Framework:	Collaborative Delivery Framework
Supplier:	Jacobs UK Ltd
Company Number:	02594504
Geographical Area:	North West
Project Name:	The Sluice, Back Drain OBC Appraisal
Project Number:	ENV0002388C
Contract Type:	Professional Service Contract
Option:	[redacted]
Contract Number:	35527
Stage:	SOC_to_OBC

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework
CONTRACT DATA

Project Name [redacted]

Project Number [redacted]

This contract is made on [redacted]
between the *Client* and the *Consultant*

- [redacted]
- [redacted]
- [redacted]

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 [redacted]

Option for resolving and avoiding disputes W2

Secondary Options

X2: Changes in the law

X7: Delay damages

X9: Transfer of rights

X10: Information modelling

X11: Termination by the *Client*

X18: Limitation of liability

X20: Key Performance Indicators

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

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

Z: *Additional conditions of contract*

[redacted]

The *Client* is [redacted]

Address for communications [redacted]

Address for electronic communications [redacted]

The *Service Manager* is [redacted]

Address for communications [redacted]

Address for electronic communications [redacted]

The Scope is in [redacted]

The *language of the contract* is English

The *law of the contract* is [redacted]

The period for reply is [redacted]

The *period for retention* is [redacted] 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	*key date*
Not used	Not used
'none set'	'none set'
'none set'	'none set'

The *Consultant* prepares forecasts of the total Defined Cost plus Fee and *expenses* at intervals no longer than 4 weeks

3 Time

The *starting date* is 27th June 2022

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

access	*access date*

The *Consultant* submits revised programmes at intervals no longer than 4 weeks

The *completion date* for the whole of the *service* is 8th November 2023

The period after the Contract Date within which the *Consultant* is to submit a first programme for acceptance is 2 weeks

4 Quality management

The period after the Contract Date within which the *Consultant* is to submit a quality policy statement and quality plan is 4 weeks

The period between Completion of the whole of the *service* and the *defects date* is 26 weeks

5 Payment

The *currency of the contract* is the £ sterling

The *assessment interval* is Monthly

The *Client* set total of the Prices is £128,921.74

The *expenses* stated by the *Client* are as stated in Schedule 9

The *interest rate* is 2.00% per annum (not less than 2) above the Base rate of the Bank of England

The locations for which the *Consultant* provides a charge for the cost of support people and office overhead are All UK Offices

If Option C is used

The *Consultant's share percentages* and the *share ranges* are:

share range	*Consultant's share percentage*
[redacted]	[redacted]

6 Compensation events

These are additional compensation events

1. 22/23 Framework rate uplift
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 *SERVICE* OR TERMINATION
The *Consultant's* failure to use the skill and care normally used by professionals providing services similar to the *service*	[redacted] respect of each claim, without limit to the number of claims	12 years after Completion
Loss of or damage to property and liability for bodily injury to or death of a person (not an employee of the *Consultant)* arising from or in connection with the *Consultant* Providing the Service	[redacted] in respect of each claim, without limit to the number of claims	12 years after Completion
Death of or bodily injury to the employees of the *Consultant* arising out of and in the course of their employment in connection with the contract	*Legal minimum* in respect of each claim, without limit to the number of claims	*For the period required by law*
The *Consultant's* total liability to the *Client* for all matters arising under or in connection with the contract, other than the excluded matters is limited to	[redacted]	

Resolving and avoiding disputes

The *tribunal* is litigation in the courts

The *Adjudicator* is	'to be confirmed'
Address for communications	'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 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] per day

OPTION X10: Information modelling

The period after the Contract Date within which the *Consultant* is to submit a first Information Execution Plan for acceptance is 2 weeks

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*
Not used	Not used
Not used	Not used
Not used	Not used
Not used	Not used

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: Jacobs UK Ltd

Address for communications: [redacted]

Address for electronic communications: [redacted]

The *fee percentage* is [redacted] [redacted]

The *key persons* are

Name (1): [redacted]
Job: Project Manager
Responsibilities: Project Management
Qualifications: CEnv MCIWEM
Experience:

Name (2): [redacted]
Job: Technical Lead
Responsibilities: Technical Lead
Qualifications: CEng MICE
Experience:

Name (3): [redacted]
Job: Project Verifier
Responsibilities: Oversight of overall quality
Qualifications: CEng MICE
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 Register
Uplift to 22/23 framework rates to be added as a Compensation Eve

3 Time

The programme identified in the Contract Data is

SluiceBackDrain_OBC_Programme_16Jun22.pdf

5 Payment

The *activity schedule* is
[redacted]

Resolving and avoiding disputes

The *Senior Representatives* of the *Consultant* are

Name (1) [redacted]
Address for communications
[redacted]
Address for electronic communications
[redacted]

Name (2) [redacted]
Address for communications
Jacobs
[redacted]

Address for electronic communications
[redacted]

X10: Information Modelling

The *information execution plan* identified
in the Contract Data is
BIM Execution Plan

Contract Execution

Client **execution**

Signed Underhand by **[PRINT NAME]** for and on behalf of the Environment Agency

[redacted] [redacted]

Role

Consultant **execution**

Signed Underhand by **[PRINT NAME]** for and on behalf of Jacobs UK Ltd

[redacted]

[redacted]

Signature Date Role

Environment Agency
Collaborative Delivery Framework (CDF)
NEC4 Professional Services Contract (PSC)
Scope Appraisal SOC to OBC

Project / contract information

Project name	The Sluice, Back Drain
Project 1B1S reference	ENV0002388C
Contract reference	35527
Date	10/05/22
Version number	0.6 FINAL
Author	Alex Whitworth, Paul Robertshaw

Revision history

Revision date	Summary of changes	Version number
28/01/22	First edits of the scope template	0.1
04/03/22	Amended to reflect agreed deliverables	0.2
22/03/22	Amended following CSM comments	0.3
25/03/2022	Amended following consultation with *Consultant*	0.4
10/05/2022	Amended following NEAS review	0.5
25/05/2022	FINAL for BRAVO issue	0.6

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 *services* are to be compliant with the Minimum Technical Requirements.

