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: North Northumberland Coast and Coquet Estuary Realignment

Bravo project ref (if applicable): project_33543

Date: 26th July 2021

Contracting Authority	Environment Agency (EA)		
Project Manager:	[redacted]	**Phone number:**	[redacted]
Budget holder:	[redacted]	**Cost code:**	[redacted]
Commercial Contact (if applicable):	[redacted]	**Email:**	[redacted]
Project Start Date	27/09/2021		
Project Completion Date	03/03/2022		
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)***	13/08/21							

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		40%
Proposed Staff (inc Pen Portraits) and Contractor's experience/accreditations.		25%
Project Management (including project plan)		25%

Health & Safety		10%

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)

North Northumberland Coast

Project Aims

This project will improve the Water Framework Directive (WFD) status of a section of the North Northumberland Coast. This will likely be achieved by restoring areas of intertidal habitat lost through historic sea defence construction. Removal or setting back of these redundant or non-essential coastal defences will create high quality intertidal habitat and improve the quality, resilience and diversity of current habitat. Limited local defences for a small number of properties are potentially required as part of the project.

The project will also tackle the nutrient loading of the bay as well as the impacts of the habitat and supported interest features. This will be achieved by increasing the extent of intertidal plant communities such as saltmarsh, which will improve the capacity of nutrients that can be processed. It will also improve the associated tidally influenced watercourses which feed directly into the Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) in the area.

The overall long term aim of the plan is to support natural development of the coastal system in such a manner as to enhance ecological function while attempting to derive more sustainable natural defences.

Work Description

An options appraisal for the area is required to direct the development of a scheme addressing these aims; exploring the feasibility of the proposed plans and selecting a preferred way forward. Below is a brief list of the assets currently managed by the Environment Agency in the area with maps of their locations for context. These have been separated out into four areas of focus but are all located close to the Lindisfarne / Holy Island Sands:

- Goswick
- South Low
- Beal Cast
- Ross Low

Goswick:

Asset ID	Asset Name	Type	Purpose	Maintained By
334484	Goswick Penstock	Control Gate	Flood Risk Management	Environment Agency

South Low:

Asset ID	Asset Name	Type	Purpose	Maintained By
28664	Longbridge End Embankment	Embankment	Flood Risk Management	Environment Agency
28989	South Low Embankment	Embankment	Flood Risk Management	Environment Agency
28990	South Low Embankment	Embankment	Flood Risk Management	Environment Agency
28992	South Low Right Embankment	Embankment	Flood Risk Management	Environment Agency
234626	D/S of Beal Sluice Outfall	Outfall	Flood Risk Management	Environment Agency
334587	Beal Sluice Gates	Control Gate	Flood Risk Management	Environment Agency

[redacted]

Beal Cast:

Asset ID	Asset Name	Type	Purpose	Maintained By
28764	Beal Cast Embankment	Embankment	Flood Risk Management	Environment Agency

Ross Low:

Asset ID	Asset Name	Type	Purpose	Maintained By
28841	Kirkley Bottoms Embankment	Embankment	Flood Risk Management	Environment Agency
50603	Ross Low Embankment	Embankment	Flood Risk Management	Environment Agency
50604	Ross Low Left Embankment	Embankment	Flood Risk Management	Environment Agency
234624	Ross Low Drain Penstock	Outfall	Flood Risk Management	Environment Agency
334556	Ross Low Sluice Gate	Control Gate	Flood Risk Management	Environment Agency

[redacted]

Coquet Estuary Realignment

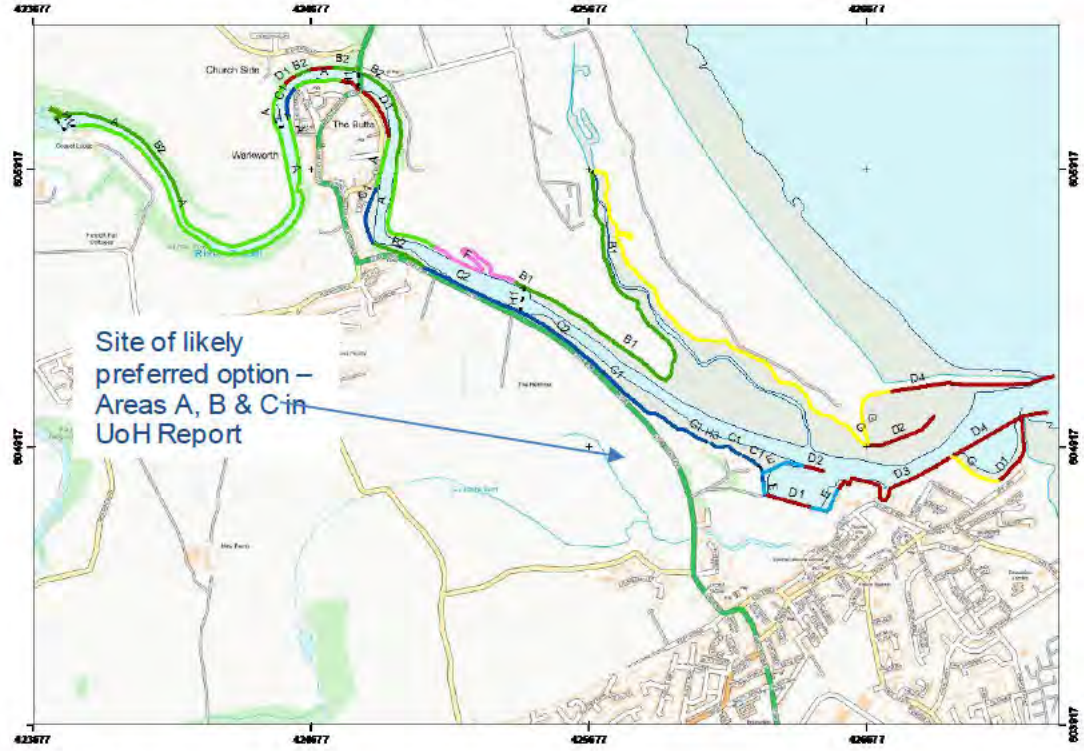
Project Aims
This project will improve the WFD status of the Coquet Estuary. The area is included in Cell 1 for coastal management (Shoreline Management Planning). The current 6 year FCERM Strategy covering the Coquet Estuary and adjacent coastline identifies opportunities 'to identify habitats that may be created or improved to help manage flood risk'. The strategy also identifies the estuary as being subject to coastal squeeze, and with the potential to improve the waterbody by the removal of obsolete structures, enhancement of the estuary edges and realigning flood defences in order to increase flood storage volume.

A study of the area was previously carried out by the University of Hull (UoH, 2019) into the potential options for habitat enhancement in the Coquet Estuary. This screened the area to determine the possible options for improvement but didn't detail feasibility, cost or sustainability.

The main proposal in this report was to breach the A1068 embankment to expand the tidal water habitat in the land to the north of Gloster Hill and West of the A1068 – designated Areas A, B & C. This would involve the adaptation of a flood defence to create 20ha of intertidal habitat and increase water storage capacity of the area in the case of tidal events.

Work Description
An options appraisal is required at this stage to explore the potential for the proposed plans and determine the preferred way forward. All options from the UoH report need to be appraised to establish the benefits of implementation and whether combinations of these are feasible.

Below is a map outlining the relevant assets in the Coquet Estuary:



Bank types

- **A. Natural river bank**
- **B. Elevated natural river bank**
  1. Fronted by intertidal
  2. With engineered structure
- **C. Natural bank fronted by intertidal**
  1. Fronted by intertidal
  2. With engineered structure
- **D. Engineered bank**
  1. Engineered bank
  2. Derelict bank
  3. Operational bank
  4. Jetty structure
- **E. Engineered bank fronted by intertidal at LW**
- **F. Realigned bank**
- **G. Dunes with fronting intertidal**
- **H. Engineered structure**
  1. Weir
  2. Bridge
  3. Slipway

Project Activities

Activities required for both North Northumberland Coast and Coquet Estuary Realignment.

The Supplier will:

Stage 1 – High Level Appraisal

1. Familiarise themselves with available data both held by the Environment Agency and publicly available in order to help them appraise options for the areas described above.

2. For Coquet Estuary Realignment only: Undertake hydraulic modelling extension to the ISIS-TUFLOW Coquet Estuary model to include 'The Gut' and 'Gielders Burn'.

