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: Elstead fish easement project

Bravo project ref (if applicable): N/A

Date: 06/12/2022

Contracting Authority (Environment Agency; Natural England; Defra etc)	Environment Agency		
Project Manager:	[redacted]	**Project manager's phone number:**	[redacted]
Budget holder:	TBC	**Cost code:**	ENV0004221C
Commercial Contact (if applicable):	N/A	**Project manager's email:**	[redacted]
Project Start Date		10/01/2023	
Project Completion Date		Outline Designs – Feasibility Report, preferred option and associated deliverables: 31/03/2023 Project Completion: 31/03/2024	
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: 10/11/2022. We are also arranging a tender site visit on 02/11/2022 which all prospective consultants are invited to attend.	New date for detailed design return: 14th December		

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

each of the elements of this project. You will need to show clear evidence of the relevant skills and experience you have, including recent examples of projects delivered meeting the specific site objectives laid out in the scope, highlighting your ability to deliver the outputs and outcomes required.		
Proposed Staff We require information for all key project staff with evidence of their relevant qualifications and experience in undertaking similar projects and working with similar methods as described in your answer to the above.		**25%**
Project Management (including project plan) You will need to provide a programme of work including a timetable, appropriate milestones. We also require the project team structure showing clear roles and responsibilities: Please let us know whether there are any time constraints on commencing or completing the project that would need to be considered.		**10%**
Health & Safety Please provide details of how you will manage health and safety throughout project delivery, including policies and practices regarding compliance with government guidance on Covid-19 risks.		**5%**
Sustainability Considerations (Travel management & reduction of carbon footprint) Please highlight how, throughout the project delivery, sustainability and minimising carbon footprint will be considered.		**5%**
Quality Assurance Please clearly identify how the project outputs will be Quality Assured by suitably qualified and experienced team members prior to submission to EA project team to ensure high quality outputs.		**5%**

Specification (Details to be provided by the Environment Agency project manager. ***Note*** *– the contractor's proposal will be limited to* ***3 pages*** *(excluding costs) unless otherwise indicated in your specification.* ***Please also detail the Contractor's required Limitation of Liability.***

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)

This contract is seeking feasibility and detailed design of a multi species fish pass on the River Wey at Elstead, upstream of the Mill at Elstead public house. The objective of the project is to secure a long-term sustainable solution that delivers multi species fish passage (including all age ranges/sizes of fish likely to be present at this location - salmonids, eels and all relevant coarse fish), maximises hydromorphological/ecological benefits and removes/minimises any operational/maintenance requirement.

We would like this project to be consultant managed and led, with Environment Agency staff providing support where required. An allowance should be made to report progress and to escalate technical queries to the EA project manager on a fortnightly basis. This progress reporting can be via teleconference of MS Teams but the consultant should produce minutes to be circulated to the whole project team. Tendering consultants should allow for a minimum of 2 site visits in their costings.

Background and Objectives

The landowners in this location are The Mill at Elstead and Surrey Wildlife Trust (SWT) upstream. Fish passage is currently limited in this section of the River Wey due to an artificial mill structure and culverted section at The Mill at Elstead public house (which is a Grade II listed building), which is no longer utilised for industrial uses. This is a significant blockage as upstream of here is predominantly rural habitat which includes a number of SSSI's, including Charleshill SSSI. Structures in this reach represent barriers to fish migration, cause impoundments and impact geomorphological function. Elstead Mill supports a 1.2 km impoundment. Currently the WFD status of this reach of the River Wey is Poor (GB106039017820) with fish aspect rating as Poor. Improvements as part of this project would go towards getting this reach to Good status. We have attached some location maps and photos depicting the section of river we are interested in and blockages to fish movement.

Delivery of a fish pass at Elstead builds on a strategic programme of works, known as the Wey FWD (Fish Pass and Wetland Delivery) which seeks to get the River Wey and its tributaries to 'Good Ecological Status' or 'Good Ecological Potential'. To date, the Wey FWD has secured mechanisms for the delivery of fish passes at all 15 priority barriers between the Thames at Weybridge and the Wey at Tilford. This will open up fish passage for over 100km, reconnecting the Thames to the Wey for the first time in centuries. This will benefit migratory fish such as trout and eels and all other fish species which rely on the ability to freely move between different habitat types to complete their lifecycles. Elstead Mill is one of these 15 priority barriers and therefore securing fish passage is critical to achieving the wider objective of the Wey FWD.

Our preliminary thoughts are that the most beneficial solution would be to link up the ordinary watercourse that runs to the north of the main River Wey and joins at Elstead Bridge. We have noticed several locations where the two watercourses are less than 20m apart. Creating a new channel between the main River Wey and ordinary watercourse would provide fish easement around the structure at The Mill at Elstead. There would be added benefits of improving the stream to the north of the River Wey, which is very stagnant and appears to be suffering from high suspended iron levels. This could provide significant habitat improvement to this ordinary watercourse and therefore provide biodiversity net gain, which could be utilised as part of SWT's bank of biodiversity net gains credit portfolio. The ordinary watercourse is dissected by at least three culverts or sluices. When assessing how much flow would be needed, the capacity of these culverts should be considered. The feasibility and outline design should explore a range of options for a fish bypass channel, thus improving fish passage along this section of the River Wey and providing biodiversity net gain.

Some initial locations for potentially linking the two watercourses have been identified as SU8974543953 and SU8988243928. There are also options for a technical fish pass solution at this location, although this is currently our less favoured option.

As a part of this contract, we expect the chosen consultant to explore the feasible options for technical fish pass and natural linkage channel at this location, including a breakdown of likely costs. The feasibility stage would include scoping out requirements for further surveys, e.g. topo and ground investigations. We would then require detailed design drawings (including fabrication drawings) to be provided for the preferred option. Early contractor involvement (ECI) (to be appointed by the consultant) is required throughout this process to identify risks and cost savings and ensure the buildability of the designs. The ECI will be required to visit the site.

Consultants will be expected to show their experience in design of both technical fish passes and natural bypass channels plus the ability to understand the hydrological sensitivities on this site and how to design schemes appropriately. For the production of the bypass channel designs we will expect to see the involvement of an experienced geomorphologist to enable a channel to be designed that exhibits natural processes and provides maximum ecological benefits.

