Environment Agency

NEC4 Professional Service Contract (PSC)

Scope

Project / contract information

Project name	Fairburn Sluice OBC
Project SOP code	[redacted]
Contract number	Tbc
Date	February 2023

Assurance

Author	[redacted]	Date: 22/03/2022
Consulted	[redacted]	Date: 25/04/2022
Reviewed	[redacted]	Date: 29/07/2022
Checked prior to issue	[redacted]	Date: 15/02/2023
Checked prior to issue	[redacted]	Date: 22/02/2023
Consulted	[redacted]	Date: 04/05/2022
Consulted	[redacted]	Date: 26/04/2022

Revision History

Revision date	Summary of changes	Version number
22/03/2022	First issue	V1.0
05/05/2022	Updated based on comments from PD, LW & EN	V2.0
29/07/2022	Updated following review with Project Executive	V3.0
03/08/2022	Updated by WSP following EA comments	V4.0
03/08/2022	Updated by EA following review of WSP comments with Project Executive	V5.0

05/08/2022	[redacted]	V6.0
10/08/2022	[redacted]	V7.0
10/08/2022	[redacted]	V8.0
19/08/2022	[redacted]	V9.0
23/08/2022	[redacted],	V10.0
05/12/2022	[redacted]	V11.0
17/01/2023	[redacted]	V12.0
18/01/2023	Finalisation from EA team	V13.0
03/02/2023	Finalisation from both [redacted]	V14.0
???	Finalisation with [redacted]	V15.0

This Scope shall be read in conjunction with the version of the Minimum Technical Requirements current at the Contract Date. In the event of conflict, this Scope shall prevail. The *service* is to be compliant with the following version of the Minimum Technical Requirements:

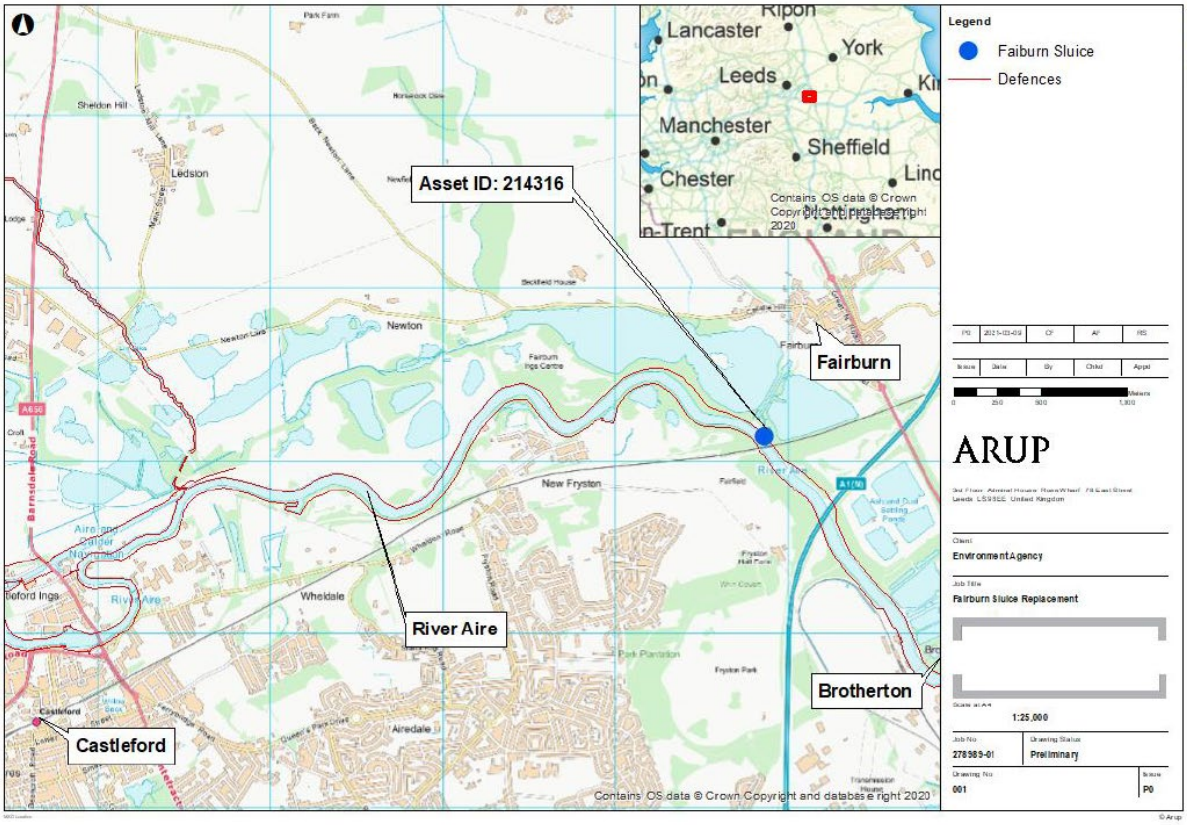
Document	Document Title	Version No	Issue date
412_13_SD01 [LIT13258]	Minimum Technical Requirements	Version 12	30/12/2021

1 Overview

1.1 Background

The Fairburn Ings sluice structure is at the end of its life and is in need of replacement to manage flood risk and maintain water levels in the washlands. It is located in an area of high environmental value due to its designation as a Site of Special Scientific Interest (SSSI).

Fairburn sluice (AIMS Asset ID 214316) is located between Fairburn Ings and River Aire. The Fairburn Ings is located in the Selby District of North Yorkshire and is part of a managed washland system along the left bank of the River Aire north of Castleford that also includes the Allerton and Newton Ings. The topography of the study area is low-lying and forms part of the historical floodplain of the River Aire. The village of Fairburn sits to the north east of the Ings. The village is situated on higher ground and is at a low risk of flooding. The area is covered by the Level 2 Selby District Strategic Flood Risk Assessment (January 2021).



