22503 ECOLOGICAL SERVICES FRAMEWORK 3 (EcoSF3)

SCHEDULE B PROJECT FORM AND CONFIRMATION OF INSTRUCTIONS
PART 1
PROJECT DETAILS, SPECIFICATION AND EVALUATION CRITERIA

To be completed by Contracting Authority Project Manager

Project title: Lugg SAC Weirs

Bravo project ref (if applicable): project_36247

Date: 16/05/2022

Contracting Authority (Environment Agency; Natural England; Defra etc)	[redacted]		
Project Manager:	[redacted]	**Phone number:**	[redacted]
Budget holder:	[redacted]	**Cost code:**	[redacted]
Commercial Contact (if applicable):	[redacted]	**Email:**	[redacted]
Project Start Date		05/09/2022	
Project Completion Date		13/03/2023	
For any projects over £10k, full competition is required (i.e. all suppliers on the Lot invited to quote).	**Direct Award**		**Mini-comp** ✔
Call off from Lot number (please tick)	1	2	3	4 ✔
Proposal return date: ***(no less than 10 working days from current date)***	17/06/2022		

dated

Evaluation criteria: (for work over £10k project managers need to prepare and complete an evaluation model on receipt of tender submissions – see EcoSF3 pages on [redacted] for template or contact the Framework Manager if other Authority). **Please note price and quality weightings are fixed (although you may alter the quality sub-criteria weightings**). Optional: If a **minimum score threshold** is set for any criteria this must be stated in the table. If not used, please delete the wording.		
Contractors: Failure to meet the minimum score threshold stated will result in the bid being removed from the process with no further evaluation regardless of other quality or price scores.		
Price	**Weighting**	**50%**
Quality	**Weighting**	**50%**
Quality Sub-Criteria Weightings:		

Approach & Methodology • Outline method of how you propose to deliver the services • How key project risks/issues will be managed. • Your proposal should demonstrate and identify how you propose to organise your resources to maximize efficiencies in your service delivery. • A programme or project plan demonstrating how the services will be delivered within the contract timeframes. • Provide clear evidence to demonstrate that the project will be managed effectively to deliver the services in accordance with the programme.		**60**
Proposed Staff (inc Pen Portraits) and Contractor's experience/accreditations. • An organogram providing details of the team dedicated to this project. • Provide clear evidence to demonstrate that appropriate resources are allocated to this project to meet the programme and that the staff you have proposed have the necessary capacity, skills and experience to deliver effective support to the project throughout the contract period. • Please detail your staff resilience plans, to ensure continuity of service, in the event of staff absence or change within the consultant project team.		**40**

Specification

Please detail the Contractor's required Limitation of Liability. If no sum is stated, the Contract Price for the Services performed or to be performed under the Contract or five million pounds whichever is the greater will apply.

1. Description of work required – overall purpose & scope (including reporting requirements)

Project Background:

Four [redacted] owned blockstone weirs (assets) upstream of Leominster on the River Lugg SSSI were built in the 1970s as part of the Leominster Flood Defence Scheme. Modelling has shown that they offer no flood defence benefit but are a barrier to fish migration except during flood conditions. They also impact on the quality of two SSSIs, notably the River Lugg SSSI and the Lugg Meanders SSSI. The lower reaches of the river are also a SAC which these weirs adversely impact. The most downstream weir at Crowards Mill, whose height cannot be reduced due to milling rights for the adjacent mill leat, requires a suitable fish pass. Importantly, initial hydraulic modelling of the weirs undertaken in 2018 as part of the development of the recently constructed Leominster FAS confirms their partial removal appears to provide a slight reduction to flood risk in Leominster.

This call off contract is to deliver Phase 1 of the works which will take the project through to Outline Business Case (OBC) assurance. Phase 2 will then follow on from Phase 1 with a new call off contract to take the project through to detailed design and FBC submission. This includes the handover of all Phase 1 deliverables in accordance to the BIM Execution Plan to enable Phase 2 to commence. Phase 2 will be tendered separately to Phase 1 following its successful completion.

The preferred weir removal options shall be determined predominantly through a supplier assessment of the existing modelled scenarios used in the 'River Lugg Weir Removal Study – Technical Note', i.e. 25% removal, 50% removal, 75% removal and 100% removal, and then further targeted modelling of the most likely scenarios. As the Leominster FAS was constructed in 2021, the supplier's assessment shall focus predominantly on the Phase 2 scenarios within the Technical Note as the Phase 1 scenarios are now superseded by the FAS.

Due to the nature of the blockstone construction of the weirs and the requirement to ensure the banks remain stable at each location, it is envisaged at this stage that the weirs will likely be "tiered/stepped" from the banks towards the centre of the river. The centre of the weir will then form the lowest point of the asset. As water velocity and depth are critical for facilitating fish passage, the targeted modelling will need to be sufficient to establish these two criteria at each location across a range of flows and, in particular, at low flows including the 95%ile (Q95). The *Client*

acknowledges that the targeted modelling cannot be fully determined until the supplier has assessed the existing modelling, so it will be treated as a service extension (contract variation) once the scope is able to be confirmed. However, as an indication of scope expectation, it will be the production of a model for the 75% removal scenario across a range of low to high flows by adapting the existing Lugg model. This is an expectation only due to the uncertainty over the model analysis. The *Client* is keen to pursue innovative solutions led by the supplier if they are viable to accurately establish the depth and velocity across the structures. This is with the exception of Croward's Weir that will require the design of a suitable fish pass, rather than weir removal, but will still require the necessary design details to enable the option to be costed. At this stage for the Outline Design, we must consider design options that allow for the following designated species. Atlantic Salmon, Shad, Sea Lamprey, Brook Lamprey, River Lamprey and Eel. The economic viability will be assessed at Outline Business Case (OBC).

A high-level costs assessment shall be produced once the necessary design details needed to understand construction delivery have been produced and delivered by the supplier Four outline designs, one for each location, are to be produced of the preferred options.

The successful supplier will be required to work alongside a construction contractor appointed by the *Client* for Early Supplier Engagement (ESE) that will assist with the costs assessment and buildability of the preferred options.

There are key risks that require establishing. These include but are not limited to: an oil pipeline located upstream of Mousenatch Weir and downstream of Gilbert's Weir, and overhead powerlines. The likely geomorphological impacts for the preferred options also need to be investigated with proposals to manage any significant geomorphological impacts required in the production of the outline design. The risks identified within the risk register are also to be considered as part of the report.