Due to the limited timescales on offer for outline designs and the potential for risks to be pushed towards detailed design stage, and risk of duplication, we have decided we would like you to quote for the inclusion of deliverables up to the detailed design stage. This work will depend on contract award but we're currently aiming for a start date of 16 December 2022. As much as possible of the outline design work will need completing by 31 March 2023, with the remaining work on the contract to commence once our budgets for next financial year, usually August approximately. We will then want the detailed design work completed by 31 March 2024.

Consideration will need to be given to:

- **Sustainability, including carbon footprint.** The Environment Agency is committed to becoming a Net Zero Carbon organisation by 2030. Use of the Environment Agency's carbon modelling tool for each of the options is required to ensure carbon is a fundamental consideration in the options appraisal and design process and opportunities. The Consultant should ensure that the preferred solution is a Net Zero Carbon

option and adhere to the Environment Agency's Minimum Technical Requirements for Environmental Sustainability, design and management (801_14).

- **Ecological impacts.** The preferred option must avoid/mitigate any adverse ecological impacts.
- **Geomorphological impacts**. The preferred option must avoid/mitigate any adverse geomorphological impacts, e.g. impacts to the road where the ordinary watercourse flows alongside it or other structures which cross it. It will also be important to establish whether the ordinary watercourse has a sufficient gradient to support flow dependent habitat.
- **Heritage/Archaeological impacts.** The preferred option must avoid/mitigate any adverse archaeological/heritage impacts. For the archaeological desk-based assessment the following must be completed:
- - Consultation with the County Archaeologist to agree a scope of works and data sources to be used.
- - A report/document detailing:
- the known, and any likely unknown, archaeological interest at the site.
- the recommended measures to be taken during the design stage to minimise the risk of impacting buried archaeology.
- the recommended measures to be taken during the construction phase to minimise any impacts to buried archaeology.
- - A final report that meets with the standards for Archaeological DBAs set by the Chartered Institute for Archaeologists (CIFA) which can be found here: https://www.archaeologists.net/codes/cifa.
- - The archaeological report must be suitable to facilitate consultation with the County Archaeologist as part of a Planning process.
- **Hydrology,** including analysis of head and tail water level records provided by the EA. See further info below
- **Flood Risk.** The fish pass will require a Flood Risk Activity Permit (FRAP). The consultant will need to demonstrate that achieving such a permit is likely and that Flood Risk in particular has been assessed appropriately. Time will need to be allocated for discussions with PSO, and the necessary level of flood risk assessment will need to be carried out under this contract. The consultant is also required to submit a pre-application FRAP request (please see template form attached) in addition to the full application.
- **Construction and Design Management Regulations** (2015). You will be expected to deliver design in line with the role of designer under the CDM regulations 2015 and will abide with the strict requirements of the EA policy document – SHEW code of practice. All designs will be required to minimise the need for maintenance, but where maintenance is unavoidable provision for safe access and maintenance is important. We are interested in how the consultant will identify the risks associated with the project and how they are seeking to minimise risks/ design out risks where practicable.
- **Further surveys/investigations.** The tender will need to allow time to assess what data is already available, identify what further data is required and provide a specification for this work, e.g. structural/condition assessment of existing sluices/culverts, Ground Investigations, topographical survey, survey drawings of the adjacent road, archaeological/ecological surveys. The surveys will either be arranged by the EA or awarded as an additional piece of work via a separate instruction. The EA have already prepared a specification for a topographical/bathymetry survey. The successful consultant will be required to have input into our survey recommendations to ensure a robust approach is carried out.
- **Waste management.** The 'waste hierarchy' should be implemented to maximise opportunities for re-use/recycling, and to minimise waste sent to landfill. This should include the re-use of spoil on site where possible which should form part of the design (in accordance with the CL:AIRE CoP.
- **Landowner requirements**, including the need for vehicular access over the channel
- **Consents/licenses** (e.g. Planning permission, FRAP, impoundment license, transfer license, waste license, Natural England licenses). The tender should allow for submission and attainment of all necessary consents/licenses, including preparation of all required supporting documents. We are currently exploring the option of submitting a Certificate of Lawful Development or having to apply for full planning permission.
- **Access and buildability.** The tender should allow sufficient time to work with an ECI to assess access, buildability and cost. We would like the ECI to be appointed by the consultant where possible. A record of their input should be provided throughout the project.
- **Cost-benefit analysis.** Outline costs (including detailed design, consents, construction and any on-going maintenance/operation) are required for each of the feasible options. A summary of the benefits for each option should also be provided, e.g. length of riparian habitat created/improved.

Hydrological assessment

- Establishing how much flow the fish pass can take will form a key part of the feasibility study. The flow needs to be sufficient to provide fish passage/flow dependent habitat, whilst not impacting on flood risk or any sensitive ecological receptors.
- The nearest flow/level gauging station is at Tilford – see data provided

- The EA will install water level logger shortly upstream and downstream of the weir to monitor changes in water level. This data will be available to the consultant and can be cross checked against data provided from Tilford gauging station.
- A critical part of the feasibility study will be assessing whether it will be possible to utilise the ordinary watercourse as a bypass channel without encountering any hydraulic barriers to fish passage (either hydraulic jumps or excessive velocities).
- There are several SSSIs and SNCIs (Sites of Nature Conservation Importance) upstream of Elstead Mill which support water dependent habitats. It's assumed that these habitats are dependent on the water level sustained by the Mill, however this has not been proven. To support the licensing of the fish pass, we will need to understand its' impact (if any) on the ecological receptors upstream. We would like to see the impact on upstream reach level and under a range of scenarios. If adverse impacts are identified, we will need to understand how this may be mitigated. This may require a greater understanding about how the Mill structures are/can be operated.
- This study will be required as part of the supporting information accompanying a water resources licence application but will also need to inform the design of the fish pass.

