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Request for Quotation

Filey Brigg – Red Cliff Intertidal Survey 2022

Request for Quotation

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.

Your response should be returned to the following email address:

Email: peter.norris@naturalengland.org.uk and yorkshirecoastdesignations@naturalengland.org.uk

Date: 16/08/2022

Time: 19:00

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

Contact Details and Timeline

Peter Norris 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	01/08/2022
Deadline for clarifications questions	08/08/2022
Deadline for receipt of Quotation	16/08/2022
Intended date of Contract Award	22/08/2022
Intended Contract Start Date	22/08/2022
Intended Delivery Date / Contract Duration	26/01/2023

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):

"Authority"	Means the Department for Environment, Food and Rural Affairs acting as part of 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 RFQ 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.

Mandatory Requirements

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

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 may vary depending on contract value. Details of these can be found [here](#) and 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: [Natural England](#)

Background:

One of the core duties of Natural England is to ensure protection and management of Sites of Special Scientific Interest (SSSIs), which are England's very best wildlife and geological sites legally protected under the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006.

We are currently collecting evidence to support the potential redesignation and expansion of several SSSI's along the Yorkshire coastline that have been previously notified for their biological and/or geological interest. These areas may also support intertidal habitats that meet the requirements of the [JNCC SSSI site selection guidelines](#).

The main objectives of the surveys within the stipulated study area are to determine and/or verify the presence and extent of:

1. Two 'whole shore' selection units which are:
 - Wave-exposed rock;
 - Moderately wave-exposed rock
2. SSSI Annex 1 biotopes considered nationally or internationally important, or of special interest as stated in: The Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 1b Marine Intertidal and Shallow Subtidal Habitats. [Chapter 1b Marine Intertidal and Shallow Subtidal Habitats \(jncc.gov.uk\)](#)

A selection of those biotopes most likely to be encountered are highlighted yellow in Appendix 1 below, but the full Annex 1 list within the guidelines should be referred to for completeness.

Description and definition of intertidal habitats - Littoral rock (rocky shores)

A variety of different habitats and communities are associated with the area of rock between the highest and lowest tide levels - known as the foreshore or littoral zone - including rock pools, bedrock ledges and platforms, gullies, crevices and boulder fields. This wide variety of habitats supports a diverse range of different seaweeds and marine animal species, most of which are specially adapted to spending periods of time out of seawater. The nature conservation interest associated with these rocky shores depends greatly on their geology, geographic orientation, latitude and influences from tides and wave exposure. For example, rocky shores composed of hard rock, will erode slowly and have fewer pools and crevices. Chalk shores are much softer and erode more quickly but support an unusual collection of seaweeds and animals, some of which are able to bore into the rock.

There is typically a zonation of rocky shore communities from the supralittoral marine lichens down the upper, mid and lower shore, which are dominated by different species of brown seaweeds, to the sublittoral fringe with kelps. The greater the energy from wave action hitting the foreshore then the more communities become dominated by animals, such as barnacles, limpets and mussels, in the place of seaweeds.

Maintenance of high-quality habitat is essential to the maintenance of the important seaweed and animal communities that depend upon these rocky habitats. Rocky shores are natural habitats dominated by wave exposure and tidal processes and the need for active management of these habitats is usually minimal. However, their proper management requires an understanding of a number of inputs and processes, both natural and anthropogenic, in order to maintain the conservation interest of these areas. The key management principle for rocky shores is to allow natural processes, such as erosion and collapse of cliffs, to proceed freely. It is also important that management aims to maintain good water quality. For the purposes of this proposed designation project, the seaward boundary will be drawn at Lowest Astronomical Tide (LAT), where exposed and moderately exposed rocks and associated intertidal marine features occur.

Technical Specification:

Natural England requires the collection of additional ecological data on the presence and extent of intertidal features which will be used to support the possible redesignation and expansion of biological SSSI's on the Yorkshire coastline. The data from this study along with previous survey work in the area will also be used to produce an ecological baseline for the current condition of intertidal features in the site. This will then support all future condition monitoring based on Common Standards Monitoring (CSM) guidance.