3. Complete a technical appraisal of options in the areas described above; the following shall be included, but not limited to:

   a. An estimate of the cost;
   b. Flood risk implications;
   c. The ecosystem services gained / lost;
   d. Long term sustainability;
   e. Practical feasibility of implementation;
   f. And, likelihood of stakeholder acceptance.

[redacted]

For North Northumberland Coast, these options shall be focused on the alteration of EA managed coastal defences, control gates and outfalls in the areas.
For Coquet Estuary Realignment, these options shall be based on the University of Hull report.

4. Complete a high-level appraisal of additional alternative opportunities in the areas described above for further habitat creation and improvement of WFD status of waterbodies. This shall include, but is not limited to, adaptation of third-party owned assets. A high level cost for these additional options shall be developed.

5. Develop the long list of options and host a workshop with the Client and selected stakeholders to confirm the short list. The workshop attendees will be confirmed by the EA Senior User.

Stage 2 – Short List Appraisal

6. Carry out an options appraisal for the short list in line with the FCRM Appraisal Guidance to quantify potential Outcome Measures with regards to Flood & Coastal Risk Management and Habitat Enhancement / Creation.

7. Complete a biodiversity baseline assessment of the rivers, estuaries and terrestrial habitats within the project area in accordance with DEFRA Biodiversity Metric 2.0 or subsequent version as appropriate.

8. Appraise options using DEFRA Biodiversity Metric 2.0, calculating the likely biodiversity unit changes resulting from the proposed options.

9. Conclude the outputs of this appraisal in two Economic Appraisal Reports, one for North Northumberland Coast and one for Coquet Estuary Realignment.

10. Host a workshop on completion of the appraisals to confirm the preferred options, which will be used in the Outline Business Cases (OBC).

Stage 3 – Preferred Option Development

11. Produce a Preliminary Environmental Information Report (PEIR) for each project using existing environmental information available and identifying the need for further surveys/assessments.

12. Determine if any structural or ground investigation is required in order to complete the outline design of preferred options. If required, the following will be treated as an additional item/variation:
    a. The Supplier shall produce the ground investigation specification and the Environment Agency will determine how to procure any intrusive investigation work;
    b. The Supplier will then interpret the factual outputs of intrusive investigation work and incorporate it into the optioneering and outline design process.

13. Determine if any surveys are required to develop the preferred option and outline design (e.g. topographical). If required, these will be undertaken by the Supplier as an additional item/variation.

14. Provide in their tender submissions indicative costs for their time to specify survey requirements and interpretation of the results for Client future cost forecasting purposes. This information will only be used for Client forecasting and will not form part of the tender assessment or be used in the assessment of any future costs under this contract.

15. Complete outline design (drawing with design assumptions) and cost estimate for preferred option.

16. Prepare an Outline Business Case (OBC) for each project in line with Government and Environment Agency Guidance with input on some of the five cases from the Client. The OBC shall include the biodiversity net gain, economic and carbon estimates for each option assessed to identify a preferred option.

Other services required:

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

18. 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.

19. The Supplier will support the Environment Agency in engagement with stakeholders by preparing sketches for the option appraisal. There is also likely to be interest from local interest groups and the local authority. The Supplier should allow for two virtual workshops (one to explore options and one to review the detail of the preferred option). The Supplier will be expected to provide materials for these workshops and produce minutes.

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

21. The Supplier will consider innovative approaches to reducing waste and maximise the reuse of site won materials.

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

23. The Supplier will undertake the role of Designer and Principal Designer under the Construction Design and Management Regulations (2015).

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

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

26. All meetings will be conducted in accordance with any Covid-19 restrictions on working practices.

27. Both projects will be awarded under one contract and therefore the Supplier must include in their tender submission how they are going to deliver them in the most efficient way, advising on savings in cost and time.

Other potential additional scope (possible contract variation)

In the event the Supplier is instructed to undertake the future OBC-FBC work, they must demonstrate that they have capacity, and the staff have the right design skills / competencies to deliver the detailed designs and FBCs. The Client re-emphasises that this does not form part of this scope that the Supplier is required to price for, nor is it guaranteed that the additional works will be instructed.

2. Information to be returned by the Contractor and the section of Part 2 the information should be provided in.

Approach and Methodology - Information to be returned by the Supplier in Part 2 Section 1:

- Identify proposed methodology to achieve the above outputs and confirm deliverables. This should include 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 of how costs will be developed for the various options proposed;
- 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 risks relating to the ongoing Covid-19 pandemic will be managed, from a business continuity perspective and operationally;

- Include details of how the quality assurance that will be applied to the project and the final outputs.

Project Management (including programme plan) - Information to be returned by the Supplier in Part 2 Section 2:

- Project plan shall include, but not limited to, the completion dates for payment schedule tasks (Part 1 Section 3 of this form). Sufficient detail should be provided to evidence a planned approach to delivering the various elements of the project within the required timeframes;
- Project Management should include and overview of the proposed project management and reporting structure;
- Include details on regular reporting and meetings;
- Include details how risks will be managed for the duration of the project, including risk relating to the ongoing Covid-19 pandemic.

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.

- Flood risk modelling
- Flood risk and habitat creation scheme appraisal in line with FCRM and treasury guidance;
- Feasibility and design of solutions that work with nature and of decommissioning assets;
- Estuarine restoration;
- Stakeholder engagement;
- CDM competency;
- Project Management.

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

Project Staff (including team organisation chart and pen portraits for key project staff). If you propose to use sub-Suppliers to provide key elements of the project, your reply should evidence their skill and experience.

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

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 areas, complete technical appraisal of proposed options and exploration of additional / alternative options. Hydraulic modelling extension to the ISIS-TUFLOW Coquet Estuary model to include 'The Gut' and 'Gielders Burn'. Develop the long list of options and host a workshop with the Client and selected stakeholders to confirm the short list.	22/11/21	15%
2	Complete detailed technical appraisal of short list of options as agreed at the workshop. Complete options appraisal in line with the FCRM Appraisal Guidance and produce two Economic Appraisal Reports: one for	21/01/21	25%

[redacted]

	North Northumberland Coast and one of Coquet Estuary Realignment. Host workshop with the Client and selected stakeholders to confirm the preferred option.		
3	Produce a Preliminary Environmental Information Report (PEIR) for each project using existing environmental information available and identifying the need for further surveys/assessments. Produce outline design (drawing with design assumptions) and outline costs for preferred option. Prepare the Outline Business Case for the preferred option of each project.	03/03/22	30%
4	Project completion	03/03/22	30%

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.*

- Demonstrate how the project will have regard for health and safety;
- Demonstrate how the risks associated with working near or over water will be managed.

22503 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		**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 10 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.

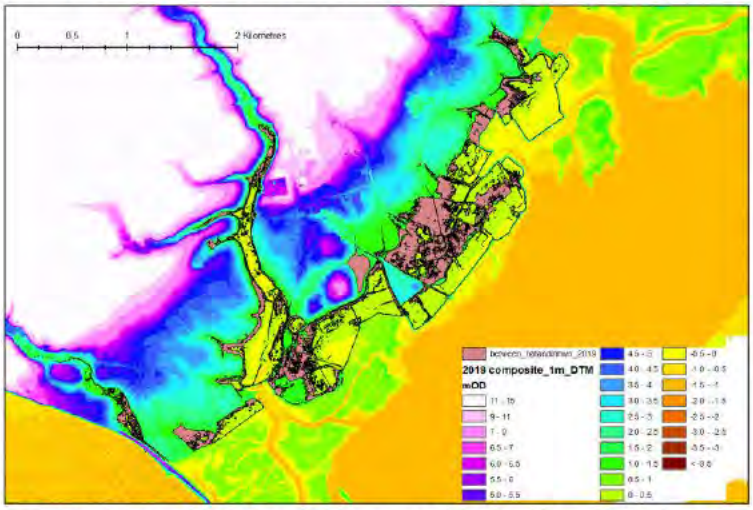
Do not make or append Caveats and Assumptions in your proposal – any points of uncertainty must be raised as a clarification point prior to submitting the proposal. Where assumptions are to be made, these will be stated by the Authority's Project Manager.

1. Approach & Methodology

The North Northumbria and Coquet restoration project will be led by our Newcastle office with additional technical support from other offices.

