Environment Agency

NEC4 Professional Service Contract (PSC)

Scope

Project / contract information

| | |
|---|---|
| Project name | Westmoor Reservoir |
| Project SOP code | ENV0001197C |
| Contract number | 32391 |
| Date | 01/03/2022 |

Assurance

| | | |
|---|---|---|
| Author | Project Manager/Atkins | Date: 20 January 2022 |
| Consulted | Senior User | Date: 1 February 2022 |
| Consulted | NEAS PEPM | Date: 1 February 2022 |
| Reviewed | Project Executive | Date: 17 February 2022 |
| Checked prior to issue | Commercial Services Manager | Date: 14 February 2022 |
| Consulted | QCE | Date: 1 February 2022 |

Revision History

| Revision date | Summary of changes | Version number |
|---|---|---|
| 20/01/2022 | First issue | 1.0 |
| 17/02/2022 | Updated following review of clarifications | 2.0 |
| 01/03/2022 | Updated following review of clarifications | 3.0 |
| 11/03/2022 | Updated following CSM review | 4.0 |
| 15/03/2022 | Final version | 5.0 |
| 15/03/2022 | Final version - amendments accepted by client | 6.0 |
| 23/06/22 | Final Version – amendment to 2.1.5 and 2.1.6 | 7.0 |

This Scope should 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 |
|---|---|---|---|
| LIT 13258 | Minimum Technical Requirements | 12 | 30/12/2021 |
| LIT 13877 | 801_14 Environmental Sustainability, Design and Management | 3 | December 2015 |
| | Employer's Information Requirements | 2.5 | April 2021 |

# 1 Overview

There are several component parts of the West Moor Reservoir project. These are:

- Midelney Syphon;
- Railway Embankment; and
- Thorny Ring Bank.

