22503 ECOLOGICAL SERVICES FRAMEWORK 3 (EcoSF3)

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

Project title: Greatham Marsh (OBC to FBC)

Bravo project ref (if applicable): project_37542

Date: 19/10/2022

Contracting Authority (Environment Agency; Natural England; Defra etc)	Environment Agency		
Project Manager:	[redacted]	**Project manager's phone number:**	[redacted]
Budget holder:	[redacted]	**Cost code:**	[redacted]
Commercial Contact (if applicable):	[redacted]	**Project manager's email:**	[redacted]
Project Start Date	23rd January 2023		
Project Completion Date	11th August 2023		

For any projects over £10k, full competition is required (i.e. all suppliers on the Lot invited to quote).	**Direct Award**		**Mini-comp**	X				
Call off from Lot number (please tick)	1		2		3		4	X

Proposal return date: ***(no less than 10 working days from current date)***	18th November 2022

Evaluation criteria:		
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 minimum score threshold 4 will apply		**60**
Proposed Staff (inc Pen Portraits) and Contractor's experience/accreditations. minimum score threshold 4 will apply		**20**
Project Management (including project plan) minimum score threshold 4 will apply		**20**

Specification (Details to be provided by the Contracting Authority Project Manager)

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)

The Tees Estuary is one of the most heavily modified and developed estuaries in the UK, with less than 10% of the original intertidal habitats remaining. From 1740, large areas of saltmarsh have been enclosed to form freshwater grazing marsh. However, it has been the industrialisation and systematic land take between 1830 and 1970s that has resulted in the majority of the habitat loss. It is estimated that the Tees Estuary has lost over two thirds of its intertidal habitat through waste disposal and infilling over the many years of modification, some 3,000ha, or 30km^2.

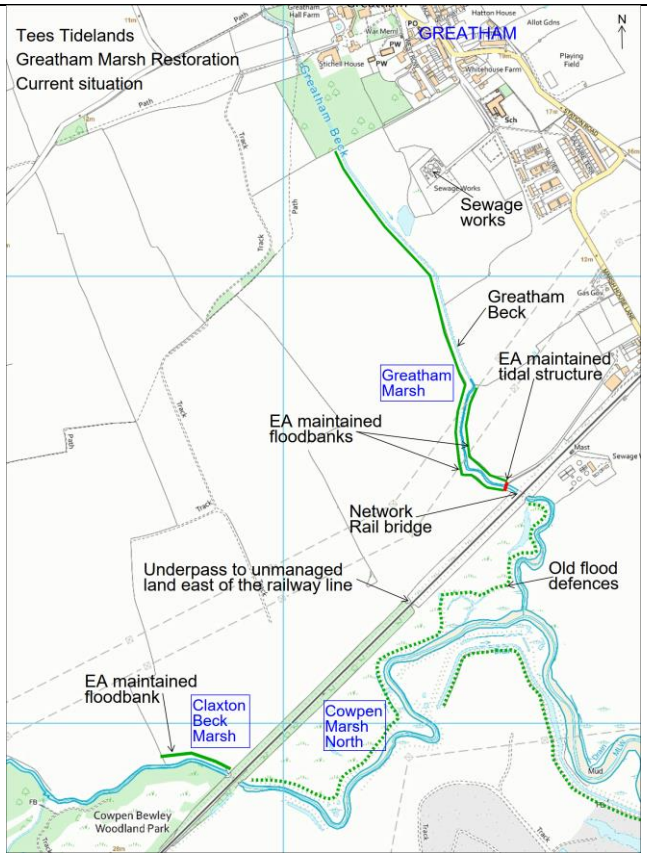
The Greatham Marsh Restoration project is centred on the restoration of intertidal habitat on the low-lying agricultural land near Greatham Village. Historically, the village was on the edge of the marshes but is now inland from the remaining intertidal areas. The land is currently protected by flood banks constructed in the 18th century and a tidal structure with tidal flaps constructed in 1980. The alignment of Greatham Beck was rationalised in approximately 1981, whereby the meandering tributary located to the west of the exiting alignment was infilled.

The tidal structure licence expires on 30 November 2029. Condition 12 of the licence stipulates that on the expiry of the Licence, the Licensee shall remove the Works and shall reinstate the riverbanks and foreshore to the Authority's satisfaction.

The project currently has an approved Outline Business Case and is currently working towards Full Business Case.

Overarching Project Objectives

The objective of the project is to restore Greatham Marsh and satisfy the legal obligation to decommission the Greatham tidal structure, which is maintained by the Environment Agency. This project will enable the natural migration of intertidal habitat as sea levels rise and help address some of the impacts of climate change. The project shall also assess the viability of creating intertidal habitat at Cowpen Marsh North and Claxton Beck Marsh.



Figures 1 – illustration of project area

Figure 2 & 3 – images of Greatham tidal structure (upstream and downstream)

Project Activities

The Contractor will:

1. Familiarise themselves with the Tees Tidal 2020 hydraulic model (TUFLOW).

2. Specify the changes made to the hydraulic model to run the scenarios, to ensure the model achieves the required standards for future utilisation. All modelling works shall be undertaken in line with the requirements of the Environment Agency's NEC4 Minimum Technical Requirements for Modelling Version

3. Model runs to include a full range of scenarios for the preferred option, including differing tidal and fluvial limits

4. Use the model to determine the current and impact on local flood risk, including potential risks to receptors such as homes and infrastructure.

5. Produce a specification for any additional topographic survey required and procure topographic survey where required to inform the detailed design.

6. Carry out a Water Framework Directive assessment to inform the selection of a preferred option and the detailed design.