It is intended for this work to be a partial repeat of the phase 1 element of the '*Scalby Ness to Filey Brigg Rocky Shore Survey*' carried out in 2013, but with a reduced method and survey area. This report can be found [here](#).

The successful contractor is expected to resurvey five transects (The Nab, Castle Rocks, Chimney Hole, The Wyke, Filey Brigg) last surveyed in 2013 (Figure 1).

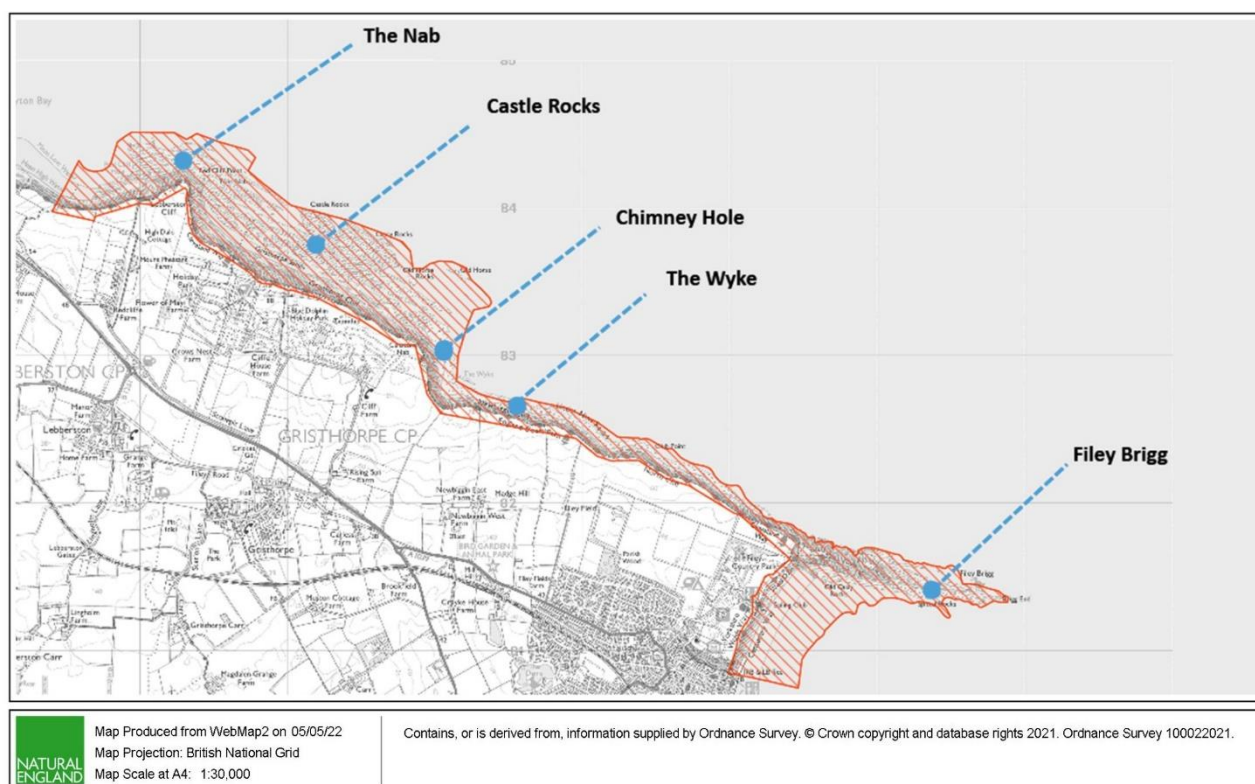


Figure 1. Planned survey locations between Filey Brigg SSSI and Red Cliff

The locations of the five transects are set out in Table 1.