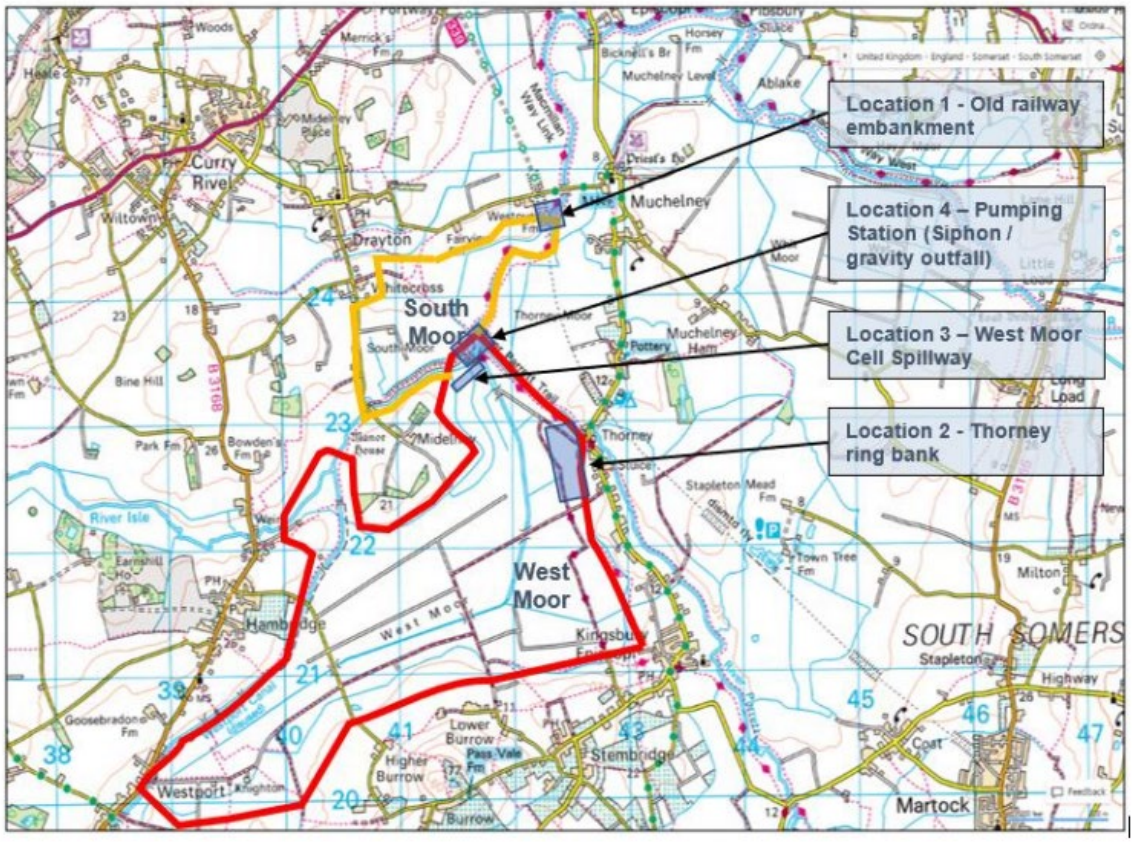


**Figure 1 Westmoor Reservoir Site Map**

The Midelney Syphon and the Railway Embankment have recommendations as to measures to be taken in the interests of safety ("MIOS") as denoted by the Reservoirs Act 1975.

The *Consultant* has completed the outline design for the Railway Embankment. The Railway Embankment is just upstream of Law Lane, Muchelney, Longport, at OS Grid Reference ST 42321 24468.

## 1.1 Background

The South Moor compartment is located within the Somerset Levels, and is classified as a 'large, raised reservoir' under the Reservoirs Act 1975. A report on an Inspection under Section 10 of the Reservoirs Act 1975 (Jacobs, August 2019) contained recommendations as to measures to be taken in the interests of safety ("MIOS"). This report relates to works undertaken to satisfy recommendation 15.2a), which is repeated below:

*2) The area of the old railway embankment currently forming the lowest outlet spillway from South Moor should be cleared of the existing thicket and assessed for the need for remedial works. If found necessary, the bank and crest should be reinstated and erosion protected at an appropriate level to act as a spillway for the reservoir, or alternatively, this outlet from South Moor be blocked off by reinstating one of the existing embankments currently below 8.80m as a flood embankment to above 9.00m aOD, topsoiled and grassed. This recommendation should be carried out in two stages with an initial study to determine an appropriate solution, followed by design and implementation.*

This MIOS is being carried out in two stages: the first stage (2a) is an initial study to assess the need for remedial works and determine an appropriate solution (now complete); and the second stage (2b) of design and implementation.

This Scope is to develop the preferred option for the Railway Embankment into a detailed design. The detailed design of the other locations within the West Moor Reservoir project will be added to this scope as future Compensation Event(s).

## 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.

| **Table 1 – Previous Studies Report** (authored by Atkins unless noted otherwise) | **Date** | **Format** |
|---|---|---|
| Inspection under Section 10 of the Reservoirs Act 1975 (Jacobs). | August 2019 | Digital |
| Geo-Environmental Desk Study | June 2020 | Digital |
| Environmental Action Plan – GI Works (Environment Agency) | August 2020 | Digital |
| Ground Investigation: Habitats Regulations Assessment: Stage 1 Screening and Stage 2 Appropriate Assessment. | September 2020 (v2) | Digital |
| Ground Investigation: Pre-construction Information. | October 2020 (v04) | Digital |
| Ground Investigation: Specification. | October 2020 (v1.3) | Digital |
| Preliminary Ecological Appraisal Report (CONFIDENTIAL). | October 2020 (v1) | Digital |
| Ground Investigation Assent. | November 2020 | Digital |
| General Permitted Development Order (GDPO) Assessment. | December 2020 (v3.1) | Digital |
| Technical Report for Badgers (CONFIDENTIAL). | March 2021 (v1) (WIP) | Digital |
| Technical Report for Bats | April 2021 | Digital |
| Ground Investigation Report. | May 2021 | Digital |
| South Moor Compartment Spillway Options Appraisal | August 2021 (P02) | Digital |
| Invertebrate Scoping Assessment (Conops Entomology Ltd). | October 2021 | Digital |
| Preliminary Ecological Appraisal Report. Addendum. | December 2021 (v1). (Draft for client comment) | Digital |
| Non-Native Invasive Species of Plant (NNISP) Survey. | December 2021 (Draft for client comment) | Digital |
| West Moor Reservoir Improvements. Description of Works. | WIP | Digital |
| Badger Technical Report (CONFIDENTIAL) | February 2022 | Digital |
| Drawing Comment Log | March 2022 | Digital |
| Somerset Levels and Moors Appraisal. River Parrett system, lowlands. Hydraulic modelling report. (CH2M). | November 2016 | Digital |
| Somerset Levels and Moors Appraisal. Hydrology Report. Project Ref. 651407 (CH2M). | November 2016 | Digital |

