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Request for Quotation

Change Detection Field Surveys

Natural Capital and Ecosystem Assessment (NCEA): Project 1.6 Change Detection

You are invited to submit a quotation for the requirement described in the specification below.

Your response should be returned to the following email address by:

Email: Anne.Stefaniak@naturalengland.org.uk

Date: 06/03/2023

Time: by 17:00

Ensure you state the reference number and 'Final Submission' in the subject field to make it clear that it is your response.

Contact Details and Timeline

Anne Stefaniak will be your contact for any questions linked to the content of the quote pack or the process. Please submit any questions by email and note that, unless commercially sensitive, both the question and the response will be published on Contracts Finder.

Action	Date
Date of issue of RFQ	30/01/2023
Deadline for clarifications questions	15/02/2023 by 17:00
Deadline for receipt of Quotation	06/03/2023 by 17:00
Intended date of Contract Award	15/03/2023
Intended Contract Start Date	20/03/2023

Intended Delivery Date / Contract Duration	6 months
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Glossary

Unless the context otherwise requires the following words and expressions used within this Request for Quotation shall have the following meanings (to be interpreted in the singular or plural as the context requires):

"Authority"	Means Natural England
"RFQ"	Means this Request for Quotation and all related documents published by the Authority and made available to suppliers
"Contract"	Means the contract to be entered into by the Authority and the successful supplier.

Conditions applying to the RFQ

You should examine your response to the RFQ and related documents ensuring it is complete prior to submitting your completed quotation.

Your quotation must contain sufficient information to enable the Authority to evaluate it fairly and effectively. You should ensure that you have prepared your quotation fully and accurately and that prices quoted are arithmetically correct for the units stated.

The supplier by submitting a quotation is deemed to accept the terms and conditions in the RFQ. Failure to comply with the instructions set out in the RTQ may result in the supplier's exclusion from this procurement.

Acceptance of Quotations

By issuing this RFQ the Authority does not bind itself to accept any quotation and reserves the right not to award a contract to any supplier who submits a quotation.

Costs

The Authority will not reimburse you for any costs and expenses which you incur preparing and submitting your quotation, even if the Authority amends or terminates the procurement process.

Clarifications

The Authority reserves the right to discuss, confidentially, any aspect of your quotation with you prior to any award of Contract to clarify matters.

Amendments

The Authority may amend the RFQ at any time prior to the deadline for receipt. If it amends the RFQ the Authority will notify you in writing and may extend the deadline for receipt in order to give you a reasonable time in which to take the amendment into account.

Conditions of Contract

The terms and conditions attached will be included in any contract awarded as a result of this RFQ process. The Authority will not accept any material changes to these terms and conditions proposed by a supplier.

Specification

The Authority is Natural England. The Authority's priorities are to secure a healthy natural environment; a sustainable, low-carbon economy; a thriving farming sector and a sustainable, healthy and secure food supply. Further information about the Authority can be found at: [Defra](#). [Natural England](#) [MMO](#)

Background to Natural England

Natural England is the government's advisor on the natural environment. We provide practical advice, grounded in science, on how best to safeguard England's natural wealth for the benefit of everyone. Our remit is to ensure sustainable stewardship of the land and sea so that people and nature can thrive. It is our responsibility to see that England's rich natural environment can adapt and survive intact for future generations to enjoy.

Background to the specific Natural England work area relevant to this purchase

The NCEA (Natural Capital & Ecosystem Assessment) Programme

UK Government has set world-leading ambition on protecting our natural assets, internationally through the Convention of Biodiversity and domestically via the ground-breaking 25 Year Environment Plan. Intrinsically linked to the successful delivery of Net Zero, protecting our environmental services has never been more vital.

Achieving these goals is underpinned by the provision of systematic and robust evidence. For the first-time, Defra are developing a programme to deliver up-to-date, UK-wide environmental data to allow for agile policy making grounded in the best available evidence – to truly understand where we are and where we need to get to.

NCEA is a transformative programme to understand the extent, condition and change over time of environmental assets across England's land and water environments, supporting the government's ambition to improve the environment within a generation.

