Requirements for the successful method include:

- Drone can be operated safely without disturbing agricultural land or ecosystems.
- Drone can be operated in moderate winds - the maximum operable wind speed must be at least 17.5kt/20mph, ideally at least 22kt/25mph. The drone must be consistently operable in "normal" winds of 15-20mph.
- Drone can be operated in light precipitation.

- Produces peat depth heat maps that are accurate to ±2m or better without ground truthing and ±0.5m or better with ground truthing, up to at least 8m in depth.

Consumer Vulnerability Impact Assessment

An assessment of distributional impacts (technical, financial and wellbeing related) for this project has been carried out using a bespoke assessment tool, which assesses the project as having a positive, negative, or neutral effect on consumers in vulnerable situations. To help inform the assessment, this tool considers the categories of consumers identified in the Priority Services Register. This project has been assessed as having a neutral impact, meaning that it does not have any effect on customers in vulnerable situations. This is because it is a Transmission project.

Success Criteria

The project will be deemed as successful if all items in the scope, objectives and learnings are achieved.

Project Partners and External Funding

SSEN Transmission will partner with Zetica Limited to deliver DEEP-PEAT using NIA funding.

Potential for New Learning

This project aims to provide a replicable methodology for surveying peat thickness using drone-based geophysics. A key output will be production of a technical guidance document, which will be made available to other networks, and will capture the lessons learned from the project, including method performance, practical deployment considerations and recommended approaches for future peatland investigations.

Learning from the project will be disseminated through a combination of formal and industry-facing outputs. These will include detailed technical reports, test data, and the technical guidance document, which can be shared with other Network Licensees. Findings will also be presented through industry forums and events such as the ENA summit and other sector innovation platforms. Where appropriate, collaboration with project partners will support wider publication and knowledge sharing. The aim is to ensure the results are accessible, transferable, and usable across the industry, helping to inform future standards, specifications, and investment decisions.

Scale of Project

The project timeframe is 9 months and is designed to get maximum learning for minimal cost. The scale of the project reflects the need to travel to areas with different peatland characteristics for testing, to ensure that the methodology developed is broadly applicable. It also allows for comprehensive testing of different geophysical techniques, providing robust evidence for the effectiveness of those techniques in isolation and in combination. One-off trials would not be able to provide the same level of technical justification for drone-based geophysics for surveying peat depth.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL7 Inactive Commissioning

Geographical Area

The project will be undertaken at sites across the SSEN-T licence area, with data processing completed in Zetica’s office in Oxfordshire.

Revenue Allowed for the RIIO Settlement

No allowance has been made for this type of development within the RIIO-T3 settlement. No savings are expected during project implementation; future savings may be possible depending on the outcomes of the project.

Indicative Total NIA Project Expenditure

The total expenditure expected from the project is £856,558, 90% of which (£770,902.20) is allowable NIA expenditure. The cost breakdown is as follows:

- WP1: Field Acquisition - £430,421
- WP2: Ground Model Development & Technical Guidance Document - £60,000

WP3: Trial Survey: Blind Field Deployment - £223,377

WP4: Project Management - £142,760

Project Eligibility Assessment Part 1

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations

Please answer **at least one** of the following:

How the Project has the potential to facilitate the energy system transition:

This project will facilitate the energy system transition by enabling more efficient surveys of peat depth on potential construction sites, leading to faster build-out of the transmission infrastructure needed to connect more renewable energy. Learnings from this project will be transferable to other sectors building on peatland, including onshore wind.

How the Project has potential to benefit consumer in vulnerable situations:

N/A

Requirement 2 / 2b

Has the potential to deliver net benefits to consumers

Project must have the potential to deliver a Solution that delivers a net benefit to consumers of the Gas Transporter and/or Electricity Transmission or Electricity Distribution licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the GB Gas Transportation System, the Gas Transporter's and/or Electricity Transmission or Electricity Distribution licensee's network, or wider benefits, such as social or environmental.

Please provide an estimate of the saving if the Problem is solved

n/a

Please provide a calculation and/or description of the expected benefits of the solution

Qualitative benefits:

- **Safety:** The drone-based method will allow surveys to take place without operatives walking across bogs.
- **Accuracy:** The drone-based method will provide a continuous map and not rely on interpolation. It should also be able to identify and account for obstructions and layers of superficial sediments. This will result in a more accurate estimate of total peat volume and reduce the amount of costly mid-construction redesign needed.
- **Environmental/Community Impacts:** The drones will be able to operate without disturbing agricultural land or ecosystems.
- **Efficiency:**
 - The drone-based method would allow more sites to be surveyed, earlier in the site selection process, and as a result land carbon considerations and construction feasibility considerations could be more easily considered in site selection.
 - Peat probing is often completed on wide grid spacing during early project development and then repeated with closer grid spacing once the site layout has been refined, leading to multiple mobilisation costs. Earlier refinement of the peat thickness model would allow earlier design layout decisions and fewer mobilisations.
 - Drone surveys will be faster – covering a 50 hectare (ha) site with 10m grid spacing with peat probes would take over 40 days – with drone surveys, this may be reduced to as few as 7 days.