Understanding the Brief: The project is split between two distinct reaches of the coastline, North Northumbria (encompassing Goswick, South Low, Beal Cast and Ross Low) and the Coquet Estuary. The main aim of the projects is to improve WFD status by altering redundant or non-essential coastal defence assets. However small local defences may still be required to protect properties. These could potentially be constructed using site won material in a bid to reduce waste. **North Northumbria:** There are four key areas located close to Lindisfarne/ Holy Island Sands. The aspiration is to extend the tidal habitat such as salt marsh in order to improve nutrient loading of the bay, as well as improve tidal influenced watercourses which feed into protected areas (including SAC and SSSI). Between the four areas there are 13 assets which have been identified as redundant or non-essential. However our scope is not limited to these assets nor 3rd party assets and we will seek further opportunities within each area. **Coquet Estuary:** The Coquet Estuary has been studied by the University of Hull in 2019 which has developed potential options for habitat enhancement. Additionally JBA developed Coquet Estuary model in 2014 and are familiar with the area. The aspiration in the Coquet Estuary is to extend both the University of Hull's study and Coquet Estuary model to deliver an options appraisal based on feasibility, cost and sustainability. **Why JBA Consulting:** JBA Consulting is an independent employee-owned company with an enviable reputation for delivering high quality and cost-effective environmental and engineering services. We have over 20 years' experience of successfully planning and delivering 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 a finalist (final three) in 2019 CIEEM Consultancy of the Year gaining a 'Highly Commended' in the Medium Firm category. In 2020 we were again runner up in Consultancy of the Year [Medium], however our [redacted], and our long-term project Thorne Moors Water Level Management Plan won the Best Practice: Large-scale Nature Conservation prize. We have been appointed onto the Anglian Water Ecology Framework for AMP7 (2020-2025). We have delivered on numerous WEIF programmes designed to enhance and restore watercourses with the main aim to deliver improvements to Water Framework Directive objectives. Most recently JBA is working on projects to deliver WFD objectives on Billingham Beck and Greatham Beck. **JBA is well-placed** to champion environmental improvements, with direct relevant experience in terms of scope and geographical location. JBA has long-standing experience of hydraulic modelling studies in the North East and developed the Coquet Estuary hydraulic model to be used in this project. We completed a model review, procured channel survey and produced method statements in preparation for the Coquet Estuary Realignment component through the MMF framework (specific project experience is provided in **Section 3**). **Hydraulic Modelling – General:** [redacted] will lead our modelling approach. The key outputs from the hydraulic modelling, such as flood extents and depths, will be used to assess the impact of the modelled options on local tidal flood risk and **potential habitat development**. This will help to inform a preferred option. Events to be run are not specifically scoped. However, we suggest adopting the same approach to options modelling which has worked well in studies in the Tees Estuary. To efficiently understand the impact of options on flood risk and potential habitat development, we propose modelling a selection of design tide events and key tides within the daily range (50%, 5%, 0.5%, 0.1% and 0.5% plus largest climate change allowance, HAT, MHWS, MLWS, MHWN). Our modelling team are experienced in delivering modelling in line with the requirements of the Environment Agency's NEC4 Minimum Technical Requirements for Modelling Version 2, having worked with you on several recent studies across the North East. **Hydraulic Modelling – North Northumberland:** Following a TQ for this submission, we assume that there was modelling undertaken in 2006 depicting Beal area. The client states that it is not expected that further modelling is required, this high level approach will save a significant amount of modelling time (c.£5 – 10k). Whilst it may be possible to predict the general implication of the options development for this area, and indeed the habitats that could be developed the confidence in the predictions may not be sufficient to provide a robust assessment in the Biodiversity Net Gain calculation. Whist a general calculation may be adequate at this stage, we would recommend that this reviewed during the project especially in determination of a preferred option. The coastline is of high ecological sensitivity, and we would wish to provide confidence to the various stakeholders that our appraisal was comprehensive. Any additional modelling requirements will be detailed in the reports prepared to accompany this study. **Hydraulic Modelling – Coquet Estuary:** Impacts of the proposed options will be hydraulically assessed using the existing Coquet Estuary model, which will be extended to include The Gut and Gielders Burn. JBA Consulting developed this model in 2014 and prepared method statements in April 2021 for its application in this realignment study. Our proposed [redacted] minimising time required for familiarisation. **We estimate this will save you around 5 days of staff time**. We will derive options based on the University of Hull 2019 report and will confirm options with the Environment Agency before commencing modelling. To link the hydraulic modelling and habitat creation opportunities we will use **ecological niche modelling** where inter-tidal habitat opportunities are mapped through predicting the likely habitat based on the existing topography. We can use LiDAR data to map this allowing prediction on a

widescale. From this baseline we can add constraints (such as key infrastructure utilities, areas of historic / cultural interest, property, footpaths) and provide a more realistic prediction of net habitat opportunities. This approach has been applied for the EA Study between **Hurst Spit and Lymington** (Solent). **Options Appraisal:** We will consider both physical interventions and innovative natural solutions to restore the Greatham Marsh intertidal habitat, to maximise the saltmarsh and intertidal mud. We will review and update the long list of options assessed as part of the SOCs, and the information presented in the Coquet Estuary Edges Enhancement Study (Hull University). The walk-over surveys and early discussion with the client will ensure that no obvious options for habitat enhancement have been overlooked. For the North Northumberland sites (5 locations), we are intending to limit our initial long list of options to 3 per site. No hydraulic modelling is proposed for this area, and we would propose a simple approach of retain, removal or adapt (in some cases removal or adapt may only be a single option, and removal will also include breaching as well as full removal of an embankment as sub-options). We will present the option analysis for North Northumberland in matrix formally summarising the generic options for each location and considering pre-selected criteria (e.g. BNG, WFD, predicted cost, buildability etc). We have applied this approach with the EA on the CDF work for the **Hurst Spit and Lymington project**. Following a technical review of the available project data, JBA would develop a short list of options. JBA would use its experience of similar projects to provide measurable benefits to support the options. Key to option development would be determination of the benefits of each. We are proposing that option appraisal and selection will be supported by an Option Workshop attended by invited stakeholders and facilitated by JBA. This can be delivered remotely through Teams. The options workshop will be supported by baseline option appraisal sheets describing the constraints and opportunities for each option, concept design and landscape visioning sketches. We would undertake a Multi-Criteria Analysis (MCA). A key feature of MCA is its emphasis on the judgement of the decision making team, in establishing objectives and criteria, estimating relative importance weights and in judging the contribution of each scenario to each performance criterion (e.g. OM4 creation, low carbon solutions, buildability, WFD benefits etc). Within the option assessment we shall consider wider habitat creation opportunities that will still contribute to WFD targets. Refinement of the viable options will require assessment of economic, environmental, technical and risk issues. Thorough investigation of these issues will make sure that the preferred option can be delivered. The Options Appraisal will:



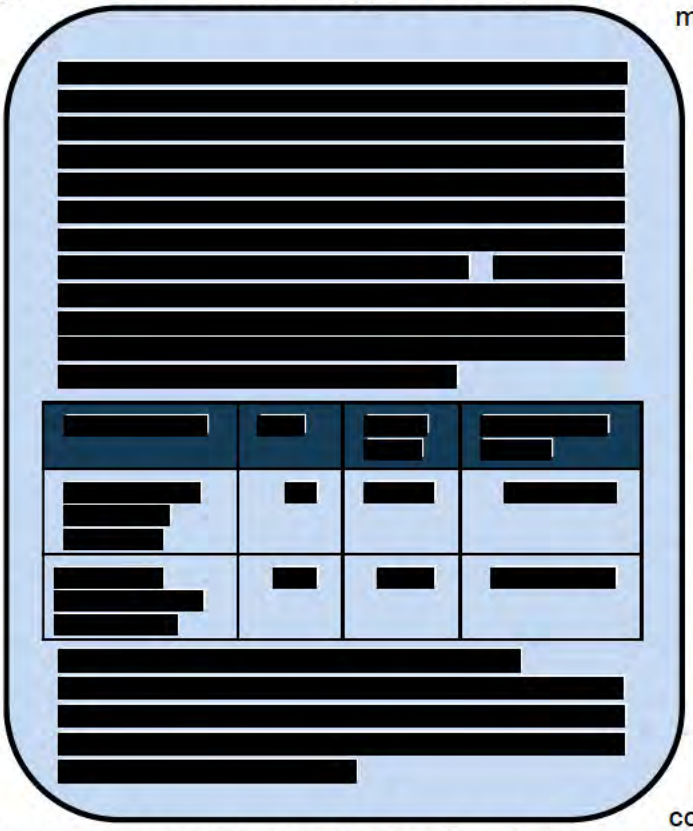
- Provide a clear record of the appraisal process and a well-argued justification for the favoured options;
- Enable the Environment Agency to make informed decisions in regard to support and funding;
- Gain support from other organisations that have an interest in the scheme (e.g. Natural England);
- Consider legal obligations, consultation with third parties, identify the agreements and permissions;
- Assess and manage risk – including the likelihood of design conditions being exceeded or failing; and
- Consider Technical Feasibility - consideration of climate change, consideration of land use, sediment transport and hydraulic models to quantify risk, and engineering design and costs.

