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Request for Quotation

Section 1: Request for Quotation

Evidence review on the sensitivity of saltmarsh to nutrients: Ref NECA22B

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

Please confirm, by email, receipt of these documents and whether you intend to submit a quote.

Please submit your quotation to the following email addresses by 11th November 2022 at 12:00 noon GMT.

Email: Rebecca.deleij@naturalengland.org.uk

Date: 11th November 2022

Time: 12:00 noon GMT

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

Rebecca de Leij 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 circulated to all tenderers.

| Action | Date |
|--------------------------------------|--|
| Date of issue of RFQ | 18 th October 2022 |
| Deadline for clarification questions | 4 th November 2022 at 12:00 noon GMT |
| Deadline for receipt of Quotation | 11 th November 2022 at 12:00 noon GMT |
| Evaluation of bids | Week commencing 14 th November 2022 |
| Notify bidders of the outcome | Week commencing 14 th November 2022 |
| Intended date of Contract Award | Week commencing 14 th November 2022 |
| Intended Contract Start Date | 21 st November 2022 |
| Intended Delivery Date | 10 th March 2023 |

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):

| | |
|-------|---|
| "RFQ" | Means this Request for Quotation and all related documents published by Natural England and made available to suppliers |
|-------|---|

| | |
|------------|---|
| “Contract” | Means the contract to be entered into by Natural England and the successful supplier. |
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Conditions applying to the RFQ

You should examine your quotation 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 Natural England 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 RFQ may result in the supplier’s exclusion from this procurement.

Acceptance of Quotations

By issuing this RFQ Natural England 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

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

Mandatory Requirements

The RFQ includes mandatory requirements and, if you do not comply with them, your quotation will not be evaluated.

Clarifications

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

Amendments

Natural England may amend the RFQ at any time prior to the deadline for receipt. If it amends the RFQ we 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 will be included in any contract awarded as a result of this RFQ process. Natural England will not accept any material changes to these terms and conditions proposed by a supplier.



Example standard
Terms and condition

Section 2: Specification

Background to Natural England

Natural England is the UK Government Department responsible for the environment, food and farming and rural affairs. We provide practical advice, grounded in science, on how best to safeguard England's natural wealth for the benefit of everyone. Natural England'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. 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. Further information about Natural England can be found at: [Natural England](#)

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

Our seas are extremely rich and diverse, with the widest range of habitats in Europe. The marine environment contributes substantially to our economic and social well-being, providing a range of ecosystem services, including playing an important role in climate regulation. Unsustainable human activity has damaged the marine ecosystem, threatening wildlife as well as the goods and services it provides.

Many of our estuarine and coastal marine protected areas (MPAs) are in unfavourable condition due to high levels of agricultural and wastewater discharges containing high nutrient loads. Currently, the nutrient status of MPAs is assessed by monitoring the response of biological indicators, such as opportunistic macroalgal growth on mudflats and phytoplankton blooms, to indicate potential problem areas. For example, the Humber estuary is a particular case where opportunistic macroalgae does not establish well in the intertidal and so does not serve as a reliable indicator of eutrophication. The Environmental Agency (EA) monitoring data show that concentrations of dissolved inorganic nitrogen have been classified as moderate or worse in the Humber since 2011, however due to the lack of biological response, the impacts of elevated nutrients on the protected site features is being overlooked. The impacts of elevated nutrients on marine ecosystems are variable depending on site specific conditions and, as such, we may see elevated nutrient impacts on more nutrient sensitive features before a eutrophic response is recognised in the wider environment.

Natural England's role is to provide evidence-based advice to government and regulators to inform decision making in the marine environment and deliver environmental objectives. Natural England uses a feature-based approach to assessing condition of MPAs and defining conservation objectives that contribute to achieving 'Favourable Conservation Status' (FCS). FCS describes the situation in which a habitat or species is thriving throughout its natural range and is expected to continue to thrive in the future. The concept of FCS has a strong foundation in international wildlife legislation, notably the 1979 Bonn Convention on Migratory species. JNCC developed a schematic which outlines the legislative context in which FCS sits¹, and it is a statutory duty that Natural England advice enables protected features to achieve FCS.

