



Framework:

Supplier:

Company Number:

Geographical Area:

Project Name:

Project Number:

Contract Type:

Option:

Contract Number:

Collaborative Delivery Framework

Ove Arup & Partners Ltd

Midlands

Bewdley Left Bank Flood Risk Management Scheme

Professional Service Contract

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework

Project Name	Bewdley Left Bank Flood Risk Management Scheme
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Project Number

This contract is made on 10 June 2021
between the *Client* and the *Consultant*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 01st day of April 2019 between the *Client* and the *Consultant* in relation to the Collaborative Delivery Framework. The entire agreement and the following Schedules are incorporated into this Contract by reference
- Schedules 1 to 22 inclusive of the Framework schedules are relied upon within this contract.
- The following documents are incorporated into this contract by reference
LIT 13261 - Psc scope- Bewdley Left Bank appraisal - February 2021

Part One - Data provided by the *Client*
Statements given in
all Contracts

1 General

The *conditions of contract* are the core clauses and the clauses for the following main Option, the Option for resolving and avoiding disputes and secondary Options of the NEC4 Professional Service Contract June 2017.

Main
Option

Option for resolving and avoiding disputes

W2

Secondary Options

The *service* is

Contract to develop an outline design for a preferred option and Outline Business Case

The *Client* is

Address for communications

Address for electronic communications

The *Service Manager* is
Address for communications

Address for electronic communications

The Scope is in
LIT 13261 - Psc scope- Bewdley Left Bank appraisal - February 2021

The *partner contract* is
Contract for Early Supplier Engagement with Jackson Civil Engineering. Details TBC

The *language of the contract* is English

The *law of the contract* is the law of England and Wales, subject to the jurisdiction of the courts of England and Wales

The period for reply is 2 weeks

The *period for retention* is 6 years following Completion or earlier termination

The following matters will be included in the Early Warning Register

Early warning meetings are to be held at intervals no longer than 2 weeks

2 The *Consultant's* main responsibilities

The *key dates* and *conditions* to be met are
conditions to be met
'none set'
'none set'
'none set'

The *Consultant* prepares forecasts of the total Defined Cost plus F and *expenses* at intervals no longer than

3 Time

The *starting date* is

The *Client* provides access to the following persons, places and th access

The *Consultant* submits revised programmes at intervals no longer than

The *completion date* for the whole of the *service* is

The period after the Contract Date within which the *Consultant* is submit a first programme for acceptance is

4 Quality management

The period after the Contract Date within which the *Consultant* is to submit a quality policy statement and quality plan is

The period between Completion of the whole of the *service* and the *defects date* is

5 Payment

The *currency of the contract* is the £ sterling

If Option C is used

6 Compensation e

These are additional compensation events

1. Additional Compensation Event COVID-19
Managing and mitigating the impact of Covid 19 and work in accordance with Public Health England guidance, as may vary from time to time, from 1st July to 31st August 2021.
2. 'not used'
3. 'not used'

4. 'not used'
5. 'not used'

8 Liabilities and insurance

These are additional *Client's* liabilities

1. 'not used'
2. 'not used'
3. 'not used'

The minimum amount of cover and the periods for which the *Consultant* maintains insurance are

EVENT	MINIMUM AMOUNT OF COVER	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE <i>SERVICE</i> OR TERMINATION
<div></div>		
The <i>Consultant's</i> total liability to the <i>Client</i> for all matters arising under or in connection with the contract, other than the excluded matters is limited to		

£5,000,000

Resolving and avoiding disputes

The *tribunal* is litigation in the courts

The *Adjudicator* is

Address for communications

'to be confirmed'

'to be confirmed'

Address for electronic communications

'to be confirmed'

The *Adjudicator nominating body* is

The Institution of Civil Engineers

Z Clauses

Z1 Disputes

Delete existing clause W2.1

Z2 Prevention

The text of clause 18 Prevention is deleted.

Delete the text of clause 60.1(12) and replaced by:

The *service* is affected by any of the following events

- War, civil war, rebellion, revolution, insurrection, military or usurped power;
- Strikes, riots and civil commotion not confined to the employees of the *Consultant* and sub consultants,
- Ionising radiation or radioactive contamination from nuclear fuel or nuclear waste resulting from the combustion of nuclear fuel,
- Radioactive, toxic, explosive or other hazardous properties of an explosive nuclear device,
- Natural disaster,
- Fire and explosion,
- Impact by aircraft or other aerial device or thing dropped from them.

