Request for Quotation

Advancing the metabarcoding assay validation framework

28 May 2025

Request for Quotation

Advancing the metabarcoding validation framework

You are invited to submit a quotation for the requirement described in the specification, Section 2.

Please confirm by email, receipt of these documents and whether you intend to submit a quote or not.

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

Email: monitoring.innovation@naturalengland.org.uk

Date: 20/06/2025

Time: 12:00 BST

Ensure you include the name of the quotation and ‘Final Submission’ in the subject field to make it clear that it is your response.

Contact Details and Timetable

Lynsey Harper will be your contact for any questions linked to the content of the quote or the process. Please submit any clarification questions via email and note that, unless commercially sensitive, both the question and the response will be circulated to all tenderers.

| Action | Data |
| --- | --- |
| Date of issue of RFQ | 28-May-2025 |
| Deadline for clarifications questions | 11-Jun-2025 at 17:00 BST  |
| Deadline for receipt of Quotation | 20-Jun-2025 at 12:00 BST  |
| Intended date of Contract Award | 30-Jun-2025 |
| Intended Contract Start Date | 07-Jul-2025 |
| Intended Delivery Date / Contract Duration  | 27-Feb-2026 |

Section 1: General Information

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 who is the Contracting Authority.  |
| “Contract” | means the contract to be entered into by the Authority and the successful supplier. |
| “Response” | means the information submitted by a supplier in response to the RFQ. |
| “RFQ” | means this Request for Quotation and all related documents published by the Authority and made available to suppliers. |

Conditions applying to the RFQ

You should examine your Response and related documents ensuring it is complete and in accordance with the stated instructions prior to submission.

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

By submitting a Response, you, the supplier, are deemed to accept the terms and conditions provided in the RFQ. Confirmation of this is required in Annex 2.

Failure to comply with the instructions set out in the RFQ may result in the supplier’s exclusion from this quotation process.

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.

Self-Declaration and Mandatory Requirements

The RFQ includes a self-declaration response (Annex 1) which covers basic information about the supplier, as well as any grounds for exclusion. If you do not comply with them, your quotation will not be evaluated.

Any mandatory requirements will be set out in Section 2, Specification of Requirements and, if you do not comply with them, your quotation will not be evaluated.

Clarifications

Any request for clarification regarding the RFQ and supporting documentation must be submitted via email no later than the deadline for clarifications set out in the Timetable. The Authority shall be under no obligation to respond to queries raised after the clarification deadline.

The Authority will respond to all reasonable clarifications as soon as possible but cannot guarantee a minimum response time. The Authority will publish all clarifications and its responses to all suppliers via email unless deemed commercially sensitive.

If a supplier believes that a request for clarification is commercially sensitive, it should clearly state this when submitting the clarification request. However, if the Authority considers either that:

* the clarification and response are not commercially sensitive; and
* all suppliers may benefit from its disclosure,

then the Authority will notify the supplier (via email), and the supplier will have an opportunity to withdraw the request for clarification by sending a further message requesting the withdrawal of the clarification request. If not withdrawn by the supplier within 2 working days of the Authority’s notification, the Authority may publish the clarification request and its response to all suppliers and the Authority shall not be liable to the supplier for any consequences of such publication.

The Authority reserves the right to seek clarification of any aspect of a quotation and/or provide additional information during the evaluation phase to carry out a fair evaluation. Where the Authority seeks clarification on any aspect of the quotation, the supplier must respond within the timeframe requested by the Authority.

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 via email.

Suppliers may modify their quotation prior to the deadline for Responses. No Responses may be modified after the deadline for Responses.

Suppliers may withdraw their quotations at any time by submitting a notice via the email to the named contact.

Conditions of Contract

The Authority’s Standard Goods and Services Terms & Conditions (used for purchases under £50k) can be located on the [Natural England Website](https://www.gov.uk/government/organisations/natural-england/about/procurement) and will be applicable to any contract awarded as a result of this quotation process. The Authority will not accept any changes to these terms and conditions proposed by a supplier.

Suppliers should note that the quotation provided by the successful bidder will form part of the Contract.

Prices

Prices must be submitted in £ sterling, exclusive of VAT.

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.

Further to the Government’s transparency agenda, all UK Government organisations must advertise on Find a Tender Service (FTS) in accordance with the following publication thresholds:

* Central Contracting Authority’s: £12,000
* Sub Central Contracting Authority’s and NHS Trusts: £30,000

For the purpose of this RFQ the Authority is classified as a Central Contracting Authority with a publication threshold of £12,000 inclusive of VAT.