Deliverables should include (but not necessarily be limited to) the following outputs/services:

- Feasibility report assessing a targeted set of options and including any supporting information as detailed above. The report should identify a short list of feasible options in line with our aspirations as set out above that achieve the project objectives, provide robust outline costs for these options and identify a preferred option which is ready to be taken forward to detailed design and construction in 2023/24.
- Outline designs for the preferred option, including cross sections and a long section with water levels (e.g. Q99, Q95, Q50, Q10).
- Detailed design drawings, including existing and proposed planform, cross section and long section drawings, all to include water levels (e.g. Q99, Q95, Q50, Q10). Drawings must be suitable for fabrication.
- All relevant CDM documentation, including an updated Pre-Construction Information (PCI) pack (started by the Client), Buildability Statement, Designer's Risk Assessment (DRA), Public, Safety Risk Assessment (PSRA), the EA's Red Amber Green (RAG) list, Drawings / Design information including SHE boxes or hazard warning signs, Hazard map, Bill of quantities.
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The following has been provided as part of the tender documentation:

- Pre-construction Information, including a desktop services search
- Survey drawings and topographic survey
- Charleshill Water Level Management Plan (WLMP)
- FRAP pre-app fish pass form template
- Land ownership plan
- Flow and level data from Tilford gauging station

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):

Project Management (including programme plan)

Tendering consultants must submit a programme with milestones and critical path identified to demonstrate that work will be completed by 31st March 2023. This programme should allow for consultation with EA/landowners and any further surveys/investigations anticipated.

(Delete the following if information is to be included in Approach & Methodology section)
Health and Safety

Sustainability

Quality Assurance

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.

The successful consultant will demonstrate and provide clear evidence and examples where relevant of their:

- Understanding of the requirements for fish passage of the range of fish species to be expected on the River Wey.
- Delivery of high quality design for a range of technical and natural fish pass solutions
- Delivery of bypass channels performing a range of natural river processes providing opportunity for maximum biodiversity benefits. We are particularly interested in projects where the design specifically applied assessment techniques and geomorphological knowledge to provide a channel which was not overly engineered but allowed for the channel to evolve in a natural way without undermining its fish pass function. We are frequently seeing bypass channels being heavily engineered to constrain natural processes due to a perceived risk of instability, and we want the bypass channels created under this project to be great examples of what can be achieved using a multi-disciplinary team of fish pass specialist, engineers and geomorphologists.
- Hydrological skills/understanding in using flow and level data to carefully balance the needs of a range of competing water resource interests.
- Ability to design structures in a way which fulfils their obligations as designers under the CDM 2015 regulations. In particular how projects have been designed to minimise H+S risks at construction; how they have succeeded in designing out the need for frequent maintenance/inspections, and where maintenance will be needed on a regular basis, how the safety of operators required to maintain the structures were taken into account.
- Ability to assess the ecological, heritage and carbon/sustainability impacts of construction project design and implementation in sensitive habitats.
- Experience of EA guidance and procedure, with regards providing a clear and demonstrable case for delivery of fish pass options.

Relevant skills/experience of the consultant's appointed ECI and how they've worked or intend to work together are also required.

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

3. Proposed programme of work and payment table (Detailing specific tasks, key milestones, deliverables & completion date where appropriate) Payment schedule should detail the % amount that will be paid after delivery of each task (*We always hold back a minimum of 30% until the project is complete. Set out how you want the Section 7 cost proposal table broken down (eg. by key task/sub-tasks; deliverable etc)…… As well as the usual format for pricing under the Ecological Services Framework (section 7), please provide a price breakdown for the tasks identified below.*

Task no.	Task and deliverable	Estimated completion date (TBC by consultant's programme)	Payment schedule
1.	Review of existing information & filling information gaps, to include survey specifications	1st December 2022	The successful consultant is welcome to submit invoices for work completed on a monthly basis, but 30% of the
2.	Archaeological desk-based assessment	December 22/January 23	
3.	Hydrological assessment	December 22/January 23	
4.	Submission of draft feasibility report, including cost-benefit analysis of feasible options and all considerations listed in section 1 above.	31st January 23	

5.	Work with EA specialists and ECI contractor to agree preferred option and finalise feasibility report	14th February 2023	total cost will be held until the project is completed.
6.	Outline designs, including all relevant CDM documentation (draft)	28th Feb 2023	
7.	Flood risk assessment and submission of FRAP pre-app	31st March 2023	
8.	Outline designs, including all relevant CDM documentation (final)	31st March 2023	

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

4. Health and Safety Requirements ***Note**: Only include if high risk activities being undertaken e.g. working at height, near or over water). Do not request RAMS or similar risk assessments are returned with submissions. These should only be requested at contract award.*
Information to be returned by the Contractor in Part 2 Section 4
5. Sustainability Considerations ***Note:** Only include if project has high risk/impact sustainability considerations e.g.travel, carbon footprint, specific bio-security risks etc. that need to be managed.*
Information to be returned by the Contractor in Part 2 Section 5
6. Quality Assurance **Note:** *Only use if there are specific QA requirements that need to be evidenced e.g. specific UKAS accreditations, chain of custody, reporting protocols etc. Do not request details of standard ISO accreditations. .*
Information to be returned by the Contractor in Part 2 Section 6

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		**APEM**	
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

Project Understanding

APEM understands that the EA requires a feasibility study, outline and then detailed design of a sustainable multi-species fish pass to assist improving the WFD status on the River Wey. The intention is for the fish pass to provide a bypass channel linking the Wey to the ordinary watercourse to the north, providing passage easement around the significant barrier at Elstead Mill. Ideally, the bypass channel will be a naturalised channel, but alternative and more technical approaches may be considered if appropriate. The EA's aspiration is to provide similar flows in the ordinary watercourse as existing conditions via a new bypass channel located upstream of where an informal ditch currently links the two channels. There is a desire shared by all parties to identify and progress naturalised solutions that promote the maximum fisheries, geomorphological and environmental benefits, whilst minimising carbon, environmental disruption, maintenance input and any detrimental impacts to surrounding water levels and flood risk. The initial stage of the scheme will culminate in a feasibility report and a comprehensive outline design for the preferred option, accompanied by supporting documentation & Early Contractor Involvement (ECI) derived estimates of scheme cost. Subject to approval of EA budgets, the scheme may then progress to the production of a detailed design package for the preferred option and the production of the appropriate consents.

Start-Up Meeting, Data Review and Site Visit

At the project outset we will arrange a start-up meeting, submit a data request and review the data held by the EA. This will foster a greater understanding of the site, help identify constraints or hazards and will enable any knowledge gaps to be identified. This request will include, but may not be limited to, the study PCI documents (including service plans), water level data, OS mapping data and scope of the planned EA topographic survey.