Table 1. Locations of transects to be resurveyed (Phase 1)

Area	Grid Reference	X	Y
Filey Brigg	TA1336581411	513365	481411
The Wyke	TA1055682657	510556	482657
Chimney Hole	TA1005883023	510058	483023
Castle Rocks	TA0919384317	509193	483748
The Nab	TA0829384317	508293	484317

The main objectives of this study are:

- i. Carry out a Phase 1 survey of the intertidal zone rock habitats at agreed survey locations across the site. This survey should be planned in accordance with the methods detailed in the CSM guidance, JNCC Marine Monitoring Handbook and the CCW Handbook for Marine Intertidal Phase 1 Survey and Mapping.
- ii. Identify and map intertidal rock habitats within the agreed sample areas:
 - Identify and map the extent and distribution of littoral rock habitat types to EUNIS Level 5 or greater wherever possible. Due to the inclusion of some sublittoral fringe habitats within the littoral SSSI designation guidance, such habitats should be recorded if observed whilst surveying littoral habitats on the lower shore but these habitats should not be specifically targeted.

- iii. Identify any marine intertidal features within the survey areas that qualify for selection as part of a SSSI based on the JNCC Guidelines for the selection of biological SSSI's.
 - This should include a review of the JNCC SSSI guidance and CSM guidance for intertidal features, highlighting where sections of the site do/ do not meet the criteria for inclusion in the SSSI boundary.
- iv. Collect semi-quantitative information on species composition across the range of rocky habitat biotopes and biotope complexes identified.
- v. Provide sufficient information to inform a condition assessment of the feature. A full condition assessment of the SSSI will be carried out by Natural England in future.
- vi. Record any anthropogenic influences that may impact on the identified features to provide an understanding of site pressures. These should be mapped where possible and include (but not be limited to) coastal defences and any damaging or potentially damaging activities. Presence and abundance (using the SACFOR scale) of invasive non-native species (INNS) should also be recorded.

Methods:

The aim of the Phase I survey would be to determine the distribution and extent of inter-tidal rock biotopes, interest features, and species that are representative and/or notable within the study area. This would be achieved by examining geo-referenced aerial photography and subsequently ground-truthing defined habitats via field survey in order to establish the biotopes (as per Procedural Guidelines 1-1 Inter-tidal resource mapping using aerial photographs in the Marine Monitoring Handbook).

The Phase 1 survey will aim to achieve 100% coverage of the inter-tidal rocky biotopes within the defined belt transect. Target transects should be used as framework for the survey design and be added to the aerial photographs and loaded into a dGPS which will be used for all position fixing during the course of the survey. Along each transect the vertical extent of each biotope would be gauged and recorded as accurately as possible using a combination of DGPS and the aerial photography. Photographs of zonation patterns at each transect should also be taken.

Having mapped the immediate area in the belt transect, the major biotopes either side could be assessed, and these boundaries drawn onto the aerial photographs. Whilst transitioning to the next location, the survey team could record super-imposed biotopes on the aerial photography. If sea caves are encountered, biotopes will be recorded at the feature level due to the inherent difficulties in accessing them.

The transects should be placed at pre-determined locations (Table 1). On each transect the following information should be gathered as a minimum:

- Photographs of habitats and up, down and along shore shots and upper, mid and lower shore.
- Habitat extent and distribution mapped over 60 m wide transect (30m either side of central transect line).
- SACFOR abundance of the main species observed within each biotope along the transect.

- Additional 3 x 1m² quadrats within each Annex 1 habitat observed on each transect.
- Detailed habitat descriptions using littoral habitat survey forms (MNCR Site form or similar) at each transect to include aspects such as substrate characteristics, features and modifiers.
- Time, date and tidal height.

The presence of notable and/or characteristic biotopes and species (The Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 1b Marine Intertidal and Shallow Subtidal Habitats) should also be recorded where encountered. Where these are observed, the positions should be recorded using DGPS and a photograph taken. The methodology used in the 2013 survey should be retained where possible within the confines of this specification.