Z3 Disallowed Costs

Add the following in second bullet of 11.2 (18) add:
(including compensation events with the Subcontractor, i.e. payment for work that should not have been undertaken).
Add the following additional bullets after 'and the cost of ' :
• Mistakes or delays caused by the *Consultant's* failure to follow standards in Scopes/quality plans
• Reorganisation of the *Consultant's* project team
• Additional costs or delays incurred due to *Consultant's* failure to comply with published and known guidance or document formats
• Exceeding the Scope without prior instruction that leads to abortive cost
• Re-working of documents due to inadequate QA prior to submission, i.e. grammatical, factual arithmetical or design errors
• Production or preparation of self-promotional material
• Excessive charges for project management time on a commission for secondments or full time appointments (greater than 5% of commission value)
• Any hours exceeding 8 per day unless with prior written agreement of the *Service Manager*
• Any hours for travel beyond the location of the nearest consultant office to the project unless previously agreed with the *Service Manager*
• Attendance of additional individuals to meetings/ workshops etc who have not been previously invited by the *Service Manager*
• Costs associated with the attendance at additional meetings after programmed Completion, if delay is due to *Consultant* performance
• Costs associated with rectifications that are due to *Consultant* error or omission
• Costs associated with the identification of opportunities to improve our processes and procedures for project delivery through the *Consultant's* involvement
• Was incurred due to a breach of safety requirements, or due additional work to comply with safety requirements
• Was incurred as a result of the *Client* issuing a Yellow or Red Card to prepare a Performance Improvement Plan
• Was incurred as a resulting of rectifying a non-compliance with the Framework Agreement and/or any call off contracts following an audit

Z4 Share on termination

Delete existing clause 93.3 and 93.4 and replace with:
93.3 In the event of termination in respect of a contract relating to services there is no *Consultant's* share'

Z6 The Schedule of Cost Components

The Schedule of Cost Components are as detailed in the Framework Schedule 9.

Z7 Aggregated Consultant's share

Delete existing clauses 54 and 93.3 and replace with:
54.1 The *Service Manager* assess the *Consultant's* share of the difference between the Aggregated Total of the Prices and the Aggregated Price for Service Provided to Date.
The difference is divided into increments falling within each of the *share ranges*. The limits of a share range are the Aggregated Price for Service Provided to Date divided by the Aggregated Total of the Prices, expressed as a percentage. The *Consultant's* share equals the sum of the products of the increment within each share range and the corresponding *Consultant's share percentage*.
54.2 If the Aggregated Price for Service Provided to Date is less than the Aggregated Total of the Prices, the *Consultant* is paid its share of the saving. If the Aggregated Price for Service Provided to Date is greater than the Aggregated Total of the Prices, the *Consultant* pays its share of the excess.
54.3 If, prior to the Completion Date, the Price for Service Provided to Date exceeds 110% of the total of the Prices, the amount in excess of 110% of the total of the Prices is retained from the *Consultant*.
54.4 The *Service Manager* makes a preliminary assessment of the *Consultant's* share at Completion of the Whole of the *service* using forecasts of the final Aggregated Price for Service Provided to Date and the final Aggregated Total of Prices. This share is included in the amount due following Completion of the whole of the *services*.
54.5 The *Service Manager* makes a final assessment of the *Consultant's* share, using the final Aggregated Price for Service Provided to Date and the final Aggregated Total of the Prices. This share is included in the final amount due.
93.3 If there is a termination except if Z4 applies, the *Service Manager* assesses the *Consultant's* share after certifying termination. The assessment uses as the Aggregated Price for Service Provided to Date the sum of
• the total of
– the Defined Cost which the *Consultant* has paid and
– which it is committed to pay for work done before termination
and
• the total of
– the Defined Cost which the *Consultant* or *Contractor* has paid and
– which it is committed to pay
in the *partner contract* before the date the termination certificate is issued under this contract.
The assessment uses as the Aggregated Total of the Prices the sum of
• the total of
– the lump sum price for each activity which has been completed and
– a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed
and
• the total of
– the lump sum price for each activity which has been completed and
– a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed
in the *partner contract* before the date the termination certificate is issued under this contract.

Add:
11.2(25) The Aggregated Total of the Prices is sum of
• the total of the Prices and
• the total of the Prices in the partner contract

11.2(26) The Aggregated Price for Service Provided to Date is the sum of
• the Price for Service Provided to Date and
• the Price for Service Provided to Date or the Price for Work Done to Date in the partner contract.

Z23 Linked contracts

Issues requiring redesign or rework on this contract due to a fault or error of the *Consultant* will neither be an allowable cost under this contract or any subsequent contract, nor will it be a Compensation event under this contract or any subsequent contract under this project or programme.