The desired outcomes of the project are:

1. To have four preferred options that enable fish passage and, as far as is feasible, improves natural geomorphological processes in order to support a healthier aquatic ecosystem. There is no expectation at Croward's Weir for geomorphological processes to be investigated downstream as part of the design of the fish pass. The preferred options are to be technically and economically feasible, and to maximise the ecological benefits. The economic feasibility shall be determined by the *Client* once the options have been developed. The preferred options shall include an outline design with the necessary supporting information that can be used by the *Client* for the later development into the detailed designs by a competent contractor.

2. To minimise risks and costs of future maintenance. The most preferable options to the *Client* would be to lower/functionally remove Mousenatch, Eyton and Coxall Weirs, and to include a fish pass on Croward's Weir. This would allow for the responsibilities and any associated costs for future maintenance to be reduced from the *Client* and would potentially maximise the geomorphological and ecological function and health of the waterbody.

3. Understand the risks and benefits associated with the options assessed; to minimise / remove / mitigate the risks; to maximise the benefits.

Description of the *works* - Phase 1 Requirements:

Objective:

The overall objective of this commission is supporting the production of an OBC. This includes confirmation of the Preferred Options for fish passage at the four weirs, subsequent production of the Outline Designs and input into the Outline Business Case itself.

Outcome Specification:

The supplier shall review information provided by the *Client* by undertaking a gap analysis to understand the works required to complete the OBC. The gap analysis assessment should include, but not be limited to, 'The Lugg Weir Removal Study – Technical Note' modelling outputs and sediment transport using the sediment analysis provided. The supplier shall determine the preferred options and assist in compiling the OBC.

The supplier shall produce the Strategic, Economic and Financial Cases of the OBC with the support of the *Client*.

The supplier shall produce four outline designs, one for each location, of the preferred options which includes technical drawings and supporting design information that is able to be costed by the *Client* and/or a competent contractor. The designs provided by the supplier, with the support of the *Client* appointed ESE construction contractor where necessary, shall contain but not be limited to the following deliverables:

1) Buildability statements
2) Risks, benefits and constraints, including benefits for natural ecological function (fish passage and natural river processes)
3) H&S statements
4) Indicative Project and Construction costs
5) Construction methods (the supplier shall consider the risks and cost savings associated with working in both wet and dry conditions for delivering the preferred options. Working in the wet has been undertaken successfully elsewhere and can potentially reduce temporary works costs significantly).
6) Access requirements
7) Project Programme (for both design and construction phases)
8) BIM Execution Plan

The supplier shall attend site to identify access requirements, physical constraints, required working areas and potential compound areas.

The supplier shall undertake a carbon assessment and consider low carbon design.

The supplier shall provide technical support to the Client for stakeholder engagement meetings and compile relevant information from the Stakeholders to help determine the preferred option and understand the risks.

The supplier shall attend a public event towards the end of the Outline Design Phase alongside the client. The supplier shall produce A1 versions of the most important design information and any other key information will need to be prepared.

Contractor Project Management (PM):

The *Contractor* shall undertake PM activities that include, but are not limited to, the following:

The *Contractor* will manage the appraisal and produce the OBC, liaising with the *Client* and other contractors (including any sub-contractors as necessary) in order to complete the *services* in line with the conditions of contract and best practice procedures.

The *Contractor* shall attend one hour length fortnightly telecons with the *Client's* and one 2-hour length monthly progress meeting per month. This equates to three meetings per month for a total of 4 hours.

The supplier shall produce a monthly progress report to document progress against programme and deliver this electronically to the *Client's* by the 10th of each month. The progress report is to include an updated monthly programme. The report and programme will form the basis of the monthly progress meeting.

The supplier shall attend an online Start-up meeting after contract award with the *Client* to discuss the gap analysis (e.g. Modelling and sediment transport) and Scope. The *Contractor* shall allow ½ a day for the Start-up meeting.

The *Contractor* shall produce a BIM Execution Plan (BEP) to be accepted by the *Client* and upload files onto the Asite portal in accordance with the accepted BEP.

The *Contractor* shall attend a Phase 1 handover meeting.

Management of the works:

Co-operate with the *Client* in the role of the BIM Information Manager.

Ensure that project deliverables such as model files, survey data or anything of a personal nature such as questionnaires or address data is returned to the *Client* in an encrypted format using WinZip 128-bit encryption.

Deliver a copy of survey data undertaken and collected for the appraisal and supporting detailed technical

reports. The supplier will take the risk of the adequacy of existing data quality and quantity. Copies of reports should be issued in digital format to the *Client*.

The supplier is expected to follow the protocols under the EcoSF3 framework, and understand that the information in the Project Form will form the contract.

Previous Studies:

Report	Date	Format	Comments
Lugg Weir Removal Study Technical Note	n/a	Will be sent digitally at Invite To Tender	
River Lugg Model	n/a	Will be sent digitally at Contract Award	
Lugg Site Photos	n/a	Will be sent digitally at Invite To Tender	
Lugg Site Plan	n/a	Will be sent digitally at Invite To Tender	
Lugg ToPo Survey drawings	n/a	Will be sent digitally at Invite To Tender	
Eyton Ownership	n/a	Will be sent digitally at Invite To Tender	
Land Ownership and surveys spec	n/a	Will be sent digitally at Invite To Tender	
SSSI Data	n/a	Will be sent digitally at Invite To Tender	
Geomorph dams of rivers handout V2	n/a	Will be sent digitally at Invite To Tender	
River Restoration Plan (RRP)	n/a	Will be sent digitally at Invite To Tender	
Sediment Transport Data	n/a	Will be sent digitally at Invite To Tender	
Risk Register	n/a	Will be sent digitally at Invite To Tender	
Safety, Health, Environment and Wellbeing (SHEW) Code of Practice (CoP)	May 2018	Will be sent digitally at Invite To Tender	Managing Safety and the Environment during design and construction.
[redacted]- Minimum technical requirements.docx	Dec 2021	Will be sent digitally at Invite To Tender	The Minimum Technical Requirements set out the minimum standards specifications required for all Flood & Coastal Erosion Risk Management (FCERM) and other [redacted] projects.

