ECC Scope Template - Early Supplier Engagement (ESE)

Environment Agency

NEC4 engineering and construction contract (ECC) Scope

24/09/2018 412_13_SD10

Project / contract information

Project name	Southlake Reservoir Improvements
Project 1B1S reference	ENV000797C
Contract reference	
Date	9th February 2021
Version number	1.00
Author	[redacted]

Revision history

Revision date	Summary of changes	Version number
9th February 2021	First issue	1.00
29th March	Final draft	2.00

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 between them, this Scope shall prevail. The *works* are to be compliant with the Scope

Contents List

1. Background and Description of the *works*

Southlake Moor Reservoir is classified as a Large Raised Reservoir under the Reservoirs Act 1975 (the Act) and has been inspected by All Reservoirs Panel Engineer (ARPE) who has recommended several Measures in the Interest Of Safety (MIOS) which must be completed before specified deadlines. These are safety improvements to the reservoir as instructed under Section 10 (2) of The Act, and are as follows:

Relating to the River Parret Right Bank

1)Raise and level the lowest sections of the embankment crest in order to reduce the risk of overtopping erosion leading to embankment failure to acceptable levels. Reinstate the grass cover on the crest and downstream faces as erosion protection.

For reservoir safety the minimum crest width shall be 3m and the embankment shall have a minimum landward gradient of 1 in 3. The riverward gradient shall be stable. The crest shall be of a consistent level along the lowest section of crest, the required level of which shall be determined from the risk assessment using the River Parrett hydraulic model taking into account the left and right embankment crest levels following the planned IDB works.

The final dimensions and gradients of the embankments shall be determined by considering the requirements to also achieve: acceptable bank stability, seepage and durability against burrowing animals; compliance with EA operational and maintenance requirements (e.g. EA OI 992-14); environmental designations and environmental and landowner impact mitigation.

2) Repair observed points of existing and on-going leakage through the embankment. Options for this include cutting-off the leakage path e.g. with piles, or excavating back and installing a filtered drain to prevent further material washing out of the embankment, but may include other measures which should be re-assessed following the planned IDB works.

3)Reinstate areas of the bank put at risk of failure due to rabbits and other burrowing animals and install measures to discourage rabbits and other burrowing animals from putting the embankment at risk of failure in future, which should be re-assessed following the planned IDB works.

Items 2 and 3 above have been undertaken as urgent works and are therefore **not within this scope,** but are included for completeness.

Relating to other embankments

4) *Check the level and condition of the bank connecting the River Sowy Bank to the Burrow Wall Rhyne Isolation Bank (see Figure 6). If found to be below 4.90m aOD, raise the bank crest to 5.0m aOD and infill existing ruts.*

5) Identify locations on the Burrow Wall Rhyne Isolation Bank and River Sowy Bank where the crest is less than 2m wide at an elevation of 4.90m aOD or appears to be defective in other ways and raise and/or reinforce these areas to provide a satisfactory bank with a minimum 2m width at an elevation of 5.0m aOD.

6) Extend the Burrow Wall Rhyne Isolating Bank west from the A361 sluice to high ground at the Burrow Mump with a crest level above 4.90m aOD in order to separate Southlake Moor Reservoir from the residential properties on the Burrow Wall

7) Remove trees and other obstructions from low points and around ends of fencing / ditch ends adjoining the Isolation bank. Replace any fencing as necessary.

8) Install a water level recorder connected to the EA telemetry system to allow water levels and speed of rise of water levels on Southlake Moor to be monitored remotely so that warnings may be issued to persons at risk and acted upon accordingly. Incorporate such warnings into an on-site plan for Southlake Moor.

For clarity, the above does not necessarily form part of this scope of services, but are shown as background information and for completeness.

The purpose of The Reservoirs Act 1975 is to ensure adequate safety in the design, construction and operation of a large raised reservoir. The EA are deemed the 'Undertaker' for any large raised reservoir that is managed and operated by us. As the Undertaker for any large raised reservoir, they are responsible for the safety of that reservoir under the provisions of the Act.

As such, the Environment Agency has a legal obligation as the Undertaker of the reservoir to carry out the recommended improvements within this fixed timeframe.

WI 101 Description of the *works*

The Early Supplier Engagement (ESE) *Contractor* shall provide advice to the appraisal consultant (South West Collaborative Delivery Framework Lot 1 – Atkins) to enable the appraisal outcomes to be delivered. This will also include undertaking Ground Investigation (GI).