APEM and our appointed ECI contractor will visit the site to meet with the EA Project Manager and other relevant EA teams, such as fisheries. Factors relevant to assessing the feasibility of fish passage options will be identified, including possible pass locations and types, surrounding structures, the geomorphological nature of the watercourse and its potential response to options. We will consider site access and land use and how these may influence options, including buildability, maintenance access, public safety and construction cost. We would also encourage the attendance of key stakeholders or landowners at this initial meeting to gain an understanding of their usage needs and aspirations for the site. The site visit will be attended by APEM's [redacted] (fisheries engineering associate director), [redacted] (principal hydraulic engineer and river modeller) and [redacted] (Principal

geomorphologist). [redacted] and [redacted] live locally to each other and their use of shared transport will minimise emissions and carbon associated with the site visit. Our appointed ECI contractor will provide valuable input on construction access and buildability. Our proposal includes appointment of Stonbury as ECI contractor for the feasibility and outline design stages. Stonbury are specialist contractors in the water environment with a wealth of experience constructing fish passes, river restoration, weir removal and erosion mitigation. APEM and Stonbury have a strong working relationship, which includes several current design and feasibility projects on United Utilities' design and build river restoration framework, where the use of sustainable green engineered river restoration approaches are being implemented. If the EA prefer to nominate an alternative ECI contractor from their own framework we would be happy to accommodate this, subject to a review of costs.

Subject to access, APEM will survey the head difference between the River Wey and the bypass channel at key locations along the reach. This data will be crucial to the early and rapid appraisal of the viability of a naturalised bypass channel at the site, as the head loss will dictate the length of the channel required to provide suitable swimming conditions for the fish species present. For this reason, the site visit will need to be undertaken in as low flows as practicable. We assume that the EA's aspirations to provide naturalise linkage from the Wey to the ordinary watercourse remains the preferred option, but to reduce the risk of abortive work we will highlight any risks arising from this preliminary survey. We note the EA's intention to install water level loggers at the mill, but would highlight that it may be beneficial to also consider loggers further upstream at the site of a proposed bypass. Should alternative fish pass options be identified on site we will assess these and immediately alert the EA to new opportunities, but a review of scheme costs may be necessary if this substantially alters the direction of the project.

Fish/Eel Pass Long List, Workshop 1 & Survey Confirmation

Building on the knowledge gained, APEM will identify an initial long list of bypass approaches. This will include different naturalised bypass options as well as, potentially, more engineered approaches ranging from rock ramps to technical baffle passes. The suitability of the long-listed options will be appraised at a high level, with their key advantages and disadvantages (including fisheries, geomorphology, habitat, buildability, waste/carbon & sustainability, hydrology, maintenance, flood risk) captured in a concise 'at-a-glance' appraisal summary table, delivered to the EA within 1 week of the site visit. At the heart of this appraisal will be the ability of a naturalised bypass channel to provide adequate flow depths and velocities for exploitation by the fish species present over the head loss measured on site. The purpose of this preliminary appraisal will be to rapidly and efficiently identify and rule out options identified as non-viable; this can help reduce abortive costs (e.g. incorrectly targeted topo survey or hydraulic model extent). We propose to hold a meeting with the EA (Workshop 1; assumed via Teams, or similar) to confirm the short-listed options (assumed up to 3 options) and agree on the scope and extent of the topographic survey, archaeological study and other surveys potentially required. If appropriate, key stakeholders could also be invited to Workshop 1 so progress on the scheme can be shared and their preliminary feedback gathered. Following this workshop we will provide feedback on the EA topo survey scope and commission the requested archaeological report. We propose to use Oxford Archaeology, who APEM have an established working relationship with, to deliver this report and our fees include for a small amount of online/phone post-report consultation with the County archaeologist to agree the most likely mitigation strategy.

APEM have worked on a number of recent bypass fish pass design projects for the EA, with [redacted] and [redacted] working as a team to produce designs on the River Itchen (multi-species naturalised bypass in a SSSI and a rock ramp pass) and the River Wensum (naturalised bypass channel). These schemes have had a number of challenging constraints, requiring innovative thinking to identify, appraise and design bypass channels compatible with the challenging site layouts and species present. Focus on these projects was the design of naturalised channels, including provision of hydraulic habitat suitable for protected species (southern damselfly). Should a technical fish pass be required [redacted] is experienced in the hydraulic design of baffle passes (River Tees gauging station) and [redacted] has produced detailed designs, along with a full suite of CDM and supporting documentation for Larinier baffle passes (River Evenlode) and eel passes (River Evenlode and River Thames), plus other sites. The team's combined expertise in appraising and designing safely buildable, sustainable and exploitable fish passes will maximise the fisheries, WFD and geomorphological benefits at the site.

Options Appraisal

Hydrological Assessment

APEM's principal hydromorphologist, [redacted], will undertake a catchment review of hydrological connectivity based on publicly available LiDAR, the topographical survey, site observations along with land use characteristics and historical information. We will estimate baseline flow inputs to the River Wey and the ordinary watercourse using industry standard software. This will include the minor watercourses within the Charleshill SSSI to ensure that any tributary contributions are captured in hydraulic modelling. The flows will be agreed in advance and likely range from low Q99 to Q10 flows through to a flood risk scenario including an allowance for climate change. The EA estimated flood risk extent will be reviewed to inform the hydraulic model extent. The data from the EA flow

gauge at Tilford and any level logger data installed as part of this project will be reviewed to determine stage/ discharge relationships for later model calibration (if needed). APEM also have the capability to undertake on-site flow measurement surveys and we would be happy to discuss adding this to the project scope if beneficial.

Hydraulic modelling

To fully appraise the short-listed bypasses and, ultimately, design the preferred option and understand their impact on hydrology, ecology and flood risk, we propose to produce a hydraulic model approximating to the indicative study area extent shown in *Elstead Location Map 1* included in the tender information. We propose that [redacted] will build a 1D-2D linked model using HEC-RAS modelling software using the topographical survey data for the 1D channel and hydraulic structures along with LiDAR data for connection to the 2D floodplains. All minor tributary flows will be added to the model for completion and to establish a base model that can be calibrated against gauged data and comments in the Charleshill SSSI water level management report. Please note that we are not anticipating modelling any complex operational structures such as time/ stage-controlled weir gates, pumps etc.