The Living England and Change Detection Projects

Natural England leads on both the development of the Living England model (NCEA Project 1.1) and 25 YEP indicator D1 on habitat quantity, quality, and connectivity (which it is proposed will be the basis for the Environment Bill wider habitats target). The use of remote sensing satellite data to measure and monitor the location and change in habitats is a developing area of work. Developing its capacity to detect change is critical for assessing ecosystem extent over time and change in natural capital ecosystem assets.

Living England produces a map of broad habitat classifications for the whole of England based on up-to date satellite imagery and a collection of ancillary data layers including elevation (and derivatives such as slope, height above nearest drainage), proximity to various features (e.g., woodland, moorland, surface water, roads) and climatic variables. This is carried out by first splitting up England into 14 Biogeographic Zones, based on National Character Areas, which are distinctive areas each with unique environmental conditions. Recent satellite imagery is then identified for each biogeographic zone, which aims to use as cloud-free imagery as possible to create spring and autumn mosaics. A segmentation process is then applied to identify parcels of land with similar appearances in the imagery – forming a series of polygons using an object-based image analysis framework (OBIA). The polygons are then classified using a random forest, machine learning algorithm to identify the likely broad habitat present, informed by the field collected habitat records, satellite imagery and the ancillary datasets. The resulting map is a habitat probability map showing the likely broad habitat class for each polygon, creating a national picture of our natural capital assets. Living England Phase IV was published under an Open Government Licence in 2022 and can be accessed here [Living England Habitat Map \(Phase 4\) | Natural England Open Data Geoportal \(arcgis.com\)](https://naturalengland-open-data-geoportal.arcgis.com).

The Change Detection project (NCEA Project 1.6) is scoping the ability to use the Living England habitat probability maps to assess national scale habitat change over time. Change Detection aims to identify areas of habitat change identified between two iterations of Living England with a temporal gap of 2 years and use field data to validate the change detection outputs and identify likely causes of habitat change.

Robust, high-quality field survey data is needed to validate the identification of regions of habitat change and causes of habitat change detected. Living England is aiming to produce an updated habitat probability map every two years in order to provide an up to date assessment of England's natural capital assets and monitor changes in these assets. Change Detection requires regular provision of field survey data from across the different habitat classes and biogeographic zones (BGZs) in

order to identify recent areas of habitat change likely to have occurred within the two-year period.

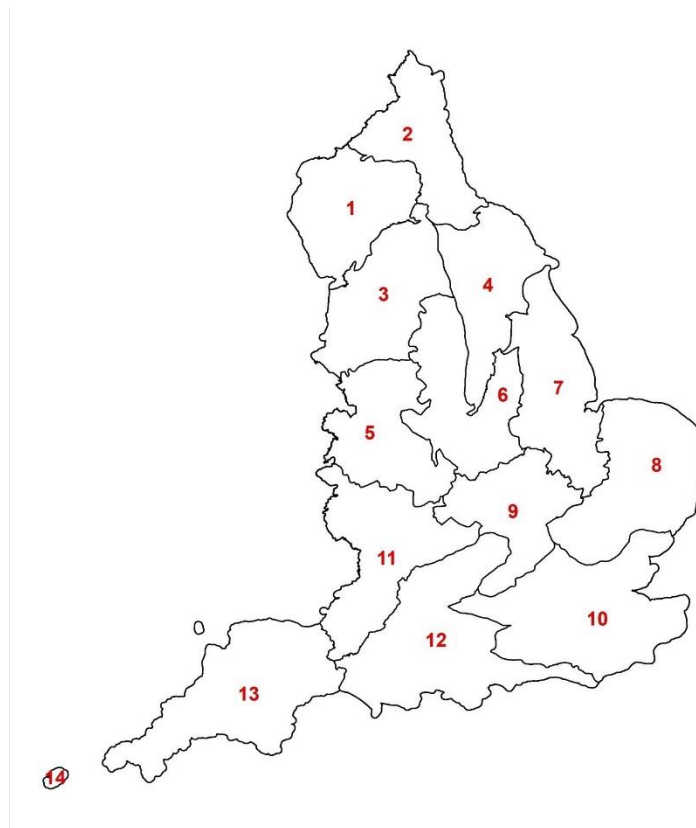


Figure 1: Living England Biographic Zones (BGZs) based on National Character Areas.