Natural England's current approach for assessing water quality is based on the EA's monitoring program and the data collected for waterbody scale assessments. This approach deviates from the feature-based assessments used for other attributes and as such, there is a risk that nutrient enrichment is not being assessed at an appropriate scale or sensitivity for protected features. There is, therefore, a need to review the evidence and consider revising NEs conservation advice on water quality attributes so that these align with condition assessments and nutrient enrichment evidenced at the feature level.

There is evidence to suggest that saltmarsh habitats are sensitive to nutrient enrichment²³. These habitats provide many ecosystem services and are either designated feature, sub-feature or supporting habitat in most estuarine and coastal MPAs. One of the main pressures causing the decline of these key habitats is nutrient enrichment, usually through smothering by opportunistic macroalgae, or via changes in the root structure of the saltmarsh itself. Eutrophication has also been known to impact saltmarsh indirectly through increase in dominance/productivity of upper species such as Sea Couch, creating species-poor monocultures of grass species.

In order to manage MPAs, and give appropriate advice, it is important for Natural England to understand the nutrient and water quality conditions that will lead to the favourable condition of these features. This will enable conservation targets to be ecologically relevant at the appropriate scale. To identify these targets, relationships between nutrient concentrations and ecosystem responses need to be investigated. These relationships are complex and impacted by multiple interacting environmental factors, indirect effects, as well as mobilisation of legacy nutrient sources and the baseline condition of the receiving habitat.

The aim of this evidence review is to improve our understanding of the impacts of elevated nutrients on saltmarsh species. Specifically, asking the questions:

¹ <https://data.jncc.gov.uk/data/b9c7f55f-ed9d-4d3c-b484-c21758cec4fe/FCS-Diagram.pdf>

² <https://www.sciencedirect.com/science/article/abs/pii/S0006320717300952>

³ <http://publications.naturalengland.org.uk/file/6013760784564224>

1. What is the response of saltmarsh to changing nutrient concentrations in estuarine ecosystems?

and

2. How are these relationships affected by other factors?

To answer these questions, the review should collate:

- the evidence on the Nitrogen and Phosphorus compounds that impact saltmarsh condition, the mechanisms behind this, and the concentrations or water quality parameters at which damage to the feature condition occurs; and,
- the environmental and ecological factors that drive site specific differences in saltmarsh response to elevated nutrients.

Natural England will use the outputs of the review to inform our understanding of how we can apply nutrient concentration targets to saltmarsh features and how these targets will change depending on the environmental and ecological context.

Requirement

This project has three objectives:

1. **Collate the evidence on the impact of Nitrogen and Phosphorus compounds on the condition of the typical saltmarsh species⁴ present in the UK marine environment.**

For this objective, the output should improve our understanding on the different forms of N and P in the marine environment and the potential for these different forms to impact saltmarsh health. The review should present the evidence on the impact of elevated forms of N and P concentrations on typical saltmarsh species associated with the main vegetation zones (e.g. in the pioneer zone - *Salicornia* species and *Spartina anglica*; in the low-mid marsh – *Atriplex portulacoides*, *Limonium* species. *Puccinellia maritima*, and *Tripolium pannonicum*; and in the mid-upper-marsh *Elymus athericus*, *Festuca rubra*, *Juncus gerardii*, *Juncus maritimus* to name but a few). The evidence review should have a particular emphasis on impacts that cause changes to the health and resilience of these species or changes in the rate or direction of succession. This output should be presented as a section in the final report, based on an evidence review of peer reviewed literature via appropriate platforms e.g. Science Direct.