Appraise options using DEFRA Biodiversity Metric 3.0: The Defra Biodiversity Metric 3.0 will be used to calculate biodiversity net gain for all options to be considered. The Defra Biodiversity Metric 3.0 would be used to calculate a biodiversity baseline assessment of the river, estuary and terrestrial habitats within the project area. Subsequently, an appraisal of the short-listed options would be undertaken using this tool to calculate the likely biodiversity unit changes of each option. The baseline information will be provided for terrestrial habitats through data collected from the PEA surveys using UKHabs. This detail can then me inputted into the metric (both as baseline and target habitats) allowing detailed calculations of BNG. For North Northumberland the application of the metric will be hampered by the lack of detail in the predicted habitat (particularly is condition, which would affect the number of

Terrestrial Unit	Calcs
Baseline units	607.41
Predicted units – terrestrial	645.04
Predicted units – new ditches and ponds	5.47
Predicted units – new river channels	1.93
Total units gained	652.44
Total unit change	+45.03
Total % change	**7.41%**
River Unit	**Calcs**
Thorpe beck baseline.	11.27
Thorpe beck potential to achieve through restoration.	+9.83
Billingham beck upper baseline.	9.37
Billingham beck upper potential to achieve through restoration.	+8.19
Total BNG river unit baseline for both sub-sites.	20.64
Potential to achieve through restoration of both sub-sites.	**+18.02**

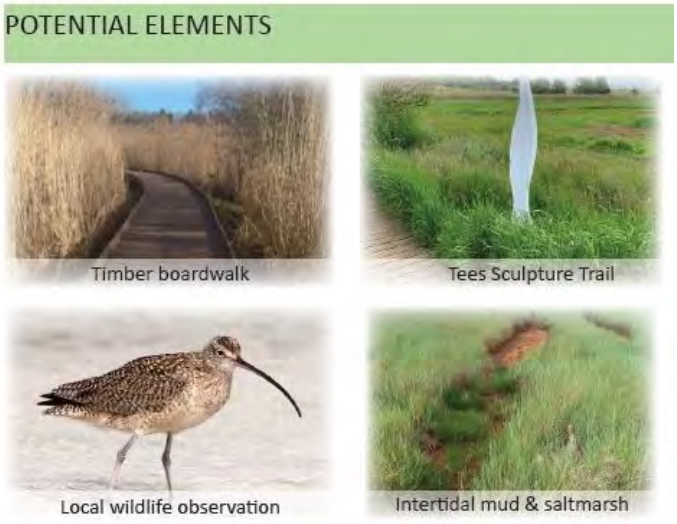
Case Study – Calculating Biodiversity Net Gain

units). For the Coquet, data on the frequency and depth of inundation for each option, where possible to determine the area inter-tidal habitats could be restored with the removal or alternation of the function of the structure. **Economics:** Focus of the option appraisal will be OM4, BNG, maintenance and any additional costs which can be derived from an **Eco-Services approach**. As per the expected deliverables, a summary table of the likely biodiversity gain or loss for each habitat type would be produced for each option, allowing a comprehensive assessment to be made of the biodiversity net gain impact for each option. The uplift generated from the BNG calculations will be used to compare and contrast the options. At this stage, the potential gains and losses would be provisional, and the Metric calculations would need to be updated during detailed design at a future stage of the project (outside the scope of this OBC). We will provide an assessment of the **Carbon Sequestration** value attributed to the transition in habitats following implementation of the options. **Costs:** We would normally seek to gain a ECI price from one of our approved contractor partners, although given the preliminary status of the some of the proposals we would wish to support these estimates with the Environment Agency's Long Term Costing tool to establish indicative costs. JBA has considerable experience of whole-life costing for a range of restoration and habitat creation schemes. JBA has worked with the River Restoration Centre and the Tweed Forum to gather case studies and examples of previous natural flood management measures to provide indicative costs. We will seek to utilise this information from this project to ensure consistency with other projects and appraisal studies. Our cost appraisals will consider the information necessary for the preparation of the OBC. If required, whole-life costing will be considered. Whole-life costs enable investment to be more effectively evaluated through the consideration of all costs, rather than just initial capital costs. This facilitates the choice between competing alternative options / strategies and ensures planning decisions and sustainable solutions are sufficiently robust and backed up by consistent and accurate costed programmes of activities. Existing costs of current management practices provided by the stakeholders will be reviewed if available to inform these aspects. The preferred design will initially be priced against a bill of quantities, following the outline design stage that will be suitable for developing budgets. In addition to the ECI support, we will prepare the detailed bill of quantities and cost estimates for the restoration using Civil Engineering Standard method of Measurement. The pricing scheme will be based on Spons Civil Engineering and Highway Works Price Book 2013, which will be reviewed against our records of outturn costs for similar previously completed construction works. It is envisaged that this information will be used to inform the construction contract strategy. Estimation of carbon costs for each of the options using the Environment Agency's carbon modelling tool. This will ensure that carbon accounting is a fundamental consideration within the options appraisal: the final preferred solution will be a Net Zero option. **Project Risks:** 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 JBA, receiving comments on draft deliverables as programmed, and the consequences of any remaining prevailing Covid-19 guidelines and restrictions during the course of the project. The high-level predictions for habitat creation / establishment may place a risk when discussion with stakeholders, however this can be resolved during later stages of the project. Unknown utilities present a significant risk to the project in terms of time, cost and meeting the objectives of the restoration. As part of the desktop study we will request record plans from all statutory service providers and record utilities that could impact of the restoration. Existing utilities will be mapped on the options and design proposals with an assessment of the risk to the project and identification for the need of further-site investigation surveys during the delivery stage. We are not proposing to undertake an Site Investigation including trial pits to locate services at this stage. A live risk register will be maintained throughout the project, with any early warnings submitted to the EA Project Manager. We will review the key risk during project meetings, with an aim to reduce the severity and costs / implications for OBC. We will follow EA standard practice for Risk Assessment for OBC. An example is shown as an appendix to this submission. The gradings are preliminary and would be confirmed at the Risk Workshop. **Landscape and Restoration Visioning Report:** [redacted] will lead the Landscape Design Team, which is integrated into the Option Development and project Management Team. [redacted]



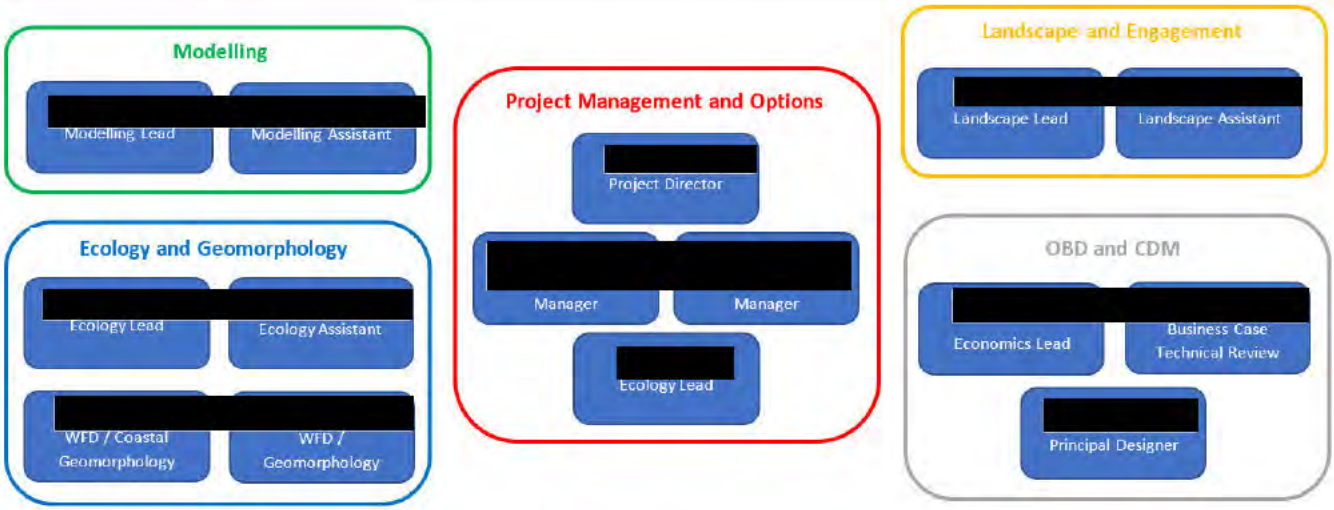
[redacted]