7. Appraise options using DEFRA Biodiversity Metric 2.0 to reassess the biodiversity baseline and forecast the biodiversity gains resulting from the proposed changes. The Supplier should utilise the comments box within the metric to detail reasoning behind the condition score ((i.e. invasive species present, water quality in pond appears poor, lack of under storey to woodland etc).

8. A UK Habitat classification (UK Hab) assessment should be undertaken within the red line boundary of any project where BNG is to be applied – This should be done as an alternative to a Phase 1 habitat survey

9. All surveys must be undertaken by a suitably qualified and experienced ecologist. We expect a minimum of one full member of CIEEM to be present.

10. All BNG surveys must follow UK Hab assessment guidelines (https://ukhab.org/) and latest BNG technical guidance (http://publications.naturalengland.org.uk/publication/5850908674228224)

11. The habitat should be compartmentalised so similar habitats with different conditions in the same area can be clearly identified

12. A map should be produced displaying the habitat types present and the condition of these habitats. Separate maps for habitat condition and distinctiveness will be produced aid in understanding the site

13. The Supplier will provide recommendations on how the number of units could be increased and how each habitat should be managed or uplifted in their reporting.

14. The Supplier will consider the potential of reedbeds to be developed as part of the preferred option to offset impacts from the Greatham North East project.

15. Further BNG assessments may be required if offsite enhancement, creation, or offset is likely. This will be deemed as a variation to the Project Form and assessed in Part 3 Change Control.

16. Scope and procure the following environmental surveys to inform the detailed design and construction phase;

    - Water vole
    - Otter
    - Bat survey
    - Great Crested Newt eDNA
    - Barn Owl

17. Complete options appraisal in line with the FCRM Appraisal Guidance to include monetisation of FCRM and Ecological services benefits, including BNG.

18. Facilitate a Short List to Preferred option workshop.

19. Produce detailed design drawings of the preferred option in accordance with the Minimum Technical Requirements (MTRs), and address comments made on the design drawings by the EA and their appointed Early Supplier Engagement (ESE) contractor. They will work with the contractor, for them to provide a construction phase estimate that will directly feed into the Economics report and FBC.

20. The designs will consider;

    - Interaction with utilities, including gas main and pylons
    - Interaction with the sewage treatment works
    - Interaction with Network Rail embankment
    - Access arrangements and compound location
    - Material to be excavated and opportunities to reuse on site
    - Maintaining Public Rights of Way
    - Potential for in-channel morphological improvements
    - Review of Ground Investigation results
    - Works south of the railway line and Claxton Beck (see Outline Design)

21. Produce sketches and artist impressions of the preferred option for engagement with the wider community .

22. Carbon estimates will be calculated by the Supplier for all short-listed options.

23. Liaise with Hartlepool Borough Council and submit a request through their online system to determine planning requirements.

Other services required

a) The Supplier shall attend contract start-up meeting (via Microsoft Teams) with the Environment Agency PM to finalise project scope and deliverables for the project.

b) The Supplier will attend monthly progress meetings and produce minutes of the meetings. They will also produce a monthly progress report including details of work completed, risks to delivery and a forecast of likely contract payments until completion.

c) The Supplier will support the Environment Agency in engagement with stakeholders by preparing sketches for the option appraisal.

d) The Supplier will actively seek efficient solutions and communicate any efficiencies that could be claimed through the Agency's efficiencies reporting process.

e) The Supplier will also actively seek low carbon solutions and will complete the Agency's Carbon Calculator for any preferred options identified.

f) The Supplier will undertake the role of Designer and Principal Designer under the Construction Design and Management Regulations (2015) for the design phase.

g) The Supplier shall be responsible for complying with copyright, including the procuring any licences required, relating to the use 3rd party data for the project.

h) The Supplier will be responsible for arranging any access required to undertake site visits in the study areas.

i) All meetings will be conducted in accordance with any Covid restrictions on working practices

j) The Supplier will be responsible for applying suitable quality assurance procedures at all stages of the project to ensure outputs are robust and to a high quality standard.

Potential future work
There is the potential to award extra work under this contract if required. Note only an indicative cost should be provided at the stage of tendering, as this will not form part of the Project Form. Should any of the following is required, they will be instructed through the Change Control section by the Client.

- Further modelling required in addition to that set to be carried out for the preferred option
- Constuction phase drawings/designs
- Provide the role of Principal Designer during the construction phase
- Respond and act on Technical Queries raised by the contractor during the construction phase through updating detailed designs
- Further design work based on the Tees Tidelands footpath
- FBC documentation production
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- Produce a management plan of the site for post construction activities
- Prepare the Full Business Case (FBC) to restore Greatham Marsh and removal of Greatham tidal structure. The FBC shall include the biodiversity net gain, economic and carbon estimates for each option assessed to identify a preferred option.
- Prepare contractual documents for the construction phase, including the scope, Pre-Construction Information and Environmental Impact Assessment.
- Pre-Construction Information packages for construction works as required under the latest EA SHEW code of practice (as issued in June '22).
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2. Information to be returned by the Contractor and the section of Part 2 the information should be provided in.
Approach and Methodology (including Health & Safety, Sustainability and Quality Assurance unless being evaluated separately):

- Identify proposed methodology to achieve the above outputs and confirm deliverables. This should include survey work (if applicable), assumptions and exclusions.
- Details of how options will be appraised using the analysis tools set out in the Specification above and communications with the Environment Agency.
- Details relating to the updating of the existing model with proposed scenarios, provide supporting materials and designs to support the EA in production of the FBC documentation, unless instructed under separate cover to undertake this task
- Details of how the relationship between the Supplier and contractor's programmes will be managed, as input is required from both parties.
- Identification of key project risks and how they will be mitigated. A summary risk table (including residual risk ownership) should be included in the proposal.
- Include details of how the quality assurance that will be applied to the project and the final outputs.