| *Table 1 – Drawing number and title* | Rev | Date |
|---|---|---|
| ENV0001197C-ATK-DE-3RE-DR-C-000001 - WESTMOOR RESERVOIR RAILWAY EMBANKMENT GENERAL ARRANGEMENT PLAN | P04 | 21/03/22 |
| ENV0001197C-ATK-DE-3RE-DR-C-000005 - WESTMOOR RESERVOIR RAILWAY EMBANKMENT SPILLWAY EROSION PROTECTION TYPICAL CROSS SECTION AND LONGSECTION | P03 | 21/03/22 |
| ENV0001197C-ATK-DE-3RE-DR-C-000002 - WESTMOOR RESERVOIR RAILWAY EMBANKMENT LONGSECTION | P04 | 21/03/22 |
| ENV0001197C-ATK-DE-3RE-DR-C-000003 - WESTMOOR RESERVOIR RAILWAY EMBANKMENT CROSS SECTIONS | P04 | 21/03/22 |
| ENV0001197C-ATK-DE-3RE-DR-C-000004 - WESTMOOR RESERVOIR RAILWAY EMBANKMENT SPILLWAY EROSION PROTECTION PLAN | P03 | 21/03/22 |
| ENV0001197C-ATK-XX-3SP-DR-C-000001 - WESTMOOR RESERVOIR SADDLE BANK SPILLWAY GENERAL ARRANGEMENT PLAN | P04 | 21/03/22 |

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* if the data is incorrect, contains anomalies, is not adequate for the purposes of detailed design or is based on inappropriate assumptions. Following this review, and completion of any work required to rectify the deficiencies identified, the *Consultant* will take the risk of any deficiencies in existing data quality and quantity which have not been notified to the *Client*.

## 1.3 Objective

The *Consultant* shall develop the outline design (as described by the drawings listed above in Table 1.2) for Westmoor Railway Embankment into a detailed design that allows the MIOS and other statutory requirements in the Section 10 report (dated August 2019) to be met. The Environment Agency are the statutory Undertaker for reservoirs and must comply with the Reservoirs Act 1975. Undertaking this work will ensure the Environment Agency continue to comply with this legislation.

The *Consultant* shall produce information to support the preparation of a Full Business Case (FBC) by the *Client* to ensure West Moor Railway Embankment secures compliance with the legally enforceable requirements of the Section 10 Report under the Act.

# 2 The *service*

## 2.1 Outcome Specification

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

2.1.1 The required outcome of this commission is to develop the outline design produced at appraisal stage into a detailed design such that it meets the project objectives and enables the scheme to be priced and constructed under an NEC4 Engineering and Construction Contract.

2.1.2 The *Consultant* shall ensure that the detailed design takes into consideration all relevant guidance and legislation and seek to minimise long-term asset/land management, maintenance costs and whole life carbon.

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

2.1.4 Working with the *Client* and Early Supplier Engagement (ESE) contractor, the *Consultant* shall be responsible for ensuring the design is acceptable to the *Client* (gaining approval of Gateway 3), is designed to gain planning approval and any other associated approvals and to be acceptable to statutory and key stakeholders.

2.1.5 The *Consultant* shall not prepare a planning application as the works are considered permitted development.

2.1.6 The *Consultant* shall apply for protected species licences, on behalf of the *Client*.

2.1.7 The *Consultant* shall seek to develop the detailed design such that the cost and quality of the scheme represents value for money and can be constructed within the approved OBC budget.

2.1.8 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.

2.1.9 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.

2.1.10 Within the constraints described in Section 1.3 above, the *Consultant* shall ensure the design process fully considers and addresses sustainability including carbon reduction as strategic outcomes.

2.1.11 The *Consultant* shall develop the outline design into a detailed design that optimises the project objectives and outcomes identified in the OBC, supported by evidence that will enable the *Client* to produce a Full Business Case.

2.1.12 The *Consultant* shall produce a detailed design that supports the *Client* to achieve efficiency targets set for this commission and future stages of the project using the Combined Efficiency Reporting Tool (CERT).

2.1.13 The *Consultant* shall prepare the ECC Scope for the main works tender document. The ECC Scope shall not contradict the *Client's* standard documents. If there is a requirement to do so the *Consultant* shall justify the need and obtain the prior written agreement of the *Client*.