If this opportunity is advertised via FTS, we are obliged to publish details of the awarded contract.

A copy of the contract must also be published with confidential information redacted.

By submitting a Response, 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.

Information Security requirements

The Government Security Classification Policy (GSCP) sets out the administrative system used by HM Government (HMG) to protect information and data assets appropriately against prevalent threats through the use of ‘classification tiers’. HMG uses three classification tiers; OFFICIAL, SECRET and TOP SECRET. Each tier provides a set of recommended baseline behaviours and a set of protective controls, which are proportionate to the threat profile for that tier AND the potential impact of a compromise, accidental loss or incorrect disclosure of information held within that tier.

Tenderers and suppliers must ensure that appropriate protective security controls are in place to comply with the GSCP and manage the information shared and received as part of this tender exercise.

A full suite of guidance documents is available on GOV.UK, with specific guidance for tenderers and suppliers set out in [Guidance 1.6 - Contractors and Contracting Authorities.docx (publishing.service.gov.uk)](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1166155/Guidance_1.6_-_Contractors_and_Contracting_Authorities.pdf).

Use of Artificial Intelligence

The Authority expects suppliers to declare where they have used AI software in the creation of Tender responses or intend to use AI software in the performance of the contract. How any AI software was, or will be, used should be to be declared within the technical submission part of the tender. We may require you to answer specific question/s on this topic, particularly where the Authority expects that usage is highly likely or clearly relates to the contract requirements.

Suppliers must follow any guidelines or regulations related to AI use and declarations as indicated in the [PPN 2/24 Improving Transparency of AI use in Procurement](https://www.gov.uk/government/publications/ppn-0224-improving-transparency-of-ai-use-in-procurement/ppn-0224-improving-transparency-of-ai-use-in-procurement-html).

Any information, instructions, or data provided by the Authority to suppliers as part of this tender, the requirements, or contract should not be directly inserted into Generative AI software (such as Gemini, ChatGPT, or CoPilot) without prior permission, unless this information is clearly published in the public domain.

Use of any Authority confidential tender information for training AI software is prohibited. it is advised that Defra’s data or instructions, or anything marked as confidential should not be directly inserted into AIs. For example, putting Authority’s instruction email into Gemini, ChatGPT, or CoPilot is not recommended.

If you intend to use AI to provide goods or services to the Authority, then you are required to complete a declaration which is simply answering the question stated within the 'Information to be returned’. The answer to this question will not be used in scoring your quote.

Protection of Personal Data

In order to comply with the General Data Protection Regulations 2018 the supplier 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.

Equality, Diversity & Inclusion (EDI)

The Client is striving to create a diverse and inclusive working environment where every individual has equality of opportunity to progress and to apply their unique insights to making the UK a great place for living. The Service Provider is expected to respect this commitment in all dealings with Natural England staff and service users.

Suppliers are expected to:

* support Defra group to achieve its Public Sector Equality Duty as defined by the Equality Act 2010, and to support delivery of [Defra group’s Equality & Diversity Strategy](https://www.gov.uk/government/publications/defra-group-equality-diversity-and-inclusion-strategy-2020-to-2024/defra-group-equality-diversity-and-inclusion-strategy-2020-to-2024).
* meet the standards set out in the [Government’s Supplier Code of Conduct](https://www.gov.uk/government/publications/supplier-code-of-conduct)
* work with Defra group to ensure equality, diversity and inclusion impacts are addressed (positive and negative) in the goods, services and works we procure, barriers are removed and opportunities realised.

Sustainable Procurement

Addressing global sustainability impacts and realising additional community benefits within commercial activity is core to Defra group’s approach, working with its supply chain is key to achieving sustainable outcomes. In addition to supporting Defra group to meet its outcomes we look to understand and reduce negative sustainability impacts associated with our commercial activity and realise benefits.

The Client encourages its suppliers to share these values, work to address negative impacts and realise opportunities, measure performance and success.

Suppliers are expected to have an understanding of the Sustainable Development Goals, the interconnections between them and the relevance to the Goods, Services and works procured on the Client’s behalf.

Conflicts of Interest

The concept of a conflict of interest includes but is not limited to any situation where an Involved Person or Relevant Body has directly or indirectly, a financial, economic or other personal interest which might be perceived to compromise their impartiality and independence in the context of the procurement procedure and/or affect the integrity of the contract award.