Z24 Requirement for Invoice

Add the following sentence to the end of clause 51.1:
The Party to which payment is due submits an invoice to the other Party for the amount to be paid within one week of the *Service Manager's* certificate.
Delete existing clause 51.2 and replace with:
51.2 Each certified payment is made by the later of
• one week after the paying Party receives an invoice from the other Party and
• three weeks after the assessment date, or, if a different period is stated in the Contract Data, within the period stated.
If a certified payment is late, or if a payment is late because the *Service Manager* has not issued a certificate which should be issued, interest is paid on the late payment. Interest is assessed from the date by which the late payment should have been made until the date when the late payment is made, and is included in the first assessment after the late payment is made

Z25 Risks and insurance

The *Consultant* is required to submit insurances annually as Clause Z4 of the Framework Agreement

Secondary Options

OPTION X2: Changes in the law

The *law of the project* is the law of England and Wales, subject to the jurisdiction of the courts of England and Wales

OPTION X7: Delay damages

X7 only Delay damages for Completion of the whole of the *service* are [REDACTED]

OPTION X10: Information modelling

The period after the Contract Date within which the *Consultant* is to [REDACTED]
Information Execution Plan for acceptance is [REDACTED]

OPTION X18: Limitation of liability

The *Consultant's* liability to the *Client* for indirect or consequential loss is limited to [REDACTED]

The *Consultant's* liability to the *Client* for Defects that are not found until after the *defects date* is limited to [REDACTED]

The *end of liability* date is 6 years after the
Completion of the whole of the *service*

OPTION X20: Key Performance Indicators (not used with Option X12)

The *incentive schedule* for Key Performance Indicators is in Schedule 17

A report of performance against each Key Performance Indicator is provided at intervals of
3 months

Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996

The period for payment is 14 days after the date on which payment becomes due

Y(UK)3: The Contracts (Rights of Third Parties Act) 1999

term beneficiary

Part Two - Data provided by the *Consultant*

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.

1 General

The *Consultant* is
Name

Address for communications

Address for electronic communications

The *fee percentage* is

The *key persons* are

Name (1)
Job
Responsibilities
Qualifications
Experience

Name (2)
Job
Responsibilities
Qualifications
Experience

Name (3)
Job
Responsibilities
Qualifications
Experience

Name (4)
Job
Responsibilities
Qualifications
Experience

Name (5)
Job
Responsibilities
Qualifications
Experience

Name (6)
Job
Responsibilities
Qualifications
Experience

Name (7)
Job
Responsibilities

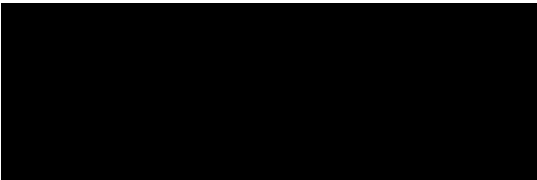
Qualifications
Experience

The following matters will be included in the Early Warning [REDACTED]r

3 Time

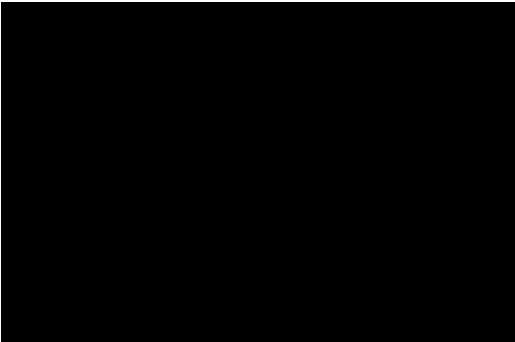
The programme identified in the Contract Data is

5 Payment



Resolving and avoiding disputes

The *Senior Representatives* of the *Consultant* are



Name (2)
Address for communications

Address for electronic communications

X10: Information Modelling

The *information execution plan* identified in the Contract Data is

Contract Execution

Client execution

Signed under hand by for and on behalf of the Environment Agency

[Redacted signature area]

Consultant execution

Consultant execution

Signed under hand by for and on behalf of Ove Arup & Partners Ltd

[Redacted signature area]

Environment Agency

NEC4 Professional Service Contract (PSC)

Scope

Project / contract information

Project name	Bewdley Left Bank Flood Risk Management Scheme
Project SOP code	[REDACTED]
Contract number	[REDACTED]
Date	February 2021

Assurance

Author	[REDACTED]	
Consulted		
Reviewed		
Checked prior to issue		
Reviewed		

Revision History

Revision date	Summary of changes	Version number
January 2021	Draft issue	D1
	First issue	D2
March 2021	Second Issue	D3

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
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412_13_SD01	Minimum Technical Requirements	Insert latest version of MTR on Asite	Insert date of latest version of MTR on Asite
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1 Overview

1.1 Background

This project seeks to reduce the high level of flood risk to the community on the left bank of the Severn in Bewdley, Worcestershire. An Flood Risk Management Scheme (FRMS) here would reduce direct flood risk to 41 properties, increase the resilience of the town by ensuring the main road remained open and save the Environment Agency (EA) over £300k in operational and incident response costs over 50 years. Bewdley is subject to significant flood risk from the River Severn. A fluvial flood event in February 2020 demonstrated the strategic case for investment, as river levels overwhelmed EA temporary defences and flooded approximately 40 properties and the only road crossing the river in Bewdley. The existing standard of protection is relatively low at 5-10% annual exceedance probability (AEP) (5.0m ASD at the Bewdley gauge, see Appendix K) and is likely to be reduced by the impacts of climate change in the near future. Bewdley was subject to further flooding in January 2021. The temporary barriers used by the Environment Agency were compromised, leading to further property flooding. There is significant political and community support for the swift delivery of a permanent scheme. This project looks to deliver a permanent FCRM asset that is fit for purpose as quickly as possible. To meet funding constraints, there is a requirement for the FBC to be approved and construction to have commenced by 31 March 2022. Flood Risk Management (FRM) investment strongly aligns with local business strategies. Reduced flood risk and resilience to climate change is an important outcome of these strategies, with wider economic, social, heritage and environmental benefits.