2.1.14 Any *Client* request to re-optioneer the outline design would be a Compensation Event.

## 2.2 Constraints

2.2.1 Not applicable.

## 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 The overall management of the commission shall:

- Contribute monthly to the updates to the project risk register.
- Provide input to project efficiency CERT Form.
- ~~**OMIT:** Attend progress meetings.~~
- **AD:** Attend and facilitate monthly progress meetings, take minutes and share the minutes with all relevant parties.
- 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.
- Within the constraints described in Section 1.3 above, maintain and show how accurate and up to date information on the whole-life cost and carbon 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 FBC.

2.3.3 The contract will be administered using FastDraft.

2.3.4 **AD**: Weekly submission of programme information to the *Client* and external Programme Manager via the weekly programme meetings.

## 2.4 Outputs and Deliverables

2.4.1 The *Consultant* shall confirm the list of products with the *Client* and submit the product description for the *Client's* acceptance before commencing work on the product.

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

- Detailed Design.
- Updated Programme showing milestones to construction completion 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.
- Update Carbon Optimisation Report.
- Draft text within relevant sections of the FBC.

2.4.3 The detailed design shall be sufficient for a contractor to set out and construct the works. The detailed design should include but not be limited to:

i. Calculations.
ii. Drawings (including landscape/ ecological design drawings/ planting schedules).
iii. Environmental Assessment.
iv. Documents necessary to enable the *Client* to form a NEC4 Engineering and Construction Contract for the construction works with the Lot 2 Delivery Partner.
v. Specifications (including any additional clauses to Environment Agency standard specifications - e.g. Environment Agency NEAS Landscape Specification template).
vi. Design philosophy statement, giving design process, standards used, and assumptions made to the satisfaction of the *Client*. This should demonstrate compliance with the *Client's* sustainability targets.
vii. Design report, including asset schedule, buildability statement and maintenance plan.
viii. Designer's Risk Assessments.
ix. Public Safety Risk Assessments.
x. Pre-construction information.
xi. Application for all necessary consents and permissions required at FBC stage.
xii. Environmental Action Plan.
xiii. Materials Management Plan.

# 3 Site Investigation

## 3.1 Topographic Survey

3.1.1 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.

3.1.2 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.

3.1.3 ~~Example text - A topographical survey is required to provide further details of the existing piles so that the alignment of new piles may be optimised relative to this. A survey is also required to supplement that previously undertaken by XXXX in order to identify the location of key features on the quay so that we may clearly define working areas and accesses in the Scope.~~ The *Consultant* shall undertake the following specific requirements:

- 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.
- ~~AD:~~ The *Consultant* shall undertake the topographic survey necessary to be able to complete a detailed design. The procurement of the topographic survey will be subject to a Compensation Event.

3.1.4 The *Consultant* shall use the outputs from the topographic survey in their modelling and design.

## 3.2 Ground Investigation

3.2.1 The *Consultant* shall scope any additional Ground Investigation required to undertake the 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. The supervision will be subject to a Compensation Event.

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

## 3.3 Ecological surveys

3.3.1 Undertake additional surveys consistent with current guidelines, where these are essential to securing permissions or are essential to achieving good environmental design such as informing the Biodiversity Metric. Utilise project information regarding habitat condition as well as the distribution of species and the current understanding of the factors governing their distribution. Use habitat, species and survey information in a scientific and informed way to justify environmental decision making.

## 3.4 Services Search

3.4.1 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 design, including preparation of plans.

3.4.2 The *Client* will arrange for a non-intrusive survey to detect key utilities (e.g. GPR) to inform SI and/or detailed design. 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.

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

3.4.4 The outputs from this survey shall be included in the design, including revising the plans. The output shall be used to make recommendations for any further surveys required which would include intrusive investigations to inform the detailed design.

# 4 Hydrology and Hydraulics

## 4.1 General

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

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

4.1.3. The model is to be used for updating levels with detailed design components, if the *Consultant* feels this is necessary. It is not intended for the whole range of options to be re-run, only the scheme design at the design flow(s).