[redacted] Minimum Technical Requirements – Environmental sustainability, design and management	Dec 2015	Will be sent digitally at Invite To Tender	
[redacted] - Minimum Technical Requirements - Landscape and Environmental Design	Feb 21	Will be sent digitally at Invite To Tender	
[redacted] - Employers Information Requirements	April 2021	Will be sent digitally at Invite To Tender	BIM Level 2 required on all frameworks
[redacted] – Whole Life (Construction) Carbon Planning Tool	Sep 2021	Will be sent digitally at Invite To Tender	
[redacted] - Summary Guide: Delivering Low Carbon Concrete - Revision 1;	Dec 2021	Will be sent digitally at Invite To Tender	
[redacted] - Carbon reduction in the use of concrete: A compendium of relevant research - Revision 1.	Dec 2021	Will be sent digitally at Invite To Tender	

Services and other works:

1. **Site Meeting**

As part of this commission the supplier shall undertake a site visit with key members of the team to gain an understanding of the site conditions and requirements.

2. **Site Investigations**

The suppliers shall undertake a Phase 1 Habitat Survey, a protected species survey and complete a Stage 1 Habitat Regulation Assessment (HRA) as part of this commission. They shall attend two meetings with the [redacted] and [redacted] for the production of the Stage 1 HRA.

The supplier shall also recommend any additional surveys required to complete the production of the OBC to the *Client*. The *Client* has identified Ecological surveys regarding significant habitats and species will be required as this may restrict working areas (e.g. Trees for nesting birds/bat roost, otter holts, etc.) but is aware that the full scope of these cannot be fully determined until the designs have been sufficiently developed and consultation with the construction contractor has taken place regarding expected construction methodology. The *Client* will determine whether to proceed with any recommendations provided by the supplier or to

undertake them for the following detailed design phase (Phase 2). Any further surveys determined necessary to produce the OBC and confirmed by the *Client's* Project Manager will be managed as a service extension (contract variation) to this contract.

3. **Services search**

The supplier shall obtain services data from utility companies where this has not already been obtained by the *Client* and provided. This shall include direct costs of obtaining data and be incorporated into the OBC, including preparation of plans.

Economics Appraisal:

An economic appraisal is required to be undertaken in order to produce a cost benefit analysis that will be used to determine the selection of the preferred options.

The supplier shall review how to reduce / remove future maintenance costs.

Costs will be an estimate of the whole life expenditure including, design, investigation, construction, third party costs incurred as a result of construction, operation, and maintenance. The *supplier* will lead the development of the cost estimate with support from the ESE construction contractor and the *Client*.

The supplier shall organise and attend a Risk Workshop that arrives at a risk allowance. The risk allowance will be calculated using a recognised method, such as a Monte Carlo analysis, with input into a risk register provided by the whole project team.

The selection of the preferred options should be based on the cost effectiveness analysis and technical viability of the option and will be consulted between the *Client,* ESE and the appointed supplier.

The assessment shall include sensitivity tests to look at the effects of any changes to key parameters and to demonstrate the robustness of any key assumptions made.

Specifications of Standards to be used:

1. **Health and safety**

Health and safety is the number one priority of the *Client.* The supplier will promote and adopt safe working methods and shall strive to deliver solutions that provide optimum safety to all.

Programme (Indicative dates)

The commission shall commence on

04/07/2022, Key milestones are outlined

below:

Outline Business Case (OBC) and four Outline Designs - completion: 13/01/2023

The supplier shall provide a programme in Microsoft Project format and as a PDF.

The supplier shall produce an outline design programme for the preferred options, highlighting any constraints or efficiencies that could be made.

Services and other things provided by the [redacted]:

1. **Data and information management and intellectual property rights**

All of the data listed as being supplied to the supplier as part of this study remains the Intellectual Property (IP) of the *Client*.

2. Data custodianship

The data custodian for project deliverables from this commission will be the FBG team.

3. Licensing information

Access to LiDAR Data, Ordnance Survey mapping, model, survey, hydrometric and historical data that is the responsibility of the *Client* will be provided to the *supplier* upon award of this commission alongside any necessary licences or authorisations.

4. Data management and metadata

The supplier populates a metadata database called the information asset register (IAR). It is a requirement that all information produced by modelling work is appropriately tagged with metadata. The *Client* will supply an IAR spreadsheet (and any supplementary local metadata requirements if appropriate) where all relevant metadata can be recorded and handed over on project completion.

5. Data security

All model and survey information will be provided to the supplier in an encrypted format (using WinZip 128 bit encryption) according to [redacted] data security policy. It is expected that once the commission is completed, all the original data sent to the supplier which is classed as commercially sensitive, is returned in an encrypted format using WinZip 128 bit encryption.

Project deliverables such as model files, survey data or anything of a personal nature such as questionnaires or address data must also be returned in an encrypted format using WinZip 128 bit encryption.

Further details regarding security measures can be discussed at the Start-up meeting for this commission

6. Agency's Advisors

The *Client* has a number of advisory departments. Instructions will only be deemed enacted from them when they are confirmed by a confirmation of instruction from the *Client.* These departments include but not limited to Asset Performance, Partnership and Strategic Overview team, Fisheries, Biodiversity and Geomorphology team, Field Team, NEAS, Estates.

Appendix 1 BIM Protocol – Information Production and Delivery Table:

The supplier will be given access to the BIM2 workspace on the Asite portal.

2. Required skills / experience from the contractor and staff. Include any essential qualifications or accreditations required to undertake the work. Please provide details for any sub-contractors being used.

Geomorphological services and advice
Design and feasibility of fish passage
Modelling / Hydraulics
Economics and Cost Analysis
Appraisal
Business Case Development/Writing
Stakeholder Engagement

Information to be returned by the Contractor in Part 2 Section 3

3. Proposed programme of work and payment table (Detailing specific tasks, key milestones, deliverables & completion date where appropriate) Payment schedule should detail the % amount that will be paid after delivery of each task (*We always hold back a minimum of 30% until the project is complete. Set out how you want the Section 7 cost proposal table broken down (eg. by key task/sub-tasks; deliverable etc).*

Task no.	Task and deliverable	Completion date	Payment schedule
1	Start-up Meeting		1%
2	Gap Analysis - Review information provided and determine work required to confirm the preferred option to support the production of the Outline Business Case (from the 5 Case Business Model). This could include but not exclusive to additional model work and surveys if required.		10%
3	To work alongside a construction *Contractor* appointed by the *Client* for Early Supplier Engagement (ESE) as necessary		5%
4	Produce outline designs of the preferred options thereby allowing a detailed design to be produced in Phase 2.		40% (to be paid on completion)
5	Risk and Constraints - Key risks investigated and assessed in order to confirm the preferred options and produce the outline designs including: Geomorphological, Aquatic, Angling Concerns, impacts on potential Abstraction Points, Oil Pipeline. Other key risks to be identified by the Contractor. engagement with key stakeholders.		10%
6	Attend Bi-weekly telecons and monthly progress meeting, producing and submitting minutes for acceptance by the *Client*		5%
7	Determination of the preferred options for weir removal extent at Mousenatch, Eyton and Coxall weirs, and suitable fish pass at Croward's Weir.		10%
8	Draft the strategic, economic and financial cases of the Outline Business Cases for *Client's* review and finalisation.		10%
9	Review and update the live risk registers		4%
10	Create and update the programme of works		5%

Note: The following information is managed at framework level and should not be repeated unless there are specific requirements that relate to your project. General requirements should be covered in Section 1 and be included in the Contractors reply to the Approach and Methodology section unless you are using the optional evaluation criteria. Delete sections if not required.