[redacted] has worked in the North East for [redacted]. Based [redacted] will work with [redacted] to produce the concept designs and landscape visioning sketches to support the Stakeholder events and option development. Recognising the historical, environmental and social importance of the site will be a key part of the vision. We will produce a series of figures to illustrate the key findings, opportunities and constraints identified as part of the assessments undertaken. The figures will provide a design concept and aim to engage, enthuse and excite stakeholders. Helen will also oversee the preparation of drawings for the outline designs for the proposed habitat creation plan and prepare CAD Outline Designs. We do not propose to undertake a formal Landscape and Visual Impact Assessment at this stage. **Stakeholder Engagement:** Communication with stakeholders and obtaining their buy-in will be essential to the success of this project. We will develop an integrated Stakeholder Engagement and Communications Strategy, in accordance with the **EA's Working With Others** document and maintain this as a living document throughout the project. We will initially produce a project briefing note and contact stakeholders to introduce the project and timescales. This will set out how we plan to liaise with stakeholders and when, giving them a clear indication of their involvement throughout the project. Typically, we find face-to-face workshops and site visits very valuable for stakeholder engagement. However, we are very conscious of minimising the risk of Coronavirus spread. Therefore, in this instance, working closely with and overseen by the Environment Agency, we would recommend utilising our new **virtual conferencing facilities**. Over the last 18 months we have learned how to get the best from virtual workshops – using webcams to see each other face to face, incorporating regular polls and Q&A sessions. We will apply all these techniques to deliver a virtual workshop. We have successfully used Concept board (https://conceptboard.com/) to stimulate and record stakeholder events. **Outline Business Case (OBC):** Based on the range of options considered a Short Form business case for each study OBC might be appropriate. JBA will produce the strategic, economic and financial cases with the **Environment Agency providing the text for the commercial and management cases** (given these relate, in part, to procurement strategies). [redacted] will lead the preparation of the OBC, which will be reviewed independently within JBA [redacted] and has [redacted] experience in the preparation of SOC, OBC and FBC for Environment Programme projects and projects with the PCM Teams in the North East. Projects have included Natural Flood Risk Management and Diffuse Pollution schemes that have included natural capital or ecosystems services in the development of benefits. [redacted] will provide support and technical review for the OBC. JBA has undertaken several benefit assessments for habitat creation projects at Billingham Beck, Greatham Marsh, Cwm Ivy (South Wales) for Natural Resources Wales, Hurst to Lymington scheme appraisal for the Environment Agency, and as part of the Committee for Climate Change's research into Land use: 'Reducing emissions and preparing for climate change'. Partnership funding scores will be derived for the preferred option. **Option Appraisal Report(s):** An Option Appraisal Report will be produced for each area it will include estimation of carbon costs for each of the options using the Environment Agency`s carbon modelling tool. This will ensure that carbon accounting is a fundamental consideration within the options appraisal: the final preferred solution will be a Net Zero option. The Report will provide a justification for the preferred option, describing a robust and comprehensive option selection process. The report will identify key risks associated with the options and state the requirements to progress the project to FBC and final delivery including the **scope of ecological, landscape, topographical and geotechnical survey works required to complete FBC for the preferred option**. **Supporting Documentation:** We will produce a Preliminary Environmental Information Report (PEIR) to support the OBC using existing environmental information available, supplemented by the walk-over surveys and PEA surveys using UKHabs; identifying the need for further surveys/assessments. We will aim to reduce the environmental impact of the preferred option to an extent where, working with the Local Planning Authority (LPA), we will be able to screen out the proposals with regard to EIA Regulations. We will undertake a **WFD Assessment** on the preferred option for each area. Screening will be undertaken to support the WFD elements of option selection. We will undertake **Stage 1 of the HRA process** based on the preferred option. This process identifies the likely significant effects upon a European site based on the proposed project, either alone or in-combination with other projects or plans and determines whether these impacts are likely to be significant. At this stage we would prepare the Likely Significant Effect stage of the HRA and agree a scope for the further studies with Natural England. **Construction, Design and Management (CDM) Regulations:** JBA has extensive experience in management of design and construction works



under the Construction (Design and Management) Regulations 2015. We will work with the EA as the Client under these regulations. We will provide a Principal Designer as requested by the client[redacted]