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
Bewdley Left Bank Flood Risk Management Scheme Strategic Outline Case	October 2020	PDF	FSoD Approval
ARUP delivered GI results as part of the Beales Corner recovery works	March 2021	As specified by ARUP February 2021	Survey results
Topographic Survey as part of the Beales Corner recovery works	March 2021	As specified by ARUP February 2021	Survey results
Tree survey as part of the Beales Corner recovery works	March 2021	As specified by ARUP February 2021	Survey results
Geophys survey as part of the Beales Corner recovery works	March 2021	As specified by ARUP February 2021	Survey results
Previous topographic surveys	2009	PDF	Existing data

Previous outline layouts	2009	PDF	Existing data
Severn Trent Water previous surveys and reports	2015	PDF	Existing data
Model Reports – Severn re-run JBA	2013	PDF, Word document, RAW files: DBFs, SHP	Fluvial flood model
Topographic Surveys of Stourport and Kidderminster Road & long sections	2009	PDF	Existing data
STW review of properties experiencing internal flooding from drainage	2016/17	Excel, email	Existing data
Barrier Review	2014	Word Document	Existing data
Historic Environment Record Search for a Desk Based Assessment for Flood Defences at Bewdley Bridge and Westbourne Street (WSM73408)	25 August 2020	PDF	Existing data
Bewdley Flood Alleviation Scheme, Phase 2 Severnside South, Appendix 1 Archaeological Report	February 2003	PDF	Existing data
Archaeological Watching Brief at Severn Side North, Bewdley, Worcestershire	10 October 2002	PDF	Existing data
Archaeological Investigations along Severnside South, Bewdley, Worcestershire	June 2006	PDF	Existing data
Bewdley Tithe Description (no date – provided by Worcestershire)	2020	PDF	Existing data
Flood Alleviation Schemes and the Historic Environment - Lessons in good practice	Date not stated	PDF	Existing data
Ground Investigation results	April/May 2021		Data to be delivered by ARUP and Jacksons
Topo survey	April/May 2021		Data to be delivered by ARUP and Jacksons
Trees survey	April/May 2021		Data to be delivered by ARUP and Jacksons

- 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 Bewdley Left Bank (Beales Corner) is subject to significant flood risk from the River Severn. A fluvial flood event in February 2020 demonstrated the strategic case for investment, as river levels overwhelmed EA temporary defences and flooded approximately 40 properties and the only road crossing the river in Bewdley. The existing standard of protection is relatively low at 5-10% annual exceedance probability (AEP) (5.0m ASD at the Bewdley gauge, see Strategic Outline Case Appendix K) and is likely to be reduced by the impacts of climate change in the near future.

Flood Risk Management (FRM) investment strongly aligns with local business strategies. Reduced flood risk and resilience to climate change is an important outcome of these strategies, with wider economic, social, heritage and environmental benefits.

This project seeks to reduce the high level of flood risk to the community on the left bank of the Severn in Bewdley, Worcestershire.

This contract is to develop an outline design for a preferred option and Outline Business Case that meets the Environment Agency's investment criteria, is acceptable to the local community and all scheme partners. The outline design needs to ensure a financially viable preferred option with a benefit cost ratio greater than 1.

The investment objectives were identified and agreed with the key project stakeholders at the start of the appraisal process and are summarised as follows:

- The scheme should align with the U.K. Government's (DEFRA) flood risk management policy and thereby reduce the risk of flooding to people, their property and other critical infrastructure serving the communities in the study area.
 - The scheme should be economically viable and aim to deliver best value for public FCERM funding. Any scheme should deliver multi-functional benefits and therefore attract third-party financial and delivery contributions.
 - The scheme should be environmentally acceptable, maximise opportunities for environmental and biodiversity improvement and reduce additional impacts on the setting, heritage assets, tourism and recreational attraction of Bewdley and the river.
 - Where possible, the agreed scheme will minimise future operation and maintenance requirements.
 - Minimise carbon footprint, to comply with the EA target to carbon neutral by 2030.
-

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 *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 flood risk management scheme for Beales Corner, Bewdley and is sufficient detail to enable submission of a full planning application to the Local Authority. 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 AD: The *Consultant* shall seek to develop the outline design such that the cost and quality of the scheme represents value for money and can be constructed within the approved OBC budget.