Requirement

Change Detection Field Surveys – BGZ06

This specification covers habitat surveys to be undertaken in 2023 across all habitat classes in biogeographic zone (BGZ) 06 covering the Peak District and Nottinghamshire region to assess habitat change. This contract aims to collect 560 data points across BGZ06 aligned with the Living England segmentation in regions of change in the last 2-3 years. The target habitats cover all habitats classified within Living England.

- Total number of data points collected in year 2023 – 560

All data collected as part of these habitat surveys will belong to Natural England and may be used for current and future projects where habitat data are required.

Survey points should be collected in relation to the detailed habitats listed in Table 1.

Detailed Habitat	UKBAP Level	Broad Habitat
Acid, Calcareous, Neutral Grassland	Semi-natural Grasslands	Grassland

Arable and Horticultural	Broad	Cropland
Bare Ground	EO Resolution	Bare Ground
Bare Sand	EO Resolution	Bare Ground
Bog	Broad	Wetland
Bracken	EO Resolution	Grassland
Broadleaved, Mixed and Yew Woodland	Broad	Woodland
Built-up Areas and Gardens	Broad	Urban
Coastal Saltmarsh	Priority	Coastal
Coastal Sand Dunes	Priority	Coastal
Coniferous Woodland	Broad	Woodland
Dwarf Shrub Heath	Broad	Heath
Fen, Marsh and Swamp	Broad	Wetland
Improved Grassland	Broad	Grassland
Scrub	EO Resolution	Woodland
Water	EO Resolution	Freshwater

The supplier is expected to produce a proposal of the sites they will survey. This will be subject to approval from the Change Detection Project Leader.

The contractor should work alongside the Natural England Living England and Change Detection teams to confirm areas to target the surveys. Areas of likely change to target will be informed via identification from existing databases detailing areas of habitat creation, restoration and potential causes of change over a two-year period to align with using two iterations of Living England. Various datasets will be provided to aid identification of regions of change to target within BGZ06. The following habitat classes will be used to record the current habitat class at the time of the survey:

- Acid, Calcareous and Neutral Grasslands
- Arable and Horticultural
- Bare Ground
- Bare Sand
- Bog
- Bracken
- Broadleaved, Mixed and Yew Woodland
- Built-up Areas and Gardens
- Coastal Saltmarsh
- Coastal Sand Dunes
- Coniferous Woodland
- Dwarf Shrub Heath
- Fen, Marsh Swamp
- Improved Grassland
- Scrub

The contractor will be responsible for ensuring all permissions for land access are in place using the Living England provided standard letter prior to undertaking the surveys. The contractor will need to get permission from the landowner/occupier to carry out standalone LE surveys, even if it is on publicly accessible land. The

contractor does **NOT** need to get permissions to carry out standalone LE surveys on NE-owned NNR.

- Land Registry and Rural Payments Agency data for the survey sample has been acquired by Natural England and will be made available to the contractor at the start of the contract. The data will be in Excel (.csv) format.
- A data license will be required between the contractor and Natural England before this data can be released. Contractors will be expected to abide by the contract terms and conditions in relation to all data handling.
- Natural England cannot guarantee the accuracy of owner details from either Land Registry or Rural Payments Agency data. The data supplied may not include email addresses, phone numbers, or other contact details which the contractor will be expected to obtain during the process of negotiating access permissions.

The contractor is expected to Provide Natural England with a site-specific risk assessment, including requirements around coronavirus, before the survey - **YOU MUST SEND THIS TO THE LIVING ENGLAND ENQUIRIES MAILBOX PRIOR TO THE SURVEYS** (livingenglandenquiries@naturalengland.org.uk). The contract will provide assurance that:

- They will work within government guidance on working outdoors: <https://www.gov.uk/guidance/working-safely-during-coronavirus-covid-19/construction-and-other-outdoor-work>
- Coronavirus specific risk assessments have been carried out by the contractor.
- That landowners/occupiers of sites concerned are aware of the survey and agree to surveyors being on each site involved – surveys will not proceed without landowner/occupier agreement.
- Interaction with NE staff is not required unless assessed as essential to the survey work, and this is specifically covered by a risk assessment and wellbeing conversation for the involvement of NE staff (for National Nature Reserves (NNRs), this is set out in the NNR decision framework). Likely mobile reception should be considered when conducting risk assessments. Mobile service cannot be guaranteed; therefore, the contractor should consider alternative arrangements.