Where evidence is available, report the concentration of N and P and their compounds associated with different health of saltmarsh habitats. If substantial information exists, the output of this should be presented as a table, including any

⁴ Typical saltmarsh species that should be considered and are mentioned in [Common Standards Monitoring Guidance for Saltmarsh Habitats \(jncc.gov.uk\)](https://jncc.gov.uk/CommonStandardsMonitoringGuidanceforSaltmarshHabitats)

relevant environmental and ecological information considered influential as per objective 2 and 3 (see below).

2. Collate the evidence for environmental factors that can affect the impact of elevated nutrients on saltmarsh species present in UK waters.

For this objective, the outputs should improve our understanding of how and why there is significant variability in the response of saltmarsh to elevated N and P in different locations around the UK coastline in relation to environmental factors. The evidence should be based on peer reviewed literature via appropriate platforms. This objective should aim give environmental context to the impact of N and P on both species and vegetation zone that could influence the response of saltmarsh to elevated N and P concentrations. In particular, this objective should investigate the influence of N:P ratio (Redfield ratio), pH, salinity, turbidity and temperature as the key factors. If other environmental factors are found to be significant through the process of this review or by expert option, then these should also be included. The output should be presented as a section in the final report in addition to a summary table highlighting the key environmental factors, supporting evidence and confidence scoring.

3. Collate the evidence for ecological factors that can affect the impact of elevated nutrients on saltmarsh species present in UK waters.

For this objective, the outputs should improve our understanding of the ecological factors that influence how and why there is significant variability in the response of different saltmarsh habitats to elevated N and P around the UK coastline. The evidence should be based on peer reviewed literature via appropriate platforms. This objective should aim give ecological context to the impact of N and P on both species and vegetation type that could influence the response of saltmarsh to elevated N and P concentrations. In particular, this objective should investigate the influence of saltmarsh life stage, existing saltmarsh health, and presence of competing autotrophs that utilise N and P as the key factors. If other ecological factors are found to be significant through the process of this review or by expert option, then these should also be included. The output should be presented as a section in the final report in addition to a summary table highlighting the key ecological factors, supporting evidence and confidence scoring.

It is important to ensure that each objective is clearly delivered in the report. Where evidence is not present for UK case studies, further research on UK species in temperate European countries could be considered, taking into account similarities and differences in environmental and ecological factors. Laboratory based studies may also indicate potential impacts. This indirect evidence on the impacts of N and P outside the UK should be highlighted as being of lower confidence since it would not represent those conditions in UK sites yet could be indicative of potential impacts.

It will not be necessary to carry out a systematic review for these objectives. However, some of the principles of systematic review will be helpful in formulating your method whatever the approach, the following methodology must be followed:

1. Search criteria, terms, and strategy are defined and agreed with the NE project manager before commencing the searches.
2. Assessment of the quality of the data for each study is carried out and documented (appraisals)
3. The evidence is ranked by the relevance of each study according to the following hierarchy:
 - a) Field based studies in UK
 - b) Field based studies on UK species done outside UK
 - c) Lab based studies

Scope

This is a desk-based study. Field based data collection is not expected.

The successful contractor will have:

- Background in marine ecology and experience in interpreting ecological studies.
- An understanding of the behaviour of nutrients in the marine environment.
- Experience in collating, reviewing and synthesising evidence across a range of sources and presenting it to inform management and /or policy decisions.

Outputs and contract management

The contract is expected to begin as soon as possible and needs to be complete by 10th March 2023. Inception meetings with the project manager Rebecca de Leij is expected to update on any key findings.

It will be important that the contractor keeps in good contact with the project manager via MS team calls, providing progress updates every 2 weeks for the duration of the contract, from commencement until completion of the contract.

The draft report should include

1. Objective 1: Collate the evidence on the impact of Nitrogen and Phosphorus compounds on the condition of the typical saltmarsh species present in the UK marine environment
- Objective 2: Collate the evidence for environmental factors that can affect the impact of elevated nutrients on typical saltmarsh species present in UK waters.
- Objective 3: Collate the evidence for ecological factors that can affect the impact of elevated nutrients on typical saltmarsh species present in UK waters.