- 2.1.7 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).
- 2.1.8 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.
- 2.1.9 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.
- 2.1.10 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.
- 2.1.11 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 the short list options identified in the SOC and appraise these to identify a preferred option and develop this option, its impacts, planning and Environmental Impact Assessment (EIA) requirements scoped to a level that it can be priced.
- 2.1.12 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.
- 2.1.13 AD: The *Consultant* shall keep under review opportunities to work with other wider catchment based initiatives, including natural flood management.
- 2.1.14 AD: The *Consultant* shall compile the supporting technical documentation required for the *Client* to obtain an Environmental Impact Assessment (EIA) screening opinion from the local planning authority in accordance with the applicable EIA Regulations.

2.2 Constraints

- a) AD: All reports shall be written to be able to be shared in public.
- b) AD: As part of the historic studies, raised defences at Bewdley Left Bank have previously been modelled using the existing hydraulic model. The ambition for the project is to replace the existing temporary barriers with a permanent defence. The *Consultant* shall only model the final design option to support the OBC and to inform a future Flood Risk Assessment as part of the planning application.
- c) AD: While the SOC refers to a possible pumping station in some of the options, since the SOC has been produced the *Client* has agreed with Severn Trent Water (STW) that the scheme will not deliver a new pumping station. However, the design will need to account for the STW temporary pumping requirements. The *Consultant* shall work with STW to confirm these pumping requirements and incorporate them within the outline design.
- d) AD: The *Consultant* shall review the short listed options in the Bewdley Left Bank SOC. The *Consultant* shall also consider the option of a full demountable defence if a more passive scheme is not viable for cost, planning or other reasons.

- e) AD: The *Consultant* shall ensure that the resulting designed asset is as passive as possible given local site constraints and the constraints set by the Planning Authority and other statutory bodies.

AD: Known constraints including environmental constraints are:

- Bewdley Conservation Area and a range of sensitive landscape and visual receptors
- Nearby listed buildings and structures, including the Grade 1 Severn Bridge
- An area of archaeological potential associated with successive bridges and rivers crossings
- River Severn Local Wildlife Site and a migratory route for a range of protected fish species
- An area of high amenity use, including the Severn Valley Way

Others

- Buried Services
 - Highways
- f) AD: The *Consultant* shall produce a plan of all required site investigations, shall identify their delivery timescales on the programme, design the investigations and deliver. These investigations shall confirm the design as viable and shall help quantify any residual risks that need to be managed post OBC, The results of these investigations shall be captured in the Project Risk Register accordingly. Site investigations could include but are not limited to ground investigation, utility searches, environmental surveys, archaeology trial investigations. Survey delivery costs shall be managed as a compensation event. Large scale intrusive site investigations such as ground investigations or utility checks shall be delivered using Jackson Civil Engineer, delivery costs will be managed through the contract between the Client and Jackson Civil Engineering. The *Consultant* shall work in partnership with Jackson Civil Engineering for all contract activities.
- g) AD: The design needs to ensure seepage will not cause an asset failure, however seepage that can be managed by small mobile pumps is acceptable.
-

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.

- In managing the *service* the *Consultant* shall
- AD: Develop a Project Risk Register incorporating risks from all supporting delivery parties. Update the Project Risk Register on a monthly basis with input from all supporting delivery partners.
- Provide input to project efficiency CERT Form.
- AD: Attend progress meetings and prepare record minutes within a week for the *Client* to issue. Including:
 - Attendance at monthly progress meetings, to be held via MS Teams
 - Participating in bi-weekly teleconferences to progress any issues
 - To attend once a month and present key project options and decisions at the Project Board meetings. These would be as required by the project and would be run virtually.

- 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 5th day of each month.
- 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.
- 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 *Client's* Project Manager ~~EA-PM~~ to include in the scheme lessons learnt log on Projects Online (POL) and to be appended to the OBC.
- AD: The *Consultant's* Environmental Lead shall have a bi weekly progress review meeting with the *Client's* NEAS representative. The *Consultant's* Environmental Lead shall attend all progress meetings, issues telecons and Project Board meetings

2.3.2 The contract will be administered using FastDraft.

2.3.3 AD: The *Consultant* shall use POL for document sharing, capturing lessons learnt and recording of risks.

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.
- AD: Outline Business Case (OBC). The *Consultant* shall write all chapters of the OBC, with the *Client* providing input to the management, commercial and financial chapters.

2.4.3 AD: As part of the options appraisal, the *Consultant* shall use Appraisal Summary Tables (AST) to present the impacts of the options, both positive and negative, this including the carbon impacts of the options.