WI 102 Purpose of the Works

The Purpose of the Works is to provide the required Deliverables - ESE technical and buildability advice covering but not limited to:

- Option development from short list to preferred option.
- Health and safety implications of options
- Temporary and permanent works outline design
- Operating regime and maintenance
- Access and buildability
- Sustainability and carbon
- Environmental impact
- Materials
- Cost
- Review of proposed site investigation
- Construction methodology
- Risks and opportunities
- Programme and phasing of works
- Option development from short list to preferred option.
- Value engineering and efficiency
- Knowledge transfer and lessons learnt

Management of overall project delivery shall be the responsibility of the *Client*.

The *Project Manager* will keep an issues log established for response by both the Lot 1 and the ESE supplier to record how issues identified have been incorporated into the project going forward.

The *Contractor* is to provide the following *works*

a) The *Contractor* shall maintain verbal contact with the *Project Manager* and the *Client's* environmental project manager (NEAS) such that the *Client* is fully informed of progress and issues.

b) The *Contractor* shall prepare and issue to the *Project Manager* monthly progress reports to include financial, progress and issue log updates / resolutions by the last two clear working days before the progress meeting.

c) The *Contractor* shall attend all meetings required to deliver the services including weekly catch ups and the monthly progress meetings.

d) The *Contractor* shall revise and issue to the *Project Manager* their monthly expenditure forecast with each Application for Payment (AFP). This shall show (broken down monthly) spend to date, invoiced to date (with order number referenced), forecast cost to complete and an estimate total cost to *the Project Manager*

e) The *Contractor* shall assist the *Client's* design consultant to deliver outline designs for the *Client's* Southlake Reservoir Improvements design in accordance with the *Client's* Minimum Technical Requirements.

f) The *Contractor* shall engage with the *Client's* design consultant as required to deliver the project programme.

g) The *Contractor* shall review and comment on the designers risk assessment for all elements of the outline design.

h) The *Contractor* shall follow the Employers Operating Instruction - OI 120_16 (02/11/16) Whole Life Carbon Planning Tool and review the Carbon Calculator and Carbon Optimisation Report once drafted by the *Client*. Provide advice on available materials and products including information on carbon and sustainability implications using amongst other tools the Carbon Planning Tool

i) The *Contractor* shall input to the projects 'Combined Efficiency Reporting Tool (CERT)' and proactively identify efficiencies by involving the entire project team. The project team will discuss efficiencies at each monthly progress meeting to assist in identifying efficiencies.

j) The *Contractor* shall input to the projects 'Lessons Learnt' register and proactively identify lessons learnt. Also to Share lessons learned from the *Contractor's* wider organisation

k) The *Contractor* shall undertake any stakeholder engagement for the successful delivery of the *works* included in this Scope.

l) Collaboratively work with the *Client* and *Project Manager*, Designer, Principal Designer and others to assist in developing the preferred solution for the scheme

m) Identify Health & Safety issues, potential value engineering opportunities and efficiencies in delivery.

n) Assist in the identification of project risks and the development of the project risk register; including estimating the cost of risks realisation and mitigation measures.

o) Provide Information and advice on buildability.

p) Review outline design options / drawings that are to form part of the tender information to assist to ensure that sufficient information is available to price the options. Identification and advice to be provided on buildability, construction methods, SHEW compliance, access requirements etc

q) Attend site visits to identify access requirements, physical constraints, easement requirements, required working areas, compound areas, etc.

r) Attend design and risk workshops as required

s) Produce a project draft delivery programme based on the preferred option at FBC stage. Programme is to identify required consenting, procurement, and site mobilisation and construction activities.

t) Review of high-level project programme, as part of the strategic programme and input into activities, durations and sequence, identification of long lead items, ecological constraints, third party constraints, consents, and robust delivery durations considering risk. Early identification of programme constraints that could prevent a scheme from commencing or completing as planned.

u) Co-operate with the *Client* in the role of the BIM Information Manager.

v) Review of any required draft temporary works schedules. Identification of any significant temporary works designs that need to be considered from a CDM perspective in advance of the works pricing, to ensure sufficiency of resources and time.

w) Contribution to specialist areas of the high level cost estimate against a defined scope as requested by the project team. Advise / calculate suitable risk cost allowance.

x) Input into a project level risk register that can be communicated and updated regularly thorughout the life of the project. Identify opportunities and risks, the measures required to mitigate, quantification, and the allocation of residual risk to the party best placed to manage the residual impacts as part of the integrated project risks register

y) Attend landowner meetings to discuss working methodology, disturbance, duration, temporary access arrangements, compound locations etc.

z) Produce plans of all temporary compound locations and traffic routes.

aa) Provide market relevant advice to support on project whole life costs (and carbon) as requested by the *Client*

bb) Consider where applicable innovation and technology that can be embedded throughout the project, evaluating on a risk and opportunity basis

cc) Input into optioneering and selection of best procurement methods for the project/package.