During the survey, the presence of potential anthropogenic influences (e.g. sewers, land drains etc) should be recorded and any obvious impacts noted. An accurate assessment of the magnitude of these impacts would require a more targeted sampling strategy which is not possible given the budgetary constraints of the project.

Outputs:

A written record of fieldwork (including original target notes) and surveys completed, and an electronic copy of the draft report should be submitted in accordance with the timescales below for review by the Natural England project officer.

Draft reports should be provided in MS Word format for comment. All written outputs must be formatted using the template and writing guidance provided by Natural England in order to meet our publishing and accessibility requirements.

All reports should retain a clear suggested citation stating that it is a 'Report to Natural England'. Data must be interpreted, analysed and presented in light of the overarching hypotheses for each contract. Contractors should pay particular consideration to the data and GIS required formats for information compatibility including MEDIN metadata standards and Marine Recorder provision.

The final report may be submitted in either MS Word or PDF format, however if submitted as a PDF we would retain the right to request an MS word version in the event that formatting edits are needed to meet our publishing and accessibility obligations.

All interpreted products following data analysis should accompany the draft report; these will include:

- All GIS datasets need to be provided in ESRI ArcGIS format compatible with ArcGIS version 10.2 and have attached metadata.
- All GIS files containing habitat data for each individual survey need to be produced to the MESH translated habitat Data Exchange Format (DEF) to the most detailed EUNIS habitat level possible. MNCR (v15.03) data should be added to the ORIG_HAB column. The GUI provided by Natural England for each survey will be used, and as much information as possible (e.g. survey name, originally assigned feature/habitat name etc.) from the original

dataset, as well as any documentation provided (where available) should be included in the resulting datasets to maintain a useful audit trail. As specified in the MESH DEF, data files must be provided as ESRI Shapefiles using geographic coordinates (lat/long) and the WGS84 datum. If the datasets supplied are in other projections, transformation using the appropriate petroleum (EPSG) transformation should be carried out as part of the data formatting procedure.

- If not included in the GIS data layers listed above all sampling locations, vessels tracks, and links to data obtained should also be included as a single GI layer.
- A MESH data confidence assessment for each habitat map should be calculated and provided in a 'MESH confidence scoresheet' *.XLS file. The confidence assessment process is described and a template provided in the following MESH resources The MESH Confidence Assessment Scheme.

Natural England endorses the MEDIN initiative. Any data gathered/derived as part of this project must be submitted to Natural England in a way which expedites the MEDIN data archiving process through Data Archive Centres (DACs) with metadata meeting the MEDIN metadata discovery standard (MEDIN discovery metadata standard). A MEDIN compliant metadata XML file must be provided for each survey. Natural England will supply the 'MEDIN guidance for contractors' document to successful contractors at the mini-tender stage.

All sample data (e.g. video/still photography analyses, biotope lists, biological taxon data) need to be entered into Marine Recorder NBNdata.mdb (or similar) and an exported snapshot file of the data should be provided for QA. Natural England will provide licence keys for Marine Recorder. Natural England will supply a 'Marine Recorder guidance for contractors' document to successful contractors.

Copies of the original data spreadsheets or databases are to be provided in the appropriate Microsoft Office format. However please be aware that using MEDIN marine biodiversity data guideline spreadsheets (available online under the marine biodiversity tab at MEDIN data guidelines) will ensure that biological taxon data is prepared correctly for entry into Marine Recorder and will facilitate the efficient entry of data into this system and the data archiving process in general. Natural England welcomes and supports the provision of raw data spreadsheets in the MEDIN format and expects that all raw datasheets will contain the mandatory fields in the MEDIN guidelines, regardless of their format.

High quality imagery which has been selected to form part of the image reference collection for the survey need to be labelled appropriately, including the habitat/species which is represented. These should be provided as a separate folder on the storage device to the standard survey imagery.

All data products, photographs and electronic files must be appropriately named so they sufficiently describe the contents and are not purely a numerical value. All products should be named appropriately so that they can be clearly linked to the report/project.