The contractor is expected to project manage and undertake field data collection on the agreed targeted sites using the Change Detection app. This should follow the methodology set out in the Change Detection Specification for Validation Data Collection document (to be provided).

Field surveyors should plan the site visits and habitat data collection carefully. Areas of likely change and thus areas to target include (but are not limited to) those affected by recent (2019 – 2023) burning – either from wildfires or managed burning, new plantations resulting in maturity levels indicative of a habitat change, and areas of felling or coppicing.

Field surveyors should add data points within the segments corresponding to their location and complete the information required on the app, including details of habitat percentage cover and habitat indicator species. Where possible, the surveyor

should add as much detail as the app permits, including recording to the finest resolution of habitat class possible and have suitable ecological knowledge to do so.

The change detection data should include a range of habitat changes and causes for any changes e.g., natural/ managed where possible to identify. For each survey point, the type of management occurring within the segment should be recorded and include as much detail as possible.

All data collected will automatically be uploaded and tracked on the Living England/Change Detection dashboard, detailing where and when data points have been collected enabling continual assessment of the range of habitat change data points collected.

The habitat surveys may require annual repeat surveys to collect additional training data points to keep the model up to date and make improvements to identify future regions of change or regions of no change. The field maps app may be updated in the future with prior warning and training to be given if required.

The habitat surveys must be completed by the end of the contract completion date. Contractors must bid for the full contract.

The contractor is expected to project manage the delivery of the access permission, pre-survey risk assessments and field surveys, ensuring project milestones and timescales are achieved.

The contractor should ensure regular communication with the Natural England Change Detection team to update on progress and any issues which may arise. The Living England and Change Detection teams will be able to track data points collected through the Living England/Change Detection dashboard and will update on any changes to habitat types and/or areas with which to target where appropriate.

The data sets required to deliver the work will be provided by Natural England. A data licence will be required between the contractor and Natural England before this data can be released. Contractors will be expected to abide by the contract terms and conditions in relation to all data handling.

Resource required	<ul style="list-style-type: none">• Land Registry and Rural Payments Agency data• Living England Phase IV map from 2021 (Living England Habitat Map (Phase 4) Natural England Open Data Geoportal (arcgis.com)).• Change Detection Specification for Validation Data Collection document.• Change Detection Esri Field Maps application.• Living England/ Change Detection Dashboard for monitoring collected points.• Change Detection pilot data for BGZ06 between 2019 and 2021 to aid identification of habitat change classes and for validation.• Spreadsheet of priority habitat change to target and datasets to source target areas
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Skills required	<ul style="list-style-type: none"> • Good species ID skills to undertake the proposed project equivalent to approximately FISC/BSBI level 4 or similar levels of experience
Outputs	<ul style="list-style-type: none"> • The contractor will provide a short report about the habitat surveys (side of A4) noting any issues that were encountered during the survey e.g., alignment with segments, identifying areas of change and causes, use of the app for data collection and any advice to help smooth the process next time. Any reasons why data points could not be collected should also be included in the report. • Ground truth survey data points uploaded to the AGOL dashboard with all required information
Why is this of benefit to Living England? Justification of why to do it	<p>This analysis will help to validate the change detection mapped outputs to identify true areas of habitat change. A validation assessment will be developed with the inclusion of ground truth data. This will directly lead to improvements in the current methodology and the development of guidance in how to use the change detection outputs and what it should and should not be used for.</p>
Measurable outputs	<ul style="list-style-type: none"> • Access permission evidence for field surveys • Site specific risk assessments • Survey issues log • Ground truth survey points

The Intellectual Property Rights resulting from the work shall belong to Natural England.

The cover of all reports or drawings will include a statement © Natural England and the date of creation.

When using existing data the supplier should own, or be licensed to use, all Intellectual Property Rights that are necessary to provide the Services. You should seek advice from Natural England on responsibilities for obtaining a data licence for third party data. Note that Natural England requires to know the lineage of your output (i.e., all the datasets that went into the work) and be able to identify what the licence terms for each of the inputs is in order to be able to license the output for use.