We expect suppliers to mitigate appropriately against any real or perceived conflict of interest through their work with government. A supplier with a position of influence gained through a contract should not use that position to unfairly disadvantage any other supplier or reduce the potential for future competition.

Where the supplier is aware of any circumstances giving rise to a conflict of interest or has any indication that a conflict of interest exists or may arise you should inform the Authority of this as soon as possible (whether before or after they have submitted a quotation). Tenderers should remain alert to the possibility of conflicts of interest arising at all stages of the procurement and should update the Authority if any new circumstances or information arises, or there are any changes to information already provided to the Authority. Failure to do so, and/or to properly manage any conflicts of interest may result in a quotation being rejected.

Provided that it has been carried out in an open, fair and transparent manner, routine pre-market engagement carried out by the Authority should not represent a conflict of interest for the supplier.

Section 2: The Invitation

Specification of Requirements

Background to Natural England

Natural England is the government’s adviser for the natural environment in England. We protect England’s nature and landscapes for people to enjoy and for the services they provide. Within England, we are responsible for:

* promoting nature conservation and protecting biodiversity;
* conserving and enhancing the landscape;
* securing the provision and improvement of facilities for the study, understanding and enjoyment of the natural environment;
* promoting access to the countryside and open spaces; and
* contributing to social and economic well-being through the sustainable management of the natural environment.

Advancing the metabarcoding validation framework

Background to the specific work area relevant to this purchase

DNA-based methods have the potential to significantly change how we monitor and assess ecosystems. Natural England has been exploring the use of these methods for environmental monitoring for several years, delivering a series of reports which focus on the development of DNA-based methods with potential in a particular area. These methods are now being used more widely within Natural England, particularly the detection of ecological communities using environmental DNA (eDNA). This is often conducted by employing metabarcoding assays which target specific species assemblages (e.g. fish, mammals) or broader taxonomic groups (e.g. vertebrates, invertebrates, bacteria).

The DNA Team aims to operationalise DNA-based methods and produces guidance for using them in monitoring projects. In order to provide sound recommendations, it is important that we understand the limitations of, and uncertainties with, DNA-based methods. Natural England staff need to be able to understand how DNA-derived data can be used, and the confidence they can have in data derived using different DNA-based methods which have been validated to different stages.

Natural England previously commissioned the development of a framework to enable end users to assess confidence in metabarcoding assays and results (Pagaling and others, under review; a copy of the framework can be provided by Natural England upon request by emailing monitoring.innovation@naturalengland.org.uk). By using the checklist and levelled scale, end users can appropriately interpret results. It also provides validation and reporting standards for the development of new metabarcoding assays. The framework will enable end-users to determine the recommended scenarios for application of a given assay and improve assay performance with further validation.

As part of development, the framework was trialled against five commonly used assays in the eDNA literature, with specific climate and habitat combinations to account for inherent differences in biodiversity between climates and different workflows used across habitats. Due to time and resource, only temperate climates and one or two habitats for each assay were considered, and the number of metabarcoding studies evaluated to assign a level for each assay varied.

This project will advance the metabarcoding assay validation framework by expanding upon this trial to conduct a comprehensive literature review and meta-analysis, covering more assays being used for different purposes and in different contexts. Feedback on the framework will be sought from the wider eDNA community and a user guide created for applying the framework.

Requirement

The objectives of this project are to create a user guide for applying the metabarcoding assay validation framework, seek feedback from the eDNA community on the user guide and framework, and refine both the user guide and framework as needed. The contractor will then perform further testing of the metabarcoding assay validation framework to increase its robustness and utility. The contractor should work closely with the Natural England Project Officer and a steering group comprised of academic, government, non-governmental, and commercial organisations to ensure that the framework is appropriate for use by Natural England staff and other end users.

Please provide separate quotes for undertaking each requirement. Natural England reserves the right to let only one of these requirements.