1 Overview

1.1 Summary

The Environment Agency has completed a Strategic Outline Case (SOC) Business Case to support funding to further investigate and develop a preferred option to repair Middle Bank – an embankment in poor condition which separates two watercourses – The Sluice and Back Drain.

Approval of the SOC has released Grant in Aid funding to enable the further appraisal necessary in order to define a preferred option, in accordance with FCERM-AG.

The scope of this contract is to undertake a detailed appraisal of the scheme viability and other necessary activities for the production of the Outline Business Case (OBC) and further progression of the project.

This contract is to be let under the Collaborative Delivery Framework and will be compliant with the overarching CDF policies and clauses.

1.2 Background

The project is considering the requirements for the repair of Middle Bank and other assets in poor (condition grade 4) or very poor (condition grade 5) condition in The Sluice/Back Drain system, which drains via pumping at Crossens Pumping Station (PS). This project seeks to extend the residual life of the assets by at least 23 years, to 2045. This approach aligns with Crossens PS Improvement Works Project Appraisal Report (PAR) which justified replacement of several pumps and associated equipment in 2015, assuming a 30 year life of MEICA equipment.

For this project it is important to consider the wider strategic context given in the Alt Crossens Catchment Flood Management Plan and Lower Alt with Crossens Pumped Drainage Catchment FRM Strategic Plan. This informs the options development and appraisal process, as the long-list options for short term works for repair of Middle Bank and other FRM assets need to reflect the options / future scenarios presented in the CFMP and Strategic Plan. A scheme for repair works is consistent with the strategic objectives put forward in the Alt Crossens CFMP, which sets the policy to continue the current level of flood risk management activity in this part of the catchment.

This contract will address not only the failing reach of Middle Bank but will also investigate the full length of this embankment as well as other failing flood risk management assets identified in the Sluice/Back Drain system.

The SOC recommends further appraisal of asset repair options, benefit-cost analysis taking an apportionment approach for the pumped catchment, environmental assessment, outline design of the preferred option and the preparation of the OBC report.

1.3 Study Area

For economic appraisal, the study area is defined as the benefit area based on the management units for the Sluice/Back drain system using the same sub-division defined in the Alt Crossens Strategy. A figure showing the location of this area within the Crossens pumped catchment is found below, highlighted in black. Banks village relies on the drainage and pumping system to reduce flood risks. The Middle Bank and the additional assets under study are all located in and around Banks village.

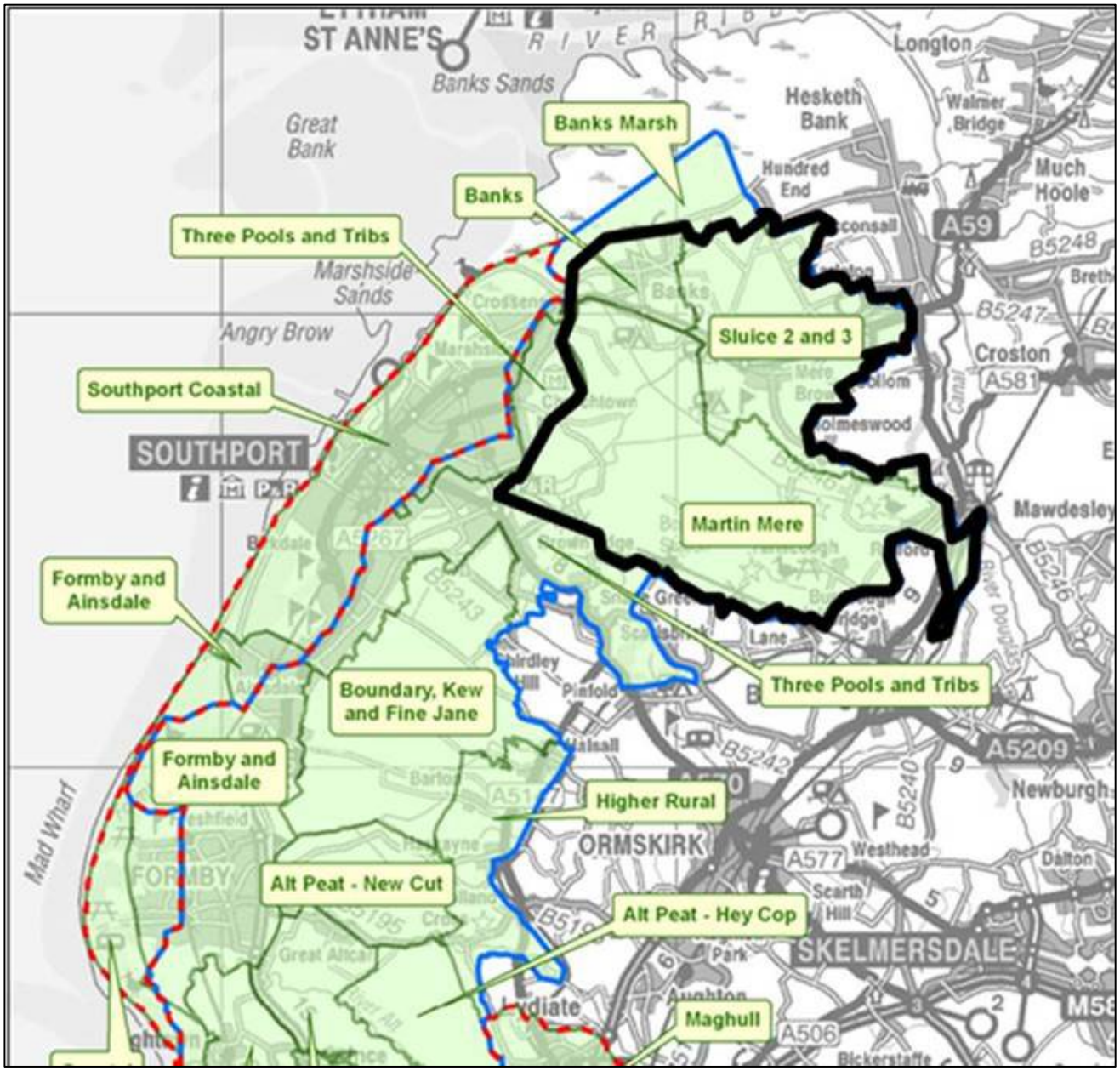
In terms of flood risk management, the system is estimated to provide a current Standard of Protection of 4% Annual Exceedance Probability (AEP), which is predicted to reduce to 6.6% AEP by 2040 due to climate change (source: Crossens PS Improvement Works PAR).