Any species lists submitted will be compliant with current taxonomic names and synonyms (e.g. Marine Species of the British Isles and Adjacent Seas (MSBIAS), World Register of Marine Species (WoRMS))

Video and still camera filenames must include the recording start date and time. Position data must be included within the overlay information.

Invasive non-native species (INNS):

Invasive non-native species (INNS) are considered to be one of the top five pressures directly driving biodiversity loss globally. Prevention is the key focus, particularly in marine environments. The contractor shall be aware of and work in accordance with standard good practice biosecurity measures to avoid spread of INNS:

- Equipment, clothes and boots should be clean before carrying out any work on site
- When on or near water it is important that equipment is drained after use and as far as possible dried
- Boats to be used in survey work should have their hulls cleaned on a regular basis. Best practice guidelines should be followed as outlined by [The Green Blue](#)

The contractor must collect georeferenced photographs of INNS observed on site, record these on Marine Recorder, report immediately to the Natural England Project Officer, and include within the survey report. Any species currently listed as 'alert' species should be flagged immediately to the GB Non-Native Species Secretariat. More information and guidance including ID guides can be found at www.nonnativespecies.org.

Timing:

The proposed survey window for this work is September to October. The contractor will confirm the fieldwork schedule (e.g. number of field days and rough dates) in their quotation.

All analysis and reporting is to be completed by 26th January 2023

An extension to the final submission deadline may be negotiated if requested by the contractor and agreeable to Natural England.

Site Access:

Natural England will obtain the necessary permissions from landowners and the Crown Estate for access to the intertidal area. Survey work will not be able to begin until these access permissions have been obtained. It is expected that the successful contractor will liaise directly with the appropriate landowners regarding specifics of the survey, as required.

In addition, each member of the survey team must carry a letter from Natural England to confirm that they are doing this work on the behalf of Natural England.

Where contractors intend to use either a vessel or hovercraft to access sites, the requirements should be made clear in the tender submission. Natural England may be required to provide details of any vessel to the MMO under the terms of its marine licence.

Health and Safety:

The contractor must ensure that all the works are undertaken in accordance with the Health and Safety at Work Act 1974 and its associated regulations.

Where there are no statutory legislative controls the contractor should follow the industry best practice, always ensuring personnel are properly protected, trained and competent to carry out the operations being undertaken. All contractors will be required to wear appropriate personal protection equipment as demanded by the operation and working conditions. Safe working procedures must have been discussed and provided to the project officer before commencement of the contract.

Because of the remote location of the sites, areas with poor or hazardous access must not be visited.

The contractor is responsible for the health, safety and welfare of the contract workforce and a certified first-aider will be present at all times. All accidents are to be reported to Natural England via the Project Officer.

The winning contractor is expected to submit a suitable risk assessment to the Natural England Project Officer prior to commencing the survey work.

Prices

Prices must be submitted in £ sterling, inclusive of VAT. If you are VAT exempt please state this clearly within the quotation.

It is anticipated that this contract will be awarded for a period of 5 months to end no later than 26/01/2023. 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 advance of any work commencing and may be subject to further competition.

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 – 50%

Quality – 50%

The following quality criteria are weighted in accordance with the importance and relevance attached to each one.

Criteria	Weighting (%)	To include:
Experience, technical expertise and reliability/reputation	30	<ul style="list-style-type: none">• Details of staff experience in the relevant survey and assessment techniques including examples of working intertidal habitats.• CV's of key staff members.• Details of any occasions where you have previously worked on contracts for Natural England or English Nature
Methodology	20	<ul style="list-style-type: none">• An explanation of the methodology to be used and how this will deliver the objectives listed earlier in this document.• A demonstration of understanding of the specific challenges associated with surveying intertidal habitats.• Methods must be repeatable in future surveys• Detail how you will manage Health and Safety risks (see below)
Cost	50	
Please note that managing Health and Safety risks will be assessed as Pass or Fail, please provide an example risk assessment for similar survey work.		