1. Guidance creation
	1. The contractor should create an accessible (i.e. able to be used by anyone, regardless of differences or impairments) user guide for applying the metabarcoding assay validation framework, which should be able to be published as HTML and PDF format.
	2. The guide should include examples that demonstrate how the framework can be used flexibly to meet different use cases of end users (e.g. validation level assessed for MiFish-U (Miya and others, 2015) in tropical marine systems on water samples vs. MiFish-U in UK marine systems on sediment samples) and what to do when reporting is unclear.
	3. The user guide should be reviewed by the Natural England Project Officer and the project steering group.
2. Consultation
	1. The contractor should consult the UK DNA Working Group and other eDNA consortia (to be decided with the Natural England Project Officer) to assess the usability of the framework with the user guide, whether any modifications are required, and areas for further development. This could be via online survey and / or workshops (in person or online). The Natural England Project Officer should review a survey and / or attend any workshops.
	2. The user guide and framework should be revised to incorporate changes suggested and feedback received in consultation with the Natural England Project Officer and the project steering group.
3. Literature review
	1. Using a list of eDNA assays (i.e. not assays applied to gut contents, faeces, trap and trawl samples or natural samplers) and scenarios provided by Natural England as a basis, the contractor should identify 20 assays for a meta-analysis in consultation with the Natural England Project Officer and project steering group. These should include:
		1. The five assays from the initial trial (primer names, sequences and publications will be provided by Natural England).
		2. Other assays, including newly published and taxon-specific assays.
		3. Modifications of primers which should each be treated as a new assay, e.g. MiMammal-U (Ushio and others 2017), MiBird-U (Ushio and others, 2018), and Tele02 (Taberlet and others, 2018) are named modifications of MiFish-U. Studies that have made modifications to a primer but have not renamed the assay (e.g. modifications to MiFish-U by Stoeckle and others 2022) also apply here.
	2. Of these 20 assays:
		1. At least three should be selected to demonstrate their use in different contexts (i.e. multiple climates, multiple habitats, multiple sample types), for example, MiFish-U in tropical marine systems vs. tropical freshwater systems when used on water vs. sediment (one assay in four contexts).
		2. At least three should be selected to examine their application for different purposes, e.g. 12S-V5 (Riaz and others, 2011; Kelly and others, 2014) for freshwater vertebrate biodiversity assessment vs. UK lake fish monitoring vs. rare species detection (one assay for three purposes).
		3. A single climate, habitat, sample type, and purpose can be considered for remaining assays.
	3. The contractor should perform a literature review to identify metabarcoding studies for the list of defined assays (and any subsets as described above) for inclusion in a meta-analysis.
4. Meta-analysis
	1. The contractor should perform a meta-analysis of studies identified by the literature review (requirement 3) using the validation checklist and place metabarcoding assays on the validation scale. Informative criteria from the framework should be used to analyse patterns across studies, such as climates, habitats, sample types, genes/regions, lysis methods, and sequence platforms used. The percentage of criteria reported in each thematic block of the framework should be assessed for each assay, including which minimum criteria prevent assay progression.
	2. At least 10 assays should be evaluated (including subsets as described above) and at least 20 studies should be assessed for each assay (and any subsets) unless fewer studies are available after the literature has been exhausted. A record of all studies evaluated, and any discarded after initial inspection, should be kept as a literature database.
	3. Recommendations for future work and/or best practice should be provided.
	4. The contractor should archive and publish the literature database and meta-analysis online and open access as part of journal submission and through Natural England’s Access to Evidence portal.

The results should be compiled into a final detailed report (see outputs for details).

Sustainability

Natural England protects and improves the environment and is committed to reducing the sustainability impacts of its activities directly and through its supply chains.  We expect the Contractor to share this commitment and adopt a sound, proactive sustainable approach in keeping with the 25 yr environmental plan/our commitments compliant with all applicable legislation. This includes understanding and reducing direct and indirect sustainability impacts and realising opportunities, including but not restricted to; resilience to climate change, reducing greenhouse gas emissions, water use and quality, biosecurity, resource efficiency and waste, reducing the risk of pollution, biodiversity, modern slavery and equality, diversity & inclusion, negative community impacts.

As a delivery partner, the successful contractor is expected to pursue sustainability in their operations, thereby ensuring the Contracting Authority is not contracting with a supplier whose operational outputs run contrary to the Contracting Authority’s objectives. The successful contractor will need to approach the project with a focus on the entire life cycle of the project.

Outputs and Contract Management

A final written report detailing the activities and analysis undertaken should be provided to the Natural England Project Officer. The final report must follow the [Natural England report writing guidance](https://publications.naturalengland.org.uk/publication/5790636781600768) including use of template and adherence to the accessibility requirements.

The data and report produced will be made available by Natural England under an Open Government Licence.