1.2 Previous Studies

1.2.1 **In undertaking the *service* the *Consultant* shall take account of the previous studies detailed in the table below and produce a short technical summary explaining how best use will be made of historical data.**

Report	Date	Format	Outcomes of study
Asite Project Details		[redacted]	
Strategic Outline Case	Nov 2021	https://adoddleak.asite.com/lnk/rABbKieSpL6zzKH89dx9	Detailed in document
Model		Breach modelling (2019/ 2020), Mid Aire and Lower Calder model (2019) https://adoddleak.asite.com/lnk/7ALByEesExXqEEU5pdnj	Detailed in document
Utilities Search	Jun 2021	https://adoddleak.asite.com/lnk/RAEB9L6UKn89eLFkXbrX	Detailed in document
Fairburn Ings Sluices – Whole life Management Plan / Register	2003	Asite – Word doc	Detailed in document
Fairburn and Newton Ings Water Level Management Plan	2010	Asite - PDF	Detailed in document
Fairburn Sluice - Operational Procedures	Unknown	Asite - PDF	Detailed in document
Cost estimates for sluice options	Unknown	Asite - Excel	Detailed in document
Middle Aire and Lower Calder Washland Model Report	2019	Asite - PDF	Detailed in document
Appendix A to model report	2019	Asite - PDF	Detailed in document
Appendix B to MALC report Long list of options	2019	Asite - Excel	Detailed in document
Appendix C Decommissioning report	2019	Asite - PDF	Detailed in document
Existing Information on Fairburn Ings	2017	Asite - PDF	Detailed in document
Lower Aire SSSI Study: Fairburn and Newton Ings	2017	Asite - PDF	Detailed in document

1.2.2 **The previous studies have been undertaken by or for the *Client* using reasonable skill and care. and have been accepted. The *Consultant* shall review the information provided and notify the *Client* of any deficiencies in its adequacy. Following this review, and completion of any work required to rectify the deficiencies identified, the *Consultant* shall take the risk of any deficiencies in existing data quality and quantity which have not been notified to the *Client*.**

1.3 Objective

The Environment Agency has a 25 Year Environment Plan aims to ‘reduce the risk of harm to people, the environment and the economy from natural hazards including flooding, drought and coastal erosion by boosting the long term resilience of homes, businesses and infrastructure.’

The objectives for the project are:

- the production of an outline design which seeks to provide the optimum economic, technical, social and environmental/sustainability/carbon outcomes, supported by evidence that will enable the Client to produce an Outline Business Case.

- to manage the flood risk at Fairburn Sluice, avoid a reduction in the existing standard of protection and have no detriment to SSSI.

- to raise awareness of the residual risk of flooding within the community, in line with the policies set out in the National Flood and Coastal Erosion Risk Management Strategy for England and the Leeds City Council (LCC) Local Flood Risk Management Strategy (LFRMS).

- to undertake appropriate stakeholder engagement to fully understand risks and wider opportunities relating to the project, including those relating to partnership working in line with E:Mission 2030.

- to work with partners to develop a scheme that delivers multiple benefits, most notably RSPB.

- the project objectives shall be met by the scope outlined in this document.

2.1 Outcome Specification

The *Consultant* shall deliver the *service* such that it meets the outcomes listed in this section.

2.1.1 The *Consultant* shall demonstrate sustainability leadership through fully considering and contributing to achieving the *Client*'s environment and sustainability ambitions and targets. These are set out in the EA2025 Action Plan, e:Mission 2030 Strategy, the Defra 25 Year Environment Plan and are in line with the principles of sustainability as described by the United Nation's Sustainable Development Goals.

2.1.2 The *Consultant* shall design the scheme taking into account the environmental sensitivities and opportunities of the sites and involving key environmental specialists as appropriate within the *Consultant* and the *Client's* organisation.

2.1.3 The *Consultant* shall ensure the optioneering process fully considers and addresses sustainability including carbon reduction as strategic outcomes. The EA business case template further requires separate option appraisals of sustainability benefits and whole-life carbon to compare with the economic appraisal and promotes a preference for the most sustainable option.

2.1.4 The *Consultant* shall ensure the optioneering process fully considers environmental mitigation and opportunities to further conserve and enhance as per our legal and policy obligations but to also contribute to the Environment Agency's ambitions. This includes delivery against OM4, to achieve biodiversity net gain but must also consider wider sustainability opportunities. The *Consultant* shall ensure the optioneering process avoids where possible, minimises and compensates or offsets any adverse environmental effects.

2.1.5 The *Consultant* shall produce an outline design which seeks to provide the optimum economic, technical, social and environmental/sustainability/carbon outcomes, supported by evidence that will enable the *Client* to produce an Outline Business Case.

2.1.6 The *Consultant* shall produce an appraisal report and outline design that enables the *Client* to achieve efficiency targets set for this commission and future stages of the project using the Combined Efficiency Reporting Tool (CERT).

2.1.7 The *Consultant* shall ensure that the options and final solution take into consideration all relevant guidance and legislation and seek to minimise long-term asset/land management and maintenance costs and carbon.

2.1.8 The options will also demonstrate that the *Consultant* has learnt from best practice and demonstrate how optimum flood risk reduction, natural processes, carbon reduction, recreation, good ecological water quality and visual amenity can be combined.

2.1.9 This commission must consider planning permission and all other necessary permissions/licences being obtained at detailed design stage. The outline design shall feasibly be able to obtain planning permission.