4. Health and Safety Requirements
***Note**: Only include if high risk activities being undertaken e.g. working at height, near or over water). Do not request RAMS or similar risk assessments are returned with submissions. These should only be requested at contract award.*

Information to be returned by the Contractor in Part 2 Section 4
5. Sustainability Considerations ***Note:*** *Only include if project has high risk/impact sustainability considerations e.g.travel, carbon footprint, specific bio-security risks etc. that need to be managed.*
Information to be returned by the Contractor in Part 2 Section 5
6. Quality Assurance **Note:** *Only use if there are specific QA requirements that need to be evidenced e.g. specific UKAS accreditations, chain of custody, reporting protocols etc. Do not request details of standard ISO accreditations. .*
Information to be returned by the Contractor in Part 2 Section 6

2503 ECOLOGICAL SERVICES FRAMEWORK 3 (EcoSF3)
SCHEDULE B PROJECT FORM AND CONFIRMATION OF INSTRUCTIONS

PART 2
TASK QUOTATION SHEET

To be completed by Framework Contractor			
Framework Contractor name		[redacted]	
Contractor Project Manager name		[redacted]	
Contractor project manager phone number:	[redacted]	**Contractor project manager e-mail address:**	[redacted]

Note: Your proposal must not exceed 6 sides of A4 plus the Costs Proposal in Section 4 (unless otherwise indicated in project client's specification above). Attachments must not be included unless requested with the exception of a programme diagram and full cost schedule if you consider these would support your proposal.

1. Approach & Methodology

The [redacted] have identified four weirs upstream of Leominster which were constructed in the 1970s as part of the Leominster flood defence scheme. Recent hydraulic modelling has shown that the weirs do not provide the flood risk benefit as intended and there is scope to remove three of the weirs and install a fish pass at Crowards Mill. The purpose of this work is to take the project through to Outline Business Case.

We have the experience, both in terms of technical skills, project management experience and resources to successfully deliver this project for you:

- Our Project Director [redacted] is well versed in the [redacted] business case process, as he has been Environmental Project Manager on a number of fish pass and flood defence projects in the South-East Hub under the [redacted] framework.
- Our lead technical staff have delivered numerous fish pass and weir removal projects as a multi-disciplinary team. Our lead technical specialists are supported by junior staff members with experience in their discipline. In the event of illness or absence, our wider, Catchment and River Restoration Team (CRRT) can be used to provide support the project.
- We act as engineer to the River Lugg IDB through the Shire Group of IDBs.
- Our Economics and Carbon leads are experienced at delivering non FCRM projects through the [redacted] business case process. For example, [redacted] were commissioned by the [redacted] Navigation team to undertake an assessment of the benefits delivered by the River Wye and Lugg. The purpose of the assessment was to develop benefits evidence to support strategic business cases for the sustainable maintenance and safe, reliable operation of the navigable inland waterways managed by the [redacted]. The assessment comprised both a 'place-based assessment' outlining the social and geographical context of the waterways with regards to their local environment; and a 'benefits assessment' of various socio-economic and natural capital benefits
- Our experience on the Teme and numerous rivers like the Lugg enables us to provide you with specialist advice on the geomorphological and ecological functioning of this river system. Our process-based approach will be used to identify opportunities for improving aquatic habitat, as well as understanding the risks of channel change in the context of site constraints.

Upon contract award we will hold a **start-up meeting** between our key project team members and your project team, which we will use to confirm the project scope, programme, our communication plan, required/available data (a list of which will be drafted on appointment) and site access permissions. The scope of the gap analysis will also be discussed. An honest and open relationship will be fostered at all stages of the project, through scheduled fortnightly catch up calls of 1hr duration, and monthly, more detailed progress calls of 2 hours in duration. We have allowed for 6 months of these calls, through to the close of the project.

Gap analysis: Upon receipt of all required data, we will undertake a thorough review of all previous work and data made available by the [redacted], to develop a working understanding of the system highlighting requirements for targeted surveys, which we will feed back to you. All [redacted]-supplied data will be logged on our system by the Project Manager

Known datasets which will be reviewed include LIDAR, historic maps, old reports, flood risk hydraulic model and photography. We will undertake a Historic Trend Analysis (HTA) in order to understand how the weirs have influenced river behaviour historically. This will provide useful information which will feed into identification of the Critical Success Factors and our options appraisal.

Deliverables: Single gap analysis report highlighting any further data which will need to be collected. The specification for this data collection will be provided after it has been agreed that this data is required.

Site based work: Our proposed team will undertake a joint site visit to conduct the structural assessment, geomorphological audit, ecology and landscape assessment. This approach will be of benefit to the project as it will allow ideas to be shared on site between the key disciplines involved.

Structural Assessment: A visual inspection and photographic survey of each of the weir structures will be undertaken. Our key outputs for our structural assessment will be a plan showing weir defects, a short report identifying, as far as known, the construction of the weir, photographs and descriptions of defects and the potential impact of these defects for the different options we identify as part of our long list. If possible our engineer will visit the location of the pipe crossing to better understand the risk to that asset from the removal of Mousenatch Weir.

Geomorphology and Ecology Assessment: During the survey visit we will utilise [redacted] bespoke **Integrated Riparian Survey** (IRiS) methodology which combines fluvial audit, Phase 1 and river habitat survey into a single survey. Our team will record features of the river, its riparian strip and the associated floodplain, along with its biota, including the potential for any protected species. Our site work methodology for surveying is fully compliant with, indeed builds upon, the work of Mainstone (2007) and has been developed and refined by [redacted] since 2012 to take in the entire river corridor, not just the channel and/or riparian strip. This integrated approach to assessment will take into account historic system functioning, legacy issues, wider catchment factors and local influences on river system structure and behaviour.