The Crossens pumped catchment drains a low-lying area of mainly agricultural land, some of which is high grade, and many small communities between Ormskirk and the edge of the Ribble Estuary near Banks. The catchment is drained and subject to intensive water-level management via an extensive network of ditches and main drains which discharge to Crossens PS. All flows out of the system are pumped as there is no gravity drainage. The pumps at Crossens were replaced within the last 5 years.

Crossens PS is located at the confluence of three Main Rivers: The Sluice, Back Drain and Three Pools Waterway. It is these three watercourses that collect and convey fluvial flows to the pumping station from an extensive system of land drainage. As part of this system, three main watercourses drain the village of Banks and its surrounding area. Banks Watercourse and Greaves Hall Watercourse (also referred to as Back Lane Drain) are part of the lower system that drains into Back Drain, passing under The Sluice and Middle Bank via inverted siphons, and Banks Railway Drain is part of the upper system that drains into The Sluice.

- Banks watercourse: Flows through the northern part of Banks village, then enters a culvert at Bond's Lane and exits at Vicarage Lane into open channel, which connects with Hoole Lane Watercourse and Banks Station Drain, discharging into Back Drain.
- Greaves Hall watercourse: Flows through the southern part of Banks village and enters a 500m long culvert along Aveling Drive. Which appears to form part of the surface water drainage system that discharges to open channel west of Guinea Hall Lane, parallel to Banks Railway Drain, before turning southwards to Gravel Lane, discharging into Back Drain.
- Banks Railway Drain: Flows along the alignment of a disused railway in a south-westerly direction and discharges directly into The Sluice.

Figure 1: The Sluice / Back Drain Study Area



1.4 Objectives

The primary objectives of this contract are:

- To undertake the detailed appraisal stage of the Sluice / Back Drain project
- To develop and refine the Do Minimum and Do Something options presented in the SOC and present a preferred repair option for Middle Bank and other identified failing assets (outlined in the SOC) in the study area
- To undertake further assessment of damages and costs for the shortlisted repair options and confirm the detail of the preferred repair option; demonstrating a benefit: cost ratio >1 and target PF score >100% (partnership funding may be needed as the SOC indicates a raw PF score of 95%, subject to assurance). This is in order to provide input to the Outline Business Case, primarily the Economic Case and associated appendices
- To identify and develop environmental enhancements and OM4 habitat proposals

- Undertake further assessment and develop proposals for the repair of existing failing assets within the village of Banks.

1.5 Opportunities

The *Consultant* is to assist the *Client* in exploring the opportunities to

- Sensibly apportion the total number of OM2s that can be claimed from this scheme, ensuring any future schemes by EA or partners are acknowledged
- Carbon savings through design (e.g. bio-engineering using coir) and potential use of a local borrow pit to limit import of embankment fill material
- Environmental opportunities include the potential for a habitat strip adjacent to embankment, improved footpath access, new fishing platforms and future maintenance using electric vehicles charged at the planned solar array (Crossens PS)
- Opportunity for cost, carbon and programme efficiencies at construction stage by considering smaller scale repair options if appropriate
- Introduce a safer maintenance practice for Middle Bank with potential for reduced future revenue costs by delivering a scheme that can be maintained in-house rather than the specialist maintenance contractors needed at present.

2 Managing the Services

2.1 Key Activities

The key activities that the *Consultant* is required to undertake or contribute towards, in delivering this contract shall include, the following areas.

- General Project Management
- Data Collection
- Problem Definition
- Preferred Option Selection & Outline Design
- OBC Production

Full details of requirements are included in Section 3 Services Required

2.2 Deliverables

The key deliverables that the *Consultant* is required to provide, for *Client* acceptance and sign-off are listed below. The *Client* review period will be 10 days.

<u>General Project Management (review period not required)</u>

- Monthly Progress Report document (including updated programme, meeting minutes, financial updates, forecasts and updated issues log)
- Contribute to the project Risk Register
- Updates to the Projects Lessons Learnt Log
- Updates to the Project Efficiency Register (CERT)
- BIM Execution Plan and updated Master Information Delivery Plan (MIDP)

<u>Data Collection and Reporting</u>

- Environmental Surveys and Reports including:
  - Environmental Desktop Study and Recommendations File Note
  - Preliminary Ecological Appraisal (PEA), and scope for identified additional Phase 2 Environmental Surveys
  - UK Habitat Survey (to include potential OM4 areas)
  - Cultural heritage desk based assessment
  - Site visit record

- Topographic Survey Brief – update from SOC stage
- Review existing Geotechnical Desk Study Report produced at SOC stage
- Asset Condition Report (incl. CCTV) – update from SOC stage
- Report recording and summarising feedback and attendance at consultation events

Preferred Option Selection & Outline Design

- WFD (WER) compliance assessment
- Updated Sustainability Register following Sustainability Workshop
- Habitat Regulations Assessment - Stage 1
- Options Appraisal Report (assess short-listed options against investment objectives) – update from SOC stage
- Economic Appraisal Report – update from SOC stage
- Carbon Modelling Tool (incl. Carbon Optimisation Report) - short listed options only
- Preferred Option Outline Design Report (incl., if required, Design Calculations, Design Drawings & Environmental Action Plan)
- Carbon Calculator (incl. Carbon Optimisation Report) for the preferred option
- Costing & Risk Allowance File Note
- Initial scope for Ground Investigation including buried services investigation
- Specification for non-intrusive buried services survey
- Preferred Option Designers Risk Assessment & Draft RAG List
- Public Safety Risk Assessment (Draft)
- OBC stage Partnership Funding calculator
- Preferred Option Buildability Statement (with input from the ESE contractor)
- Preplanning advice Submission and Recommendation Summary File Note
- Display Material for Appraisal Stage Public Consultation Event