HEC-RAS is capable of determining the ordinary watercourse's channel flow capacity, water depths, velocities and bed shear forces. Similar outputs can be provided for the River Wey to determine the existing spill points and locations with potential to connect to the ordinary watercourse. We can also model the ordinary watercourse as a fully realised 2D channel depending on the frequency of cross sections for interpolation of the channel bed elevations – this will be agreed following the initial data review. This option allows for the channel to be represented with seamless connection to the floodplain along its entirety. This is particularly useful for modelling scenarios where the channel or riverbanks and floodplain have been lowered, raised or for determining required channel elevations to achieve certain velocity/ flow rate/ bed shear stress targets. A pure 2D gridded model, with incorporated 1D hydraulic elements, typically has longer simulation times but provides a more stable solution.

Upon agreement of the baseline model, we will re-configure the model to simulate proposed bypass short-list options (see next section). HEC-RAS has advanced terrain modification tools to incorporate the proposed channel connection and fish pass modifications. We have assumed one calibrated base model configuration, and three short-listed scenarios which we will iterate (up to four times) to understand hydraulic performance under different flows or which amendments to the core channel geometry (i.e., bed elevation, gradient) are most suitable. This modelling will extend to considering the gradient and flow velocities in the bypass channel and assessing the risk of existing structures leading to hydraulic barriers to fish passage. We can also include options to remove the existing structures i.e. culvert replacement with single-span bridges. This will enable us to fine-tune the hydraulic conditions to optimise flow velocities/depths in the bypass to maximise opportunities and benefits for wider fisheries, habitat and geomorphological purposes, whilst minimising risks and impacts.

Hydraulic modelling outputs will be reviewed by [redacted] and our geomorphology and fisheries/ecology experts as necessary to ensure they bring benefits to river processes and aquatic and terrestrial habitat. Results will then be reviewed and provided as either as direct output files from the model or as mapped items.

This phase of modelling will provide an understanding of the high-level impact of the bypass on flood risk and will enable the FRAP pre-application to be delivered, but the model is not intended to provide formal quantitative assessment of flood risk to full EA and local lead flood authority guidance. This level of detail may be more appropriate at detailed design stage, for more complex options and may need to include mapped flood extents at the agreed design flood event including an allowance for climate change.

Please note that we do not propose to run extensive sensitivity analysis to simulate flood risk i.e. culvert & hydraulic structure blockage. Sensitivity tests may be undertaken at this stage to understand the hydrological, and ecological benefits or project risks associated with diverting more (or less) flows to the watercourse.

[redacted] and [redacted] have undertaken several recent hydrological and modelling projects, including building and assessing options in HEC-RAS and Flood Modeller models. This includes drought modelling and hydrology assessment to assess impact of low flows on river habitats (River Derwent) and assessing the impact of changes in flow regime on river conditions for environmental purposes (River Rivelin).

Short List Appraisal

Whilst the above hydraulic modelling phase will be crucial in informing the appraisal of the short-listed options, we will ensure that the appraisal process considers the full range of factors. This will include findings from the archaeological desk study, ECI advice and the further consideration of opportunities of risks that our specialist team identifies as project knowledge evolves, including hydrology and ecology issues as well as risks to the SSSI. In parallel with hydraulic modelling we will develop our appraisal summary table to appraise in more detail the short-listed options, such that the opportunities identified at this stage can feed into the latter stages of the hydraulic

modelling and design work. At short list appraisal stage we will produce (in conjunction with the hydraulic modelling) outline specifications and simple concept/GIS sketches for the short listed bypasses, suitable for communicating the nature and layout of the scheme in the feasibility report and to enable the estimation of scheme costs. The costs, benefits and carbon estimates required under the scope will be presented for each short-listed option, with costing input provided by the ECI contractor.

The close working relationship between our core team will ensure that all factors related to the bypass design are considered when developing, modelling and appraising bypass options. [redacted] will oversee the appraisal phase, bringing his extensive experience on fish passage and river restoration appraisal, design and construction, plus flood risk management scheme design and hydraulic modelling/hydrology. [redacted] will lead the hydraulic modelling and bypass design work. His prior experience in both hydraulic modelling and the hydraulic and engineering design of bypasses and fish passes will bring proven knowledge and efficiency to this phase. [redacted] inputs will ensure that geomorphological risks and opportunities are captured and carried forwards for consideration in the appraisal and subsequent design work. The core team will have access to APEM's wider environmental experts, including fisheries scientists, hydrologists and river restoration specialists.

Workshop 2 and Confirmation of Preferred Option
The preliminary results from the hydraulic model (see above) will be issued to the EA, alongside the more detailed short list appraisal summary. These will be discussed at an online meeting (Workshop 2) attended by the EA, including fisheries and PSO teams, plus the ECI contractor. It will give the project team chance to discuss the feasibility study, respond to any questions and, ultimately, jointly identify the preferred option (i.e. bypass location and type) to be carried forward to outline design stage.

Outline Design
As per the EA scope, we have included allowance for a second site visit (assumed at commencement of the design phase, but this could be scheduled at another time if more beneficial). Our fees include attendance by [redacted], but we would be happy to discuss attendance of other staff, if appropriate. We will produce outline design drawings of the preferred option. The drawings will comprise a general arrangement and sections/details as appropriate, including the required long sections showing water levels in the new bypass from Q99 to Q10. The design will seek to minimise carbon and waste, whilst optimising passability and wider environmental benefits. Where appropriate, high level notes of any required mitigation or improvements will be indicated on the drawings; this could include structure modifications, erosion protection works, potential future access/maintenance facilities and public safety mitigation measures. Bypass channels invariably require a fixed offtake structure at their upstream end to maintain the optimum flow split into the bypass and minimise risks of uncontrolled erosion or breaches. The appraisal and design work will consider options to reduce the reliance on engineered structures wherever possible, or mitigate their visual impact if they are essential (for example the use of more natural rock offtakes in preference to sheet piled or concrete structures). Should erosion protection be required to the bypass channel banks, we will endeavour to use green engineered and sustainable approaches wherever possible, matching the use of sympathetic erosion protection (e.g. willow spiling or biodegradable coir matting and vegetated coir rolls or rock rolls) to the modelled flow velocities.

We have identified there may be opportunities to incorporate additional river restoration improvements in the ordinary watercourse, to maximise environmental benefits and WFD improvements. This could include measures such as in-channel features (e.g. deflectors, woody debris, berms) to improve flow diversity and provide fish refuge and modifications at the confluence with the River Wey to improve the attraction plume discharging to the Wey. We have not allowed for the detailed modelling or design of these features (we understand river restoration is not part of the project scope), but we will identify any such opportunities to ensure they are captured for use in stakeholder discussions and future design phases.