Whilst on site our team will map key morphological features, inspect the existing structures and banks. We will also undertake **Wolman sediment sampling** in order to collect riverbed grainsize data across exposed surfaces, which will support discussions around risk and the potential for bedload movement during the options appraisal stage. Riverbank material will be visually characterised on site to feed into discussions around bank stability following weir removal.

All data collected during the field work will be used in later stages of the project, alongside hydraulic outputs from the modelling. We believe our IRiS survey method is the key to eco-geomorphology and it is flexible enough to include inputs from other disciplines, in this case fisheries and engineering. IRiS is built upon the surveyors on site exchanging ideas, gaining a greater understanding of the biotopes in the river and how these are affecting the vegetation communities and ultimately river types. The data we collect on site will include, in addition to habitats and biotopes, the locations of any notable, protected and, especially on this reach, invasive non-native species (INNS). This data will all feed into our options appraisal. This will be undertaken in the form of GIS-based **predictive geomorphological response mapping** (over a series of short, medium and long timescales) in order to identify the likely morphological response to each unconstrained option we identify.

The **landscape setting** and opportunities will be presented in a Landscape and Visual Appraisal document and an Environmental Site Appraisal Plan (ESAP).

Topographic and Bathymetric survey: Following the gap analysis and site survey we will make recommendations for additional survey required to undertake the modelling of the options. We understand that will be in the form of a compensation/change event.

Services search: We will commission a desktop services search to understand the services in and around the sites, including potential access routes.

Deliverables: Structural assessment report (one per site); Phase 1 habitat survey (one report covering all four sites) including recommendations for further work (including any tree survey); Results of services search; agreement on critical success factors; Baseline Landscape and Visual Appraisal, Environmental Site Appraisal Plan (ESAP)

Unconstrained Options Development: Following the on-site survey our project team will hold an internal meeting from which we will prepare an initial list of unconstrained options. To accompany our long list of options we will produce a series of conceptual annotated sketches which we will share with you for comment.

Options Appraisal: Our options appraisal will involve the whole project team. Existing utility services will be identified together with other constraints (e.g. pylon and wall, access routes, trees etc). Each option will be evaluated, considering their impact on these constraints, for example if the bed level is reduced will banks be destabilised? Will service crossings or bridges upstream be impacted? This may require some additional stabilisation works of the bed to reduce the risk of the bed level dropping too far, potentially affecting other structures and services in the area.

The extent of any bank and bed stabilisation works will be identified for each option using sketch drawings. Early Contractor Involvement (ECI) will be used to assess relative costs and risks associated with each option; these will be presented in an optioneering matrix. To help appraise the options we identify, we propose to undertake a Multi Criteria Analysis (MCA). The MCA would act as a high-level scheme appraisal tool, which will assist the decision-making process. The MCA is a matrix-type tool, whereby each option will be assessed on its ability to meet key project criteria and objectives. A simple numerical value is assigned to each of the key criteria dependent on how well each option meets the specific objective. The criteria against which the options are assessed will include technical performance, engineering constraints, cost, future maintenance, and geomorphological, carbon ecological and landscape/visual impacts. The quantification of carbon impacts at options assessment is a developing field. Our Carbon work will be led by [redacted] ([redacted] lead on Carbon Reduction), and further details on our methodology and experience is provided in Section 5. Following completion of the MCA, we will **hold a Risk Workshop with you in order to agree and finalise the Preferred Option to be progressed to design.** Following the meeting we will finalise our concept design for each of the sites.

Deliverables: Options assessment report including MCA.

Following finalisation of the preferred options, the **outline design** at the four sites will start.

Hydraulic Modelling: For each of the sites a Flow Duration Curve (FDC) will be estimated using a combination of Low Flows 2 software and the data available from gauges Lugg at Butts Bridge (55021) and Pinsley Brook at Cholstrey Mill (55020). We will also calculate and test more extreme flood events including the 1 in 2 year, 1 in 10 year and 1 in 100 year flood events, using the hydrological estimates in the existing flood risk model.

Assuming that weir removal is still preferred at Mousenatch, Eyton and Coxall weirs, we will construct a new 2D hydraulic model for each weir to assist with the design process. We will use TUFLOW or HEC-RAS modelling software and we will represent up to two options for each weir.

The model will be used to assess the performance of the design at low to moderate flows (e.g. Q95 to Q10) from a fish passage perspective. The design criteria for fish passage will be agreed with you following an

analysis of the fish species present in the river and estimation of the likely swimming speeds (SWIMTv3.3 will be used).
Furthermore, we will analyse velocity across the flow regime linked to the Hjulstrom Curve and shear stress to assess the potential impact on erosion and deposition processes through the reach. The hydraulic model outputs will allow us to further quantify hydromorphological character (through biotope mapping) and dynamics for each option which we identify. We will utilise the existing hydraulic model results to understand how weir removal could impact in-channel morphological dynamics and flood risk within the local and wider area. We will use outputted velocity and shear stress data to understand probable changes to sediment transport and bank stability. This will be linked to the Wolman sediment distribution data collected from sediment samples undertaken at the weir and upstream and downstream of the structure. We will use the outcomes of the hydraulic model to gain an understanding of the impact of river and floodplain connectivity and assess the pass-ability of the river for fish across the flow regime. We will also assess the wider impact of weir removal within the up and downstream reaches, then use our model to adapt our concept design.
GIS Predictive mapping: Upon completion of our modelling exercise we will refine our initial predictive mapping (based on the outputs from the site work). This will take onboard sediment erosion and deposition zones and likelihood of future morphological change at the site as well as upstream and downstream. Our analysis will link to key receptors at the site and those nearby (such as the rail viaduct upstream) and assess whether mitigation measures need to be considered.
For the technical fish pass at Crowards Weir, an appropriate modelling/calculation technique will be used. If for example the solution is a Larinier pass, we will use our in-house Larinier design spreadsheet to maximise the efficiencies of the hydraulic design process.
Drawings: Our hydraulic design team and engineering team will work closely throughout the outline design to ensure that the designs are as safe as reasonably practicable to build and maintain. We will deliver three drawings per site: a Hazards and Constraints Plan, a General Arrangement Plan and a Sections drawing. Health and Safety will be embedded in the design process as we will liaise with your Principal Designer and follow SHEW COP. We will also provide landscape management plan objectives for the design proposals and an indicative landscape plan (ILP) for the designs.
As the outline designs are developed, we will undertake the Stage1 Habitats Regulations Assessment (HRA) Screening to assess potential impacts upon the River Wye SAC. We have allowed for two meetings with the EA and Natural England (NE) to discuss the HRA. In the programme we have currently scheduled this at the end of the draft and final review stages.
We have allowed for the attendance at stakeholder engagement event for our PM or one of our other technical leads (this can be flexible depending on who is most appropriate given the audience). We have assumed that this will take place after the finalisation of the outline design drawings.