Project Management (including programme plan):

- Programme shall include key milestones. Sufficient detail should be provided to evidence a planned approach to delivering the various elements of the project within the required timeframes.
- Programme should allow for consultation with contractor appointed through Early Supplier Engagement contract, including time for the contractor to quote for the works.
- Project Management should include and overview of the proposed project management and reporting structure.
- Include details on regular reporting and meetings.

Project Staff:

- Demonstrate appropriate skill and competency to deliver the required outputs identified in the Specification above and in Section 2 below.
- Identify previous relevant experience of undertaking similar projects.

- If subcontractors are being proposed, please provide the elements of the project that will be delivered by these

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.

- Experience of scheme appraisal in line with FCRM and treasury guidance
- Experience of feasibility and design of solutions to restore habitat including intertidal habitat
- Stakeholder Engagement
- Report and Business Case development including developing PFC
- Project Management
- CDM competency

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

Task no.	Task and deliverable	Completion date	Payment schedule
1	Attend contract start-up meeting Familiarisation with hydraulic model Review options and propose any changes and/or additional options, to be agreed with the Environment Agency		10
2	Model preferred option to restore Greatham Marsh, to maximise the saltmarsh and intertidal mud Appraise options using DEFRA Biodiversity Metric Procure ecological surveys		30
3	Produce detailed design for the preferred option Produce contract pack for the construction phase		20
4	Produce economic appraisal Produce FBC		10
5	Project Completion		30

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PART 2
TASK QUOTATION SHEET

To be completed by Framework Contractor

Framework Contractor name		**JBA Consulting**	
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.

Do not make or append Caveats and Assumptions in your proposal – any points of uncertainty must be raised as a clarification point prior to submitting the proposal. Where assumptions are to be made, these will be stated by the Authority's Project Manager.

1. Approach & Methodology

Understanding the Project and the Brief

The Greatham Marsh Restoration project will be led and delivered by a dedicated team from our [redacted] (PM and engineering), [redacted] (environment), [redacted] (modelling and planning) and [redacted] (ecology) offices. The team are highly skilled and familiar with the wider Tees Tidelands programme of work as well as this specific Greatham Marsh project. The team are all within 90-minute drive of the study area, minimising travel time.

The Greatham Marsh Restoration project aims to remove a tidal structure and restore both saltmarsh and mudflat habitat. The preferred Option (5) has been identified as the preferred option, which comprises removing the tidal structure, construction of breaches with realignment of the former Greatham Beck tributary and some additional creeks joining the tributary (tie-in downstream of Greatham Wood). The existing Greatham Beck would remain as the main flow channel. A Northumbria Water outfall would remain unchanged. The project benefits include; an area of approximately 15ha of intertidal habitat; a BNG uplift of over 200%; opening 0.9km of burn for fish passage and ensures compliance with the legal obligations associated with tidal structure (asset 338757) licence. The project has the support of the landowner and it also offers the opportunity for further adjacent habitat improvements at Claxton Beck and Cowpen Marsh. It forms part of a larger estuary wide programme of work at Saltholme and Port Clarence. Accesibility is to be considered as part of the work. An existing right of way lies adjacent to the railway and watercourse and part of the 'Greatham Get Away' circular walk which also connects to the much larger proposed Tees Tidelands Footpath, connecting south of the railway. The impact on the PRoW and the opportunities will need to be addressed as part of the project.

We understand that the work will be [redacted]. The client will lead on Stakeholder engagement and we have indicated in the methodology where we anticipate support is required from ourselves. JBA have excluded currently any legal or formal process/procedures with key asset owners. CLOCs have been excludes due to on-going framework level clarifications. We have not made any allowances for construction support or construction phase designs currently, it is assumed that this will be picked up during the construction phase works. JBA have excluded all intrusive ground investigation works. We cannot take responsibility for delays to the project programme caused by the need for design changes arising from consultees or arising from regulatory requirements not currently foreseen for example the outcome of the WFD Assessment.

Why JBA Consulting?

JBA Consulting is an independent employee-owned company with an enviable reputation for delivering high quality and cost-effective environment and engineering services. We have over 25 years' experience of successfully planning and delivery environmental projects. As a consultancy, we are respected by our clients and competitors. We are recognised nationally as a leading consultancy: in ecology we were shortlisted and highly commended in this year's (2022) CIEEM Consultancy of the Year (Medium) as well as highly commended in the Best Practice – Small Scale Mitigation category for our Water and Abandoned Metal Mines – Calaminarian grassland project.

Previous Experience

JBA is well-placed to support the restoration of Greatham Marsh. Our team have direct relevant experience of working with the wider team in developing the project to OBC. We have long-standing experience of hydraulic modelling studies in the Tees Estuary and developed the Tees Tidal 2020 TUFLOW model to be used in this project. Successful outcomes from the study supported development of the Strategic Outline Case for Greatham Marsh Restoration. This work was then built upon through the Ecological Services Framework (EcoSF3) Lot 4 allowing JBA to effectively support the delivery of the Outline Business Case for Greatham Marsh Restoration. Elsewhere in the Tees Estuary, JBA have delivered hydraulic modelling work for Lustrum Beck, assessed the impact of removing or adapting Portrack Screens and delivered outline business cases including Holme Fleet which seeks opportunities for environmental enhancement without detriment to flood risk.