Quantitative benefits:

- **Cost:**
 - Drone surveys are expected to achieve almost a **50% cost reduction** per hectare compared to peat probing on a 10m grid (the nearest comparison, because although peat probing can be conducted more cheaply on a wider grid, only a 10m or smaller grid is comparable to the continuous coverage of drone surveys). Drone surveys are expected to cost £1,919/ha while peat probing on a 10m grid averages £3,818/ha.
 - **467 ha** of peat surveys would be required for savings from using drones to make up the innovation development cost. This is equivalent to peat surveys for either: 6.7 400kV substations, 15.6 275kV substations, or 23.4 132kV substations. Considering the number of substations to be built and the use of peat surveys for overhead lines and underground cables, it is expected to reach the breakeven point approximately **one year** after deployment of the innovation, based only on SSEN-T proposed projects.
 - With an estimated uncertainty range, between 356 and 658 ha of peat surveys will likely be required for savings from using drones to make up the innovation development cost.
 - After breakeven, the per-hectare lifetime saving from using drones instead of probing is **£1,173** (in 2018 terms). This is the

difference between the lifetime cost per-hectare of probing, £2,359, and the lifetime cost per-hectare of drone surveys, £1,186 (in 2018 terms).

- With an estimated uncertainty range, savings will likely fall within the range of £828.87 to £1,445.50 per hectare (in 2018 terms).
 - If this innovation (drone surveys) had been adopted for all SSEN-T T3 projects (including T3 132kV, 275kV and 400kV substations, overhead lines and underground cables), total lifetime savings would equal **£15.68 million** (in 2018 terms). This is hypothetical and assumes that the cost of the innovation was incurred in 2021, with peat surveys carried out from 2022 to 2026. We can assume similar savings will be realised for T4 projects (relative to the scale of investment in T4), which will likely be the first to consistently use drone surveys, since peat surveys are on average completed around 5 years prior to energisation.
- With an estimated uncertainty range, savings will likely fall within the range of £9 million to £24.6 million.

Please provide an estimate of how replicable the Method is across GB

The method will be replicable across GB wherever peatland is present, but some calibration (e.g. limited ground-truthing such as peat probing or Russian augers) will be required to use the method outside of the North of Scotland. The focus for this project is on the SSEN-T licence area because it faces more challenges with building on peat compared to the other TOs, with 40.8% of the SSEN-T licence area covered in Class 1-4 peat. However, the project aims to capture a wide range of peatland characteristics with test sites located both on the mainland and islands, which will make the method adaptable to other areas of GB as well.

Please provide an outline of the costs of rolling out the Method across GB.

At project completion, an updated CBA will be provided with updated deployment costs. Currently, it is estimated that deployment of the new method will cost approximately £1,919/hectare. The technical guidance document will be made available to all networks, who will be able to then procure drone-based peat depth surveys from any contractor with the appropriate geophysical and drone operation expertise, likely at a comparable price.

Requirement 3 / 1

Involve Research, Development or Demonstration

Projects must have the potential to have a Direct Impact on a Network Licensee's network or the operations of the System Operator and involve the Research, Development, or Demonstration of at least one of the following (please tick which applies):

- ☐ A specific piece of new (i.e. unproven in GB, or where a method has been trialled outside GB the Network Licensee must justify repeating it as part of a project) equipment (including control and communications system software).
- ☐ A specific novel arrangement or application of existing licensee equipment (including control and/or communications systems and/or software)
- ☐ A specific novel operational practice directly related to the operation of the Network Licensees system
- ☐ A specific novel commercial arrangement

Involve Research, Development or Demonstration - Please select all that apply

- ☐ A specific piece of new equipment (including monitoring, control and communications systems and software)
- ☒ A specific piece of new technology (including analysis and modelling systems or software), in relation to which the Method is unproven
- ☒ A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)
- ☐ A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology
- ☐ A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution
- ☐ A specific novel commercial arrangement

Specific Requirements 4 / 2a

Please explain how the learning that will be generated could be used by the relevant Network Licensees