4.1.4. **OMIT:** ~~The *Consultant* shall provide the *service* in accordance with the Modelling Technical Scope, included in Appendix 2.~~

4.1.5. Following completion of the study, this model will be handed over to the Flood Incident Management team and the model should be able to determine thresholds of flooding and trigger levels. All electronic data should be in an agreed format in line with the scheme data management plan. A copy of the plan will be provided by the *Client*.

4.1.6. **AD:** The *Consultant* shall not undertake any new hydraulic model runs, but use the existing model results as agreed with the QCE.

4.1.7. **AD:** The output from the existing hydraulic model shall be used within the *Consultant's* hydraulic calculations to support the detailed design.

# 5 Economics Appraisal

The economics appraisal is intended to take the outputs of the earlier work and update the economic business case for input to the scheme business case. The detail should (normally) be covered by appraisal guidance and the Multi-Coloured Manual (MCM) and by the business case template and guidance. It is anticipated that this work will be undertaken by the *Client*.

# 6 Environmental Assessment

6.1.1 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, within the constraints described in Section 1.3 above.

6.1.2 The *Consultant* shall ensure that the project level assessment sits within the context of any previous strategic environmental assessment and additional information developed in support of the OBC through the Appraisal Stage. This commission will bring forward all relevant information and conclusions.

6.1.3 The *Consultant* shall be able to demonstrate how the information from the environmental assessment has been used to inform and adapt the detailed design.

6.1.4 Should the preferred option or the design significantly change (unless instructed to do so by the *Client*), the scope of the environmental assessment shall be adapted accordingly.

6.1.5 The *Consultant* shall ensure that the detailed design includes all of the necessary information to assure the delivery of all mitigation, management and monitoring measures and the delivery of wider benefits during construction.

6.1.6 The *Consultant* shall report the findings of the environmental assessment as required which will form an Appendix to the FBC with relevant summary details incorporated into the relevant section(s) of the FBC main text.

6.1.7 The *Consultant* shall be able to demonstrate how they have taken account of the *Client's* wider sustainability aspirations in the development of the detailed design and the associated benefits.

6.1.8 **AD**: The *Consultant* shall attend a CEEQUAL scoping workshop (half-day) with the *Client*. This will identify with NEAS the CEEQUAL issues and scope that is applicable to this stage of work. The *Consultant* will then review and respond to the scope issued by NEAS, to reach agreement on the scope. The subsequent completion of the CEEQUAL scope will be subject of a compensation event.

6.1.9 The following deliverables are required under the Scope:

- **AD:** Specification for badger relocation
- **AD**. Indicative Landscape Plan (ILP)
- Landscape Master Plan (LMP)
- Environmental Action Plan (EAP)
- **AD:** Preliminary Water Framework Directive (WFD) Assessment
- Environmental low risk file note
- Environment Permit application
- **AD:** Arboriculture Impact Assessment
- **AD:** Habitats Regs Assessment screening/stage 1

# 7 Preferred Option Development – Detailed Design

7.1.1 The *Consultant* shall assist with pricing and buildability which will be led by the *Client's* CCE and the ESE contractor respectively.

7.1.2 The *Consultant* shall develop designs with the *Client* including the Field Service and Area Teams.

7.1.3 The *Consultant* shall discuss with the *Client* where environmental information, landscape details, archaeological information, methodologies or on-site management deviate from that stated in the OBC environmental report or associated documents. This will enable any legal implications to be checked and for the environmental implications of the changes to be assessed.

7.1.4 The *Consultant* shall discuss developments in the design with the appointed Principal Designer.

7.1.5 The *Consultant* shall discuss with the *Client* how the design enables carbon reduction targets to be met.

7.1.6 The *Consultant* shall facilitate design workshops, ~~attend/~~ facilitate risk workshops to produce a risk register with analysis in accordance with LIT 14847 Risk Guidance for Capital Flood Risk Management Projects.

# 8 Stakeholder Engagement

~~The *Client* will lead on consultation, but the *Consultant* may need to assist and prepare materials for use in meetings.~~

8.1.1 The *Consultant* will lead on consultation, with support from the *Client* as required. Once the Stakeholder Engagement Plan has been finalised (as covered by a separate contract) this can be fully defined and shall be the subject of a compensation event.

# 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 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. Detailed design work shall be treated as if it was notifiable.

9.1.5 **AD**: The *Consultant* shall fulfil the Principal Designer (PD) role and discharge the duties in accordance with the requirements of regulations 8, 9, 11 and 12 of the Construction Design Management Regulations 2015.