The Final Report must include:

|  |  |
| --- | --- |
| Requirement | Information |
| Guidance creation | * An accessible document containing an introduction to eDNA metabarcoding and barriers to widespread adoption by end-users, and summary of metabarcoding validation framework development to date.
* Clear and detailed methodology for applying the metabarcoding validation framework, including steps, tips, and troubleshooting.
* The guide should include examples that demonstrate how the framework can be used flexibly to meet different use cases of end users (e.g. validation level assessed for MiFish-U in tropical marine systems on water samples vs. MiFish-U in UK marine systems on sediment samples).
* A glossary of terms for end users that have only recently started to use metabarcoding.
 |
| Consultation | * Clear and detailed methodology for engaging different eDNA consortia.
* A summary of consultation and outcomes of online survey or workshops (in-person or online)
* Any modifications to the validation framework required for a large-scale meta-analysis of the scientific literature should be reported and discussed.
* A list of areas for further development of the metabarcoding validation framework.
 |
| Literature review | * A list of 20 assays selected to search the literature, including subsets of these.
* Clear and detailed methodology of literature search and refinement including search engine(s), search terms, search dates, and the number of studies returned for each assay (and any subsets) that meet relevance criteria.
 |
| Meta-analysis | * Clear and detailed methodology for the meta-analysis.
* Results of the meta-analysis, including where metabarcoding assays (and any subsets as described above) rank on the validation scale.
* Discussion of findings and a list of recommendations for further work and/or best practice.
* Open-access archival and publication of the literature database and meta-analysis.
 |

The following documents are also required as outputs of the project:

* User guide.
* An Excel spreadsheet containing the literature database.
* An Excel spreadsheet containing the results of scoring for each validation criterion and the overall validation level should be provided.

The report will be made publicly available on our Access to Evidence portal. After submission and publication on Access to Evidence, the content of the report will contribute to a publication in a scientific journal. The lead author of this publication will be the contractor that originally developed the metabarcoding validation framework. The Natural England Project Officer will be last author.

Following the completion of this project, the report will be evaluated and reviewed by Natural England, and any next steps decided on.

Important timescales and deadlines for key deliverables are outlined below.

|  |  |  |
| --- | --- | --- |
| Deliverable  | Responsible Party  | Date of completion  |
| Inception meeting held  | Successful contractor and Natural England  | July 2025  |
| Fortnightly meetings with Natural England's project officer  | Successful contractor  |   |
| At least three meetings with the project steering group | Successful contractor and Natural England  |  |
| User guide created | Successful contractor | 1st August 2025 |
| Consultation complete | Successful contractor | 26th September 2025 |
| Literature review complete | Successful contractor | 26th September 2025 |
| Meta-analysis complete | Successful contractor | 16th January 2026 |
| Draft report (in digital format, details above) sent to Natural England  | Successful contractor   | 30th January 2026 |
| Draft report with any Natural England comments returned  | Natural England  | 13th February 2026 |
| Final report (in digital format) and data submitted to Natural England  | Successful contractor  | 27th February 2026 |

References

KELLY, R.P., PORT, J.A., YAMAHARA, K.M., & CROWDER, L.B. 2014. Using environmental DNA to census marine fishes in a large mesocosm. *PLoS ONE*, 9(1), p.e86175. <https://doi.org/10.1371/journal.pone.0086175>

MIYA, M., SATO, Y., FUKUNAGA, T., SADO, T., POULSEN, J. Y., SATO, K., MINAMOTO, T., YAMAMOTO, S., YAMANAKA, H., ARAKI, H., KONDOH, M., & IWASAKI, W. (2015). MiFish, a set of universal PCR primers for metabarcoding environmental DNA from fishes: detection of more than 230 subtropical marine species. *Royal Society Open Science*, *2*(7), 150088. <https://doi.org/10.1098/rsos.150088>

Pagaling, E., Benavent-Celma, C., Cooper, A., Buswell, V. G., Rangel, L.I., Parker, T.C., Caul, S., Robinson, L.J., Hedley, P.E., Dunn, N., Harper, L.R. (2025). A framework for assessing confidence in metabarcoding assays and results. Natural England Commissioned Report NECR643. Natural England. *Under review*.