Alongside the drawings and DRA we will also produce the various H&S documentation listed in the EA scope (RAG list, buildability statement etc.) at a level appropriate for an outline design. We will also supply relevant designer's information for inclusion in the PCI, in accordance with the CDM regulations. Our understanding is that the CDM Regulations apply to this scheme and that APEM will be appointed by the EA as Designer. In accordance with the CDM Regulations we will liaise throughout with the EA's Principal Designer to ensure risks are carefully managed and communicated, including via drawing SHE Boxes. We will produce a high-level Designer's Risk Assessment (DRA) for the outline design and detailed design, which will document the key risks identified, how these have been eliminated or mitigated during the design development and any residual risks. A summary of the Client's duties under the CDM Regulations can be found in the following link and we would be happy to discuss any questions you may have on CDM. https://www.hse.gov.uk/pubns/indg411.pdf

Final Reporting and Deliverables – Feasibility and Outline Design Stage

The feasibility assessment will be fully documented in our draft report, which will summarise the key constraints at the site (including fish species present, surrounding site features, access, construction, maintenance and public safety risks and mitigation measures). The report will also discuss and appraise the key hydrological factors influencing the options appraisal and design work and will include details on flow estimates used in the model. The appraisal summary tables will be used to document the advantages, disadvantages and risks for the short-listed options in an efficient format suitable for any continued stakeholder engagement, if required. The report will include commentary on the potential risks to delivery, including consents, and suggested options to mitigate these risks.

We have allowed for the ECI contractor to review scheme costs for the preferred option, following completion of the outline design drawings, and these revised costs will be included in our final report. We will provide a pre-application FRAP for the preferred option and will be happy to discuss content with the EA PSO teams.

We will issue all deliverables in draft format for EA review and we will finalise deliverables in response to a collated single set of EA comments. The issuing of the final feasibility report, design package and supporting CDM information will mark completion of this study.

Key Assumptions and Optional Extras - Feasibility and Outline Design Stage

- We will consider the existing crossings and structures associated with the ordinary watercourse in the appraisal, modelling and design and comment on critical site visit observations. The design of significant modifications or replacement of structures (including roadside retaining walls) is not included for in this tender.
- We assume that any geotechnical or structural design will be undertaken at detailed design stage.
- The level and geometry of the bypass will be shown in the design but we understand the concept design is not required to be developed to full outline design stage for Fish Pass Panel Approval.
- Our hydraulic modelling fees and design fees do not include for landowners/others manipulating water levels or flows in the main river during fish migration flows via the use of gates or sluices in the vicinity of the Mill. Should such practices be apparent, the complexity of the scheme may increase and extra fees may arise.
- We will provide written details of survey specification for the EA to include in their scope/contract documents only. No allowance included for producing formal contract documents or procuring any surveys.
- APEM also have capabilities to undertake a Phase 1 habitat survey and Modular River Physical (MoRPh) survey to inform a River Condition Assessment (RCA). Results from these surveys can used to calculate the DEFRA Biodiversity Metric 3.1 to establish the baseline biodiversity units within the project area. Once a final design has been confirmed, post-scheme calculations can be completed to establish overall Biodiversity Net Gain. We have not included costs for this in our tender, but would be happy to discuss further if helpful.

Detailed Design

We understand that, following completion of the feasibility and outline design stage in approximately March 2023, the project will lie dormant for a period whilst the EA review budget availability for future project stages. It is understood that the EA's aspiration is to recommence the project in August 2023, with the appointed consultant then to produce a detailed design for the preferred option and prepare the necessary consent applications by 31st March 2024. At the time of producing this tender, the nature of the preferred option is unknown and the consents required cannot yet be determined, so detailed design and consenting costs cannot be priced or programmed with confidence or accuracy. As requested by the EA, APEM's budget estimates of potential costs associated with these tasks accompany this tender response. However, it will be essential to review and formally agree detailed design and consenting fees once the nature of the preferred option is known and the future scope is confirmed. Fee estimates included with this proposal for detailed design and consenting must be considered a budget estimate only at this stage and they do not constitute a formal offer from APEM to deliver this work at the stated price. It is assumed that the future project scope and costs will be agreed via a Compensation Event following completion of the feasibility and outline design stage.

As requested during tender clarification emails and phone calls with Alex Swann, we have included budget estimates for a range of potential preferred options of varying design complexities with this tender. Irrespective of the level of complexity, detailed design deliverables will comprise:

- a suite of drawings, containing sufficient detail to be suitable for construction, showing plans, cross sections and key water levels etc. and key construction details. These will use the outline design drawings as their starting point but will be developed to include full details appropriate for construction. Naturally, these drawings will remain fully integrated with our H&S processes and will clearly communicate hazards and risks, including the use of SHE Boxes.
- An updated CDM Designer's Risk Assessment, RAG list, Buildability Statement and PSRA, fully documenting key health and safety information at a level appropriate for detailed design.

The early and effective identification and management of H&S risks will be integral to our whole approach to the project. As previously detailed, risk identification will commence from the project's commencement and site visit phase, linking into the appraisal process and onwards to outline and then detailed design. Risks will be continually identified, including during the data review phase (e.g. buried services), via site visits and ECI input (e.g. access constraints or existing structures), through Client and stakeholder feedback (e.g. land use and public interaction) and then continuously throughout the appraisal and design phases (e.g. maintenance and public safety risks). The greatest opportunities to eliminate risks will occur during the appraisal phase and our proposed approach maximises the visibility of risks identified and how option selection can be used to eliminate risks. All APEM staff have knowledge of identifying and managing risks and [redacted] has extensive experience of risk management through 20+ years of civil engineering design on EA schemes, including construction supervision of EA fish pass and bypass projects. Examples of recent APEM H&S risk management on similar projects have included proposals to relocate naturalised bypass channels to areas of more suitable topography to eliminate risks of uncontrolled breaches, fish pass appraisals at hazardous EA gauging weirs with a history of public access and recreational swimming and safely designing and managing construction access routes onto a private country estate for fish pass construction. This process will culminate in our CDM Designer's Risk Assessment, which will accompany the detailed design and will fully document the management of significant risks and will communicate any residual risks associated with the final design.