2.4.4 AD: **CEEQUAL assessment**

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 any supplementary topographic survey if 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 AD: Any additional topographic survey needs are to be managed as a Compensation Event.
- 3.1.4 The *Consultant* shall use the topographic survey in their option appraisal.
-

3.3 Services Search

- 3.1.1 AD: The *Consultant* shall scope the non-intrusive survey to detect key utilities (e.g. GPR etc.) to inform SI and or options appraisal.
 - 3.1.2 AD: The *Consultant* shall ensure that the environmental risks and opportunities associated with the non-intrusive survey, including the collection of environmental evidence to support Appraisal and Assessment, are identified and addressed. This includes archaeology risks.
 - 3.1.3 AD: In scoping the non-intrusive survey works the *Consultant* shall include the necessary works to facilitate efficient and sustainable materials management planning and re-use within the project.
 - 3.1.4 AD: The *Consultant* shall clearly communicate and work in partnership to design the scope of the non-intrusive survey to the Lot 2 contractor for the Lot 2 contractor to undertake.
 - 3.1.5 AD: The *Consultant* shall supervise the non-intrusive survey undertaken by the Lot 2 *Contractor*. The supervision will be subject to a Compensation Event.
 - 3.1.6 AD: The *Consultant* shall produce a summary of key interpretative decisions for the non-intrusive survey undertaken by the Lot 2 *Contractor*.
 - 3.1.7 AD: The *Consultant* shall consult the *Contractor* during the development of non-intrusive survey scope to ensure that the scope offers value for money, is deliverable considering the local site conditions and designs out delivery risks where possible.
-

4 Hydrology and Hydraulics

4.1 General

- 4.1.1. AD: 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. AD: Modelling should be restricted to the minimum required to support the Business Case development and to prove no significant negative impact elsewhere from the scheme. The target is to develop the scheme that matches the final defence level of the opposite bank.
 - 4.1.3. AD: Model runs shall be allowed for the final design case to give a sensitivity analysis on key parameters and to ensure that the preferred option does not significantly increase flood risk to anyone. This shall be captured as a Flood Risk Assessment (FRA) that will be later used to support the planning application. This FRA shall meet the requirement of a FRA at the time of production.
-

5 Economics Appraisal

- 5.1.1 The *Consultant* shall develop the 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. The calculation of carbon emissions and completion of the carbon tool will be carried out by the *Client*, the *Consultant* is required to provide the information needed to complete this.
- 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 run risk workshops facilitated by 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 engage all relevant environmental consultees (internal and external) (to the agreement of the *Client*) in a scoping consultation process to inform scheme development and any required scoping opinion. The *Consultant* shall undertake scoping in parallel to and integrated with the options development process in order to ensure that environmental information and environmental stakeholder engagement influences the development, appraisal and selection of options. The *Consultant* shall identify opportunities for the scoping consultation process to align with the stakeholder engagement plan for internal and external stakeholders.
- 6.1.7. AD: The *Consultant* shall scope the preferred option to set out the terms of reference for the assessment phase of the project. The *Consultant* shall undertake this in accordance with the Minimum Technical Requirements, 801_14.
- 6.1.8 AD: For projects requiring a statutory Environmental Statement or a non-statutory Environmental Report, the *Consultant* shall record the scoping process and environmental and sustainability assessment methodology for the preferred option in a Scoping Report (Preliminary Environmental Information Report). The Scoping Report shall be proportionate and include the environmental information required to support the Outline Business Case submission, and where necessary, to obtain an Environmental Impact Assessment (EIA) scoping opinion from the relevant Competent Authority. Prior to any external consultation, the *Consultant* shall make provision for and incorporate comments from a consultation with internal stakeholders.
- 6.1.9 AD: The *Consultant* shall report on the CEEQUAL assessment in accordance with the hub workload plan.

Heritage:

- 6.1.10 AD: Prior to the commencement of any historic environment study, the *Consultant* shall prepare a product description for agreement with the *Client*. The *Client* shall provide an outline template for the product description.
- 6.1.11 AD: The *Consultant* shall investigate and report on the structural integrity of Severn Bridge. This shall be undertaken by an accredited conservation engineer and inform an updated Cultural Heritage Desk Based Assessment.

- 6.1.12 AD: The *Consultant* shall establish the historic environment baseline (cultural heritage and archaeology) in accordance with the MTR 801_14 SD01 Cultural Heritage and Archaeological Standards. This shall include a review of previous cultural heritage / archaeological assessments in the area so that an updated Cultural Heritage Desk Based Assessment (CHDBA) is proportionate and tailored to the proposals.
- 6.1.13 AD: The *Consultant* shall work collaboratively with the *Client* and the *Contractor* to ensure the design and delivery of ground investigations realises opportunities for integrating archeologically-led data collection and or archaeological monitoring.
- 6.1.14 AD: The *Consultant* shall undertake an appropriate level and type of archaeological evaluation to inform the option appraisal as agreed by the *Client*. The scope for the archaeological evaluation shall be informed by the findings of an updated CHDBA, other ground investigations, early engagement of the *Client* (NEAS archaeologist) and be subject to agreement by the *Client*.
- 6.1.15 AD: The *Consultant* shall support engagement and pre-application discussions with key historic environment stakeholders, including Historic England.