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

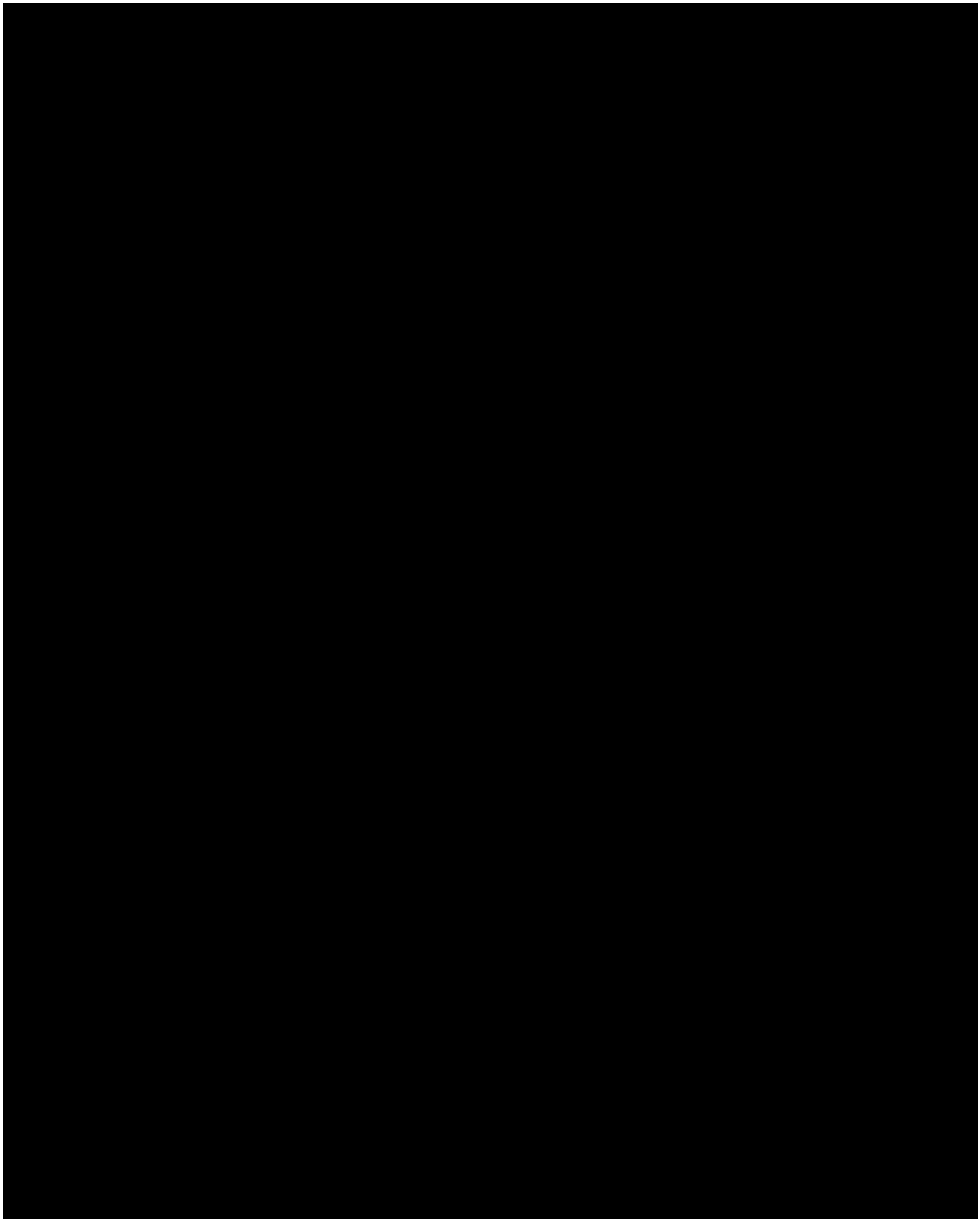


Quality and Environmental Management: JBA is a registered practice with CIEEM and also holds the IEMA Kitemark for its EIA works. Both require external review and continuous improvement through set performance targets. JBA maintains an Integrated Management System (IMS) that covers Quality Management (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. 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 progress meetings. **Copyright and Licensing:** 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 Management:** The project will be managed from our Newcastle Office, which is conveniently located for Tyneside House and also the study areas. Staff proposed are from the EcoSF3 submission, although since award we have supplemented our Team. Pen Portraits are submitted when new staff are appointed in accordance with the framework agreements. An organogram is provided to describe the team make up. Our Project Managers will maintain weekly contact with the EA PM, providing updates on programme and costs. **Efficiency and Innovation:** The ITT states that both projects will be awarded under one contract. Our approach to the project will ensure efficiencies in delivery through a single team delivering all elements of the commission. Studies (e.g. ecology and BNG) and appraisals for the two 'catchments' will be completed together to maintain continuity and reduce 'start-up' costs. There will be elements of both OBCs that can be developed as a single unit, any field surveys that are required (e.g. Ecology, Geomorphology) can be combined providing saving in travel (including carbon). Our proposal for modelling is 'light-touch' (see Section 1) which provides an estimated saving of c. £5k. Our approach to option selection from long-list to short will also bring efficiencies to the projects. Where possible meetings will be undertaken using Teams and we will combine the project meetings. **Additional scope and delivery phases:** JBA has grown to over 500 members of staff and possesses a depth of experienced in steering projects through SoC, OBC and FBC and construction. We have worked with the Environment Agency for many years and currently sit on all its frameworks. We are the CDF Supplier for the South **East Hub. We have the experience and knowledge to undertake future OBC / FBC as instructed by the client.** We have design teams in Edinburgh, Leeds, Saltaire, Peterborough, Newport, Coleshill and Haywards Heath to support the Newcastle Team, although that we would ensure that that key Project Management services were provided by the delivery office. Our Design Teams have delivered habitat creation schemes for the EA, NRW, SEPA, local authorities and Rivers Trusts. We have excellent relationships with contractors who may be used to provide early-contractor involvement. We maintain an approved supplier list for sub-contractor services.

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)
Pen portraits for key project staff are provided below.

[redacted]

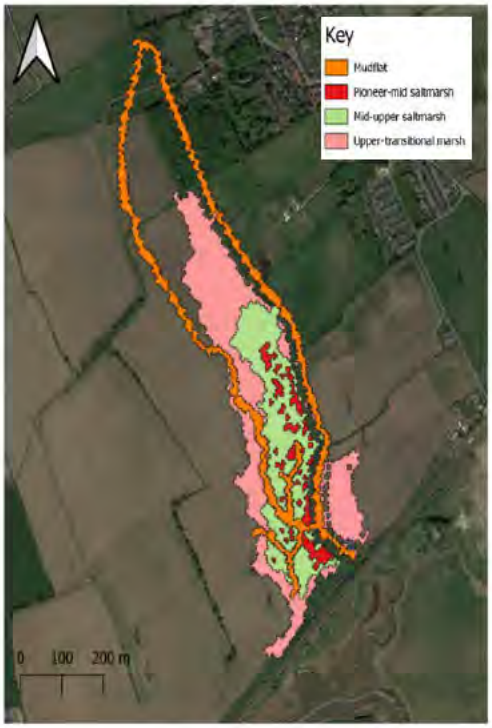
[redacted]



Tees Estuary Enhancement Project (Tees Rivers Trust and Environment Agency). JBA was appointed by Tees Rivers Trust (TeRT) to support the detailed design of a series of enhancement features to encourage an increase in inter-tidal habitat on a 500m section of estuary on the River Tees, Middlesbrough. The aim was to increase inter-tidal habitat through widening the river edge using NFM features to provide additional habitat through low, middle and high tidal range over a section c. 500m. Our designs used a combination of naturally sourced materials, including brash from clearance at a local FRM construction site and coir rolls, avoiding as far as possible the use of micro-plastics found in many geotextiles and aimed to encourage natural accumulation of sediments along the section of the watercourse.

JBA helped develop a set of options, co-ordinated the option workshop with key stakeholders (INCA, PD Ports, Natural England, Environment Agency) provided the detailed design of the preferred option and supported TeRT with the submission and planning and the Marine Management Organisation (MMO) Licence. JBA was Principal Designer.

Greatham Marsh Restoration (Environment Agency): JBA is currently working assessed the implications of removing tidal defence assets on Greatham and Claxton Becks, reinstating a paleochannel and developing tidal creeks. Our modelling showed no increase in flood risk to property in short-listed options. We are working with the Environment Agency on the restoration of **inter-tidal habitat** on Greatham Beck, Stockton-on-Tees. 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 existing 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. We have undertaken ecological niche modelling to predict the changes in habitat following the removal of the tidal structure. Several options have been modelled based on creation of breaches in the existing embankments, creation of tidal creeks and / or creation of a new channel to transfer tidal flows across the fields adjacent to the beck. For each option the area of inter-tidal habitat has been calculated. The impacts of the proposed options have been hydraulically assessed using the existing Tees Tidal 2020 TUFLOW model. JBA Consulting developed this model and carried out a **feasibility study** on the impact of removing the tidal flap and embankments along Greatham Beck, which are under consideration here. The key outputs from the hydraulic model, such as flood extents and depths, has been used to assess the impact of the short-listed options on local tidal flood risk and potential habitat development. To efficiently understand the impact of options on flood risk and potential habitat development, we have modelled a selection of design tide events and key tides within the daily range (50%, 5%, 0.5%, 0.1% and 0.5%



	Mudflat	Lower-mid saltmarsh	Mid-upper saltmarsh	Upper-transitional marsh
Option 1	2.0ha	2.2ha	4ha	7.9ha
Option 2	4.5ha	0.5ha	4.9ha	7.1ha
Option 5	4.8ha	0.1ha	4.4ha	6.6ha

plus largest climate change allowance, HAT, MHWS, MLWS, MHWN). To support development of the OBC, the full range of design tide events will be modelled for the preferred option. A modelling report has been drafted to document

[redacted]

works undertaken. We have completed ecological surveys to support the Biodiversity Net Gain Calculations and prepared Site Investigation specifications.

Billingham Beck Country Park Restoration Scheme. We are currently working with Environment Agency and Stockton Borough Council on the restoration of a wetland mire habitat within a country park in the North East. We have completed the OBC stage and helped secured over £1 million in funds from SBC, Highways England and the Environment Agency to take the scheme through Full Business Case, with a programme to start construction in March 2022. The Scheme provides significant biodiversity net gain points that are used to 'bank' future improvements within the Tees catchment. The Country Park lies on the edge of Stockton Borough Council and illustrates an excellent example of relic mire, downstream Billingham Beck form part of the Tees Estuary where the Agency is working to create / restore areas of inter-tidal habitat and coastal grassland.

JBA was appointed under the Eco-Services Framework (EcoSF3) to complete an options assessment and identify a preferred option that could be taken forward at **Outline Business Case** (OBC) to secure additional funds for the implementation of the scheme. JBA prepared the **Design and Options Report** and OBC, plus the technical appendices to justify the option (e.g. PEAR, Landscape assessment, geo-technical assessment). The option analysis used a Multi-Criteria Assessment to determine the preferred option. A **Partnership Funding Calculator** was derived for each option that collates the whole life costs, the present value benefits and the OM4 benefits generated by the options. This was supplemented by an economic appraisal report that described the approaches taken, the assumptions and the choice of preferred option and any other factors that would change the decision-making process.

The financial justification of the project was based on the uplift value of the preferred option based on the Biodiversity Net Gain (BNG). In addition, the park provides significant amenity value to the local community. The project looked for funding from Highways England's Environmental Designated Fund (HE EDF) which included a 'Legacy' element. The re-alignment and widening of the A19 had had an adverse impact on the groundwater level.