RIAZ, T., SHEHZAD, W., VIARI, A., POMPANON, F., TABERLET, P., & COISSAC, E. 2011. ecoPrimers: inference of new DNA barcode markers from whole genome sequence analysis. *Nucleic Acids Research*, 39(21), e145-e145. <https://doi.org/10.1093/nar/gkr732>

RIAZ, T., SHEHZAD, W., VIARI, A., POMPANON, F., TABERLET, P., & COISSAC, E. 2011. ecoPrimers: inference of new DNA barcode markers from whole genome sequence analysis. *Nucleic Acids Research*, 39(21), e145-e145. <https://doi.org/10.1093/nar/gkr732>

STOECKLE, M. Y., ADOLF, J., AUSUBEL, J. H., CHARLOP-POWERS, Z., DUNTON, K. J., & HINKS, G. (2022). Current laboratory protocols for detecting fish species with environmental DNA optimize sensitivity and reproducibility, especially for more abundant populations. *ICES Journal of Marine Science*, *79*(2), 403-412. <https://doi.org/10.1093/icesjms/fsab273>

TABERLET, P., BONIN, A., ZINGER, L., & COISSAC, E. (2018). *Environmental DNA: For biodiversity research and monitoring*. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780198767220.001.0001>

USHIO, M., FUKUDA, H., INOUE, T., MAKOTO, K., KISHIDA, O., SATO, K., MURATA, K., NIKAIDO, M., SADO, T., SATO, Y., TAKESHITA, M., IWASAKI, W., YAMANAKA, H., KONDOH, M., & MIYA, M. (2017). Environmental DNA enables detection of terrestrial mammals from forest pond water. *Molecular Ecology Resources*, *17*(6), e63-e75. <https://doi.org/10.1111/1755-0998.12690>

USHIO, M., MURATA, K., SADO, T., NISHIUMI, I., TAKESHITA, M., IWASAKI, W., & MIYA, M. (2018). Demonstration of the potential of environmental DNA as a tool for the detection of avian species. *Scientific Reports*, *8*(1), 4493. <https://doi.org/10.1038/s41598-018-22817-5>

Payment

The Authority will raise purchase orders to cover the cost of the services and will issue to the awarded supplier following contract award.

The Authority’s preference is for all invoices to be sent electronically, quoting a valid Purchase Order number. Invoices to be submitted on completion of deliverables unless agreed otherwise.

It is anticipated that this contract will be awarded for a period of 8 months to end no later than 27/02/2026. Prices will remain fixed for the duration of the contract award period. We may at our sole discretion extend this contract to include related or further work. Any extension shall be agreed in writing in advance of any work commencing and may be subject to further competition.

Evaluation Methodology

We will award this contract in line with the most advantageous tender (MAT). See award criteria:

Technical – 60%

Commercial – 40%

Evaluation criteria

Evaluation weightings are 60% technical and 40% commercial, the winning tenderer will be the highest scoring combined score.

| Award Criteria | Weighting (%) | Evaluation Topic & Weighting | Sub-Criteria | Weighted Question |
| --- | --- | --- | --- | --- |
| Technical | 60% | Service / Product Proposal | Methodology | 5 QuestionsQ1.1 (10% of technical score available)Q1.2 (15% of technical score available)Q1.3 (15% of technical score available)Q1.4 (20% of technical score available)Q1.5 (20% of technical score available) |
| Key personnel | 1 QuestionQ2 (10% of technical score available) |
| Experience of similar contracts | 1 QuestionQ3 (10% of technical score available) |
| Commercial | 40% | Whole life cost of the proposed Contract | Commercial Model | 1 Question Q4 (100% of commercial score available) |

Technical (60%)

Technical evaluations will be based on responses to specific questions covering key criteria which are outlined below. Scores for questions will be based on the following:

| Description | Score  | Definition |
| --- | --- | --- |
| Very good  | 100 | Addresses all the Authority’s requirements with all the relevant supporting information set out in the RFQ. There are no weaknesses and therefore the tender response gives the Authority complete confidence that all the requirements will be met to a high standard.  |
| Good | 70 | Addresses all the Authority’s requirements with all the relevant supporting information set out in the RFQ. The response contains minor weaknesses and therefore the tender response gives the Authority confidence that all the requirements will be met to a good standard.  |
| Moderate | 50 | Addresses most of the requirements with most of the relevant supporting information set out in the RFQ. The response contains moderate weaknesses and therefore the tender response gives the Authority confidence that most of the requirements will be met to a suitable standard.  |
| Weak  | 20 | Substantially addresses the requirements but not all and provides supporting information that is of limited or no relevance or a methodology containing significant weaknesses and therefore raises concerns for the Authority that the requirements may not all be met. |
| Unacceptable | 0 | No response or provides a response that gives the Authority no confidence that the requirement will be met.  |

Technical evaluation is assessed using the evaluation topics and sub-criteria stated in the Evaluation Criteria section above.