JBA has extensive experience of similar wetland creation schemes as well as managed realignment schemes. JBA designed the wetland at Halton Marshes on the South Bank of the Humber for Able UK, following the granting of a Development Consent Order from the Secretary of State for new port developments. JBA was recommended by the Institute of Estuarine and Coastal Sciences at the University of Hull, following the failure of two previous designs to meet the requirements set by Natural England and the RSPB. We have also worked on a number of coastal habitat management and managed realignment schemes. At Alkborough Flats on the Humber we undertook the stakeholder engagement and economic evaluation of the scheme and we are currently employed on designing another large-scale realignment scheme on the North Bank of the Humber in East Yorkshire. In addition developed the first realignment scheme in Wales a coastal habitat creation scheme at Cwm Ivy on the Gower. We have also worked on re-engineering a number of coastal defence sites, such as at Runswick Bay and Thorney Island, to create more ecological niches to aid colonisation by littoral species and we are currently looking at creating artificial chalk reefs off the South Coast to create kelp beds to reduce wave erosion.

Methodology

Design, Engineering and Carbon

Our engineering design team will work closely and iteratively with our ecologists and landscape team. Our PM and Environmental Coordinator will play a key role in ensuring the design process is developed in close liaison with the client team. The full range of skills contributing to the design are identified in Section 3.

The JBA engineering team have a proven record in supporting the Environment Agency's goal to cut carbon emissions and reach net zero by 2030. The team have continued to support key EA frameworks including WEM, CDF & ECoSF3. The team have experience in both permanent and temporary works design, working collaboratively with Principal Contractors and are qualified Principal Designer & ECC Supervisor. The team will adopt the principles of PAS2080, balancing the need to build nothing through to build smarter therefore, reducing the project's carbon footprint and any engineering works' impact on the local community. **Environmental**

Co-ordination of environmental, engineering and construction related aspects will be essential to success. To support this and support the wider client project team our project PM will be supported by a dedicated environmental co-ordinator, they will support an innovative environmentally focused design to meet the projects requirements, ensuring internal efficiencies and creative interdisciplinary working.

Consenting and licence requirements which will form part of the scheme will be manged by the Environmental Co-ordinator. The project scope currently does not include for all the likely licensing and consents required and an allowance for these is not included in this proposal for example relating to potential PROW diversions and likely bridging requirements relating to the preferred Option. (Photomontage on front cover of the OBC). It is noted the completion or update to a Preliminary Environmental Information Report (PEIR) is not included within the project scope but is likely. The extent of requirements was unclear. The preparation and updating of an Environmental Action Plan has not been included for as this is not listed in the project scope.

Geotechnical and Geo-environmental

The experienced team of geotechnical engineers and geo-environmental consultants will closely supervision the ground investigations on site. On site presence will develops the teams understanding of the site and associated risks and constraints which will enable a well-informed design process. Following these investigations, the team will review and comment on the draft borehole logs and schedule geotechnical testing to finalise results. A in depth review of these results following lab testing will be conducted and a risk assessment established by the project geo-environmental consultant. A combined ground investigation interpretive including geotechnical risk register will be prepared and input will be provided into the designers' risk register. To facilitate the preparation of design for construction, the specification for the earthworks will be prepared. Input into the engineering design drawings and

buildability statement will also be conducted toa low for a robust design. Furthermore, a DoW CoP MMP compilation will be devised to assets preparation for the next phase of the project.

Ecology and Geomorphology

Our project ecologists are experienced in survey and habitat design and they include team member with specific licenses, both Great Crested Newt and Barn Owl. All surveys will be undertaken in line with best practice guidelines and have been costed based on the recommendations given in the Preliminary Ecological Appraisal. It is recognised that the site has already been surveyed for Water Vole with some potential burrows in the bank, but no additional field signs. No evidence of Otter has previously been recorded on site. Therefore a single, pre-works check for Water Vole and Otter will be undertaken by two suitably experienced ecologists within the appropriate survey window (Mid-April to end-Sept). If there is potential for disturbance to the walkway under the railway line or the railway culvert carrying the channel flow, these should be subject to at least one bat survey. We have assumed that the culvert assessed in the PEA as needing a dusk emergency survey will be subject to one survey by two experienced ecologists. Should any trees in the woodland require removal, these will need to be individually assessed for their bat roost potential. As it is not known whether this is a requirement at this stage, so no cost is provided for these surveys or any further surveys relating to bats roosts in trees. Seven ponds with average or higher potential to support Great Crested Newt have been identified on site. These will be subject to an eDNA survey, as per the recommendations in the PEA. We have costed for a standard two-week turnaround service of eDNA analysis from ADAS Ltd. This survey will be undertaken between mid-April and the end of June. All surveys will be followed up with a short report of findings and any further recommendations. The potential Barn Owl roost in the tunnel under the railway line will be checked by an experienced ecologist with a licence to survey Barn Owls. The geomorphology team will lead on the WFD assessment. The ecology team will support this assessment with input for the biological supporting elements. A survey visit will be undertaken to assess the current UKHab map to check for any changes to the baseline conditions and to re-map any compartments or areas which have changed in condition.