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.

Contract Management

This contract shall be managed on behalf of the Authority by –

Peter Norris,
Marine, Coast and Southern Lowlands Team, Yorkshire and Northern Lincolnshire,
Peter.Norris@naturalengland.org.uk
07799868669

Project Timeline –

Activity	By Whom	Deadline
Quotes Received	Project Officer	16/08/2022
Evaluation	NE Project Team	16/08/2022 – 22/08/2022
Contract Awarded	Project Officer	22/08/2022
Completion of Fieldwork	Contractor	31/10/2022
Draft report & copies of survey documentation submitted	Contractor	31/12/2022
Comments on draft report supplied to contractor	NE Project Team	12/01/ 2023
Final report submitted	Contractor	26/01/2023

We will raise purchase orders to cover the cost of the services and will issue this to the winning supplier following contract award.

Contractors should invoice Natural England upon submission and mutual agreement over the final report.

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.

Appendix 1 – Annex 1 biotopes considered nationally or internationally important, or of special interest.

Status	UK Biotope Type	UK Biotope Code	UK Biotope Name
Nationally and Internationally important biotopes	Chalk biotopes (or on other soft rock)	LR.FLR.Lic.Bli	<i>Blidingia</i> spp. on vertical littoral fringe soft rock
		LR.FLR.Lic.UloUro	<i>Ulothrix flacca</i> and <i>Urospora</i> spp. on freshwater-influenced vertical littoral fringe soft rock
		LR.FLR.CvOv.ChrHap	Chrysophyceae and Haptophyceae on vertical upper littoral fringe soft rock
		LR.FLR.CvOv.AudCla	<i>Audouinella purpurea</i> and <i>Cladophora rupestris</i> on upper to mid-shore cave walls
	Soft, piddock bored biotopes	LR.HLR.FR.RPid	<i>Ceramium</i> spp. and piddocks on eulittoral fossilised peat
		LR.MLR.BF.Fser.Pid	<i>Fucus serratus</i> and piddocks on lower eulittoral soft rock
		LR.MLR.MusF.MytPid	<i>Mytilus edulis</i> and piddocks on eulittoral firm clay
	Extremely exposed fucoid biotopes	IR.MIR.KR.Ldig.Pid	<i>Laminaria digitata</i> and piddocks on sublittoral fringe soft rock
		LR.HLR.FR.Fdis	<i>Fucus distichus</i> and <i>Fucus spiralis</i> f. <i>nana</i> on extremely exposed upper shore rock
	Tide-swept algal biotopes	LR.HLR.FT.AscT	<i>Ascophyllum nodosum</i> , sponges and ascidians on tide-swept mid eulittoral rock
		LR.HLR.FT.FserT	<i>Fucus serratus</i> , sponges and ascidians on tide-swept lower eulittoral rock
		LR.HLR.FT.FserTX	<i>Fucus serratus</i> with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrata
		IR.MIR.KT.LdigT	<i>Laminaria digitata</i> , ascidians and bryozoans on tide-swept sublittoral fringe rock
		IR.MIR.KT.LsacT	<i>Laminaria saccharina</i> with foliose red seaweeds and ascidians on sheltered tide-swept infralittoral rock
	Sand-influenced rock biotopes	IR.LIR.IFaVS.MytRS	<i>Mytilus edulis</i> beds on reduced salinity tide-swept infralittoral rock
	Extreme shelter biotopes	LS.LBR.Sab.Salv	<i>Sabellaria alveolata</i> reefs on sand-abraded eulittoral rock
	Muddy gravel biotopes	LR.LLR.FVS.Ascmac	<i>Ascophyllum nodosum</i> on full salinity mid eulittoral mixed substrata
		LS.LMx	Littoral mixed sediment
		LS.LMx.Mx.CirCer	Cirratulids and <i>Cerastoderma edule</i> in littoral mixed sediment
		LS.LSa.St.MytFab	<i>Mytilus edulis</i> and <i>Fabricia stellaris</i> in littoral mixed sediment
		SS.SMx.CMx.CiloMx	<i>Cerianthus lloydii</i> and other burrowing anemones in circalittoral muddy mixed sediment
		SS.SMx.IMx.Lim	<i>Limaria hians</i> beds in tide-swept sublittoral muddy mixed sediment
		SS.SMx.IMx.Ost	<i>Ostrea edulis</i> beds on shallow sublittoral muddy mixed sediment
		SS.SMx.IMx.VsenAsqu Aps	<i>Venerupis senegalensis</i> , <i>Amphipholis squamata</i> and <i>Apseudopsis latreilli</i> in infralittoral mixed sediment