dd) Provide input into Enabling or advance works, where this will allow the project to proceed to the required programme, or will accelerate it.

ee) Selection and advanced procurement and storage of materials where this delivers efficiencies in cost and time to the project/package

ff) Engaging with utility companies to discuss service diversion requirements and proposed plant activities in immediate vicinity of service

gg) End user engagement to set the scene for future delivery in terms of solution expectation,

hh) Review of draft Site Information - is sufficient information available to enable pricing the options. If gaps are identified, assessment made as to whether there is value in closing the gaps.

ii) Costing of specialist or bespoke operations to inform or augment PCT costing

jj) Providing advice on specialist operations and viability of those operations

2. General constraints on how the *Contractor* provides the *works*

WI 201 General constraints

The working hours shall be limited to those noted under the Minimum Technical Requirements.

The *Project Manager* shall arrange access to the Site. The *Consultant* shall inform the *Client* of their access requirements.

The *Contractor is* to maintain safe access routes for public, local landowners, properties and businesses during the contract period.

The *Contractor* shall not gain access to any occupied premises or third-party land without the prior written agreement of the *Client's* Estates Team.

Use of the Site – undertake site visits to collect information needed to provide the *works.*

Access to the Site – via public highways. Agreement to be sought of relevant landowners via EA Estates.

WI 202 Confidentiality

The *Contractor* does not disclose information in connection with the *works* except when necessary to carry out their duties under the contract or their obligations under the contract

The *Contractor* may publicise the *works* only with the *Client*'s written permission.

WI 203 Security and protection on the site

When attending site, The *Contractor* shall comply with relevant legislation and EA's constructing a Better Environment, Safety, Health, Environment and Wellbeing (SHEW), Code of Practice (CoP).

WI 204 Security and identification of people

The *Contractor* shall comply with relevant legislation, their own, and EA's mandatory security and vetting procedures.

WI 205 Protection of existing structures and services

Existing structures

The *Contractor* shall repair any structure or service damaged by *Contractor's* negligence and for any consequence of damage during the execution of the *works* due to *Contractor's* negligence.

The *Contractor* shall only remove any fencing, gates or structures with the prior approval of the *Project Manager*. The *Contractor* shall record the location of any third-party property (e.g. fences and gates etc.) prior to removal and any replaced or reinstated shall be recorded on the as-constructed drawings.

Existing services

The *Client* shall obtain services data from utility companies and shall ensure services data is requested from relevant landowners. The *Consultant* shall assist the *Client* in identifying services for the *works* and for the future stages of the project (i.e. detailed design and construction).

Public Rights of Way (PRoW)

The *Contractor* shall advise the *Project Manager* on any potential requirements for temporary Public Rights of Way diversions where required to accommodate their *works* areas. The *Contractor* shall plan their method of working to manage and minimise PRoW diversions. The *Client* shall be responsible for obtaining all approvals for PRoW diversions from the relevant authority following request from the *Contractor*.

WI 206 Protection of the *works*

3. *Contractor's* design

The Contractor is not be required to undertake any design.

4. Completion

WI 401 Completion definition

The following are absolute requirement for Completion to be certified, without these items the *Client* is unable to use the *works*:

- Deliverables as detailed above.
- Population of the *Client's* latest version of the Project Cost Tool, or its successor
- Transfer to the *Client* databases of BIM data
- Delivery of the Final Carbon Report

WI 402 Correcting Defects

Procedures for access for the correction of any Defects and process for liaison with the *Project Manager.* The *Contractor* shall inform the *Project Manager* of defects in need of correction.

WI 403 Pre-Completion arrangements

Prior to any of the *works* being offered for Completion the *Contractor* shall arrange a joint inspection or review with the *Supervisor, Project Manager, Client* (scheme Project Manager) QCE and Senior User.

WI 404 Take over

Not applicable

5. Programme

WI 501 Programme Requirements

The delivery programme shall be provided in native file format, Microsoft Project Professional 2016 and PDF file formats.

The programme complies with the requirements of Clause 31.2 and also includes alignment and submission of the BEP and Master Information Delivery Plan (MIDP).

WI 502 Programme Arrangement

The *Contractor* shall input as required to the integrated whole life programme for the project. The *Project Manager* remaining accountable for the programme.

Provide a draft methodology to support the draft construction element of the integrated whole life programme

WI 503 Methodology statement

None

WI 504 Work of the *Client* and Others

The order and timing of the work of the *Client* and Others to be included in the programme and information to be provided. Refer as necessary to sections WI 901 and WI 902.