Careful consideration of the addition of reedbed habitat will be made throughout the BNG project element and a BNG assessment made. JBA will produce a BNG calculation using the latest Metric available at the time of undertaking (either Metric 3.1 or Metric 4.0 if it has been released). Although the original work was undertaken in Metric 2.0, the latest Metric is recommended, should a planning application be required for submission. As part of the BNG Calculation, both the Habitat and Rivers BNG assessment will be undertaken, following a similar methodology undertaken by JBA Consulting for the Outline Business Case and Outline Design. The BNG Assessment will be used to support the design work. The final BNG calculations will need to be undertaken during the construction phase of work. The River Condition Assessment will be revisited to check that the baseline conditions have not changed. A similar approach in assessing intertidal habitats will be undertaken as previously. This process, findings and recommendations will be presented in a comprehensive BNG report.

JBA have assumed that the southern extent of the red-line boundary is the railway line, and no detailed design is to take place for these options to breach the watercourse to the south of the railway line within this tender, though optioneering and a workshop will be facilitated to appraise these additional opportunities, which may be developed as further work. Work will be informed by the existing data collected by JBA Consulting at the OBC phase, but any changes to the baseline since the initial surveys were undertaken will be updated and accounted for. A survey visit will be undertaken to assess the current UKHab map to check for any changes to the baseline conditions and to re-map any compartments or areas which have changed in condition. JBA have not costed for any further reporting such as an Ecological Impact Assessment, which may be required to support a planning application. A Habitats Regulations Assessment is not included within this tender but is expected to be required for a planning application and as part of the Environmental Permitting process. Should the works be considered suitable for undertaking within the Environment Agency's Permitted Development Rights, it is expected that the Environment Agency, as the likely lead Competent Authority, will liaise with the Local Planning Authority regarding a Section 77 Approval under the Conservation of Habitats and Species Regulations (2017, as amended). It is assumed that there will be no Intertidal River Condition Assessment Tool available for public use at the time of the calculation work. Beyond the surveys stated above, no further survey, mitigation work or licence work has been costed for, should these be necessary following results of the surveys. We understand that the options for Claxton Beck Marsh and Cowpen Marsh North are to be the subject of an options workshop. Our senior ecologist, environmental coordinator and our project manager will attend this workshop.

Landscape

Our team landscape architects will support the Environment Agency in the design and also engagement with stakeholders by preparing plans and sketches for the proposals. These will include artist impressions to help stakeholders in visualising the scheme and stimulate discussion. Finalised construction drawings and the management plan ensuring effective maintenance of the site will be

prepared as part of the later construction phase of activities.

Planning

To help determine the planning requirements for the project, JBA will compile and submit an Environmental Impact Assessment (EIA) screening request to Hartlepool Borough Council. This will determine whether a formal Environmental Statement would be required to accompany the proposals. In this regard a requirement could be linked to a requirement for a planning consent. However even in the event of a planning approval not being required an EIA requirement may still be triggered and require a competent authority to take responsibility for the process. Engagement with the council is considered important and will be sought to assist with all ongoing communication of the project. This will include pre-application discussion with the LPA to determine whether planning permission is required. The importance of this step in the progression of the project is recognised. JBAs efficient and knowledgeably planning consultants will ensure full transparency with the council to obtain a clear outcome and understanding for the next steps of the project.

Modelling

The modelling teams' understanding of TUFLOW and previous work at Greatham Marsh will allow for rapid familiarisation with the Tees Tidal 2020 hydraulic model. Extensive work conducted by the team for the Environment Agency means they have excellent working knowledge of the Environment Agency's NEC4 Minimum Technical Requirements for Modelling Version 3.1. Consequently, the team will ensure the model achieves the required standard for future utilisation. The modelling team will work closely with the engineering team to optimise the preferred option. The preferred option model will be run for a full range of fluvial and tidal events. We assume there is no requirement for joint probability analysis. Fluvial events will be modelled so that the peak of event coincides with MHWS for a conservative understanding of fluvial flood risk. Model outputs will be used to determine the current and future impact on local flood risk, including potential risks to receptors such as homes and infrastructure. Here, engagement with the client will be maintained to communicate risks and appropriate action. A report will be developed to present a summary of the modelling findings and outline how these will be carefully incorporated into the following project stages.