Landscape:

- 6.1.16 AD: Prior to the commencement of any landscape product, the *Consultant* shall prepare a product description for agreement with the *Client*. The *Client* shall provide an outline template for the product description.
- 6.1.17 AD: The *Consultant* shall establish the landscape and visual appraisal baseline and input to the options appraisal and preferred option in accordance with the products sets out in the MTR 801_14 SD02 Landscape and Environmental Design. There are no exclusions.
- 6.1.18 AD: The *Consultant* shall undertake Arboriculture Tree Surveys to an appropriate and proportionate level of detail to inform the options development and appraisal.

Preliminary Ecological Appraisal (PEA):

- 6.1.19 AD: The *Consultant* shall carry out 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 2.0 (or subsequent updates).
- 6.1.20 AD: The PEA shall inform the development of options, 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.
- 6.1.21 AD: The PEA and the Biodiversity Net Gain (BNG) assessment shall be mutually supportive, with the PEA establishing the scheme's overall policy context, baseline and ecological appraisal.

Biodiversity Net Gain (BNG):

- 6.1.22 AD: The *Consultant* shall endeavour that the scheme design delivers biodiversity net gain in line with the Sustainability Chapter of the Midlands IDT Annual Plan. Biodiversity net gain requirements associated with Local Planning Authority requirements shall also be considered by the *Consultant*.

- 6.1.23 AD: The *Consultant* shall ensure that biodiversity losses and gains of the likely options are considered based on the approach set out in the Defra Biodiversity Metric 2.0 (or subsequent updates), supporting technical guidance (e.g. Biodiversity Metric 2.0 User Guide and other supporting documents and subsequent updates) and good practice principles (CIEEM).
- 6.1.24 AD: The *Consultant* shall undertake a baseline Biodiversity Unit calculation (BNG baseline assessment), ideally in advance of the short list option evaluation, for all habitat areas, hedgerows and watercourse length with the potential to be impacted by the likely options. Opportunities for achieving net gain shall also be identified. The survey extents shall be agreed with the *Client*. All assumptions in the calculations shall be clearly set out. Where relevant, survey findings shall inform other environmental assessments e.g. WFD.
- 6.1.25 AD: The *Consultant* shall arrange and lead on a workshop to present the findings of the baseline Biodiversity Unit calculation to the *Client* and Lot 2 contractor and other relevant internal stakeholders. This shall be programmed so that it can inform the options appraisal, identification of alternative solutions and support stakeholder engagement.
- 6.1.26 AD: The *Consultant* shall utilise the assessment of baseline Biodiversity Units to inform the short list options appraisal, including the evaluation of alternative solutions and providing the rationale for the selection of the preferred option. The *Consultant* shall agree with the *Client* an appropriate approach for presenting and reporting on this iterative process. The *Consultant* shall set out key implications for BNG for all retained options in the options appraisal report and appraisal summary table (AST).
- 6.1.27 AD: The *Consultant* shall calculate and report on a post development biodiversity unit calculation (BNG post development assessment) utilising the baseline assessment and the identified preferred option. This assessment shall demonstrate the likely change in biodiversity as a result of the proposed scheme and identify options for habitat retention, enhancement and creation in order to meet planning requirements and the BNG goal of the Sustainability Chapter of the Midlands IDT Annual Plan. The assessment shall demonstrate the rationale for selecting the preferred option with regard to BNG and also securing the best long term outcomes for biodiversity. The *Consultant* shall ensure the results of the assessment, including recommendations for mitigation and compensation, are taken forward in all relevant environmental deliverables.
- 6.1.28 AD: Where the assessment identifies the need for off-site areas (off-sets), the *Consultant* shall provide appropriate evidence to demonstrate these can realistically meet BNG targets and are proportionate to the project. The evidence shall also include an appropriate level of baseline checks for other environmental (e.g. heritage) and other constraints, to delivery.
- 6.1.29 AD: The *Consultant* shall ensure indicative landscape proposals and costings (on site and any relevant offsets) for the preferred option shall be compatible with utilising the Defra Biodiversity Metric 2.0 (or subsequent updates), including all relevant habitats (terrestrial and aquatic) and their target condition.
- 6.1.30 AD: An initial estimate of the cost of undertaking the BNG works (on site and any required offsets) shall be provided by the *Consultant*.
- 6.1.31 AD: The BNG assessment undertaken for the preferred option shall be produced so that it can be revisited and refined as the design is finalised through detailed design.

Habitats Regulations Assessment

- 6.1.32 AD: The *Consultant* shall undertake a Habitats Regulation Assessment stage 1 screening for the preferred option and any pre construction works (e.g. site investigations) that have the potential to European sites.