2.1.10 The *Consultant* shall demonstrate that consideration has been given to a long list of potential options, identified an appropriate shortlist, appraised these to identify a preferred option and developed this option, its impacts, planning and Environmental Impact Assessment (EIA) requirements scoped to a level that it can be priced. The *Consultant* shall develop a series of options to meet the above objectives.

2.1.11 The *Consultant* shall assume that the options shortlisted in the OBC will be aligned with the strategy identified in the SOC. However, the *Consultant* shall not assume that the preferred option will necessarily be the same as that identified at the SOC stage.

2.1.12 The *Consultant* shall compile the supporting technical documentation required for the *Client* to obtain a screening opinion from the local planning authority.

2.2 Constraints

2.2.1 Planning: Regardless of whether planning permission be required or whether the preferred option constitutes permitted development, it will be advantageous to gain support from local stakeholders. This stakeholder engagement is likely to reduce risks during the Full Business Case and Detailed Design stage of the Project (see section 6.1).

2.2.2 Funding: It is anticipated that funding will be sought through Asset Replacement Allowance but could still require third party funding. Environmental Support Funding and Local Levy will also be explored as opportunities for Partnership Funding. In working in partnership with the RSPB, the opportunity to secure funding through a. Landfill Tax funding and Heritage Lottery funding will be explored, as well as seeking other opportunities where appropriate.

2.2.3 Access: there is limited space with poor vehicular access. Pedestrians are able to access the site via the aforementioned green space to the north and along the towpath. The closest vehicular access route is via Cut Lane. The track is narrow and crosses a single span bridge over a channel connecting two of the lakes within Fairburn Ings. This bridge had a trafficable width of 2.82m as measured during the site visit on 17th January 2017. Correspondence with the RSPB suggests that the bridge is capable of carrying a 40-tonne loading, further investigation by the EA suggests this may actually be 7 tonnes. There are also overhead power cables that cross the track close to Fairburn Village. Some of the overhead cables are now underground so this may be less of an issue going forward.

2.2.4 SSSI: The site boundary is within Fairburn and Newton Ings SSSI. This SSSI attracts large numbers of birds and is particularly noted for its wintering wildfowl and for the variety of migrants. Design solutions to be informed by further hydraulic assessment modelling, ecological assessment and consultation with the EA, Natural England and RSPB. A suitably qualified ecologist (SQE) will also be required to review the 'Water Level Regime Summary Note' when available. A SSSI Assent will be required for works likely to have a significant effect on the SSSI. Early engagement is required regarding the SSSI with key stakeholders e.g., Natural England and the RSPB.

2.2.5 Project Benefits: There are no OM2s as it stands, only OM1s/OM4s. So extra thought is needed about how the benefits are looking. Particularly because as it stands the environmental benefits outweigh the flood risk benefits (to be on the FCRM programme it should be primarily about reducing flood risk).

2.2.6 Benefits apportionment may be needed depending on interactions with the surface water/sewer flood risk and the timing of any future capital maintenance work (CM) to other assets in the area.

2.2.7 This section of the River Aire is not tidal and has a Water Framework Directive (WFD) Overall Water Body classification of Moderate.

2.3 *Consultant* Project Management

2.3.1 In managing the *service* the *Consultant* shall follow all the requirements as set out in the Collaborative Delivery Framework schedules and the relevant content of the Minimum Technical Requirements.

2.3.2 In managing the *service* the *Consultant* shall:

- Contribute monthly to the updates to the project risk register.
- Provide input to project efficiency CERT Form.
- Attend progress meetings and prepare record minutes within a week for the *Client* to issue.
- Produce monthly financial updates and forecasts meeting the *Client's* project reporting timetable together with progress reports. Monthly financial updates and forecasts to meet EA deadlines provided by no later than the 10th day of each month, or otherwise agreed at the project start up meeting.
- Deliver a monthly progress report in the *Client's* standard template (Link) giving progress against programme, deliverables received and expected and financial and carbon summary against programme.
- ~~Attend project board meetings as required.~~
- ~~Ensure quarterly input into framework performance assessment/environmental Performance Measures.~~
- Ensure the *Consultant's* environmental lead provides monthly progress and risk reviews to the *Client* and attends progress meetings, as invited.
- Maintain and show how accurate and up to date information on the whole-life cost and carbon of options is driving optimum solutions at all stages of design development.
- Capture lessons learnt relevant to scheme delivery for the EA PM to include in the scheme lessons learnt log to be appended to the OBC.

2.3.3 The contract will be administered using FastDraft.

2.4 Outputs and Deliverables

2.4.1 The *Consultant* shall provide input to product descriptions for key outputs and deliverables that the *Consultant* shall produce during the appraisal stage. Agree the list of products with the *Client* and submit the product description for the *Client's* approval before commencing work on the product.

2.4.2 The *Consultant* shall produce the following key documents for this commission:

- Modelling report.
- Economics report.
- Options appraisal report.
- Documentation of the environmental process and considerations including risks and opportunities (e.g. Scoping Report).
- Outline Design(s).
- Carbon Optimisation Report.
- Programme showing milestones to construction completion for the preferred option including funding and environmental constraints and opportunities. The Programme shall take account of the timeframe required for all approvals necessary for mitigation and enabling works to be carried out in advance of main construction.
- Draft text within relevant sections of OBC.

2.4.3 AD: The *Consultant* should assume that the *Client* will write the Management Case and Commercial Case for the OBC document. All other sections will be prepared by the *Consultant*.

2.4.4 AD: The *Consultant* shall work in collaboration with the Client and Lot 2 Contractor when preparing draft text within relevant sections of the OBC, such that the input of the wider project team is taken into account within draft text. The *Consultant* shall submit to the Client;

- One draft Outline Business Case for *Client* review. This shall be essentially a complete document with no missing sections or appendices and having undergone quality assurance by the *Consultant* prior to issue.
- One final draft Outline Business Case for *Client* approval, encompassing the feedback from the *Client's* review of the first draft and having undergone quality assurance and sign-off by the *Consultant* prior to issue. The final draft should be sufficiently developed and complete to enable submission of the document(s) to National Project Appraisal Service (NPAS).