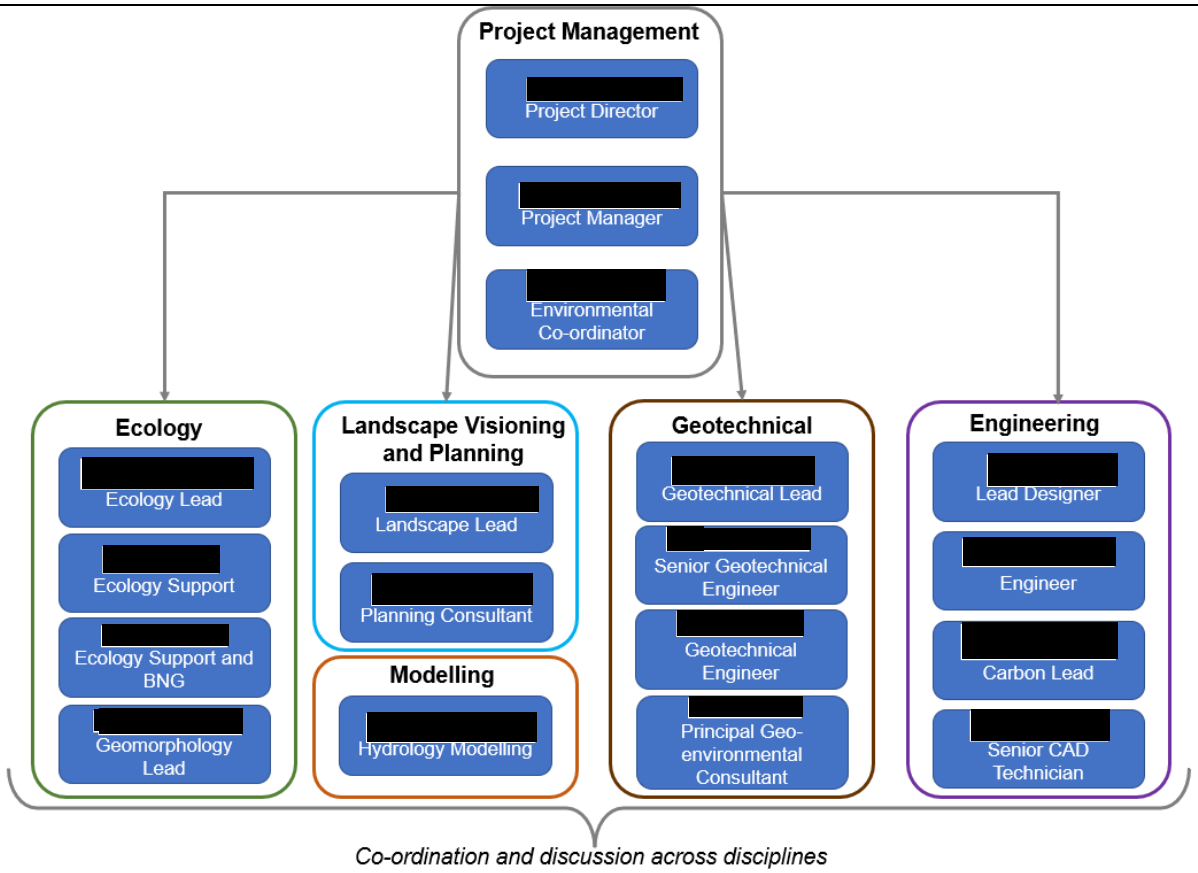
Scour Assessment

Scour was assessed in detail using three-dimensional Computational Fluid Dynamics (3D CFD) modelling at OBC. We do not anticipate a requirement for further assessment unless fluvial modelling suggests a significant increase in velocities near structures. We will make an early assessment of fluvial model results and discuss any requirement for further 3D CFD modelling with the Client.

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

Project Management

Delivery for the project will be the programme which sets out milestone and inter-dependent elements. We will report progress against the agreed programme at each progress meeting. [redacted] will act as the Project Director. [redacted] will be the Project Manager. [redacted] will provide a single point of contact with the client and the internal project team. [redacted] will be supported by the Environmental Coordinator and various Technical Leads. (shown in the Organogram).



The Team structure will allow rapid decision making when needed, in the absence of the Project Manager, and will ensure the continuous provision of summary reports on project progress and programme; and deliver the contract management activities. [redacted] is an experienced project manager and 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] will also oversee the project outputs and will be involved in the technical review of the draft and final reports.

Quality and Environmental Management

JBA is a registered practice with CIEEM and also holds the IEMA Kitemark for its EIA works. Both require external review and continuous improvement through set performance targets. JBA maintains an Integrated Management System (IMS) that covers Quality Management (QMS ISO01:2015), Environmental Management (EMS-ISO14001:2015), Health, Safety and Wellbeing Management (HSW ISO45001:2018), Information Security Management (ISMS-ISO27001:2013), Business Continuity Management (BCM) and Human Resources Management (HR). Work carried out in this project by any member of staff will be subject to JBA's QA procedure. To comply with JBA's IMS several Technical Reviewers will be required dependent upon the discipline. Technical Review Certificates will be provided at appropriate stages. The Project will be delivered following JBA's Contract Management System. JBA will be responsible for complying with copyright restrictions and will procure any third party use licences required for the Environment Agency to use any such data. **Project Programme**

Our proposed project programme is attached. We will aim to agree and finalise the project programme with the Client at the start up meeting, which will be attended by [redacted], who will also take minutes. Monthly progress meetings will be diarised after this for the duration of the project and these will be attended and minuted by the same staff, although [redacted] may step in on occasion to cover staff leave or illness. Immediately prior to these meetings, JBA will produce a monthly report for discussion which will cover works completed within the month, delivery risks and updated forecasts on contract payments.

Sustainability

JBA 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. We intend to undertake the site work for various disciplines at the same time to minimise our carbon footprint. The same proposed team are also

involved in similar projects in Teesside and we would seek to use this opportunity to further reduce our carbon footprint through efficient travel. In addition, we will use our web conference facilities (*MS Teams*) for both Client and internal meetings. Copies of our Environmental, Energy Use and Sustainability policies can be made available on request.

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).

The proposed staff listed below outlines the discipline leads and project management staff within the project. Other staff within the various disciplines will support throughout the project.

(Project Role: Project Director)
professional experience. has worked closely with both public and private clients over many years. has worked closely since 2000 with the Environment Agency, Natural England, the Climate Change Sub Committee and Defra on FCERM, habitat creation and climate change related plans and strategies. has was a member of the Landscape Institute's Education Annual Review Group, which accredits University courses in landscape architecture ; .

(Project Role: Project Manager)
An experienced senior engineer and project manager with over experience spanning technical design, quality control, management and client liaison roles. Further experiences include extensive involvement with surface water and highways infrastructure, flood defence improvement schemes and foul water drainage and disposal. is well versed in the delivery of projects at all stages throughout the project life cycle and has developed key co-ordination skills through her years in industry.