The learning generated by this project could be used by Network Licensees to more efficiently and accurately survey peat depth on proposed sites, leading to better-informed decision making. Since peat depth surveys using drones are more cost-efficient and less invasive than peat probing, surveys will be able to be completed earlier in the site selection process. Peat depth can therefore be considered in site selection decisions, resulting in cost savings and environmental benefits from avoiding sites with deep peat. Post-site selection, the drone-based surveys will continue to provide value. Continuous maps of peat depth will provide better information than point measurements, leading to more accurate peat management plans and plans for civil works. Costs of reworking those plans

upon discovery of unexpected amounts of peat will be reduced or avoided due to the access to better information upfront.

n/a

Is the default IPR position being applied?

☒ Yes

Project Eligibility Assessment Part 2

Not lead to unnecessary duplication

A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed. Networks must explicitly mention similar projects that they have considered and how these differ.

Please demonstrate below that no unnecessary duplication will occur as a result of the Project.

There are no similar network innovation projects. These methods have been trialled primarily in academia and are only starting to be trialled in industry. Drone-based GPR surveys are being trialled independently by SSEN-T and contractors through large capital project funding. However, innovation funding is needed for this project. It is higher risk and higher opportunity, due to its consideration of multiple geophysical methods and development of a practical field methodology for peat depth assessment. DEEP-PEAT will provide a comprehensive understanding of the value of different geophysical methods and will document a best-practice methodology for drone-based peat depth surveys, with a formal technical guidance document produced to make the public-facing learning available for future projects.

If applicable, justify why you are undertaking a Project similar to those being carried out by any other Network Licensees.

N/A

Additional Governance And Document Upload

Please identify why the project is innovative and has not been tried before

Drone-mounted geophysical surveys have not been used to estimate peat depth for industrial purposes in GB, apart from limited deployment of GPR on its own. Although ground-based geophysical surveys have been proposed and tested on SSEN-T sites, drone-based surveys are unproven outside limited academic use. The technology is therefore too risky to fund through business as usual, but it shows great promise. This project will test multiple geophysical methods in conjunction to establish the operational capability, performance and suitability of drone-based geophysical surveys for peatland investigations.

Relevant Foreground IPR

Any Relevant Foreground IPR generated through the project will be managed in accordance with the default NIA IPR arrangements. Project outputs, findings and lessons learned will be made available to relevant network licensees. Existing background know-how, methodologies, software, processing routines and proprietary expertise contributed by project partners remain Background IPR and are not required for access to project learning outputs.

Data Access Details

For information on how to request data gathered during this project, see Strategic Innovation Fund (SIF) and Network Innovation Allowance (NIA) Data Sharing Procedure at <https://www.ssen-transmission.co.uk/about-us/innovation/>.

Additionally, data from this project and all other projects funded under the Network Innovation Allowance (NIA), Network Innovation Competition (NIC) or the Strategic Innovation Fund (SIF) can be found or requested in the ways listed below:

- Via the Smarter Networks Portal at: <https://smarter.energynetworks.org>. To contact select a project and click 'Contact Lead Network'. SSEN Transmission already publishes much of the data arising from our innovation projects here so you may wish to check this website before making an application.
- Via our Innovation website at: <https://www.ssen-transmission.co.uk/about-us/innovation/>
- Via our managed mailbox: transmissioninnovation@sse.com

Please identify why the Network Licensees will not fund the project as a part of it's business and usual

activities

Peat depth data is critical to progress on large capital projects. Programmes and budgets do not allow for the level of experimentation required to develop a new methodology. The drone-based method is unproven and may not work, so it would be imprudent to spend project budget on this method before it is proven to be effective. Budget needs to remain largely dedicated to peat probing to ensure data is available when it is needed, until such time as there is sufficient evidence to support the drone-based method.

Please identify why the project can only be undertaken with the support of the NIA, including reference to the specific risks (e.g. commercial, technical, operational or regulatory) associated with the project

There are substantial risks associated with this project. Using drone-based geophysical surveys for this purpose is unproven and may not succeed, meaning, as stated above, that a programme of testing cannot be funded without support of the NIA. In addition to uncertainty in the methodology itself, difficulty operating in adverse weather is a frequent challenge with drones. This project aims to develop a method that will work in light rain and moderate wind, and trials will be performed in autumn and winter to address this aim. However, there's no guarantee of success. The NIA allows these higher-risk, higher-payoff trials to take place, when the business could not ordinarily spend this amount of development funding on such work.

This project has been approved by a senior member of staff

☒ Yes