2.4.5 AD: The *Consultant* will make use where appropriate of previous ground investigation and interpretive reports and information available in the catchment for OBC development.

3 Site Investigation

The following surveys noted below have been undertaken during the SOC stage of the project. These are kept on Asite and can be accessed by the *Consultant*.

Utilities Search	June 2021	https://adoddleak.asite.com/lnk/RAEB9L6UKn89eLFkXbrX	Detailed in document

3.1 Topographic Survey

3.1.1 ~~The Consultant recommends that there is no requirement to incorporate additional cross-sectional or topographical survey.~~

3.1.2 The *Consultant* will review previous topographic survey to identify gaps in existing data. The Consultant will use this to inform the scope of supplementary topographic survey required.

3.1.3 The *Consultant* shall work with NEAS to ensure that environmental and sustainability constraints within the likely scheme footprint are identified and included in the survey and to determine if efficiencies can be made by joint working.

3.1.4 ~~A cross sectional survey of the main river is being undertaken by Others and will be provided for the *Consultant* to use in constructing the hydraulic model. The *Consultant* shall liaise with the survey team on the requirements of the survey and the format of output.~~

3.1.5 ~~the *Consultant* shall undertake cross sectional survey of the main river and spatial survey of the flood plain sufficient to allow for in bank and floodplain modelling and determination of depths of flooding of properties within the flood plain. Spacing of the survey shall be determined to suit the hydraulic model and shall include a survey of all restrictions, bridges, culverts and structures.~~

3.1.6 ~~A topographical survey is required to provide further details of the existing structure and bank profile. A survey is also required to supplement that previously undertaken by XXX in order to identify the location of key features on the quay so that we may clearly define working areas and accesses in the ECC scope. Specific requirements are:~~

- ~~Preparation of a brief and procurement of the survey in accordance with the current version of the Environment Agency's National Standard Technical Specifications for Surveying Services, to enable the above.~~
- ~~Review and agree surveyors' site risk assessment.~~
- ~~Supervision and management of topographic survey company.~~
- ~~Review data / checking deliverables.~~

3.1.7 The *Consultant* shall use the outputs from the topographic survey in their modelling and option appraisal.

3.1.8 Topographic surveys are to be specified, managed and supervised by the Consultant.

3.1.9 ~~Topographic surveys required for hydraulic model development are included in the standard Scope~~

3.1.10 The *Consultant* shall review previous structural condition assessment reports and data supplied by the *Client* to identify further work assessment requirements.

2.1.11 AD: The *Consultant* shall undertake the topographic survey if deemed necessary to be able to assess the shortlist of options and complete an outline design. If a survey is required, it is considered to be a compensation event.

3.2 Ground Investigation

3.2.1 The *Consultant* shall scope the Ground Investigation required to be able to undertake an options appraisal and detailed design and agree the scope with the *Client*.

3.2.2 The *Consultant* shall ensure that the environmental risks and opportunities associated with the Ground Investigation, including the collection of environmental evidence to support Appraisal and Assessment, are identified and addressed.

3.2.3 In scoping the Ground Investigation works the *Consultant* shall include the necessary works to facilitate efficient and sustainable materials management planning and re-use within the project.

3.2.4 The *Consultant* shall identify any contaminated land within the area of the project and specify testing within the Ground Investigation scope such that it can be classified properly for disposal.

3.2.5 The *Consultant* shall clearly communicate the scope of the Ground Investigation to the Lot 2 contractor for the Lot 2 contractor to undertake.

3.2.6 ~~The *Consultant* shall supervise the Ground Investigation undertaken by the Lot 2 contractor.~~

3.2.7 The *Consultant* shall produce a summary of key interpretative decisions for the Ground Investigation undertaken by the Lot 2 contractor.

3.3 Services Search

3.3.1 The *Consultant* shall obtain services data from utility companies and shall ensure services data is requested from relevant landowners. This shall include direct costs of obtaining data. This shall be incorporated into the appraisal, including preparation of plans.

3.3.2 The *Client* will arrange for a non-intrusive survey to detect key utilities (e.g. GPR etc.) to inform SI and or options appraisal. The *Consultant* shall determine the extent of the survey and produce a specification for the survey in accordance with EA Guidance and Principal Designer discussion; defining type and purpose of survey including extents and available information.

3.3.3 The *Consultant* shall also provide a site supervisor to manage the survey supplier.

3.3.4 The outputs from this survey shall be included in the appraisal, including revising the plans.

4 Hydrology and Hydraulics

4.1 General

4.1.1 The existing modelling is identified in the table in section 1.2. The extents of the modelling and assumptions made are within the model report.

4.1.2 The *Consultant* shall verify the model with quality and extent checks.

4.1.3 The *Consultant* shall provide the *service* in accordance with the Modelling Technical Scope, included in Appendix 2.

4.1.4 Additional runs shall be allowed for the final design case to give a sensitivity analysis on key parameters.

4.1.5 The output shall be designed to interface with the economic analysis to allow for depths and durations of flooding to be determined.

5 Economics Appraisal

5.1.1 The *Consultant* shall undertake an economic appraisal in line with FCERM – Appraisal Guidance (FCERM-AG), Supplementary guidance and the HM Treasury 'Green Book'. This will include a valuation of all the key benefits, both economic and environmental, carbon assessment and whole life costs in order to produce a cost benefit analysis that will be used to determine the selection of a preferred option.