Water Framework Directive (WFD) assessment:

- 6.1.33 AD: 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. 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).
- 6.1.34 AD: The *Consultant* shall actively seek opportunities for enhancement to water body status.

CEEQUAL:

- 6.1.35 AD: The *Consultant* shall 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*. For this project 12 assessment issues have been scoped in by the *Client*.
- 6.1.36 AD: The *Consultant* shall scope individual assessment criteria within these assessment issues for agreement with the *Client*. This shall include organising a start-up workshop with the *Client* and contractor to champion CEEQUAL across the project team, facilitate agreement of the assessment issues and integrate the assessment in the design and development of the options.
- 6.1.37 AD: The *Consultant* will provide a qualified CEEQUAL assessor to undertake the assessment and evidence gathering throughout the services. Alongside the assessment, the *Consultant* shall be responsible for completing the CEEQUAL portal. The *Consultant* shall provide quarterly updates against CEEQUAL targets.

7 Option Development

The *Consultant* shall develop the existing options appraisal identified in the SOC document.

Following this screening, the *Consultant* shall review the short list of viable options included in the SOC and submit any additional options for the *Client's* approval. 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.

- 7.1.1 Options appraisal shall include engagement with the ESE contractor on pricing, buildability and maintainability and the *Client* including Field Services and Area FCRM.
 - 7.1.2 AD: The *Consultant* shall undertake the carbon appraisal for all shortlisted options using carbon and cost data provided by the *Client's* Cost and Carbon Lead. The OBC shall consider carbon when identifying the final scheme option.
 - 7.1.3 The *Consultant* shall seek options that support the e:Mission 2030 sustainability targets.
 - 7.1.4 The *Consultant* shall use these outputs to propose 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.
 - 7.1.5 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.
 - 7.1.6 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.
 - 7.1.7 AD: The *Consultant* shall appoint a Principal Designer and ensure that the Principal Designer is engaged with the project, as required by the CDM regulations 2015.
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8 Stakeholder Engagement

- 8.1.1 The *Consultant* shall 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. The *Consultant* shall keep a record of all scheme engagement and communication.
- 8.1.2 Monthly circulation of updated communications record (as specified in 8.1.1) at progress meetings.
- 8.1.3 The *Consultant* shall provide technical support, prepare information for and attend 5 stakeholder meetings.
- 8.1.4 The *Consultant* shall arrange, advertise and attend 4 public meeting/workshops.
- 8.1.5 The *Consultant* shall provide technical support, prepare information for input into the consultation documents and prepare site plans, typical outline design drawings and visualisation for public display at the above meetings (8.1.3 and 8.1.4). Attendance at these meetings shall include the *Consultant* project manager, environmental lead and other roles as necessary. Any further public or partner meetings / workshops will be managed by Compensation Event.
- 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.
- 8.1.7 AD: The *Consultant* shall provide input and visual materials for quarterly newsletters. The *Client* shall produce and issue the newsletters.
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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.
- 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.
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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 *Consultant* shall request information required to complete the Commercial, Financial and Management cases from the *Client* and include these requests in the programme. The format of this document and guidance on the contents is detailed in Write a Business Case LIT [REDACTED] 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. The *Consultant* shall be responsible for managing the Business Case assurance process.
- 10.1.3 The OBC assurance is to be in accordance with the *Client's* submission programme for the National Project Assurance Service (NPAS). 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.
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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 in the SOC document. The *Consultant* is required to work with the *Client* and the ESE contractor to reduce the project carbon footprint by 40% and look for alternative materials and construction methods see Carbon Optimisation Report for OBC and Final Carbon report for FBC.
- 11.1.3 The *Consultant* shall work with the *Client* to 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 and Carbon Optimisation Report 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.
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12 General

No additional requirements further to the other sections of this scope.

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

14 Requirements of the Programme

- 14.1.1 The *Consultant* shall provide a detailed programme in Microsoft Project format version 2016 and in PDF format 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). The *Consultant* shall submit programmes using POL.
- 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. The *Consultant* shall identify all activities to be undertaken by other parties using a different colour scheme in the programme.
- 14.1.4 The programme shall include review and consultation periods for drafts, scoping letters, statutory consultation etc. The *Client* requires 15 working days to review products.
- 14.1.5 The programme shall identify time risk allowance on the activities and float.
- 14.1.6 The *Consultant* shall produce a Programme such that the following milestone dates are achieved (examples below, delete if not required):

Date	Event
31 August 2021	Draft OBC for Client Review
September 2021	Outline Business Case submission to NPAS
March 2022	Completion of FBC

- 14.1.7 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.

- AD: POL

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, 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.

[REDACTED]

[REDACTED] Account and request access to the project workspace to view the IDP.

Appendix 2 – Modelling Technical Scope

Insert the Modelling Technical Scope created using the Quick Scope Writer, referenced in Section 4.

Appendix 3 – Add extra appendices as required