Potential approach; simple option

Detailed design
Under this option, it is assumed that fish passage could be provided by a simple bypass channel linking the Wey to the ordinary watercourse in a convenient location, with no requirement for a significant engineered offtake structure. It is assumed that there are no significant complexities associated with this option and a short, fully naturalised channel can be achieved, with no significant geotechnical, erosional or geomorphological constraints and that there are no significant safety, access or future maintenance issues requiring mitigation.

For this option, the outline design drawings would be refined and developed to make them construction-ready. Further information would be added to the drawings, potentially including setting out points/levels to guide construction and the development of minor construction details, such as erosion protection measures (assumed biodegradable coir products to assist vegetation establishment on channel banks), or localised use of rocks to form an offtake structure. A small amount of additional hydraulic modelling and geomorphological input may be appropriate to refine, optimise and finalise the design, but we assume consenting for this simple option is achievable with the hydraulic modelling work previously undertaken. Project management and fortnightly meeting costs would be included for, based on an assumed three-month design programme.

Our budget cost estimate for detailed design of this option is [redacted], with fees/hours as shown on the accompanying costing spreadsheet.

Consenting
At the present time, the range of consents required is not known and would need to be confirmed upon completion of the outline design stage following a more detailed scoping assessment. For this type of scheme, it is possible that a WFD Compliance Assessment, SSSI Assent, FRAP and an abstraction license would be required. We can confirm that APEM have the staff and experience to prepare such consents, with particular professional expertise and focus on preparing environmental permits.

It is understood that the EA are exploring whether planning permission would be required for work at the site. APEM have the technical expertise to assist and provide input to EA planning applications, but for the purposes of this tender we assume this relatively simple option could be delivered without planning permission.

Our budget cost estimate for preparing consents for this option is [redacted], with fees/hours as shown on the accompanying costing spreadsheet. In estimating this cost we have made the following assumptions:

- The hydraulic modelling previously undertaken will be adequate for flood risk purposes for FRAP consenting.
- Where required, the EA will arrange for their selected framework and/or ECI contractor to contribute to relevant site-orientated sections of consent applications. This could include risk assessments and method statements for site work, Management Systems documents, details on waste systems etc.
- We assume that consent applications will be made by the EA and any application fees will be paid by the EA.

Potential approach; more complicated preferred option

Detailed design
The above simple bypass approach may not be viable and that a more complicated option may need to be designed. The form of this option cannot be defined but, for example, it could include; a more complicated bypass channel; a requirement for geotechnical or slope stability assessment; the design of more engineered structures (e.g. offtake structures or other forms of fish pass, such as a Larinier or rock ramp).

Significant cost uncertainty remains, but EA budget costs for more complicated options could be estimated using the following framework:

- APEM fees; estimated two to four times the above 'simple option' cost.
- Additional hydraulic modelling work to inform detailed design and flood risk consenting; estimated c[redacted] (based on approximately two weeks of senior/principal modelling input).
- Specialist engineering inputs to fish pass (e.g. structural design, geotechnical design, slope stability design, sheet pile design); estimated possible increase in cost of [redacted], depending on requirements
- Detailed design of localised habitat improvement features in ordinary watercourse (e.g. deflectors, woody debris, berms); C. [redacted].
- Programme would be up to 7 months long, with a proportional increase in project management and fortnightly meeting costs.

Adding together the above, the upper and lower bounds for this option are [redacted] and [redacted], respectively.

It is possible there may be other design work associated with more complicated options, such as new access structures (e.g. bridges for agricultural access), or works to riverside retaining walls. These could lead to further increases in design costs not accounted for in the above estimate.

Consenting
The consenting work required for more complex schemes cannot be ascertained at this time. EA budget consenting costs for more complicated options could be estimated using the following framework:

- APEM fees; estimated up to two to three times the above 'simple option' cost.
- Additional allowance may be required for more complex assessment of flood risk as part of FRAP application, say £2k to £5k.
- Additional fees should be allowed for if planning permission is required for this more complex option, scope and fees unknown.

Adding together the above, the upper and lower bounds for this option are [redacted] and [redacted], respectively.

Key Assumptions and Comments – Detailed Design Stage

- Due to the unknowns associated with the preferred option we have not produced a revised tender programme (please refer to our programme accompanying the first issue of this tender for an indicative outline design programme, but noting a change in start date will apply). However, based on our experience of projects of this nature, we consider that completion of detailed design by 31st March 2024 is likely to be achievable if works on this stage commence in August 2023.
- We recognise that the EA may wish to appoint an ECI Contractor from their pool of framework Contractors at detailed design stage, so we have allowed for ECI input through the feasibility and outline design stage only. Additional fees may apply if the EA wish us to extend APEM's appointment of Stonbury input into the detailed design stage.

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

APEM has clear project management systems in place to ensure timely delivery of projects, including use of specialist software to monitor, plan and allocate staff time, and in-house project planning and checking systems to monitor project progress, budget control and delivery of milestones. These systems allow Project Managers to identify potential slippages in programme or budget so these can be caught early and the course corrected to reduce any potential impacts on the project, for example by preparing cover for staff absences.

We will maintain and share a clear programme and align tasks with the EA's key milestones. We will arrange a project start-up meeting within one week of contract award (subject to exchange of signed contracts). This will allow us to confirm project scope, achieve a common understanding of the EA's aims, objectives and aspirations, understand existing opportunities and constraints, identify risks to delivery and mitigation measures and agree how we will assess project success.

We will update the EA on project progress via the fortnightly meetings (attended by [redacted]) with additional meetings at Workshops 1 and 2 (attended by [redacted]). As necessary and appropriate, we will use these meetings to present preliminary findings to give the client the opportunity to provide steer as required. We assume each fortnightly meeting, including minutes, will be up to 1 hour. At all stages of the project, we will ensure to maintain excellent communication with the EA project manager to ensure the project successfully delivers on requirements. [redacted] will provide a single point of contact for the client to ensure clear and efficient communication. A draft project programme accompanies this proposal and will be discussed and agreed at the start-up meeting. We have ensured the programme includes adequate time for EA review of key outputs. We note that completion by 31 March will be challenging, particularly given that the topographic survey lies on the critical path, and we will be happy to discuss and review programme opportunities at the start-up meeting.

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)

Our core team organogram and pen portraits for key staff are below and full CVs are available upon request. The core team will have access to expertise from across the APEM group, including fisheries and ecological staff.