5.1.2 Costs will be the whole life expenditure including, design, investigation, construction, operation and maintenance. Costs can be devised in the most efficient but accurate manner and Early Supplier Engagement (ESE) input is required. The *Client* will provide support and costs where possible to complete this estimate.

5.1.3 Carbon will be whole-life emissions of an asset including embodied (construction), operation, maintenance and end of life emissions. The values will be calculated from the carbon tool (OI 120_16) to help optimise all options through all stages of design and business case development.

5.1.4 Risk and Optimism Bias allowances shall be calculated in accordance with Risk Guidance for Capital Flood Risk Management Projects. The *Consultant* shall attend risk workshops facilitated by others / the *Consultant* to deliver the Scope.

5.1.5 Selection of the preferred option shall be undertaken in accordance with the FCERM-AG decision rules including consideration of the most sustainable and lowest carbon options following the EA business case template and guidance.

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

5.1.7 The *Consultant* shall produce, and maintain through the project, the FCRM Partnership Funding Calculator for Flood and Coastal Erosion Risk Management Grant in Aid (The PF calculator). The PF calculator shall be updated at the request of the *Client* or when evidence obtained during the project suggests a significant change is likely. The *Consultant* shall inform the *Client* of any expected significant change in scheme choice or affordability at the earliest opportunity as the project develops.

5.1.8 The *Consultant* shall use this data to assist the *Client* in identifying suitable sources of external funding.

Economic, Sustainability and Carbon Appraisal Deliverables

5.1.9 The *Consultant* shall provide the results of this section of the study in an economics report which shall feed into the economics appendix of the OBC. This will provide a clear view of the process in order that the economic lead for the review team can review the process. As a minimum this will include, but not be limited to:

- Overview of methodology adopted.
- Parameters quantified and standards used (e.g. Multi-Coloured Manual).
- Parameters considered and not used together with reasons.
- Key receptors/ major beneficiaries.
- Wider benefits.
- Assumptions made.
- How the decision rules have been applied.
- What sensitivity tests have been applied and why.
- Treatment of climate change, carbon reduction and sustainability benefits.
- FCERM-AG spreadsheets and PF calculator.

6 Environmental Assessment

6.1.1 The *Consultant* shall confirm in the activity schedule the expected environmental outputs agreed through engagement with NEAS. The activities identified shall take into account proportionality whilst supporting the achievement of the *Client*'s wider aspirations.

6.1.2 The *Consultant* shall give due consideration of the environment and sustainability risks and opportunities throughout the design evolution of the project to maximise the delivery of *Client* and project objectives.

6.1.3 The *Consultant* shall ensure that the project level assessment sits within the context of any previous strategic environmental assessment and supporting information for the area and brings forward all relevant information and conclusions.

6.1.4 The *Consultant* shall establish and understand the baseline and the legal and policy context to identify the key environmental/sustainability risks and opportunities. This shall support the options appraisal and justify the need for any future environmental assessment activity.

6.1.5 The *Consultant* shall report the findings of the scoping exercise as required which will form an Appendix to the OBC with relevant summary details incorporated into the relevant section(s) of the OBC main text.

6.1.6 AD: The *Consultant* shall undertake the following deliverables and assessments, in accordance with the associated guidance including, but not limited to, MTR 801_14 'Environmental sustainability, design and management', MTR 801 14 SD01 'Cultural heritage and archaeology standards' and MTR 801_14 SD02 'Landscape and Environmental Design':

- A proportionate Environmental Advice Note: A note summarising the review of environmental constraints and opportunities, providing evidence of a proportionate environmental assessment and detailing further environmental assessment requirements. This is to be read alongside other environmental deliverables. In accordance with MTR 801_14 Environmental sustainability, design and management, it is considered this is a proportionate deliverable given the scale of the scheme. Should the scheme increase in scale following optioneering, the requirement (and additional fee) for a Preliminary Environmental Information Report (PEIR) will be discussed and agreed with the Client.

- ~~Pre-construction Environmental Action Plan (EAP): A document which sets out the environmental management measures required to minimise, as far as reasonably practicable, the environmental (including heritage) impacts of the proposed works. It will detail roles and responsibilities of those involved in the scheme and is intended to inform development of the Contractor's Environmental Management Systems (EMS). Specifically, the actions and behaviours identified within the EAP should be included within site management systems and processes.~~

- A Pre-GI Env Action Plan will be prepared to support the GI. EAP will be in accordance with the EA template 163_06_SD08 Enviro Action Plan. The EAP will be primarily based upon desk-top data and the findings of any site visits in advance of GI works.

- ~~SSSI impact assessment for GI works: In order to obtain SSSI Assent for preliminary works. It should also be emphasised that the hydrological requirements of the SSSI must be~~

~~considered and must feed into project designs, solutions, development of the preferred option etc.~~

- A Preliminary Ecological Appraisal (PEA): in accordance with best practice guidance (e.g., CIEEM) with supporting field surveys considering both habitats and species. The survey data gathered for the PEA shall be compatible with utilising the Defra Biodiversity Metric 3.1 (or subsequent updates). The PEA shall feed into project designs, highlight potential, alternative solutions and contribute towards the development of the preferred option, including the application of the mitigation hierarchy with respect to potential ecological impacts. Any requirements for further ecological surveys and assessments shall also be identified and an appropriate programme provided for informing the detailed design. The PEA and the Biodiversity Net Gain assessment shall be mutually supportive, with the PEA establishing the scheme's overall policy context, baseline and ecological appraisal.

- AD: An initial Biodiversity Net Gain (BNG) assessment: which identifies the required units to achieve 10% BNG with the ambition of achieving a 20% net gain. This will include a baseline assessment and running the Biodiversity Metric 3.1 calculator tool with the preferred design option to allow for a comparison between baseline and post-scheme scenarios.