Deliverables (per site): Hazards and Constraints Plan, Two design drawings per site (one GA plan, one set of sections), Design report – including optioneering and key design decisions, Buildability statement, Health and Safety Statement; Designers Risk Assessment; RAG List; Stage 1 HRA (one report covering all four sites), Draft landscape management objectives for the design proposals, indicative landscape plan (ILP).

In parallel to the development of the design we will draft a Strategic, Economic and Financial cases of the Outline Business Case (OBC). This will build upon the baseline, option assessment and outline design work. Our economics experts will calculate benefits using the OM4 length of measure improved but the proposed analysis does not include for use of natural capital metrics

Deliverables: Draft Strategic, Economic and Financial cases of the Outline Business Case. This will be one document covering all four sites.

Following completion of our design we will hold a Phase 1 **close down meeting** with you.

2. Project Management (inc Project plan). A project plan may be provided as an attachment with your **reply** *(delete if not required)*

Project Management: [redacted] (Technical Director for Fisheries) will act as Project Director. [redacted] Fisheries Team Leader) will be the Project Manager and will provide a single point of contact with the client and internal project team; ensure the provision of regular summary reports on project progress and programme and deliver the contract management activities. [redacted] is an experienced project manager and has completed intensive [redacted] Project Management Level 1 and 2 training. [redacted] will ensure that the project is undertaken in accordance with the agreed Project Plan, budget, programme and internal Quality Assurance and Environmental Management Systems procedures. [redacted] will continuously review work to ensure that it is completed to the satisfaction of the client. There will be a systematic approach to record and feedback quality and value issues to the project. We are committed to the continued improvement of our services and our approach will ensure that this can be achieved. [redacted] and [redacted] will also oversee the project outputs and will be involved in the technical review of the draft and final reports.
Project Programme: Our initial project programme is attached. This is currently in a draft format. We will aim to agree and finalise the project programme with you at our start up meeting.

Quality Assurance: [redacted] Consulting are independently accredited to the Quality Management Standard BS EN ISO 9001:2000. We have further developed an Integrated Management System that encompasses the guidelines and requirements of the Environmental Management System BS EN ISO 14001:2004 and the Occupational Health and quality standards are maintained and monitored. To achieve this consistency requires and involves 100% management commitment and a culture embracing continual improvement. All work carried out on this project will be subject to [redacted] QA procedure, with [redacted] (Project Director) overseeing delivery.

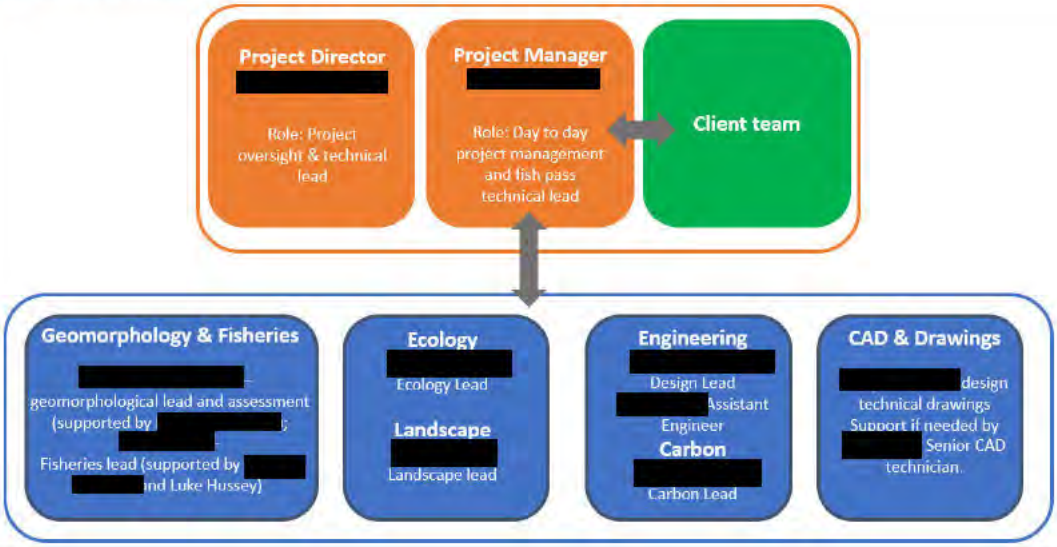
Sustainability: [redacted] will aim to reduce the environmental impacts of this project as part of our ISO14001 environmental management system. Central to this is to reduce environmental impacts in undertaking the feasibility work and maximising the environmental and sustainability outcomes (SD Goals) of the project as implemented. In delivering the project we will adhere to our hierarchy of modes of transport, where possible (depending on Covid-19 restrictions). We intend to undertake the geomorphology and ecology site work at the same time to minimise our carbon footprint. In addition, we will use our web conference facilities (MS Teams) with you, and for internal meetings. Copies of our Environmental, Energy Use and Sustainability policies can be made available on request.

Biosecurity: [redacted] recognises the importance of having a stringent biosecurity policy within our business and we employ effective biosecurity measures to demonstrate to our staff, the public and customers that we take our corporate responsibility seriously. We abide by our own Biosecurity Policy and Guide to Biosecurity (available on request), ensuring appropriate biosecurity control measures are undertaken by all staff.