The Supplier shall indemnify and keep indemnified Natural England against all actions, claims, demands, losses, damages, costs and expenses and other liabilities Natural England may suffer or incur arising from any infringement or alleged infringement of any third-party Intellectual Property Rights except to the extent that they have been caused by or contributed to by Natural England's acts or omissions

Scope of the specification

Contract Period

The contract period will be 6 months from the commencement of the contract.

This is a one-off requirement; however, there may be scope in future to extend the scope of the field surveys to additional BGZ's.

Outputs and Contract Management

Natural England will nominate a Project Officer who will manage the project and serve as the principle point of contact from Natural England. They will be responsible for the day-to-day management of this contract and will coordinate regular meetings to review the work and ensure it meets the projects aims and objectives. As outlined below, meetings will be incorporated into the programme of works to discuss progress and facilitate feedback provision. Meetings will be organised by the successful Tenderer.

The contractor will be expected to appoint a Project Manager who will act as the principle point of contact and will be responsible for the day-to-day management of the project. The contractor will be required to regularly update the Natural England Project Officer on project progress via meetings (held on MS Teams) arranged by the contractor, and when there are any significant issues.

Specific outputs will be required from the contractor during the course of this project. All reports must be produced in accordance with the Authority's templates for publications. The deliverables are to be provided as geospatial outputs, MS Word (in draft) and PDF documents (once finalised).

Timeline and Deadline

W/C	Inception meeting between project officer and suppliers	Online – MS Teams
Ongoing	Weekly catch-up meetings to discuss any issues	Online – MS Teams
W/C	Survey access permissions evidence	Digital format (MS Word) via email
W/C	Field survey points	Automatically updated to AGOL dashboard
W/C	Final reports and outputs to project officer	Report in a digital format (Pdf) via email. Outputs via email provided as spatial data files (csv, shp, gdb), and programming scripts.

W/C	Final meetings with project officer and suppliers	Online – MS Teams
	Contract completion	

It is anticipated that this contract will be awarded for a period of 6 months, to end no later than 01/03/2024. Prices will remain fixed for the duration of the contract award period.

Quotation Submission

We will award this contract in line with the most economically advantageous tender (MEAT) as set out in the following award criteria:

Price – 40%

Quality – 60%

Evaluation Criteria

Prices

Prices must be submitted in £ sterling, inclusive of VAT. Please indicate if VAT will apply to your services and at what rate.

Cost Allocation				
Task	Staff / Grade	Day rate	No. of days	Total
Access permissions				
Planned field surveys				
Field survey points				
Technical report				
Sub-contracts				
Overheads				
Other				
Total (excluding VAT)				
VAT				
Total (including VAT)				

Quality criteria

Criteria	Weighting	Details
Experience and Expertise	40%	Please provide details of your teams' member's expertise, previous experience and, if applicable, examples of similar projects worked on, relevant to this requirement. Please include abridged CVs of proposed members of team.
Quality Assurance	20%	Provide details of how you intend to quality assure work undertaken as part of this contract and outputs, so that deliverables are provided efficiently, to a high standard, and on time
Project Management	20%	<p>Please detail how you intend to manage this contract, including any consortium or sub-contracting arrangements, to ensure that project tasks and timescales are achieved. Your response should:</p> <ul style="list-style-type: none"> • Include Gantt chart, including the deliverables, critical pathways, and project dependencies, demonstrating how you will deliver the scope of services stated within the Specification of Requirements.
Health and Safety	10%	<p>Please identify and describe how you will manage any Health and Safety issues associated with this project. Please provide examples of the following documents as evidence of your risk management, health and safety and environmental policies and procedures:</p> <ul style="list-style-type: none"> • A field survey risk assessment • Lone working practices • Health and Safety policies / Certificates
Environmental Sustainability	10%	As a delivery partner, the successful contractor is expected to pursue sustainability in their operations, thereby ensuring Natural England is not contracting with a supplier whose operational outputs run contrary to Natural England's objectives. The successful contractor will need to approach the project with a focus on the entire life cycle of the project. Contractors must take