- AD: Given the scale and location of the works, the applicability of the Natural England Small Sites Metric (JP040) will be discussed with NEAS and the LPA prior to undertaking the assessment. If it is agreed that this is not required, the scope may decrease accordingly.

- AD: WFD Screening Assessment: The *Consultant* shall undertake a proportionate Water Framework Directive (WFD) assessment to ensure compliance with the regulations and to identify any risks that the developing scheme may pose to WFD objectives. This shall include an assessment of opportunities to deliver WFD improvements, through options selection and integrated design elements. The *Consultant* shall undertake a WFD baseline review, including waterbody definition and understanding WFD mitigation measures; ~~a WFD preliminary assessment; and a WFD detailed assessment (as required).~~

6.1.7 AD: The *Consultant* shall use baseline information to produce and develop options for habitat retention, enhancement and creation required to achieve relevant biodiversity net gain targets as set out in policy and strategy, including but not limited to; e:Mission 2030, The Environment Bill and The Town & Country Planning Act.

6.1.8 AD: The *Consultant* shall identify and develop wider social and environmental benefits/disbenefits to be inputted into the Benefits Register. These shall undergo cost benefit analysis by the *Consultant* and inform option appraisal.

6.1.9 AD: Prior to the commencement of any landscape product, the *Consultant* shall prepare a product description for agreement with the *Client*. Following consideration of the scale of the scheme, a proportionate approach shall be adopted to ensure that where landscape specialists contribute to relevant elements of the design, including materials, finishes and site reinstatement.

- AD: Landscape analysis and proposal plan: The *Consultant* shall produce a simplified, combined Indicative Landscape Plan and Environmental Site Appraisal Plan showing site constraints, opportunities and proposals. Incorporating other environmental constraints where relevant (e.g. key ecological constraints) including:

    - Listed Buildings, Conservation Areas and Scheduled Ancient Monuments;

- Public Greenspaces, Amenity infrastructure, Tree Preservation Orders and Veteran Trees (if available);
- Circulation routes, car parks and Public Rights of Way;
- Hydrological network (including WFD status of the River Severn);
- Topography (in the form of descriptive annotations rather than contour data);
- Available habitat information;
- Character Areas, visual envelope, key views and landmarks;
- Above ground and underground utilities and easements (if available)
- General notes / Constraints / Opportunities

- AD: Indicative Landscape Cost Estimate: The *Consultant* shall include NEAS Landscape Architect input, the costs for the implementation of any soft landscape works and a minimum 5 years establishment maintenance by a landscape contractor and the consultants fees for monitoring the implementation and establishment maintenance.

6.1.10 AD: The *Consultant* shall undertake a proportionate baseline heritage appraisal to understand the key heritage risks and identify whether any further assessment is considered to be required (e.g. Desk Based Appraisal). It must include purchasing information from the Historic Environment Records and consultation with Local Planning Authority archaeologists – North Yorkshire and West Yorkshire (Heritage Gateway must not be used).

- ~~Full heritage desk based assessment: this will assess the potential impact of each option on heritage assets, working in conjunction with a hydrology specialist. This will also identify heritage opportunities such as onsite interpretation. Consultation will be required with Local Planning Authority archaeologists.~~

6.1.11 AD: The *Consultant* shall determine if the Ground Investigation could impact on buried archaeological remains or provide useful information on the likely preservation of archaeological deposits. Note: if the GI work may need archaeologically monitoring if it's outside the area of former opencast mining. If so, the *Consultant* will write a scope for the watching brief, which will be subject to a separate compensation event.

6.1.12 AD: The following elements have been excluded from the scope of environmental works:

- CEEQUAL - Given the anticipated built value of the project, a CEEQUAL assessment has been screened out. Should the value of the project change and the screening decision change, a compensation event will be submitted for the *Consultant* to report on the CEEQUAL assessment in accordance with the hub workload plan and in line with the approved CEEQUAL Scoping Note provided by the *Client.*

7 Option Development

7.1.1 The *Consultant* shall undertake an options appraisal, which will include a review of the previous work, to prepare a long list of options. The long list shall not be constrained by previous work and will be agreed with the *Client* at an options meeting, where the *Client* will invite representation from area FCRM, the ESE contractor's representative, NEAS, MEICA, Field Services and the Principal Designer. The *Consultant* shall screen and assess this long list of options for technical, environmental, sustainability, carbon and economic suitability, as considered appropriate.

7.1.2 Following this screening, the *Consultant* shall prepare a short list of viable options for the *Client's* approval, giving reasons for including or excluding each of the long list options. The most sustainable option shall be included in the short list. On the agreement of the *Client*, the *Consultant* shall assess in detail these options for technical, environmental and economic suitability, as discussed in the relevant sections of this brief, utilising the evidence and data collated as part of this commission.

7.1.3 Options appraisal shall include engagement with the ESE contractor on pricing, buildability and maintainability and the *Client* including Field Services and Area FCRM.

7.1.4 The *Consultant* shall analyse and appraise the carbon footprint of options as outlined in Section 11.

7.1.5 The *Consultant* shall seek options that support the e:Mission 2030 sustainability targets.

7.1.6 The *Consultant* shall use these outputs to select a preferred option. The *Consultant* shall facilitate design workshops, facilitate risk workshops to produce a risk register with analysis in accordance with LIT 14847 Risk Guidance for Capital Flood Risk Management Projects.

7.1.7 The *Consultant* shall develop the business case for the preferred option and the outline design including provision of specification, drawings and documentation required for Early Supplier Engagement.

7.1.8 AD: The *Consultant* shall review inspection reports as they are issued and will liaise with the EA Reservoir Engineer throughout the development of the concept and outline design.