Project Role: Environmental Coordinator)
Since joining JBA, has fulfilled the role of environmental co-ordinator on multiple projects for both the Environment Agency and Coal Authority. role within these projects involved coordinating environmental aspects of planning and permitting processes, conducting desk-based studies to screen environmental risks as well as producing and updating environmental action plans, construction environmental management plans and pollution prevention plans. Additionally, has contributed to other desk based environmental assessments and research including a Strategic Environmental Assessment. has been involved with projects at various stages throughout the project life cycle and has developed project management skills through the co-ordination of a variety of disciplines within a project and assisting the project manager directly.

(Project Role: Lead Designer)
A professional qualified Civil Engineer with years' experience, involved with the technical design, delivery and supervision of wastewater infrastructure and non-infrastructure schemes. Duties and responsibilities included, technical design, quality control, site management, problem solving and Client liaison. Further experiences include extensive involvement with surface water infrastructure and flood defence improvement schemes, duties included structural concrete structures design, temporary and permanent surface water drainage design, and foul water drainage and disposal.

Project Role: Carbon Lead)
Post university, works in a Design and Build Joint Venture between JBA Consulting and JN Bentley known as JBA-Bentley. is currently working to deliver a variety of flood alleviation schemes as part of the Environment Agency WEM Framework in the North of the UK. Throughout this time, is currently progressing in career with the aim of being a chartered civil engineer. has also gained knowledge and experience of carbon accounting methods and tools and .

Project Role: Senior CAD Technician)
is working as the 2D/3D CAD Technician to ensure the full creation of drawings from concept design to construction. Drawings are delivered in an efficient and timely manner. Key software skills to utilise on the project are AutoCAD, Civil 3D, Revit and Navisworks. is also liaising with both engineers and site team to ensure all information is captured on drawings. is ensuring that all drawings both 3D and 2D are in compliance to BIM

Level 2 - PAS1192. Additional involvement in working closely with other CAD Technicians in the production of 3D visual presentation and animation in Sketchup.

[redacted] (Project Role: Senior Geotechnical Engineer)
[redacted] has experience delivering desktop study reports, ground investigation specifications and geotechnical interpretive reports on multi-disciplinary projects for the Environment Agency, Local Authorities, Coal Authority and Private Clients[redacted] has obtained accreditation of Engineering Technician with the Institute of Civil Engineers in [redacted] has added experience in the design and delivery of geotechnical ground investigations, working in a consultancy role alongside contractors. [redacted] has supervised over twenty ground investigations of varying size and complexity and is able to identify site-specific risks including slope instability, settlement, and seepage. [redacted] has experience in geotechnical design of retaining walls, piles, slopes, and flood embankments for a number of projects with varying requirements.

[redacted] (Project Role: Geotechnical Engineer)
[redacted] joined JBA Consulting in [redacted] following the award of a first-class Bachelor's Degree in Geophysics (Geology) Hons. from the University of Liverpool. Since working at JBA, [redacted] has gained experience in producing geotechnical desktop studies, ground investigation specifications and reports, geotechnical design reports, designer's risk assessments and calculation cover sheets. [redacted] has performed stability and seepage analysis of slopes, retaining walls, gravity walls, gabion structures and pile design. [redacted] has a good working knowledge of specialist software such as Slope/W, Seep/W, Geo5, Wallap, Holebase, QGIS and Inkscape.

[redacted] (Project role: Principal Geo-environmental Consultant)
[redacted] is an environmental consultant with [redacted] years of experience within the environmental consultancy sector. [redacted] core experience has been as part of multidisciplinary teams working on a variety of successful contaminated land projects More recent work has involved handling Escape of Oil and pollution claims for insurance clients, and the management of a team of consultants.

[redacted] (Project Role: Ecology Lead)
[redacted] has approximately [redacted] years of experience working in consultancy. [redacted] has passed through the JBA Graduate Scheme and has worked towards a recognised status of professionalism and enhanced corporate awareness under this. Whilst working for JBA, [redacted] has gained skills in surveying a wide range of habitats, invasive and protected species (including bats, otter, reptile, badger, water voles, newts, breeding birds and white-clawed crayfish). [redacted] has gained a good grounding in the legislation underpinning this work and is able to advise clients on potential constraints to development. [redacted] is a keen botanist and has completed the botanical identification course 'Identiplant'. [redacted] holds a Great Crested Newt survey licence and is working towards her White Clawed Crayfish licence, hoping to develop a specialism in these aquatic protected species to complement [redacted] botanical skills.

[redacted] (Project Role: Ecology Support)
[redacted] has [redacted] years of experience in the environmental and ecology sector providing him with a wide range and depth of knowledge. [redacted] has experience performing a range of surveys including Preliminary Ecological Appraisals, badger, water vole, invasive species, bats, great newts and otter. [redacted] has specialisms in aquatic ecology and ornithology. [redacted] holds a Great Crested Newt and barn owl survey license. [redacted] has successfully managed projects for a range of developments. [redacted] project management experience ranges from small PEA developments to large windfarm developments that required EIAs. In addition to this [redacted] successfully managed a public sector framework and delivered the environmental milestones for it.

[redacted] (Project Role: Ecology Support and BNG)
[redacted] has built up experience in environmental management roles since joining JBA Consulting in [redacted] Prior to this [redacted] worked as an Assistant Ecologist for [redacted] on numerous [redacted] sites, assessing the environmental constraints for repair and maintenance works at individual pumping stations as well as pipelines. [redacted] has been involved in undertaking Preliminary Ecological Appraisals (PEA), Ecological Impact Assessments (EcIA), Ecological and Environmental Clerk of Works roles, ecological permitting including undertaking Water Framework Directive (WFD) assessments and Habitat Regulations Assessments (HRA). [redacted] has also been involved in environmental permit applications and Sustainability Appraisals.