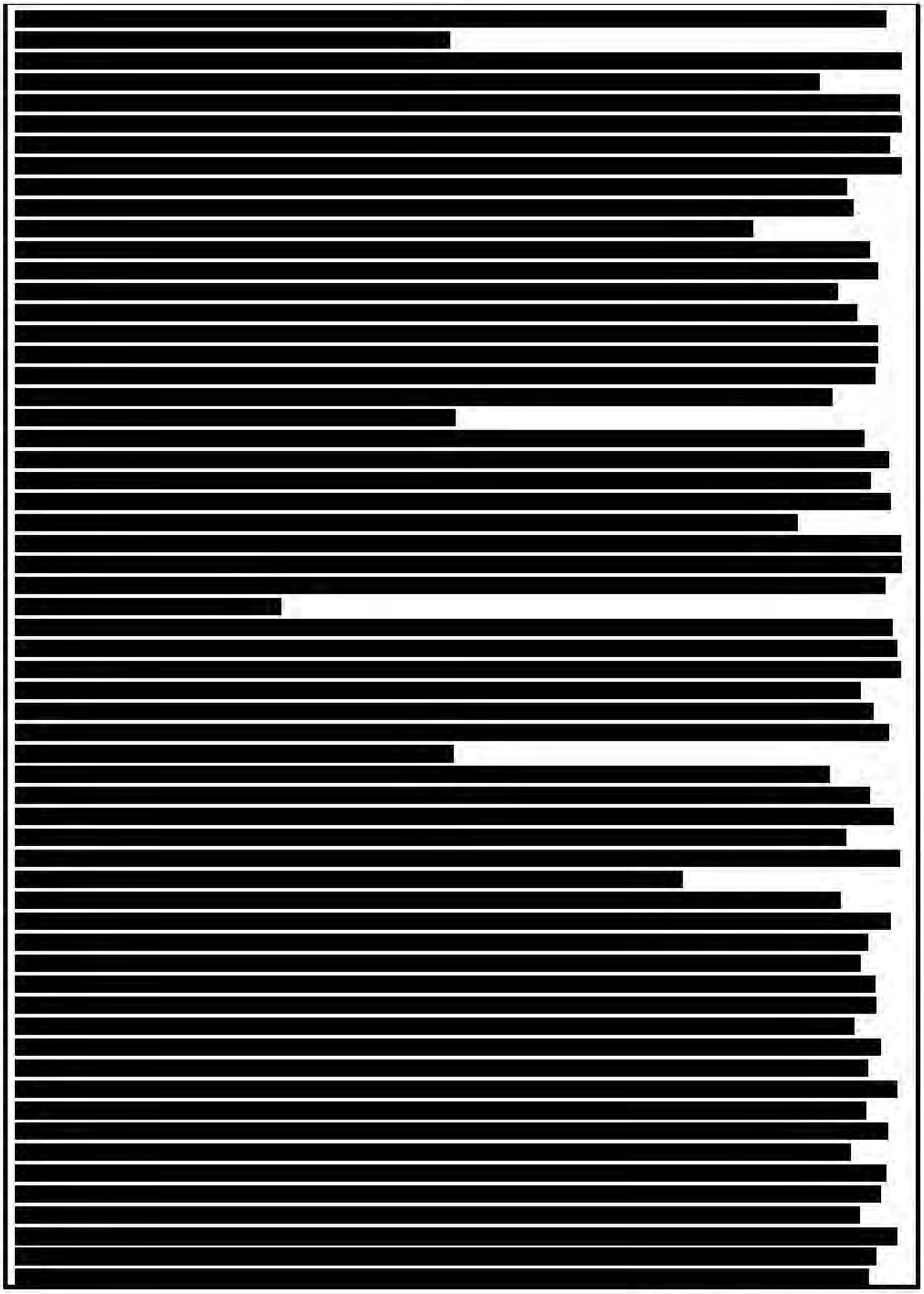
Risk: The proposed team has the necessary skills and experience to carry out the work specified. The main risks identified, which are not generic (e.g. changes in scope, loss of staff, poor weather delaying site work, site work access permissions, computer problems, etc.), relate to the timely delivery of all relevant information and datasets to [redacted] the availability of a fit-for-purpose flood risk hydraulic model (plus accompanying datasets and technical reports), receiving comments on draft deliverables as programmed, and the consequences of the prevailing Covid-19 guidelines and any future restrictions during the course of the project. We will aim to agree adequate engagement and report review periods with you during our inception meeting. We have assumed that we will get one set of comments back from your project team.

3. Proposed Staff who will do the work and briefly state previous relevant qualification/experience. Contractors experience of undertaking similar projects and accreditations (if requested)

We have provided a summary of our proposed project team below:



[redacted]



[redacted]

4. Health & Safety (only complete if requested in defined evaluation criteria)

[redacted] is very proud of its **Health and Safety** (H&S) and staff welfare record. [redacted] H&S system will be used for this project, which is based on risk-assessment and complies with ISO18001. All staff involved in this project will complete Display Screen Equipment Assessments and have annual eye tests. Other risks that are likely to be more pertinent to this study are during the site visits. Ahead of site visits we will complete and provide you with a copy of our site risk assessment, coupled with a detailed plan of action for the survey(s). These documents will ensure that our whereabouts throughout the surveys and the escalation procedures in case of emergencies are known to all. Appropriate PPE will always be worn by all our staff on site. [redacted] takes the H&S of its employees very seriously: no field work is undertaken prior to the production of a site Risk Assessment which must follow the [redacted] Method Statement/Standard Operating Procedure (SOP) for this type of work. All of the known and suspected risks on site will be incorporated into a Risk Assessment, and this will define the mitigation measures to be implemented to manage the risk as far as reasonably practicable and identify the appropriate PPE to be used on site. To demonstrate how key risks will be mitigated against, a Safe System of Work (SSoW) (Method Statement) document will be produced. This will include the scope of works and PPE and equipment to be carried by team members on site.

No lone working will be permitted during the surveys and survey teams will consist of a minimum of two members of staff, who will work together at all times. Each member of staff will carry a charged mobile phone and we will have an iPad carried by the team which can also serve as a device through which the emergency services can be contacted, and the GPS location can be tracked. This is a tried and tested technique that [redacted] have employed for many years and has been developed and refined following lessons learned during previous surveys. All [redacted] staff receive in-house health and safety training. Our survey teams, who will be working on site for this commission, have undertaken additional Working In, and Near Water Training.

Risk Assessments will be approved by [redacted] (Project Manager), and any SSoW will be approved by [redacted] (Project Director). All relevant health and safety documentation will be provided to the Environment Agency for agreement to undertaking any field work on site.

5. Sustainability (only complete if requested in defined evaluation criteria)

[redacted] are experienced in delivering holistic and proportionate carbon assessments. We are aware of the limitations of the ERIC Carbon Planning Tools in their application to schemes involving nature-based solutions and working with natural processes. For the Billingham Beck River Restoration scheme, Martin, our carbon lead, worked closely with the project manager to develop an estimate of the materials, plant and annual maintenance which were input into the relevant sections of the calculator to understand the capital and operational carbon emissions. For the River Rother Structures project, we also provided an overview of the potential blue carbon impacts a more natural river system. This is a developing area of research and whilst it won't be possible to provide quantifiable estimates of emissions or sequestration, we will highlight key findings to date which could help inform designs. We propose to apply the above approach for this project where the designs and data allow to provide as comprehensive an overview of the estimated whole life carbon impacts as possible. It should be noted that at OBC stage, assumptions will need to be made to complete the carbon calculator in full. We will make a log of these assumptions that can be refined as the project designs progress and develop. The final outputs will be presented into a plain-English as part of the design report and the spreadsheets used for the carbon calculations will be provided as appendices.