7.1.9 The *Client* shall draft the scope for the next stage of the project (OBC-FBC) and the *Consultant* shall support the *Client* to produce the scope.

8 Stakeholder Engagement

8.1.1 The *Consultant* shall prepare / review and update and maintain a stakeholder engagement plan in accordance with the EA guidance “Working with Others” including agreement of key stakeholders with discussion with the *Client*. The *Consultant* shall ensure that the results from the stakeholder engagement informs the appraisal.

8.1.2 The *Consultant* shall provide a monthly circulation of updated communications record at progress meetings.

8.1.3 The *Consultant* shall provide technical support, prepare information for and attend a key stakeholder meeting as well as preparing information and reviewing external communications prepared by Others (e.g. quarterly newsletters).

8.1.4 The *Client* will arrange and advertise 1 no. public meeting/workshops. The *Consultant* shall provide technical support, prepare information for input into the consultation documents and prepare site plans and typical outline design drawings for public display. Attendance at these meetings shall include the *Consultant* project manager, environmental lead and other roles as necessary.

8.1.5 The *Consultant* shall provide technical support and attend 1 no. meetings with key external organisations/individuals impacting upon option selection process. The current known stakeholders are identified in Appendix 4.

8.1.6 The *Consultant* shall consider the following and document how they are addressed on this contract:

- Public diversity in engagement and perception of the project team.
- Accessibility.
- How inclusive environments are created for the project team.

9 Health and Safety

9.1.1 Health, Safety and Wellbeing (HSW) is the number one priority of the *Client*. The *Consultant* shall promote and adopt safe working methods and shall strive to deliver design solutions that provide optimum HSW to all.

9.1.2 The *Consultant* shall follow and comply with the requirements outlined in the Safety, health environment and wellbeing (SHEW) Code of Practice (LIT 16559).

9.1.3 The *Consultant* shall supply designer risk assessments, drawings and any other data required to fulfil their duties under CDM.

9.1.4 The works on site included in the geotechnical section will be subject to notification to the HSE. Appraisal work to outline design shall be treated as if it was notifiable.

10 Business Case Submission

10.1.1 The *Consultant* shall aggregate all of the work undertaken from this commission into a business case document – the Outline Business Case. The format of this document and guidance on the contents is detailed in Write a Business Case LIT 55124 (Link) and the Business Case templates.

10.1.2 The *Consultant* shall be responsible for dealing with responses to queries during the approval process and any resubmission required.

10.1.3 The OBC Delivery is to be in accordance with the *Client's* submission programme for either the National Project Assurance Service (NPAS) or the Large Projects Review Group (LPRG) for projects costing over £10m. The *Client* shall be kept up to date of progress and submission dates in order that the delivery of this to the review team can be programmed and a place booked at the appropriate review meeting.

10.1.4 This section of the study shall conclude with the final approval of OBC using latest EA Guidance including all appendices and FSoD approval following submission to NPAS or LPRG.

11 Carbon

11.1.1 Carbon emissions shall be identified and assessed on a strategic whole life basis (cost and benefit) in the economic appraisal of options and also as a specific operational target (carbon budget) of the *Client*.

11.1.2 The carbon budget for the project has been set to 315tCO2e. The *Consultant* is required to work with the *Client* and the ESE contractor to reduce the project carbon footprint by a minimum of 45%.

11.1.3 The *Consultant* shall demonstrate how they have met the corporate requirement for carbon reduction using the Carbon Tool, 'ERIC' and:

- Identifying carbon differentials between alternative solution options at appraisal stage.
- Ongoing updates to the carbon calculator and use of the carbon calculator to inform design and construction methodology decisions.
- Completion and submission of the carbon calculator at the pre-defined stages.
- Inclusion of a whole-life carbon appraisal to ensure optimisation of lowest carbon in short-listed and preferred options in OBC.

12 General

12.1.1 Not used.

13 Relevant guidance

The *Consultant* shall deliver the *service* using the following guidance:

Ref	Report Name	Where used
LIT 16559	Safety, health environment and wellbeing (SHEW) Code of Practice	Throughout
183_05	Data management for FCRM projects	Mapping and modelling
379_05	Computational Modelling to assess flood and coastal risk	Modelling
LIT 14847	Risk Guidance for Capital Flood Risk Management Projects	Option development
OI 120_16	Whole-life Carbon Planning Tool	Option development
LIT 14284	Whole Life (Construction) Carbon Planning Tool User Guide	Option development
	Access for All Design Guide	Option development
	Project Cost Tool	Costs
LIT 12982	Working with Others: A guide for staff	Consultation & Engagement
Gov.uk	Appraisal Guidance Manual	OBC
672_15_SD03	Business case template – 5 case Model	OBC
672_15_SD02	Short Form Business case template	OBC
LIT 4909	Flood and Coastal Erosion Risk Management appraisal guidance (FCERM-AG)	OBC
	Flood and Coastal Erosion Risk Management: A Manual for Economic Appraisal (the 'Multi Coloured Manual')	OBC
OI 1334_16	Benefits management Framework	OBC
Gov.uk	Partnership Funding Calculator Guidance	OBC
LIT 15030	The Investment Journey	OBC
LIT 55124	Write a Business Case	OBC
LIT 14953	FCRM Efficiency Reporting – capital and Revenue	OBC
LIT 12280	Lessons Log template	OBC
LIT 55096	Integrated Assurance & Approval Strategy	Approvals
 Sustainability Targets_Briefing Note	AD: Sustainability Guidance	Throughout

14 Requirements of the Programme

14.1.1 The *Consultant* shall provide a detailed programme in Microsoft Project format version 2108 meeting all requirements of Cl.31 of the Conditions of Contract.