[redacted] (Project Role: Geomorphology)
[redacted] is a Geomorphologist providing technical and regulator advice. This is often in the form of NFM (natural flood management) schemes, flood alleviation schemes, river and floodplain restoration projects, asset performance and appraisal, weir removal and fish passage improvements. [redacted] joined JBA in [redacted] following [redacted]

[redacted] The role had a strong focus on delivery Water Framework Directive outcomes through operational and regulatory activites, as well as partnerships working to improve the environment for people and wildlife. [redacted] is also [redacted].

[redacted] **(Project Role: Landscape Lead)**
A reliable, talented and hard-working professional, with a committed attitude to work and landscape as a subject. [redacted] is responsible and mature, with a bright and friendly personality. [redacted] is an experienced Landscape Architect with almost [redacted] experience in delivering planning applications for large scale development schemes, regeneration projects, strategic infrastructure and energy projects. [redacted] has experience at Public Inquiry giving evidence for Transport Scotland and Durham County Council, as well as preparation of numerous Proofs of Evidence. Masterplanning, detailed design and specification for a full range of hard and softworks projects. Key skills in staff and project management, client liaison and business development. [redacted] undertakes tutoring at the [redacted], was previously the [redacted] branch of the [redacted] and formerly a member of the [redacted]. [redacted] has been a mentor on the [redacted] for a number of successful candidates.

[redacted] **(Project Role: Planning Consultant)**
[redacted] is an experienced Town Planner and Principal Planning Consultant within JBA Consulting. [redacted] has [redacted] years' experience working in planning, principally within [redacted]. [redacted] has dealt with and led teams dealing with a variety of planning applications and Local Plans. These applications include renewable energy, minerals and waste and large-scale housing and commercial (many involving EIA). [redacted] has also successfully managed the planning and environmental aspects on a variety of in-house Council projects including new infrastructure, renewable energy and tourist facilities. [redacted] has also managed the evidence base for Local Plan Examination in the housing and economy topics. [redacted] has lots of experience and expertise in working collaboratively with agencies such as Natural England, National Highways, Historic England, the Coal Authority and the Environment Agency. [redacted] has a wide-ranging knowledge of planning policy and legislation and is responsible for writing technical reports, coordinating planning applications and gaining necessary consents, approvals and/or licences. [redacted] is a Chartered Member of the Royal Town Planning Institute (MRTPI).

[redacted] **(Project Role: Hydrology Modelling Lead)**
[redacted] has over [redacted] years professional experience in hydrology and modelling. Since joining JBA Consulting, [redacted] has worked on wide range of challenging modelling projects using Flood ModellerTUFLOW software. [redacted] has also progressed modelling work through to mapping, flood warning and economic appraisal, providing continuity of understanding throughout detailed studies. [redacted] has managed several hydrology and hydraulic modelling studies for the Environment Agency. Through managing complex modelling studies, drawing on multiple disciplines, [redacted] has directed solutions for a wide range of water and environmental issues. These include identifying opportunities for environmental enhancement by adapting flood defence assets, while planning for climate change and ensuring future standard of flood protection. In taking [redacted] has gained an invaluable insight into working in public and private sector organisations. Through [redacted], [redacted] has investigated potential projects for the pipeline of capital works in the North East and supported Strategic Outline Case development.

[redacted] **(Project Role: Scour Modelling and Assessment)**
[redacted] specialises in modelling environmental and hydraulic processes, currently focusing on using 3D CFD software. [redacted] has used this to show evolution of bed forms (scour) for a range of events, i.e., flood flows exposing foundations to low flows resulting in sediment migration and deposition. [redacted] has a total of [redacted]' relevant experience, made up of: [redacted]. Consultancy work has enabled [redacted] to broaden his areas of interest and make use of skills learnt during his Aerospace degree. [redacted] has been able to tackle many new challenges and develop many tools to find innovative solutions that deliver the clients requirements, but much more efficiently. In 2013, [redacted] was made a [redacted].

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.

**See additional Breakdown document provided*

Task No.	Name	Framework grade	Day rate	No. of Days or part thereof	Cost
		Director	[redacted]	18	£[redacted]
		Specialist Consultant	[redacted]	79	£[redacted]
		Principle Ecologist	[redacted]	57	£[redacted]
		Senior ecologist	[redacted]	160	£[redacted]
		Ecologist	[redacted]	196	£[redacted]
		Assistant Ecologist	[redacted]	17.5	£[redacted]
				Total staff costs	£[redacted]
				7.5% Efficiency discount	-£[redacted]
				Total	£[redacted]
Expenses:					
1. Mileage		**Total miles (at 45p per mile)**			
		[redacted]			£[redacted]
2. Accommodation and meals		**Number of days**	**Number of people**		
		1	2		£[redacted]
3. Other expenses		**Detail**			
£[redacted] £[redacted] £[redacted]		Geo- QP Sub contractor Costs DoW CoP MMP Application Cost ADAS, 7 kits to be purchased and analysed			£[redacted]
				Total expenses cost	£[redacted]
				Total overall cost	£**176,989.88**

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).

Contractor Project Manager:	[redacted]
Signature:	[redacted]
Date:	25/11/2022

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 (also known as an approval reference number) must be obtained from Debbie Cousins 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]	[redacted]	13/01/2023
Authorised Contracting Authority Signature (usually the budget holder)	[redacted]		16/01/2023
DgC Authorised Signature (if required)	[redacted]		24/01/2023
Commission Code (i.e. 'approval reference number')			
Purchase order no.			
Bravo ECM Ref (if applicable)			

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 Debbie Cousins 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