OBC Production

- Carbon Optimisation Report & Carbon Calculator
- OBC (Introduction, Executive Summary, Strategic Case, Economic Case, Financial Case), Appendices and Technical Information to support the OBC
- Outline Programme for the next stage of the project (OBC to FBC)
- Outline expenditure forecast for the next stage of the project (OBC to FBC)

2.3 Previous Studies

The *Consultant* is to refer to and use the reports from the following studies (which will be provided by the *Client*) to support the delivery of this Contract

The *Consultant* can assume the documentation supplied by the *Client* to be accurate and correct. However, if the *Consultant* shall discover that any of the existing scheme documentation or supporting information provided is not correct, contains anomalies, its accuracy is not adequate for purpose, or the *Consultant* disagrees with assumptions made in deriving said information, then the *Consultant* shall inform the *Client* and seek instruction on how to proceed.

Table 1: Previous Studies

Report/ Study	Date	Format	Summary / Outcomes of study
Initial Assessment Report	Nov 2015	Various	Our previous studies involving initial assessments for Middle Bank and the Banks watercourse system, concluded that an improvement scheme was not likely viable, and FRM interventions should focus on maintaining existing assets.
Alt Crossens Draft Strategic Plan	<2013	pdf	An understanding of how the FRM and drainage system works and who benefits from it and (at that time) of the FRM assets, their condition etc
Alt Crossens Catchment Flood Management Plan (CFMP) Summary Report	2009	pdf	Summary of current and future flood risk and preferred policy for each sub area.
Crossens Pumping Station Improvement Works PAR and associated Appendices	2014	Various digital formats	Details of the scheme, including the economic appraisal and details of Outcome Measures claimed
Alt Crossens Pumped Drainage Strategy data list	2010	excel	List of all available data, including models, filenotes, reports from the Alt Crossens Strategy. Relevant data from the list can be supplied to the *Consultant* on request.
Sluice / Back Drain SOC Report	2022	Various	The report builds on the Crossens PS Improvement Works PAR. The report outlines the case for change at a strategic level and secures funding for the next project stage. A list of potential repair options are presented and the economic viability of the scheme is considered at a proportionate level of detail for the project stage.
Banks Watercourse System Initial Assessment	2015	Word	Initial Assessment covering Banks Watercourse, Banks Railway Drain, and Greaves Hall Watercourse, located in the village of Banks.

Crossens & Red Bridge – Cutting the Carbon - ENV0002614C	2021	Word	FBC report for scheme to install solar array renewable energy infrastructure - not a conventional FCRM project.
Banks Water Course Culvert Repairs FBC Report - ENV0002946C (draft Jan'22)	2022	Word	FBC report for scheme to repair a 750m length of Banks watercourse culvert, from Bond Lane to Vicarage Lane.

2.4 Additional Data Provided by the *Client*

The *Consultant* is to refer to and use the following data (which will be provided by the *Client*) throughout the delivery of this commission.

Table 2 Additional Data

Report	Date	Type	Format
0998_TBIN_01-11	17/09/15	Topographic Survey	pdf

3 Services Required

3.1 Project Management

3.1.1 Project Management - General

As part of the general project management duties the *Consultant* shall, as a minimum, undertake the following activities:

i. General Project Management and Monthly Progress Reporting (including progress update report, record of deliverables received, updated programme, financial updates & forecasts and risk management updates meeting the *Client's* project reporting timetable).
ii. Attend a start-up workshop within 2 weeks of contract award with all internal *Client* project stakeholders.
iii. Attend monthly progress meetings and produce meeting minutes for issue by the *Client*.
iv. Provide project updates to the *Client* via phone or telecon on at least a weekly basis
v. Maintain and update a project issues log which will be reviewed at monthly progress meetings and determine the appropriate actions necessary to resolve the issues.
vi. Ensure the environmental lead provides monthly progress and risk reviews to the *Client* and attends progress meetings as required.
vii. Capture lessons learnt relevant to scheme delivery on the scheme lessons learnt log, this is to be reviewed at progress meetings.
viii. Co-operate with the *Client* in the role of the BIM Information Manager; including production of BIM Execution Plan and updated Master Information Delivery Plan using the BIM Implementation Plan and MIDP structures provided by the *Client*.
ix. Provide input to project efficiency register at monthly progress meetings.
x. Provide technical support to the *Client* in its public relations and liaisons with others which includes but not limited to landowners, landowners' agents, Flood Action Groups, Parish Councils, Local Authorities, Members of Parliament and United Utilities. Technical support will be required from the *Consultant* to help the *Client* to secure landowner agreements as necessary.
xi. Ensure that all the original data sent to the *Consultant* (i.e. all model and survey information provided by the *Client* in an encrypted format (using WinZip 128 encryption) according to the *Client's* data security policy), which is classed as official sensitive, is returned to the *Client* in an encrypted format using WinZip 128 bit encryption.
xii. Ensure that project deliverables such as model files, survey data or anything of a personal nature such as questionnaires or address data is returned to the *Client* in an encrypted format using WinZip 128 bit encryption.
xiii. Deliver a copy of all models, survey data etc. undertaken and collected for the appraisal, and supporting detailed technical reports.
xiv. The *Consultant* is to make full use of the *Client's* web based project collaboration tool (Asite /Adoddle) for the handover of project deliverables. All final versions of project deliverables are to be identified in the MIDP and stored within the workspace on Asite.
xv. All contract communications are to be communicated via the FastDraft application.
xvi. Ensure quarterly input into framework performance assessment and implementation of associated actions arising.
xvii. Provide input to carbon and sustainability reporting at key project milestones.
xviii. The *Consultant* is to arrange and lead an option review meeting at an appropriate stage.
xix. General quality assurance of the deliverables and services provided under this commission.
xx. Attend formal risk workshop to agree risk mitigation measures and budgets for input to the OBC.
xxi. Attend project board and programme board meetings as required in capacity as *Consultant*.