Separate submissions for each technical question should be provided and will be evaluated in isolation. Tenderers should provide answers that meet the criteria of each technical question.

| Methodology | Detailed Evaluation Criteria |
| --- | --- |
| Q1.1 Provide details of the methodology and approaches proposed to deliver requirement 1 of the project.Responses should not exceed one side of A4, and use Arial font, size 11. | Your response should:1) Demonstrate a clear understanding of the nature of the requirements.2) Be a clear, practical, achievable, and cost-effective methodology to deliver these requirements.3) Have information in sufficient detail to allow a full appraisal of the suitability of the approach to deliver for the project. |
| Q1.2 Provide details of the methodology and approaches proposed to deliver requirement 2 of the project.Responses should not exceed one side of A4, and use Arial font, size 11. |
| Q1.3 Provide details of the methodology and approaches proposed to deliver requirement 3 of the project.Responses should not exceed two sides of A4, and use Arial font, size 11. |
| Q1.4 Provide details of the methodology and approaches proposed to deliver requirement 4 of the project.Responses should not exceed two sides of A4, and use Arial font, size 11. |
| Q1.5 Provide proposed project plan for the work, together with mitigation for any potential risks and any relevant policies / certificates (i.e. Health & Safety)Responses should not exceed three sides of A4, and use Arial font, size 11. | Your response should:1) Provide a proposed timeline.2) Highlight any potential risks to demonstrate understanding of the project and provide potential mitigation. |

| Key personnel | Detailed Evaluation Criteria |
| --- | --- |
| Q2 Provide details and short CVs of key staff involved in each requirement of the projectResponses should not exceed 2 pages of A4 (Arial font, size 11) per person | Your response should provide evidence of staff experience in:1. Metabarcoding and developing guidance or standards.
2. Reviewing and extracting information from metabarcoding studies.
3. Designing questionnaires, conducting workshops/focus groups, and performing literature reviews, ideally in the context of eDNA research.
4. Performing meta-analyses, ideally in the context of eDNA research.
 |

| Experience of similar contracts  | Detailed Evaluation Criteria |
| --- | --- |
| Q3 Provide details of similar contracts / work that you have been involved in | Your response should give clear examples of previous, similar, experience, particularly: 1. Developing guidance or standards for metabarcoding.
2. Conducting consultation exercises.
3. Performing literature reviews of eDNA studies.
4. Performing meta-analyses of eDNA studies.
 |

Commercial (40%)

The Contract is to be awarded as a fixed price which will be paid according to the completion of the deliverables stated in the Specification of Requirements.

Suppliers are required to submit a total cost to provide the deliverables stated in the Specification of Requirements. In addition to this the Commercial Response template must be completed to provide a breakdown of the whole life costs against each deliverable used in the delivery of this requirement.

Calculation Method

The method for calculating the weighted scores is as follows

* Commercial

Score = (Lowest Quotation Price / Supplier’s Quotation Price ) x [40%] (Maximum available marks)

* Technical

Score = (Bidder’s Total Technical Score / Highest Technical Score) x [60%] (Maximum available marks)

The total score (weighted) (TWS) is then calculated by adding the total weighted commercial score (WC) to the total weighted technical score (WT): WC + WT = TWS.

Once all evaluators have completed their individual evaluations and provided their final scores, an average score will be calculated which will be multiplied by the selected weighting to give a weighted score representing the views of all evaluators.

Information to be returned

Please note, the following information requested must be provided. Incomplete tender submissions may be discounted.

Please complete and return the following information:

* completed Commercial Response template
* separate response submission for each technical question (in accordance with the response instructions)
* complete AI question [ ''Do you use Artificial Intelligence (AI) or machine learning tools, including large language models within your quote submission or service delivery processes.?''] response which will not be scored, is to be returned within technical response
* completed Mandatory Requirements (Annex 1)
* completed Acceptance of Terms and Conditions (Annex 2)

Award

Once the evaluation of the Response(s) is complete all suppliers will be notified of the outcome via email.

The successful supplier will be issued the contract via a Purchase Order.

Annex 1 Mandatory Requirements

Part 1 Potential Supplier Information

Please answer the following self-declaration questions in full and include this Annex in your quotation response.