Runswick Bay (Scarborough Borough Council): JBA is working with Scarborough Borough Council on a variety of Coastal project including Runswick Bay and Robin Hood's Bay. Runswick Bay included the detailed design (including planning and EIA) and design support during construction for new section of rip-rap and repairs to the existing sea wall. The new rock fillet was located within the newly designated Marine Conservation Zone. JBA designed a series of enhancements to the imported granite rip-rap including artificially created rockpools, cervices and 'seed-blocks' placed within the new rip-rap. The rock fillet has placed to make sure that existing natural rock pools were not displaced and there was linkage between the new and existing features. The artificial pools were placed in the low, middle and high tidal range. These features were to encourage the colonisation of the rock and to benefit biodiversity. The rock pools have been monitored (by Bournemouth University) since installation and have proved to be highly effective. The application of the artificial pools at Runswick Bat was the largest example in the UK at time of delivery.

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

JBA maintains an Integrated Management System (IMS) that covers Health, Safety and Wellbeing Management (HSW ISO 45001:2018). The system covers:

- Policies relevant to health, safety and wellbeing
- Guides relevant to health, safety and wellbeing
- Completed Risk Assessments and Templates
- Process Flow Charts relevant to health, safety and wellbeing
- JBA Slip and Trip Posters
- Forms and Templates relevant to health, safety and wellbeing
- All documents relevant to health, safety and wellbeing

Health and Safety Management at JBA: The Project Director and Project Manager are responsible for managing H&S within the project however our systems ensure that all staff have a high level of appreciation and respect to H&S. No one is expected to carry out activities that they are not trained, are competent or feel confident in doing,

Our compliance with ISO standards requires us to maintain a register of legislation relevant to our undertakings and to make the register available to our employees and other interested parties. We maintain our register in accordance with our management document 06-015 Guide to Maintaining JBA Legal Register. This requires us to identify H&S and environmental legislation relevant to our undertakings and the locations in which we operate, assess how the legislation applies, whether we meet our legal duties or where we require to take action to meet. Subsequently we **continually monitor our compliance** with the legal requirements imposed on us. We see our legal duties as a minimum standard and not the ultimate limit. We subscribe to Legislation Update Service (LUS) who compile and

[redacted]

host our JBA specific register, and JBA then review and manage the content. The Legal Register is published on our intranet Integrated Management System (IMS) where it is available to all staff.

We directly employ a team of Health, Safety and Environmental Advisers who keep up to date with current legal requirements, changes to them and the areas on the horizon for change. We are notified of legal changes etc via the advisers' professional knowledge, professional subscriptions and LUS services. In addition to hosting our bespoke JBA specific legal register, LUS publish monthly briefs/news letters on changes and updates to the relevant legislation and other related topics which we publish to all staff via IMS along with JBA analysis of the impact. These advisers review whether the legislation is relevant to our undertakings and what impact they will or do have on our operations. They make recommendations to Boards and groups of employees on the actions needed to address any potential shortcomings as part of our continual improvement process. As part of our ISO Management Review process our board of directors are advised of changes to legislation and of shortcomings, gaps and weaknesses in our management systems. The review papers are in turn **cascaded to our teams** as part of management briefs, along with actions required of their staff. Significant changes, impacts and required actions are issued to all staff via our intranet as a news item or safety brief, or where needed as a webinar presentation.

Risk Assessment: All activities in JBA's work are subject to risk assessment. For operations in the field and in the office, we have established a programme of risk assessment tool that must be complied with. Risk Assessments are carried for all activities, for field visit these must be prepared and approved in advance and communicated to all those involved at the start of the activity prior to commencement. If there are changes to anticipated activity, or the site / location is difference from that original predicted work must not start (or stop) until the risk assessment has been reviewed. This may require postponement of the activity. The process of completing a risk assessment can be split into five defined steps:

1. Identify the hazards
2. Identify those who may be affected by the hazards and how
3. a) Evaluate the risks associated with the hazards (consider likelihood and severity). b) Identify suitable controls
4. Records the findings and brief those affected
5. Review the risk assessment regularly to ensure it remains adequate – update as required.

By 'controls' this means to identify the ways and means of carrying out an activity to eliminate the risk. This may mean in some case to avoid the activity at all (e.g. entering a confined space).

For activities that are considered to be higher risk (e.g. working on, in or near to water, see below), there is an additional required to produce a Safe System of Work (SSoW). Risk Assessments and SSoW are available to our clients for review.

Working On, In or Near Water (WOINW): JBA has developed its own guide to *Guide to Working On, In or Near Water (WOINW).* WOINW is a feature of some of the services JBA has provided to clients for over twenty years. The document therefore provides guidance on risks associated with working on, in or near water, and **control measures and procedures arising** from these activities. The guidance is to assist those in their everyday work and provides information on hazards, options and advice to manage water working risks. The guidance is based on a dynamic risk assessment approach. In JBA we consider working on, in or near water to be as a higher risk activity. The competence of staff involved in such work is a key component of managing the risk associated with these activities. The Defra guide has informed JBA's approach to evidencing competence of staff WOINW through further training. JBA has prepared a webinar on WOINW. The webinar provides a general introduction to WOINW and an overview of JBA's WOINW guidance.

Covid – JBA has successfully steered its operations through the Covid pandemic, developing new agile systems of working and meeting Government and client requirements whilst aiming to maintain full consideration of its employees mental and personal health. In line with Government instructions, the JBA approach is only go out for work / to site if the task cannot be effectively completed from home or your regular JBA office (although we accept that the guidance is developing as we move out of the pandemic). The JBA approach allows for:

Establishment of the need to travel.

- Planning the journey and assessing the risks from the works. As part of the planning we need to review the content of *16-042 Risk Assessment for Coronavirus (Site Works)* to assist with managing any on-site risks posed by the pandemic.
- Obtaining approval to complete the journey and the proposed works using form in Section 6 *AND* the *16-001 Site Risk Assessment*

The final stage of this process will be the deciding factor in whether journey and works are appropriate or necessary. In line with JBA established procedures, the risk assessment identifies whether the journey and work activity can be undertaken safely. If work activity or travel cannot be competed safely, then no work should be done.

H&S documents can be obtained at request.
5. Sustainability (only complete if requested in defined evaluation criteria)
Not applicable – managed at framework level.
6. Quality Assurance (only complete if requested in defined evaluation criteria)
Not applicable – managed at framework level.