3.1.2 Project Management - Deliverables

The *Consultant* shall provide

i. Monthly Progress report document (including updated programme, meeting minutes, financial updates, forecasts and updated issues log)

ii. Contribute to the Project Risk Register

iii. Updates to the Project Lessons Learnt Log

iv. Updates to the Project Efficiency Register (CERT)

v. BIM Execution Plan and updated Master Information Delivery Plan (MIDP)

3.2 Modelling

3.2.1 Hydraulic Model – General

The *Consultant* shall assume that no Hydraulic Modelling is required.

3.2.2 Hydraulic Deliverables

The *Consultant* shall assume that no Hydraulic Deliverables are required.

3.3 Economic Appraisal

3.3.1 Economics Appraisal General

The *Consultant* shall produce an economic appraisal in accordance with the FCERM – Appraisal Guidance, supplementary guidance and the HM Treasury 'Green Book'. The *Consultant* shall assess the value of all the key benefits, both economic and environmental, and whole life costs in order to complete a cost-benefit analysis to determine the preferred option.

The *Consultant* shall develop the economic appraisal undertaken at SOC stage. The SOC describes the approach that has been adopted in order to identify and allocate benefits in support of the current business case, utilising information from the Alt Crossens Strategy and Crossens PS scheme.

The *Consultant* should seek to undertake the appraisal such that future planned works within the study area, or future land use change is not precluded given uncertainty over the future management of the catchment.

The *Consultant* shall further refine and develop the apportionment model provided in the SOC.

The *Consultant* shall compile costs for options for the whole life expenditure including, design, investigation, construction, operation and maintenance and with sufficient breakdown to be interrogated in detail. The *Consultant* shall include risk in the assessments.

The *Consultant* will lead the programme for, and compile, cost estimates with assistance from the *Client's* ESE contractor and the *Client's* Cost and Carbon Estimator (CCE), to undertake the options cost estimating. The Project Cost Tool (PCT) shall be used and will be the default method for cost estimation.

The *Consultant* shall work with the *Client's* CCE to use the PCT for establishing default option costs. The *Consultant* shall develop option designs in a format that can be used to extract data from PCT. During this activity carbon footprints for all options shall also be calculated by the *Consultant* using the carbon modelling tool / calculator and shall feed in to the options appraisal and selection process.

The *Consultant* shall calculate a risk allowance using a Monte Carlo analysis with input to a risk register provided by the project team The *Consultant* shall allow for attendance at a risk workshop facilitated by others.

The *Consultant* shall undertake calculation of the Partnership Funding (PF) score for all options throughout the project, especially if new information is obtained E.g.) identifying additional funding sources, refining costs and OM2s.

The *Consultant* shall provide the results in a fully detailed Economics Appraisal Report that will be included as an appendix to the OBC. This will provide a clear view of the method, results and interpretation of the economic analysis undertaken. Should existing outputs from the SOC be sufficient then these can be presented (i.e. duplication of work is not to be undertaken). As a minimum this will include, but not be limited to:

- Overview of methodology adopted.
- Parameters quantified and standards used (including the Multi-Coloured Manual).
- Assessment of existing assets, breach / failure modes and rates of deterioration.
- Definition of Do Nothing and Do Minimum.
- Definition of Do Something options, including the likely most sustainable option.
- A breakdown of all damages, including both direct and indirect, and a summary of capped damage values.
- Identification of key receptors / major beneficiaries, with a breakdown of flood damage values.
- Assumptions made.
- How the decision rule and process has been applied.
- What sensitivity tests have been applied and why, along with results and analysis.
- Treatment of climate change.
- FCERM-AG and PF calculator spreadsheets.
- Presentation of costs and damages using economic spreadsheets provided via the FCERM appraisal pages on the .gov website.

The *Consultant* shall undertake sensitivity testing for the appraisal of options as part of the economic analysis.

Sensitivity tests shall quantify the effects of any changes to key parameters or assumptions that affect appraisal options costs and/or benefits. The purpose of sensitivity is to demonstrate the tipping points when option choices and decisions being made and recommended by the OBC would change and to test the robustness of any key assumptions made. Further guidance can be found in the FCERM-AG.

3.3.2 Economic Appraisal Deliverables

The *Consultant* shall provide:

i. Economic Appraisal Report – updated from SOC

ii. Costing and Risk Allowance file note

3.4 Environmental Assessment

3.4.1 Environmental Assessment General

The *Consultant* shall carry out all work in accordance with the Minimum Technical Requirements 801_14 Environmental sustainability, design and management and associated guidance documents - 801_14 SD01 Cultural heritage and archaeology and 801_14 SD02 Landscape and environmental design.

The *Consultant* shall undertake an in-depth desktop assessment, reviewing all previous environmental information made available, including the environmental information in the SOC. The *Consultant* shall liaise with Local Government and appropriate regional specialists (where available) to identify information and data gaps. The *Consultant* shall collate this data and their recommendations in an Environmental Desktop Study and Recommendations File Note. Any additional work that is identified as being required will be discussed and agreed with the *Client* and then instructed separately. The *Consultant* should not delay any subsequent tasks while awaiting *Client* feedback and approval of the Desk Study.

The *Consultant* shall organise and attend a site visit with the *Client* to further understand the project's environmental constraints and opportunities. Attendance from the *Consultants* environmental coordinator is required as a minimum in order to develop a shared understanding of and vision for the site, its environmental constraints and opportunities. The *Consultant* shall provide a note recording the findings and summary of the site visit.

The *Consultant* shall undertake a Stage 1 Habitat Regulations Assessment to screen the impacts of the proposed works. The *Client* will undertake any required consultation with Natural England, if required.