A final project report should then be produced including the above information addressing any comments raised by the project team after review.

The key suggested milestones and outputs for the contract are set out in the table below:

| Date | Milestone | Description |
|------------------------------------|---------------------------------------|--|
| w/c 21 st November 2022 | Contract starts and inception meeting | Inception MS teams meeting |
| 17 th February 2023 | Draft report | Draft outputs provided for Objectives 1, 2 and 3 |
| 10 th March 2023 | Final report | Final outputs provided (following two weeks for review and feedback on receipt of draft outputs by project manager and NE habitat specialists) |
| 31 st March 2023 | Contract ends | Contract ends and due funds paid |

Intellectual Property

Contractors shall make no financial investment in the project and, therefore, shall not benefit from any intellectual property rights arising from the project. The successful tenderers must comply with the terms and conditions of Natural England. Outputs will be owned and maybe published by Natural England.

Sustainability

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. In response to this RFQ, please explain to Natural England what your organisation is doing to incorporate sustainability within its operations. This may include any details you are able to provide in relation to steps you may be taking to reduce your carbon footprint.

Section 3: Requirements for Tender Bid

It is anticipated that this contract will be awarded for a period of 21 weeks to end no later than 31/03/2023. Prices will remain fixed for the duration of the contract award period, with paid made upon completion of work. We may at our sole discretion extend this contract to include related or further work. Any extension shall be agreed in advance of any work commencing and may be subject to further competition. Bidders must complete and return the following documents:

Tender Response Questions – Bidders must answer the questions in this document to describe their proposal to undertake the performance of the Contract. Bidders submissions must follow the same layout as this document.

Pricing Schedule – Bidders must complete and return this document to describe their prices. Bidders submissions must follow the same layout as this document.

Scoring

Scores will be allocated to bids according to the weighting described below;

- Cost 50%
- Quality 50% (comprising):
 - Methodology 50%
 - Previous experience and track record 40%
 - Risk analysis 10%

| 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. |

Tender Response Questions

1. Methodology (50%):
Please describe how you will approach the work for each objective
2. Previous experience and track record (40%):
Please outline any previous experience you have of working in this particular or related area of research.
3. Risks (10%):

- 3.1 Describe all of risks you have identified that would impact your ability to complete the research to your fullest capability, including how you intend to manage these risks to mitigate impact on the project.
- 3.2 Describe how you will manage staff absences or other events that may impact the research
- 3.3 Describe how you will manage the timescales for this project to ensure it is delivered on time.

Pricing Schedule

Tenderers must complete the following pricing schedule. All prices must be quoted in pounds sterling, exclusive of VAT. All prices are to remain fixed for the duration of the contract.

Pricing schedule to be completed and returned in the following format:

| Deliverable | Number of days | Day rate of staff PRICE (ex. VAT) £ | Total Price (ex. VAT) £ |
|-------------|----------------|--|----------------------------|
| Objective 1 | | | |
| Objective 2 | | | |
| Objective 3 | | | |
| Total cost | | | |

Contract Management

This contract shall be managed on behalf of Natural England by Rebecca de Leij
Rebecca.deleij@naturalengland.org.uk

The contract will be managed by:

- Start-up meeting
- Progress reporting every 2 weeks via MS teams to the project team
- Inception project meeting

We will raise purchase orders to cover the cost of the services and will issue to the awarded supplier following contract award. To be invoiced after all the work has been completed.

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, Natural England may disclose within Government any details contained in your quotation. The information will not be disclosed outside Government during the procurement.

In addition, Natural England 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, Natural England 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 Natural England have been prepared in good faith Natural England does not warrant that this information is comprehensive or that it has been independently verified.

Natural England 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 Natural England following receipt of the RFQ should make its own investigations and independent assessment of Natural England 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 Natural England

- 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 Natural England 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 Natural England without the consent of the data subject, unless Natural England is required by law to make such disclosures.