Appendix A: Risk Register - draft

Appendix B: Programme – draft

Risk ID	Task ID	Risk description		Risk owner (Customer, contractor, consultant, etc)	Qualitative ranking (before response action)					Response Action	Qualitative Ranking (After Response Action)						Data for Quantitative Analysis			
		Source of risk	Consequence on project		Probability scale	Cost impact	Time impact	Cost+time impact	Risk priority	Response strategy	Residual probability (%)	Probability scale	Cost impact	Time impact	Cost+time impact	Priority	Least cost (£)	Most likely cost (£)	Max cost (£)	MEV (£)
1	1	Public and landowner objection leading to additional appraisal	Programme delay and cost	Customer	M	VH	H	VH	H	Liaison with estates/legal to ascetain responsibilities.	10%	VL	VH	M	VH	H				
2	2	Additional services require re-design	Cost	Contractor	M	M	L	M	M	Contractor to undertake additional SI	30%	L	M	L	M	M				
3	3	Discovery of unforeseen contamination	Programme delay and cost	Contractor	L	M	H	H	M	Clear scope and liaison with ops teams into scope	30%	L	M	M	M	M				
4	4	Material from the excavation cannot be kept on site	Cost	Contractor	L	H	L	H	M	Consultation with Landowners	70%	H	H	H	H	H				
5	5	Additional erosion control (rip-rap)	Programme delay and cost	Contractor	L	M	L	M	M	Contractor to review access requirements and consider as part of the scope of works	30%	L	M	VL	M	M				
6	6	Insufficient modelling to determine preferred option (based on BNG uplift)	Programme delay and cost	Consultant	H	M	H	H	H	Additional modelling to be completed at OBC - FBC	10%	L	M	M	M	M				
7	7	Funding	Scheme feasible but not fully funded	Customer	H	L	L	L	M	Increase contributions from external sources	30%	L	L	L	L	L				
8	8	Adverse weather	Prevents works on site, delaying programme and increasing costs	Contractor	H	M	M	M	M	Programming of work to avoid worst weather periods	70%	H	L	L	L	M				
9	9	Landowner agreements	Inability to access works area to complete works resulting in delays and increased compensation	Customer	M	L	L	L	L	Early liaison Notice of Entry served in good time	30%	L	L	VL	L	L				
10	10	Security	Additional costs due to security breaches	Contractor	H	M	L	M	M	CCTV monitoring Sercurity fencing	30%	L	L	VL	L	L				
11	11	Future maintenance of assets created	Increased risk of asset failure due to lack of maintenance	Customer	H	H	VL	H	H	Liaison with LA and agree future responsibilities	50%	M	M	VL	M	M				
12	12	Design Creep	Increased cost to works	Consultant	M	H	H	H	H	Well defined scope, design management, change management	50%	M	M	M	M	M				
13	13	Damage to existing land drains during works (including Highway Drains)	Increased work load resulting in increased costs	Contractor	H	L	L	L	M	Identification and protection measures Availability of materials for repairs	50%	M	L	L	L	L				
14	14	Regrading overly steep bank, working adjacent to water	SHE risks	Contractor	H	L	L	L	M	Best practice Following SHEW CoP and H&S Plan	30%	L	L	VL	L	L				
15	15	Planning conditions imposed on designs	Potential delay and extra design	Consultant	M	M	M	M	M	Proposals all in accordance with current aesthetics	10%	VL	M	L	M	L				
16	16	Unexpected protected species licence	Delays in programme, timing restrictions on construction	Consultant	M	VL	H	H	H	Early consultation NE, FBG, other statutory bodies, NEAS and undertaking survey, permit	30%	L	VL	L	L	L				
17	17	Lack of public engagement	Impact on reputation, dealing with complaints during construction	Customer	H	H	VH	VH	H	Consultation - clear transparancy, consideration of public comment - appropriate comms and engagement plan. Consideration for diverse population and minorities - appropriate communication i.e. languages/translations	30%	L	L	L	L	L				
18	18	Changes to Project team staff	Loss of info, knowledge	Consultant	H	L	VH	VH	H	Succession planning - ensuring continuity and appropriate handovers between leavers and joiners	50%	M	L	L	L	L				
19	19	Lack of ground investigation	Designs inappropriate - delays, changes to proposal or construction plan	Customer	VH	VH	VH	VH	H	Undertake GI. ESE - Contractor and Consultant to site to agree the GI requirements/scope	70%	H	H	H	H	H				
20	20	Lack of internal consultation	Options not operable by AP, ecological damage, impacts on flood warning	Customer	H	H	VH	VH	H	Early consultation with FBG and NEAS re scheme and PEIR. AP on project team	30%	L	L	L	L	L				
21	21	Planning withheld	Delays to programme, business case sign-off	Customer	H	VH	VH	VH	H	Early planning authority consultation	50%	M	M	M	M	M				
22	22	Env Permit withheld, national signoff delay	Delays to programme, business case sign-off	Customer	M	VL	VH	VH	H	Early P&SO permit chat - programme in submission. Keep FBG rep up to date	30%	L	VL	L	L	L				
23	23	Failure to agree design for discharge treatment	Delays to programme, business case sign-off	Consultant	M	H	VH	VH	H	Very early consultation - good communications	30%	L	M	M	M	M				
24	24	INNS - Japanese Knotweed	Delays in programme, change in construction plan	Contractor	VH	L	VH	VH	H	Early identifying and treatment in advance of works. Biosecurity guidance followed	10%	VL	VL	VL	VL	L				
25	25	Missing environmental enhancement opportunities	Reputational, loss of potential funding	Customer	H	VL	M	M	M	Engagement with NEAS FBG and other stakeholders - identifying enhancement opportunities	30%	L	L	L	L	L				
26	26	Lack of feasible scheme	Reputation with local stakeholders, residents	Customer	M	VL	VH	VH	H	Communication - transparency	30%	L	L	L	L	L				
27	27	Archaeology	Impact on proposal design and cost	Consultant	H	H	VH	VH	H	Desk based studies - identify need for further study. GI	50%	M	M	M	M	M				
28	28	HRA requirement	Delays in programme, change in construction plan	Customer	L	VL	VH	VH	H	Early consultation with NE	30%	L	VL	L	L	L				
29	29	Works has negative impact to estuary sediment movements	Reputational damage, costs to rework, legal contest	Customer	M	H	VL	H	H	Ensure a robust baseline is set and than ongoing monitoring of site post works to review impacts against baseline	30%	L	M	VL	M	M				
30	30	Contractor Cost at FBC in excess of estimates in OBC	Insufficent funds - BCUR	Customer	VH	H	H	H	H	ECI	50%	M	M	M	M	M				
31	31	Failure to appoint a contractor	Delays in programme, change in construction plan	Customer	L	L	VH	VH	H	Re advertise	30%	L	L	L	L	L				

Item	2021														2022								
	40	41	42	43	44	45	46	47	48	49	50	51	52	53	1	2	3	4	5	6	7	8	9
Project Management																							
Project Start-up 27th September																							
Meetings (not marked as held weekly)																							
Walk-over (both locations)																							
Modelling																							
Hydraulic Modelling: Coquet																							
Present findings																							
Modelling Report																							
North Northumberland Coast - high level review																							
Present findings																							
Modelling Report																							
Option Development - Combined																							
Agree Options																							
Develop Long List(s)																							
Option Workshop																							
Define Short List(s)																							
Confirm preferred option(s)																							
Preparation of Design Pack																							
Economic Apprasial																							
Technical report																							
Environment																							
Environmental Baseline (desk studies)																							
UK Habs remapping																							
DEFRA Biodiversity Metric 3.0																							
HRA - Screen / LSE																							
WFD																							
Reporting - (BNG, WFD and HRA)																							
Preparation of PEIR and drafting																							
Stakeholder Engagement																							
Production of visual / interactive vision maps																							
Landscape Visioning Sketches																							
Agreeing Preferred Option and Informing Stakeholders																							
Business Case Development																							
Strategic Case																							
Economic Case																							
Commercial Case - to be completed by EA																							
Financial Case																							
Management Case - to be completed by EA																							
Executive Summary																							
FCERM 2 and PF Calculator																							
Draft OBC																							
Design and CDM																							
Undertake outline review for prefeered option																							
Finalise drawings and sign-off																							

ECI and Option Costings																							
Identify and draw site hazards and constraints plan																							
Discuss with EA Project Team																							
Finalise hazards and constraints plan																							
Management Plan																							

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
[redacted]	[redacted]	Director	[redacted]	15.53	[redacted]
		Director		4.40	
		Senior		28.93	
		Ecologist		27.13	
		Principal		4.27	
		Assistant		19.53	
		Ecologist		32.53	
		Principal		5.00	
		Senior		16.00	
		Senior		1.00	
		Senior		13.07	
		Director		11.40	
		Assistant		13.87	
		Director		0.00	
		Director		4.27	
		Assistant		8.00	
		Assistant		29.87	
		Ecologist		5.00	
		Assistant		14.67	
		Senior		2.00	
		Ecologist		7.00	
				al staff costs	
Expenses (please detail type i.e. travel, accommodation etc.)					
				Total overall cost	**83,801.33**

Additional Costs (subject to agreement as variation):		
Surveys (please provide cost per survey for anticipated requirements)		
Type	**Unit of measure (per m/ per day etc)**	
Additional Ecology Surveys (subject to confirmation)		
a) Wintering Bird Surveys (using WEBS data – reporting and interpretation)		
b) Breeding Bird Surveys (seasonally restricted)		
c) Appropriate Assessment (if required)		
Site Surveys (not intrusive)		
Interpretation and report of SI		
Topo survey (JBA)		
	Total staff costs (i)	
Expenses		
Ecology	for a) – data purchase	
	for b) – travel, subsistence, accommodation	
	for c) – travel, subsistence,	
Site Surveys (not intrusive)	Topo travel, subsistence,	
	Total (ii)	
	Total (i + ii)	**£ 27,780.00**

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 JBA Consulting 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:	
Date:	16th August 2021

[redacted]

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 **Authorised Contracting Authority Signature** **DgC Authorised Signature (if required)**			

Commission Code	
Purchase order no.	
Bravo ECM Ref (if applicable)	

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.

[redacted]

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

[redacted]