9.1.6 **AD**: The PD must be a lead or active designer and can either demonstrate relevant Skills, Knowledge and Experience to undertake the role or have access to relevant support to discharge their duties.

9.1.7 **AD**: The PD will demonstrate their compliance with their CDM duties by preparing and updating the Pre-Construction Management Tool on a monthly basis (or more frequently for start of construction activities) and liaising with the CSF Resident Principal Designer.

9.1.8 **AD**: The PD will identify and track significant risks, scrutinise the quality of treatment of risks with regards to the principals of prevention, co-ordinate other designers' mitigation and handover designs which can be constructed safely.

9.1.9 **AD**: The PD shall ensure there is effective liaison and coordination between phases with the Principal Contractor.

# 10 Business Case Submission

The *Client* shall aggregate all of the work undertaken from this commission into a~~n update of the Outline Business Case document to create~~ the Full Business Case.

# 11 Carbon

11.1.1 Within the constraints described in Section 1.3 above, carbon emissions shall be identified and assessed on a strategic whole life basis (cost and benefit) in the design and also as a specific operational target (carbon budget) of the *Client*.

11.1.2 **OMIT:** ~~The carbon budget for the project has been set to X. The *Consultant* is required to work with the *Client* and the ESE contractor to reduce the project carbon footprint by XX% (we need to define this following our review).~~

**AD:** The carbon budget for the project has been calculated to be XXXX tonnes by the Client (figure obtained from PAFS). The *Consultant* is to work with the *Client* and the ESE contractor to reduce the carbon budget of the project within the constraints described in Section 1.3 above.

11.1.3 The *Consultant* shall demonstrate how they have met the corporate requirement for carbon reduction (within the constraints described in Section 1.3 above) using the Carbon Tool, 'ERIC' and:

- 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 and Carbon Optimisation Report at the pre-defined stages.
- Inclusion of a whole-life carbon appraisal to ensure optimisation of lowest carbon in detailed design.

# 12 General

12.1.1 Not applicable.

# 13 Relevant guidance

13.1.1 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 |

| Ref | Report Name | Where used |
|---|---|---|
| LIT 14847 | Risk Guidance for Capital Flood Risk Management Projects | Detailed design |
| OI 120_16 | Whole-life Carbon Planning Tool | Detailed design |
| LIT 14284 | Whole Life (Construction) Carbon Planning Tool User Guide | Detailed design |
| | Access for All Design Guide | Detailed design |
| | Project Cost Tool | Costs |
| LIT 12982 | Working with Others: A guide for staff | Consultation & Engagement |
| LIT 12280 | Lessons Log template | FBC |
| LIT 55096 | Integrated Assurance & Approval Strategy | Approvals |

# 14 Requirements of the Programme

14.1.1 The *Consultant* shall provide a detailed programme in Microsoft Project format version 2013 meeting all requirements of clause 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 Include internal project team/board decision gateways (as a minimum) for:

a) Gateway 3, to ensure the detailed design and costings are complete and the works can be constructed within the allowed time and budget.

14.1.6 The following consultation periods should be incorporated into the programme, with adequate allowance for review and revision of documents by the project team where appropriate:

a) *Consultant* internal review (as per *Consultant*'s quality review procedures) and *Client* review of all outputs before circulation to the wider project team to ensure high quality of all output.

b) Sufficient allowance for internal and external consultation. Statutory consultation periods at scoping & draft stages. Note local authority approvals through cabinet prior to public consultation can take a long time.

c) Local Authority time for planning approval.

d) *Client* approvals as required to include for Reservoirs Act, impoundment licence and working in watercourse approvals.

e) Time for pricing up of the works by the *Client's* CCE or possible construction tender.

f) Submission for approval and time allowance for the *Client's* approval process.

14.1.7 The *Consultant* shall produce a programme such that the following milestone dates are achieved:

| Date | Event |
|---|---|
| 13 October 2022 | Contract documents finalised (ID464 Programme Rev72_220110) |

14.1.8 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.

14.1.9 **AD:** Additional elements associated with update of Employer's Information Requirements from v2.3 to v2.5.

# 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

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 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 *Service Manager*. These departments include Asset Performance, Partnership & Strategic Overview, NEAS and others.

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* or the *Service Manager*.

# 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.
- Project Cost Tool (PCT).

# 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.