Water voles are known to be present on site. Any further surveys required to establish the presence and distribution of water voles within the study area are to be carried out by the *Client*.

The *Consultant* shall identify any risks / opportunities not previously identified in the project documentation and propose means of resolving / advancing these. This should be sufficient to quantify the environmental damages and benefits in the baseline scenarios and inform the mitigation measures. The *Consultant* shall identify the need for further surveys or assessment.

The *Consultant* shall consider and comment on the following potential issues:

- Habitats and protected species (including coastal squeeze)
- Invasive and non-native species
- Water Framework Directive (WFD)
- Cultural heritage
- Landscape and visual amenity
- Noise, vibration and air quality
- Contaminated land
- Amenity
- Social and community impacts
- Environmental assessment requirements
- Consents
- Stakeholders

The *Consultant* shall identify opportunities for wider environmental enhancements, considering local benefits and stakeholder requirements, and support the *Client* in identifying funding opportunities to aid deliverability of the enhancements.

The *Consultant* shall provide environmental resource to support communication with environmental stakeholders.

The WFD compliance assessment should also include an assessment of opportunities to deliver WFD improvements, through options selection and integrated design elements.

The *Consultant* shall liaise with the *Client's* archaeologist to ensure that the heritage and archaeological risks are identified and addressed in any ground investigation work that is to be undertaken.

The *Consultant* shall identify the need for environmental consents such as Marine Licence, Habitat Regulations Assessment and protected species licences, and advise on the need to progress any investigations during OBC.

The *Consultant* shall assume at this stage that Planning Consent is not required. The *Consultant* shall produce a file note for submission to the Local Planning Authority to confirm whether planning consent is required. Any activities subsequently required will be instructed separately by the *Client*.

3.4.2 Environmental Deliverables

The *Consultant* shall provide:

i. Environmental Desktop Study and Recommendations File Note

ii. Preliminary Ecological Appraisal (PEA), and scope for identified additional Phase 2 Environmental Surveys

iii. UK Habitat Survey (to include potential OM4 areas)

iv. Habitats Regulations Assessment – Stage 1

v. WFD (WER) compliance assessment

vi. Cultural heritage desk based assessment

vii. Site visit record

viii. Updated Sustainability Register following Sustainability Workshop

ix. Preplanning advice Submission and Recommendation Summary File Note

3.5 Topographic Survey

3.5.1 Topographic Survey General

The *Consultant* shall update the topographic survey specification produced at SOC stage to enable the *Client* to procure the topographical survey which is in accordance with the Environment Agency's National Specification for Surveying Services Version 3.1. and be of sufficient detail to enable the survey to be used for subsequent arboricultural surveys as per BS 5837.

The additionally identified survey works will be agreed with the *Client* and instructed separately.

The *Consultant* shall provide a plan to the *Client* identifying any land access requirements necessary to secure the additional topographic data so that the *Client* can arrange access. The *Client* will progress access discussions early with the affected parties in order to ensure access is provided in a timely manner.

The *Consultant* shall programme time for the *Client* to produce, issue and serve Notice of Entry to any affected landowners.

3.5.2 Topographic Survey Deliverables

The *Consultant* shall provide:

i. Topographic Survey Brief – update from SOC stage

3.6 Ground Investigation Survey and Services Search

3.6.1 Ground Investigation General

The *Consultant* shall review and update, if necessary, the Ground Investigation Desk Study Report undertaken at SOC stage.

A copy of the completed Geotechnical Desk Study Report is to be provided to the *Consultants* Heritage specialist to inform the Cultural and Heritage Desk Based Assessment (if required), discussions with the *Client's* Archaeologist and to ensure any archaeological and heritage risks are considered in further development of Ground Investigation activities.

The *Consultant* shall undertake initial scoping of the requirements for ground investigation, including any buried services investigation, required during the appraisal stage to inform the outline design development. This will be decided early in the OBC stage from discussions about the short-listed options to be further considered.

The *Consultant* shall discuss any identified additional ground investigation requirements with the *Client* who will then instruct the detailed scoping and procurement of these works separately as necessary. The *Consultant* is to allow for producing a budget estimate only for geotechnical work, including the production of a Geotechnical Interpretive Report.

The *Consultant* shall consult with the Principal Designer in defining the type and purpose of the required non-intrusive buried services survey*; establishing the extents of the survey and understanding existing available information.

The *Consultant* shall determine the extent of the required non-intrusive buried services survey and produce a specification for the survey in accordance with the EA Guidance (as per EA Buried Services

Specification 300_10_SD10) for acceptance by the *Client*. Following acceptance, the *Client* will instruct the works separately.

*Ground-penetrating radar survey will be required in all areas where ground is to be broken, GPR surveys must not be more than 90 days old before breaking ground.

3.6.2 Ground Investigation Deliverables

The *Consultant* shall produce:

i. Review existing Geotechnical Desk Study Report produced at SOC stage

ii. Initial scope for Ground Investigation including buried services investigation

iii. Specification for non-intrusive buried services survey

3.7 Option Appraisal Development & Outline Design

3.7.1 Option Appraisal Development & Outline Design General

The *Consultant* shall review and understand the options presented in the SOC.

The options appraisal will include a review of the previous work and consideration of the appraisal approach to confirm the appropriateness of the proposed short list options, as identified in the SOC. The list of options will be agreed with the *Client* at an options meeting, where the *Client* will invite representation from area FRM, NEAS, Asset Performance, MEICA and the Principal Designer. The *Consultant* should screen and assess this list of options for technical, environmental and economic suitability, as considered appropriate.

The *Consultant* shall review and update (if required) the existing Asset Condition Report for the assets within the study area. The *Consultant* shall use all existing data provided by the *Client* for inclusion in the report and identify information gaps and produce a brief for undertaking any further necessary survey and assessment. The *Client* will instruct any further works as necessary.

The *Consultant* shall arrange and facilitate 2No. optioneering / design workshops during the course of the appraisal stage to develop, agree and finalise option outline designs. These workshops are additional to the initial options meeting noted above to agree the list of options.