[redacted]. [redacted] is a Divisional Director with APEM and heads up the Physical Aquatic division which encompasses fisheries engineering, geomorphology, river restoration and fish ecology among other specialisms. Nicola has 20 years' experience in fisheries engineering and in-river works. Nicola will be Project Director on this scheme and will ensure that project is undertaken to programme and budget. Nicola will ensure quality of all outputs produced under the project.

[redacted]. [redacted] has Project Managed, appraised and designed numerous fish and eel passes across the UK and is skilled in undertaking hydrological assessments and managing hydraulic modelling projects. He has extensive experience of applying the CDM regulations to his design work, which includes fish passes and major flood defence schemes, and he is trained in undertaking EA PSRA and RAG list assessments. [redacted] has been responsible for the construction supervision (ECC Site Supervisor role) of numerous EA projects, including FCERM assets, bypass channels and fish passes, which provides him with an excellent understanding of the complexities associated with designing and constructing in-river works. [redacted] will be APEM's PM, will lead the technical appraisal of options and will oversee production of the design and all technical outputs.

[redacted]. [redacted] is a principal hydraulic engineer with extensive experience in fluvial hydraulics, design of hydraulic structures and numerical modelling. He has been involved with several high-profile projects as a lead hydraulic engineer. Shervin has experience of undertaking feasibility studies and design of bypass channels and fish passes across the UK and internationally. [redacted] will contribute to hydraulic modelling, option appraisal and outline design.

[redacted]. [redacted] is a Principal Geomorphologist with expertise in sediment dynamics and river management. He has been responsible for assessing the geomorphological impacts of changes to flow and sediment dynamics caused by fish passes and modifications to impounding structures. He has experience of undertaking river restoration feasibility studies, options appraisals and design and he is skilled in a range of geomorphological field investigations, including fluvial audits, bed-surface material sampling and sediment transport monitoring. Tim will provide geomorphological input to the options appraisal and design.

[redacted] is a Principal Hydrologist with over ten years of experience throughout the environmental engineering and consultancy industry. Jonathan specialises in hydrology & water resource management, hydraulic modelling, surface water modelling, flood risk management, drainage design, catchment management, hydrogeology, habitat restoration, groundwater monitoring studies, and frequently provides environmental advisory services to a range of clients. [redacted] will undertake the hydrological assessment and provide technical input and review of hydraulic modelling.

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

APEM have a dedicated Health and Safety provision reporting to Directors independently of project delivery and budget responsibility. Our culture reinforces continuous reductions in near misses, incidents and accidents. Site survey staff have passed the relevant certifications required to work adjacent to watercourses in rural settings. This includes First Aid training and Water and Flood Awareness training. Risk Assessments and Method statements (RAMS) are produced by APEM for all site visit and RAMS are approved in advance of any work by our dedicated Health and Safety team managers. The risk assessment is dynamic and any unforeseeable risks are added to the risk assessment as the project progresses with changes communicated to the site team, project team and client, as

required. In the event of any incidents occurring our RAMS include details of site locations, staff contact details, local hospital locations and a plan of action in the event of any emergencies.

APEM is following an approach to site-based work during the Covid-19 pandemic based on current advice provided by the UK Government (COVID-19: guidance for employees, employers and businesses - GOV.UK) (Construction and other outdoor work - Working safely during coronavirus (COVID-19) - Guidance - GOV.UK) and advice provided to the Chartered Institute of Ecology and Environmental Management by DEFRA.

APEM staff involved in design work understand their responsibilities under CDM and how they can contribute to improved safety. The core project team have all received comprehensive CDM training.

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

Where possible we consider using public transport to attend site visits, but this is not always viable due to remote site locations. To mitigate the environmental impact of site visits on this project our core team will lift share and all of APEM's drivers have undergone training on how to use more efficient driving methods to minimise fuel use and vehicle emissions. APEM also propose solely using online meetings on this project to eliminate transport emissions. Where viable we strive to promote options that eliminate or minimise waste and we seek to promote the use of locally sourced or sustainable materials and those that can be re-used or recycled. Working with natural processes will be key for developing a sustainable and naturally functioning bypass that will minimise cost, time and emissions associated with future maintenance.

It is recognised that INNS are a major contributor to biodiversity loss and steps must be taken to prevent the spread of such species into non-affected areas. The principle of check, clean and dry is applied to our equipment and PPE on site visits to reduce the natural capital risk and ensure the environment we are working in is not impacted negatively by our activities.

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

APEM's quality system is accredited to ISO 9001. Overall responsibility for delivery will rest with [redacted], APEM's Divisional Director, who will undertake technical review (Quality Assurance) of project outputs and provide high level support to the project team. We incorporate client review periods into our programme, with allowance for finalising draft deliverables. This ensures our outputs meet the high expectations of the client, APEM and, where appropriate, regulators in relation to content, format, quality, readability and technical accuracy.

Each task required as part of the options appraisal process will be checked and reviewed by an appropriately qualified member of the relevant discipline. This will include [redacted] overseeing all options appraisal and design work. Through Early Supplier Engagement, we will also be provided with input from contractors Stonbury. All deliverables are quality assured within Stonbury and [redacted] will review Stonbury's inputs to ensure high quality work.

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
					See accompanying cost breakdown sheet
				Total staff costs (formally tendered)	[redacted]
				Total staff costs (budget estimate; simple option)	[redacted]
				Total staff costs (budget estimates; complicated option)	**Varies – see text**
Expenses:					
1. Mileage		**Total miles (at 45p per mile)**			
		1100			[redacted]
2. Accommodation and meals		**Number of days**	**Number of people**		

	4 person days	4	[redacted]
3. Other expenses	**Detail**		
	Subcontractor costs (ECI & archaeology report)		[redacted]
		Total expenses cost	[redacted]
		Total overall cost	**£59,475.50 (+ budget estimates)**

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:	14/12/22

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

Notes	All agreed post submission amendments to scope, proposal, timetable or costs must be updated in the sections above prior to accepting the proposal. **A commission code (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]	**10/01/2023**
Authorised Contracting Authority Signature	[redacted]		

(usually the budget holder)			
DgC Authorised Signature (if required)	[redacted]	[redacted]	**10/01/2023**
Commission Code (i.e. 'approval reference number')	EcoSF3/22/303		
Purchase order no.			
Bravo ECM Ref (if applicable)	C5556		

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

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

PART 3
CHANGE CONTROL SCHEDULE

Notes	**To be completed by Contracting Authority Project Manager**

	Any extensions, price changes or amendments to existing orders need to be discussed with 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