Status	UK Biotope Type	UK Biotope Code	UK Biotope Name
Biotopes of special interest	Rockpool biotopes	LR.FLR.Rkp.Cor	Coralline crust-dominated shallow eulittoral rockpools
		LR.FLR.Rkp.Cor.Bif	<i>Bifurcaria bifurcata</i> in shallow eulittoral rockpools
		LR.FLR.Rkp.Cor.Cys	<i>Cystoseira</i> spp. in eulittoral rockpools
		LR.FLR.Rkp.FK	Fucoids and kelp in deep eulittoral rockpools
		LR.FLR.Rkp.H	Hydroids, ephemeral seaweeds and <i>Littorina littorea</i> in shallow eulittoral mixed substrata pools
		LR.FLR.Rkp.SwSed	Seaweeds in sediment-floored eulittoral rockpools
	Under-boulder biotopes	LR.MLR.BF.Fser.Bo	<i>Fucus serratus</i> and under-boulder fauna on exposed to moderately exposed lower eulittoral boulders
		IR.MIR.KR.Ldig.Bo	<i>Laminaria digitata</i> and under-boulder fauna on sublittoral fringe boulders
	Cave and overhang biotopes	LR.FLR.CvOv	Littoral caves and overhangs
		LR.FLR.CvOv.FaCr	Faunal crusts on wave-surfed littoral cave walls
		LR.FLR.CvOv.SpByAs	Sponges, bryozoans and ascidians on deeply overhanging lower shore bedrock or caves
		LR.FLR.CvOv.SpR	Sponges and shade-tolerant red seaweeds on overhanging lower eulittoral bedrock and in cave entrances
		LR.FLR.CvOv.SpR.Den	Sponges, shade-tolerant red seaweeds and <i>Dendrodoa grossularia</i> on wave-surfed overhanging lower eulittoral bedrock and caves
		LR.FLR.CvOv.VmuchHil	<i>Verrucaria mucosa</i> and/or <i>Hildenbrandia rubra</i> on upper to mid shore cave walls
		IR.FIR.SG.CrSpAsDenB	Crustose sponges and colonial ascidians with <i>Dendrodoa grossularia</i> or barnacles on wave-surfed infralittoral rock
		LR.FLR.CvOv.AudCla	<i>Audouinella purpurea</i> and <i>Cladophora rupestris</i> on upper to mid-shore cave walls
	Sublittoral fringe surge gully biotopes	IR.FIR.SG	Features of infralittoral rock
		IR.FIR.SG.CrSp	Crustose sponges on extremely wave-surfed infralittoral cave or gully walls
		IR.FIR.SG.CrSpAsAn	Anemones, including <i>Corynactis viridis</i> , crustose sponges and colonial ascidians on very exposed or wave surfed vertical infralittoral rock
		IR.FIR.SG.DenCcor	<i>Dendrodoa grossularia</i> and <i>Clathrina coriacea</i> on wave-surfed vertical infralittoral rock
		IR.FIR.SG.FoSvCC	Foliose seaweeds and coralline crusts in surge gully entrances
		IR.FIR.SG.CrSpAsDenB	Crustose sponges and colonial ascidians with <i>Dendrodoa grossularia</i> or barnacles on wave-surfed infralittoral rock