14.1.2 The *Consultant* shall provide a baseline programme for the project start up meeting and shall update the programme monthly for progress meetings with actual and forecast progress against the baseline. The programme shall also include alignment and submission of the BIM Execution Plan (BEP) and Master Information Delivery Plan (MIDP).

14.1.3 The programme shall cover all the activities and deliverables in the project, and include all major project milestones from commencement to the end of the reporting, consultation and approvals stage.

14.1.4 The programme shall include review and consultation periods for drafts, scoping letters, statutory consultation etc.

14.1.5 The programme shall identify time risk allowance on the activities and float.

14.1.6 The following are absolute requirements for Completion to be certified:

- Population of the *Client's* latest version of the Project Cost and Carbon Tool, or its successor
- Transfer to the *Client* of BIM data
- Clause 11.2(2) work to be done by the Completion Date

15 Services and other things provided by the *Client*

15.1.1 Access to Environment Agency systems and resources including:

- Asite.
- FastDraft.
- Collaborative Delivery Community SharePoint access.

15.1.2 Letter of Appointment of Principal Designer.

15.1.3 Site access authorisation letter(s).

15.1.4 Previous studies listed in Section 1.2.1. The *Client* will provide the previous studies within two weeks of contract award.

16 Data

16.1.1 Requirements for the handling of project data are covered by the framework schedules.

17 *Client's* Advisors

17.1.1 The *Client* for the Contract is represented by the Programme & Contract Management (PCM) team, primarily the EA Project Manager, acting as the *Service Manager*, and in their absence the Project Executive. Instructions may only be given by these staff.

17.1.2 The *Client* has a number of advisory departments. Instructions will only be deemed enacted from them when they are confirmed by an Instruction from the *Client*. These departments include Asset Performance, Partnership & Strategic Overview, NEAS, etc.

17.1.3 The *Client's* organisation has a regulatory function. Communications from the Environment Agency in its capacity as a regulator are not to be confused with communications as the *Client*.

18 *Client* Documents the *Consultant* Contributes to

18.1.1 The *Client* maintains several project documents, the *Consultant* is required to contribute to these *Client* owned documents:

- Project Risk Register.
- Project Efficiency CERT Form.
- Scheme Lessons Learnt Log.
- Cost and Carbon Tool (CCT).

Appendices

Appendix 1 – BIM Protocol

The *Consultant* shall adhere to the Environment Agency's Employers Information Requirements (EIR) framework level minimum technical requirements.

All *Client* issued information referenced within the Information Delivery Plan (IDP) requires verifying by the *Consultant* unless it is referenced elsewhere within the Scope.

https://www.asite.com/login-home

The *Consultant* shall register for an Asite Account and request access to the project workspace to view the IDP.

Appendix 2 – Modelling Technical Scope

Fairburn Sluice - Modelling Technical S

Appendix 3 – Glossary of terms

AEP	Annual Exceedance Probability
ASCII	American Standards Code for Information Interchange
BEP	BIM Execution Plan
BIM	Building Information Model
CEEQUAL	Civil Engineering Environmental Quality and Assessment Scheme
CERT	Combined Efficiency Reporting Tool
CDM	Construction Design Management
CE	Compensation Event
CFMP	Catchment Flood Management Plan
CifA	Chartered Institute of Archaeologists
DAP	Drainage Area Plan
EA	Environment Agency
EAP	Environmental Action Plan
EIA	Environmental Impact Assessment
EIR	Employers Information Requirements
ESE	Early Supplier Engagement
ESRI	Environmental Systems Research Institute
EW	Early Warning
FAS	Flood Alleviation Scheme
FBC	Full Business Case
FCERM-AG	Flood and Coastal Erosion Risk Management – Appraisal Guidance
FRM	Flood Risk Management
FsoD	Financial Scheme of Delegation
G3	Gateway 3
G4	Gateway 4
GI	Ground Investigation
GIS	Geographical Information System

GPR	Ground Penetrating Radar
GVA	Gross Value Added
HRA	Habitat Regulations Assessment
HSE	Health & Safety Executive
IAR	Information Asset Register
ISIS	Integrated Systems and Information Services
IDP	Information Delivery Plan
IHBC	Institute of Historical Building Conservation
ILP	Indicative Landscape Plan
LED	Landscape and Environmental Design
LEDG	Landscape and Environmental Design Guidance
LiDAR	Light Detection and Ranging
LPRG	Large Project Review Group
LVIA	Landscape and Visual Impact Assessment
MEICA	Mechanical and Electrical, Instrumentation, Control and Automation
MIDP	Master Information Delivery Plan
MTR	Minimum Technical Requirements
NaFRA	National Flood Risk Assessment
NEAS	National Environmental Assessment and Sustainability
NFCDD	National Flood and Coastal Defence Database
NGR	National Grid Reference
NPAS	National Project Assurance Service
NYCC	North Yorkshire County Council
OBC	Outline Business Case
OMs	Outcome Measures
PAB	Project Assurance Board
PAR	Project Appraisal Report
PCCT	Project Cost and Carbon Tool
PCT	Project Cost Tool
PEIR	Preliminary Environmental Information Report

PESTLE	Political, Economic, Social, Technological, Legal and Environmental
PM	Project Manager
PRSA	Public Safety Risk Assessment
PSC	Professional Services Contract
PSO	Partnership & Strategic Overview
SHE	Safety, Health and Environment
SHEW	Safety, Health, Environmental and Wellbeing
SMP	Shoreline Management Plan
SOC	Strategic Outline Case
SoP	Standard of Protection
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
UXO	Unexploded Ordnance
WFD	Water Framework Directive
YW	Yorkshire Water

Appendix 4 – Stakeholder Engagement Plan

Yorkshire SOC
Stakeholder Engagem