WI 505 Information required

W401 refers, required by contract end date

WI 506 Revised programme

The *Contractor* shall provide a revised programme as required to ensure that the version provided at the end of this contract is the most up to date

6. Quality management

WI 601 Samples

State the materials and samples required including any procedures for submission and acceptance.

The *Contractor* shall take samples and submit for testing as defined in any GI scope produced by the appraisal consultant.

WI 602 Quality Statement

None

WI 603 Quality management system

State any requirements for a quality management system, including accreditations or legislative standards.

The *Contractor* shall comply with their own quality management system.

WI 604 BIM requirements

The BIM Information Manager is the *Client* Project Manager

State any requirements for a BIM data to be collected.

The *Contractor* shall collect and provide all data in accordance with the *Client's* BIM standards.

7. Tests and inspections

8. Management of the *works*

WI 801 Project team – Others

The project team are:
Client – Environment Agency
Project Manager – EA PCM project manager.
Site Supervisor & EcOW – Provided as required by *Client*
Design Consultant – Atkins

WI 802 Communications

The *Contractor* shall engage in the project team to assist in realising the objectives of the project stage. Specifically the *Contractor* shall attend / engage in:

- Attending all weekly and monthly programmed meetings as required by the *Project Manager*
- Reporting requirements (monthly progress reports detailing expenditure to date, forecast to completion, work undertaken in last month and work planned in next month
- Other ad-hoc meetings either via Teams, in person or on the Site.

9. Working with the *Client* and Others

WI 901 Sharing the Working Areas with the *Client* and Others

The *Contractor* shall coordinate and co-operate with the appraisal consultant who may occasionally use the Working Area (for GI) to deliver their services.

WI 902 Co-operation

The *Contractor* shall co-operate with the appraisal consultant and the *Project Manager* at all times, together with all other members of the project team.

WI 903 Co-ordination

The *Contractor* shall co-ordinate activity with the *Client*, *Project Manager* and appraisal consultant.

WI 904 Authorities and utilities providers

The *Contractor* will assist in the identifications of *works* to be carried out by the authorities and utilities providers.

WI 905 Diversity and working with the *Client,* Others and the public

- Consider the following and document how they are addressed on this contract:
- The Contractor shall consider the following in delivery of the works
- **Public**: how to effectively engage with, and how they perceive us, the diverse public throughout projects?
- **Project team**: how to create an inclusive environment for our project team?

- **Framework:** identify opportunities to support diverse workforces on our projects across our organisations.

10. Services and other things to be provided

None

11. Health and safety

The *Contractor* shall comply with relevant legislation and EA's constructing a Better Environment, Safety, Health, Environment and Wellbeing (SHEW), Code of Practice (CoP).

The Contractor shall:

a) Provide guidance and advice that the following documents (produced by the *Client*) are comprehensive and provide the best information available at this stage, inputting as required, to include suitable assurance for each of the following documents:

Hazard Plan, Buildability Statement, desktop services searches, Pre-Construction Information Pack, Design Statement, Environmental Action Plan, and Construction Method in the EIA, Information Delivery Plan, and Carbon Reporting.

b) Provide comprehensive advice on proposed options such as the impact of potential relevant permissions and consenting application processes including related programme considerations;

c) Provide the logistics and practical considerations for the design elements, including for the use of supply chain engagement, temporary works, carbon costs, example materials, site compound locations, access constraints, construction logistics, community safety, procurement and sourcing options;

d) Consider the impact on services.

e) Champion SHEW, wider sustainability matters and challenging assumptions where applicable.

12. Subcontracting

It is a requirement for any subcontracting that the *Contractor* remains responsible for all the *works*

Acceptance procedures

There are no additional constraints above CDF framework agreements on acceptance.

13. Title

N/A

14. Accounts and records (Options C and E)

Additional Records

The *Contractor* shall keep but are not limited to the following additional records:

- Forecasts of the Defined Cost (Forecasts are to include, but not be limited to costs to date, costs to completion including detailed breakdown of staff, any sub-contractors and major material items)
- Cost reports
- Timesheets and site allocation sheets
- Equipment records

The format and presentation of records to be kept are to be accepted by the *Project Manager*

Client's work specifications and drawings

WI 1701 *Client's* work specification

None

WI 1702 Drawings

None

WI 1703 Standards the *Contractor* will comply with

The *Contractor* shall carry out their work using the following guidance.

Ref	Report Name	Where used
	Project Cost Tool	Costs
	Sustainability Measures Form	
	Timber Policy Documents	
	300_10 SHE handbook for managing capital projects	
	300_10_SD27 SHE Code of Practice	
	Carbon Planning Tool	