The *Consultant* shall use the *Client's* Carbon Planning Tool to identify carbon differentials between the various options being considered and to facilitate the selection of the preferred scheme option.

Once a final preferred option has been identified through development with the *Client*, the *Consultant* will develop the Preferred Option Outline Design & Report. The *Consultant* shall ensure that the Preferred Option Outline Design includes (if required): design calculations, design drawings, and environmental action plan. The *Consultant* shall ensure that the Outline Design is sufficient to inform the detailed design stage.

The *Consultant* shall produce an Optioneering Report and provide input to the Optioneering section of the OBC and relevant appendices. The *Consultant* shall ensure the Optioneering Report addresses the technical, environmental and economic viability of the preferred option as well as addressing the *Client's* sustainability targets.

The *Consultant* shall produce a Preferred Option Buildability Statement. The *Consultant* shall ensure that the Buildability Statement includes an assessment of how the works could be safely and

effectively constructed, consideration of construction access, working area, traffic movements, material handling and identify any residual hazards.

The *Consultant* shall Liaise with all relevant local stakeholders, including (but not limited to) United Utilities, Natural England, West Lancashire Borough Council, Sefton Council during the option development to ensure information, advice and any views from these organisations on the proposals are considered and accounted for.

The *Consultan*t shall provide a WFD compliance assessment following the identification of the preferred option.

The *Consultant* shall complete and submit a pre-planning advice application for the preferred option. The submission should include completing an online Application form, submitting scheme drawings, Environmental reports and other relevant documentation. The *Consultant* shall use the pre planning application consultation process with the LPA to discuss/ develop the screening approach. The *Consultant* shall arrange and attend a site visit with the LPA to view the key areas of the project.

The *Consultant* shall prepare a note summarising the pre-planning advice received and highlighting any issues that would impact the further development of the scheme.

3.7.2 Option Appraisal Development & Outline Design Deliverables

The *Consultant* shall provide:

i. Carbon Calculator (incl. Carbon Optimisation Report) for the preferred option

ii. Asset Condition Report (incl. CCTV) – update from SOC stage

iii. Options Appraisal Report (assess short-listed options against investment objectives) – update from SOC stage

iv. Preferred Option Outline Design Report (incl., if required, Design Calculations, Design Drawings & Environmental Action Plan)

v. Preferred Option Buildability Statement (with input from the ESE contractor)

vi. Preplanning advice Submission and Recommendation Summary File Note

vii. WFD (WER) compliance assessment

3.8 Consultation

3.8.1 Consultation General

The *Consultant* shall work collaboratively with the *Client* to develop and maintain a Stakeholder Engagement Plan (prepared and led by the *Client*) in accordance with EA "Working with Others Approach".

The *Consultant* shall integrate the Stakeholder Engagement Plan timescales and activities within the project / contract programme.

The *Consultant* shall ensure the Project Team is informed of any updated contact details.

The *Consultant* shall attend and prepare information for 2 No. Key Stakeholder meetings to help the *Client* promote the scheme.

The *Consultant* shall integrate the Stakeholder Engagement Plan timescales and activities within the project / contract programme.

The *Consultant* shall prepare information for input into one public consultation event, such as site plans and typical outline design drawings for public display.

3.8.2 Consultation Deliverables

The *Consultant* shall provide:

i. Display Material for Appraisal Stage Consultation Event

ii. Report recording and summarising feedback and attendance at consultation event

3.9 Health and Safety

3.9.1 Health and Safety General

The *Consultant* shall assume that this project is notifiable under the CDM 2015 Regulations.

The *Consultant* is required to undertake the role of Principal Designer for this stage project and will be responsible for complying with the duties of that role in accordance with the CDM Regulations 2015.

In addition, the *Consultant* shall provide CDM support and guidance to the *Client* and assist the *Client* in complying with their CDM *Client* duties under the CDM Regulations 2015. CPP);

The *Consultant* shall undertake the role of Designer under the CDM 2015 Regulations.

At least 7 days in advance of any site visit the *Consultant* must contact the *Client* to assess and understand the existence of any potential hostile sites within the study area.

The *Consultant* shall produce a Draft Public Safety Risk Assessment for the preferred option. The assessment must be undertaken by a suitably trained person as stipulated in the EA SHEW document.

The *Consultant* shall produce a Designer's Risk Assessment (DRA) for the preferred option as well as a draft RAG list. The *Consultant* shall take into consideration the comments and views of the Principal Designer when developing the DRA and RAG list.

3.9.2 Health and Safety Deliverables

The *Consultant* shall produce

i. Public Safety Risk Assessment (Draft)

ii. Preferred Option Designers Risk Assessment and Draft RAG list

3.10 Outline Business Case Submission

3.10.1 Outline Business Case Submission General

The study will conclude with a rounding up of all the study input into a business case document – OBC. The format of this document and guidance on the contents is detailed in the guidance 'completing a project appraisal report' and the OBC templates.

The *Consultant* shall produce the following sections of the OBC:-

- Introduction
- Executive Summary
- Section 2 Strategic Case
- Section 3 Economic Case (refer to Section 3.3.1)
- Section 4 Financial case

The *Consultant* shall provide an outline programme to develop the preferred option from OBC to FBC taking into consideration key funding and environmental constraints and opportunities. The *Consultant* shall take into account the time frame to obtain all necessary approvals, along with any mitigation required and any enabling works in advance of construction.

The *Consultant* shall assist the *Client* to deal with responses to queries from the *Client's* Project Assurance Board during the review and approval process.

The *Consultant* shall produce a PF calculator for the preferred option following the completion of the outline design.