6. Quality Assurance (only complete if requested in defined evaluation criteria)

Not required as per Tender clarification16.

7. Cost Proposal

Please use day rates, including any applicable discounts, as agreed under the framework contract. A full cost schedule may be attached to support the costs summarised below.

Task No.	Name	Framework grade	Day rate	No. of Days or part thereof	Cost
1	[redacted]	Director	[redacted]	0.63	[redacted]
1		Principal		4.44	
1		Assistant		1.27	
1		Senior		0.63	
2		Principal		3.01	
2		Assistant		3.81	
2		Principal		0.63	
2		Senior		0.63	
3		Principal		1.90	
3		Principal		1.27	
3		Principal		0.79	
3		Assistant		0.79	
4		Director		1.59	
4		Principal		12.06	
4		Assistant		28.56	
4		Assistant		14.28	
4		Senior		1.27	
4		Assistant		2.54	
4		Principal		0.63	
4		Senior		3.17	
4		Principal		2.38	
4		Senior		14.28	
4		Assistant		19.04	
4		Principal		6.35	
4		Assistant		19.04	
5		Principal		1.75	
5		Assistant		2.38	
5		Assistant		1.59	
5		Senior		3.49	
5		Assistant		1.19	
5		Principal		0.32	
5		Senior		4.76	
5		Principal		1.90	
5		Senior		4.76	
5		Assistant		0.48	
5		Principal		1.11	
5		Assistant		2.38	
6		Director		2.86	
6		Principal		13.96	
6		Senior		1.43	
6		Principal		0.79	
6		Senior		0.79	
6		Principal		0.79	
6		Principal		0.79	
7		Principal		2.38	
7		Assistant		9.52	
7		Assistant		9.52	
7		Senior		1.59	
7		Senior		9.52	
7		Director		4.76	
7		Director		4.76	

8	[redacted]	Director	[redacted]	3.17	[redacted]
8		Principal		8.57	
8		Assistant		9.52	
8		Assistant		9.52	
8		Principal		5.55	
8		Senior		6.35	
8		Principal		4.76	
8		Assistant		19.04	
8		Director		4.76	
9		Director		0.32	
9		Principal		2.22	
10		Principal		1.75	
10		Assistant		3.49	
			Total staff costs		

Expenses (please detail type ie travel, accommodation etc)	**Travel** [redacted] mile based on 1400 miles, breakdown as follows: - Site meeting for PM (Skipton - Leominster) 172miles x 2 No meetings = 344miles - Ecologist site visit (Doncaster - Leominster) = 150miles x 2No. Visits = 300 miles - Geomorphologist visit (Coventry - Leominster) = 73 miles x 2 No. Visits= 146 miles - Landscape architect site visit (Newport - Leominster) = 58miles x 2 No Visits= 116 miles - Stakeholder engagement visit for PM (Skipton - Leominster) = 172 miles x 2 No. Visits = 344 miles - Mileage incurred on site (assumed 30 miles per visit) = 30miles x 5 No visits = 150 miles
	Accommodation [redacted]**:** [redacted] per night based on 8 overnight stays: - 1 overnight for PM - site meeting/start up - 2 night stay for ecologist part of Phase 1 habitat mapping and HRA work - 2 nights for Geomorphologist - IRIS work - 1 night stay for Landscape architect - 2 nights for stakeholder engagement event (assuming all day event with prompt start)
	Subsistence - [redacted]**:** [redacted] per day for subsistence based on 8 overnight stays

	Subcontract [redacted] Services Searches:
Total overall costs	[redacted]

8. Terms & Conditions
Note to contractor – All call off contracts under the Ecological Services Framework are subject to the terms and conditions agreed at framework award, including the Prior Rights Schedule and GDPR Schedule completed at award of the call-off contract.

Notes	You must have a purchase order number from the Contracting Authority before you start any work in connection with this proposal. **If you have carried out a protected species survey, data collected must be uploaded onto the NBN network. Please take account of this in your quote.**

By signing this form *(Insert Contractors Name)* agree to provide the services stated above for the cost set out in your Cost Proposal and in accordance with the Ecological Services Framework 3 Agreement Terms and additional appendices (if used). **Notes**

Contractor Project Manager:	[redacted]
Signature:	[redacted]
Date:	31-8-22

9. Confirmation of Instructions (Contracting Authority Project Manager to complete)

Notes	All agreed post submission amendments to scope, proposal, timetable or costs must be updated in the sections above prior to accepting the proposal. **A commission code must be obtained from Stephen Perriss prior to confirming award and must be quoted on your purchase order.** A Bravo ECM reference should be obtained from Commercial if the project has been issued via Bravo and quoted on your purchase order.

Authorisation	**Name**	**Signature**	**Date**
Contracting Authority Project Manager	[redacted]		08/09/2022
Authorised Contracting Authority Signature			12/09/2022
DgC Authorised Signature (if required)			

Commission Code	[redacted]
Purchase order no.	
Bravo ECM Ref (if applicable)	project_36247

The completed Project Form should be returned to the Contractor as authorisation to commence work. A copy must be provided to the named Commercial Lead if the award has been conducted via Bravo.

22503 ECOLOGICAL SERVICES FRAMEWORK 3 (EcoSF3)
SCHEDULE B PROJECT FORM AND CONFIRMATION OF INSTRUCTIONS

PART 3
CHANGE CONTROL SCHEDULE

Notes	**To be completed by Contracting Authority Project Manager** **Any extensions, price changes or amendments to existing orders need to be discussed with Stephen Perriss before being agreed with the Contractor**. Please remember to amend your Purchase Order in SOP if necessary. The table below should be used to record and authorise the agreed changes throughout the project. A Change Control Notice (CCN) should be completed for substantial changes to the project and a summary provided in the table below. Send a copy of the revised Project Form and CCN (if used) to the Contractor once the change has been agreed and approved. A copy should also be sent to your Commercial Lead if a Bravo ecm reference has been provided.

10. Change Control
All amendments to project scope, timetable or costs must be submitted to and approved by the Contracting Authority PM prior to implementing the change.

Change Details	CCN Ref. (if applicable)	Revised completion date (if applicable)	Revised Project Cost (if applicable	Approved by (Contracting Authority's PM) / Date