Part 1.1 Potential Supplier Information:

| Question no. | Question | Response |
| --- | --- | --- |
| 1.1(a) | Full name of the potential supplier submitting the information |  |
| 1.1(b)  | Registered office address (if applicable) |  |
| 1.1(c) | Company registration number (if applicable) |  |
| 1.1(d) | Charity registration number (if applicable) |  |
| 1.1(e) | Head office DUNS number (if applicable) |  |
| 1.1(f) | Registered VAT number  |  |
| 1.1(g) | Are you a Small, Medium or Micro Enterprise (SME)? | (Yes / No) |

Note: See EU definition of SME <https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en>

Part 1.2 Contact details and declaration

By submitting a quotation to this RFQ I declare that to the best of my knowledge the answers submitted and information contained in this document are correct and accurate.

I declare that, upon request and without delay you will provide the certificates or documentary evidence referred to in this document.

I understand that the information will be used in the selection process to assess my organisation’s suitability to be invited to participate further in this procurement.

I understand that the authority may reject this submission in its entirety if there is a failure to answer all the relevant questions fully, or if false/misleading information or content is provided in any section.

I am aware of the consequences of serious misrepresentation.

| Question no.  | Question | Response |
| --- | --- | --- |
| 1.2(a) | Contact name |  |
| 1.2(b) | Name of organisation |  |
| 1.2(c) | Role in organisation |  |
| 1.2(d) | Phone number |  |
| 1.2(e) | E-mail address  |  |
| 1.2(f) | Postal address |  |
| 1.2(g) | Signature (electronic is acceptable) |  |
| 1.2(h) | Date |  |

Part 2 Exclusion Grounds

Part 2.1 Grounds for mandatory exclusion

| Question no.  | Question | Response |
| --- | --- | --- |
| 2.1(a) | Please indicate if, within the past five years you, your organisation or any other person who has powers of representation, decision or control in the organisation been convicted anywhere in the world of any of the offences within the summary below. |
|  | Participation in a criminal organisation.  | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Corruption.  | ((Yes / No)If yes please provide details at 2.1 (b) |
|  | Fraud.  | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Terrorist offences or offences linked to terrorist activities | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Money laundering or terrorist financing | (Yes / No)If yes please provide details at 2.1 (b) |
|  | Child labour and other forms of trafficking in human beings | (Yes / No)If yes please provide details at 2.1 (b) |
| 2.1(b) | If you have answered yes to question 2.1(a), please provide further details.Date of conviction, specify which of the grounds listed the conviction was for, and the reasons for conviction.Identity of who has been convictedIf the relevant documentation is available electronically please provide the web address, issuing authority, precise reference of the documents. |  |
| 2.1 (c) | If you have answered Yes to any of the points above have measures been taken to demonstrate the reliability of the organisation despite the existence of a relevant ground for exclusion? (i.e. Self-Cleaning) | (Yes / No) |
| 2.1(d) | Has it been established, for your organisation by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of any part of the United Kingdom or the legal provisions of the country in which the organisation is established (if outside the UK), that the organisation is in breach of obligations related to the payment of tax or social security contributions? | (Yes / No) |
| 2.1(e) | If you have answered yes to question 2.1(a), please provide further details. Please also confirm you have paid or have entered into a binding arrangement with a view to paying, the outstanding sum including where applicable any accrued interest and/or fines. |  |

Part 2.2 Grounds for discretionary exclusion

| Question no.  | Question | Response |
| --- | --- | --- |
| 2.2(a) | The detailed grounds for discretionary exclusion of an organisation are set out on this [webpage](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/551130/List_of_Mandatory_and_Discretionary_Exclusions.pdf), which should be referred to before completing these questions. Please indicate if, within the past three years, anywhere in the world any of the following situations have applied to you, your organisation or any other person who has powers of representation, decision or control in the organisation |
| 2.2(b) | Breach of environmental obligations?  | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2(c) | Breach of social obligations?  | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2(d) | Breach of labour law obligations?  | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2(e) | Shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity, or a prior concession contract, which led to early termination of that prior contract, damages or other comparable sanctions? | (Yes / No)If yes please provide details at 2.2 (f) |
| 2.2 (f) | If you have answered Yes to any of the above, explain what measures been taken to demonstrate the reliability of the organisation despite the existence of a relevant ground for exclusion? (Self Cleaning) |  |

Annex 2 Acceptance of Terms and Conditions

I/We accept in full the terms and conditions appended to this Request for Quote document.

Company \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Position \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_