		<p>adequate biosecurity precautions to ensure that the risk of spreading disease, pests and INNS is minimised.</p> <ul style="list-style-type: none"> • Please provide details of your policies/procedures with regard to biosecurity and delivery of this project. • Describe your organisations approach to sustainability and how this will be managed and adopted throughout the project. The successful contractor is likely to be able to provide a copy of their environmental policy and any environmental accreditation schemes such as ISO 14001 or EMAS which they have been awarded or are working towards.
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Scoring criteria

Score	Justification
For a score of hundred (100):	Excellent - Response is completely relevant and excellent overall. The response is comprehensive, unambiguous and demonstrates a thorough understanding of the requirement and provides details of how the requirement will be met in full.
For a score of seventy (70):	Good - Response is relevant and good. The response demonstrates a good understanding and provides details on how the requirements will be fulfilled.
For a score of fifty (50):	Acceptable - Response is relevant and acceptable. The response provides sufficient evidence to fulfil basic requirements.
For a score of twenty (20):	Poor - Response is partially relevant and/or poor. The response addresses some elements of the requirements but contains insufficient / limited detail or explanation to demonstrate how the requirement will be fulfilled.
For a score of zero (0):	Unacceptable - Nil or inadequate response. Fails to demonstrate an ability to meet the requirement.

Disclosure

All Central Government Departments, their Executive Agencies and Non Departmental Public Bodies are subject to control and reporting within Government. In particular, they report to the Cabinet Office and HM Treasury for all expenditure. Further the Cabinet Office has a cross-Government role delivering overall Government policy on public procurement, including ensuring value for money and related aspects of good procurement practice.

For these purposes, the Authority may disclose within Government any details contained in your quotation. The information will not be disclosed outside Government during the procurement.

In addition, the Authority is subject to the Freedom of Information Act 2000 and the Environmental Information Regulations 2004, which provide a public right of access to information held by public bodies. In accordance with these two statutes, the Authority may be required to disclose information contained in your quotation to any person who submits a request for information pursuant to those statutes.

By submitting a quotation you consent to these terms as part of the procurement.

Disclaimers

Whilst the information in this RFQ and any supporting information referred to herein or provided to you by the Authority have been prepared in good faith the Authority does not warrant that this information is comprehensive or that it has been independently verified.

The Authority does not:

- make any representation or warranty (express or implied) as to the accuracy, reasonableness or completeness of the RFQ;
- accept any liability for the information contained in the RFQ or for the fairness, accuracy or completeness of that information; or
- accept any liability for any loss or damage (other than in respect of fraudulent misrepresentation or any other liability which cannot lawfully be excluded) arising as a result of reliance on such information or any subsequent communication.

Any supplier considering entering into contractual relationships with the Authority following receipt of the RFQ should make its own investigations and independent assessment of the Authority and its requirements for the goods and/or services and should seek its own professional financial and legal advice.

Protection of Personal Data

In order to comply with the General Data Protection Regulations 2018 the contractor must agree to the following:

- You must only process any personal data in strict accordance with instructions from the Authority
- You must ensure that all the personal data that we disclose to you or you collect on our behalf under this agreement are kept confidential.
- You must take reasonable steps to ensure the reliability of employees who have access to personal data.
- Only employees who may be required to assist in meeting the obligations under this agreement may have access to the personal data.
- Any disclosure of personal data must be made in confidence and extend only so far as that which is specifically necessary for the purposes of this agreement.
- You must ensure that there are appropriate security measures in place to safeguard against any unauthorised access or unlawful processing or accidental loss, destruction or damage or disclosure of the personal data.
- On termination of this agreement, for whatever reason, the personal data must be returned to us promptly and safely, together with all copies in your possession or control.

General Data Protection Regulations 2018

For the purposes of the Regulations the Authority is the data processor.

The personal information that we have asked you provide on individuals (data subjects) that will be working for you on this contract will be used in compiling the tender list and in assessing your offer. If you are unsuccessful the information will be **held and destroyed within two years** of the award of contracts. If you are awarded a contract, it will be retained for the duration of the contract and destroyed within **seven years** of the contract's expiry.

We may monitor the performance of the individuals during the execution of the contract, and the results of our monitoring, together with the information that you have provided, will be used in determining what work is allocated under the contract, and in any renewal of the contract or in the award of future contracts of a similar nature. The information will not be disclosed to anyone outside the Authority without the consent of the data subject, unless the Authority is required by law to make such disclosures.