3.10.2 Outline Business Case Submission Deliverables

The *Consultant* shall provide:

i. OBC stage Partnership Funding Calculator.

ii. OBC (Introduction, Executive Summary, Strategic Case, Economic Case, Financial Case), Appendices and Technical Information to Support the OBC

iii. Outline Programme for the next stage of the Project (OBC to FBC)

iv. Outline expenditure forecast for the next stage of the project (OBC to FBC)

3.11 Sustainability Targets

3.11.1 Sustainability Targets

In developing the outline design the *Consultant* shall give due consideration and regard to the *Client's* sustainability targets,

i. 40% reduction in construction embedded carbon between baseline set at Gateway 1 and actual achieved at Gateway 4.
ii. Recover, reuse or recycle more than 95% of construction waste.
iii. 100% of timber purchased to be legal and sustainable.
iv. At least 85% of construction aggregate to be from a recycled source.

The *Consultant* shall arrange and organise a sustainability challenge workshop to challenge the options/ preferred option on sustainability grounds

The *Consultant* shall provide a Carbon Optimisation Report for the outline design using the *Client's* standard template. The Carbon Optimisation Report should record the measures taken during the development of the outline design to minimise the carbon footprint and demonstrate how the 40% carbon reduction between Gateway 1 and Gateway 4 will be achieved. The *Consultant* shall produce a Carbon Calculator for the preferred scheme option using the latest information relevant to the outline design to support the Carbon Optimisation Report. The Carbon Optimisation Report and Carbon Calculator will be required for inclusion in the FBC.

3.11.2 Sustainability Targets – Deliverables

The Consultant shall provide:

i. Carbon Calculator (incl. Carbon Optimisation Report) for the preferred option
ii. Updated Sustainability Register following Sustainability Workshop

4 Specifications of standards to be used

4.1 Health and Safety

Health and safety is the number one priority of the *Client*. The *Consultant* will promote and adopt safe working methods and shall strive to deliver solutions that provide optimum safety to all.

The *Consultant* is to ensure that the outline design is developed in accordance with the requirements of the Environment Agency's Safety, Health, Environment and Wellbeing Code of Practice.

4.2 Client Standard Documents

The *Consultant* should carry out their study using the following guidance.

Table 3 *Client* Standard Documents

	OI No	Report Name	Where used
1	-	Guidance for practitioners on Initial Assessment	Initial Assessment
2	379_05	Computational Modelling to assess flood and coastal risk	Modelling
3	84_09	How to write a strategy	OBC report
4	85_09	How to produce a simple/supported change business case	OBC report
5		OBC template	OBC report
6		Project Cost Tool	Costs
7		FCERM-AG	Business Case
8		Multi Coloured Manual	Business case
9	183_05	Data management for Flood Risk Management projects and good data management considerations	Mapping and modelling
10		Appraisal Guidance Manual	
11		Sustainability Measures Form	
12		EA Building Trust with Communities	
13		Carbon Planning Tool Guidance notes available on Asite	Carbon Optimisation
14	300_10_SD10	Buried Service Survey Specification	Optioneering
15	300_10	SHEW Handbook	Project development
16	801_14 SD02	Landscape and environmental design	Landscape and Environmental design
17	LIT 12566	Project Efficiency Register	Throughout Appraisal
18	S01_14_ SD01	Cultural Heritage and Archaeology	Cultural Heritage and Archaeology- assessment/ design

5 Constraints on how the *Consultant* Provides the *Services*

5.1 Constraints

The *Consultant* shall ensure that their Project Manager and relevant project team members are available to attend all monthly progress meetings and optioneering / risk / outline design development workshops. Meetings will be held virtually.

The *Consultant* will work in collaboration with the *Client's* ESE contractor in order to develop cost estimates, understand buildability issues and construction timescales.

6 Requirements of the programme

6.1 Programme

The *Consultant* provides the programme in accordance with the Contract Data and the requirements of Clause 31 of the conditions of contract in Microsoft Project format (Version 2016).

The *Consultant* shall include within the overall project programme:

- the programme activities for the submission of the BEP and MIDP;
- appropriate time allowances for the internal quality assurances and review of all deliverables prior to issue to the *Client*;
- a 10 day period for the *Client* to review each of the deliverables prior to their finalisation. It is recognised that not all deliverables will require finalisation before subsequent tasks can commence. The *Client* shall advise accordingly; and
- appropriate time periods to undertake consultation with statutory consultees and other key stakeholders. Key consultees will include but are not limited to: Natural England, West Lancashire Borough Council, Sefton Council, and utility companies.

7 Services and other things provided by the *Client*

7.1 Data and Information Management and Intellectual Property Rights

All of the data listed as being supplied to the *Consultant* as part of this study remains the IP of the *Client*.

7.2 Data Custodianship

The data custodian for project deliverables from this commission will be the Partnership and Strategic Overview team.

7.3 Licensing Information

Licences for LiDAR Data, Ordnance Survey mapping, model, survey, hydrometric and historical data will be provided to the *Consultant* upon award of this commission.

7.4 Data Management and Metadata

The *Client* populates a metadata database called the Information Asset Register (IAR). It is a requirement that all information produced by modelling work is appropriately tagged with metadata. The *Client* will supply an IAR spreadsheet (and any supplementary local metadata requirements if appropriate) where all relevant metadata can be recorded and handed over on project completion.

7.5 Data Security

All model and survey information will be provided to the *Consultant* in an encrypted format (using WinZip 128 bit encryption) according to *Client* data security policy. It is expected that once the commission is completed, all the original data sent to the *Consultant*, which is classed as commercially sensitive, is returned in an encrypted format using WinZip 128 bit encryption.

Project deliverables such as model files, survey data or anything of a personal nature such as questionnaires or address data must also be returned in an encrypted format using WinZip 128 bit encryption.

Further details regarding security measures will be discussed at the start-up meeting for this commission.

7.6 *Client's* Advisors

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 Area, NEAS, etc.

7.7 Quality

- The *Consultants* Quality Plan and quality management system shall comply with the requirements of ISO9001 and ISO14001.

7.8 BIM Protocol – Production and Delivery Table

All *Client* issued information referenced within the Information Delivery Plan requires verifying by the *Consultant* unless stated otherwise in Scope (refer to schedule 19 of the Framework agreement)

Appendices

Appendix A – Information Delivery Plan
Appendix B – Whole Life Programme