[redacted]

Framework: Collaborative Delivery Framework
Supplier: [redacted]
Company Number:

Geographical Area: Midlands
Project Name: Barton to New Holland SOC - OBC
Project Number: [redacted]

Contract Type: Professional Service Contract
Option: Option C

Contract Number: [redacted]

Stage: SOC_to_OBC

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework
CONTRACT DATA

Project Name Barton to New Holland SOC - OBC

Project Number [redacted]

This contract is made on 20 October 2022
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
[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	Option C	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*

The *service* is Development of Barton to New Holland business case, and associated services between SOC - OBC

The *Client* is [redacted]

Address for communications

Address for electronic communications

The *Service Manager* is
Address for communications

Address for electronic communications

The Scope is in
NGSA SOC-OBC Barton Scope, dated 20.09.22, v3

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	*key date*
'none set'	'none set'
'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 — 10 October 2022

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

access	*access date*
Asite	01 October 2022
Notice of Entry for Site access as required	As required

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

The *completion date* for the whole of the *service* is — 31 August 2023

The period after the Contract Date within which the *Consultant* is to submit a first programme for acceptance is — 4 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 [redacted]

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

[redacted]

These are additional compensation events

1. 'not used'
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	[redacted]	LOWING COMPLETION OF THE THE *SERVICE* OR TERMINATION
The *Consultant's* failure t use the skill and care normally used by professionals providing services similar to the *service*	[redacted]	s after Completion
Loss of or damage to property and liability for bodily injury to or death a person (not an employ of the *Consultant)* arisin from or in connection wit the *Consultant* Providing the Service	[redacted]	s after Completion
Death of or bodily injury the employees of the *Consultant* arising out of and in the course of their employment in connectio with the contract	[redacted]	*riod required by law*
The *Consultant's* total liability to the *Client* for matters arising under or 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

After cl54.2 and before cl54.3, insert the following additional clause:
54.2A If, prior to the Completion Date, the Price for Service Provided to Date exceeds 112% of the total of the Prices, the amount in excess of 112% of the total of the Prices is retained from the Consultant.

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*

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 [redacted]

Address for communications

Address for electronic communications [redacted]

The *fee percentage* is

The *key persons* are

Name (1) [redacted]

Job

Responsibil

Qualificatio

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 Register

3 Time

[redacted]

5 Payment

Resolving and avoiding disputes

[redacted]

Address for electronic communications

X10: Information Modelling

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

Contract Execution

***Client* execution**

[redacted]

***Consultant* execution**

[redacted]

[redacted]

Consultant.

Security Marking: Enter / delete as necessary

Change key
• Standard Scope
• Text to clarify project information
• ~~Standard Scope which has been removed~~
• Additional Scope

[redacted]

NEC4 Professional Service Contract (PSC)

Scope

Project / contract information

Project name	Barton to New Holland Flood Alleviation Scheme - Outline Business Case
Project SOP code	[redacted]
Contract number	[redacted]
Date	[redacted]

Assurance

[redacted]

Revision History

Revision date	Summary of changes	Version number
5-11-21	Working Version	01
10-12-21	Updated draft	02
20-9-22	Final Version	03

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

1 Overview

1.1 Background

1.1.1 The Barton to New Holland Outline Business Case (OBC) study area focuses on the tidal flood defences along the Humber Estuary frontage between South Ferriby Cliff (OS grid reference: 499705, 422393) and New Holland (OS grid reference: 508783, 424561) and includes Barton and Barrow Haven. There are a total of 81 defence assets across the study area totalling 14km in length (Figure 1). The assets are a combination of embankments, walls, demountable defences, and high ground. [redacted] The Humber internationally designated sites include habitats to the front and the rear of the defences along a large part of the study frontage and constraints and opportunities related to the habitats will need careful consideration in the OBC development.

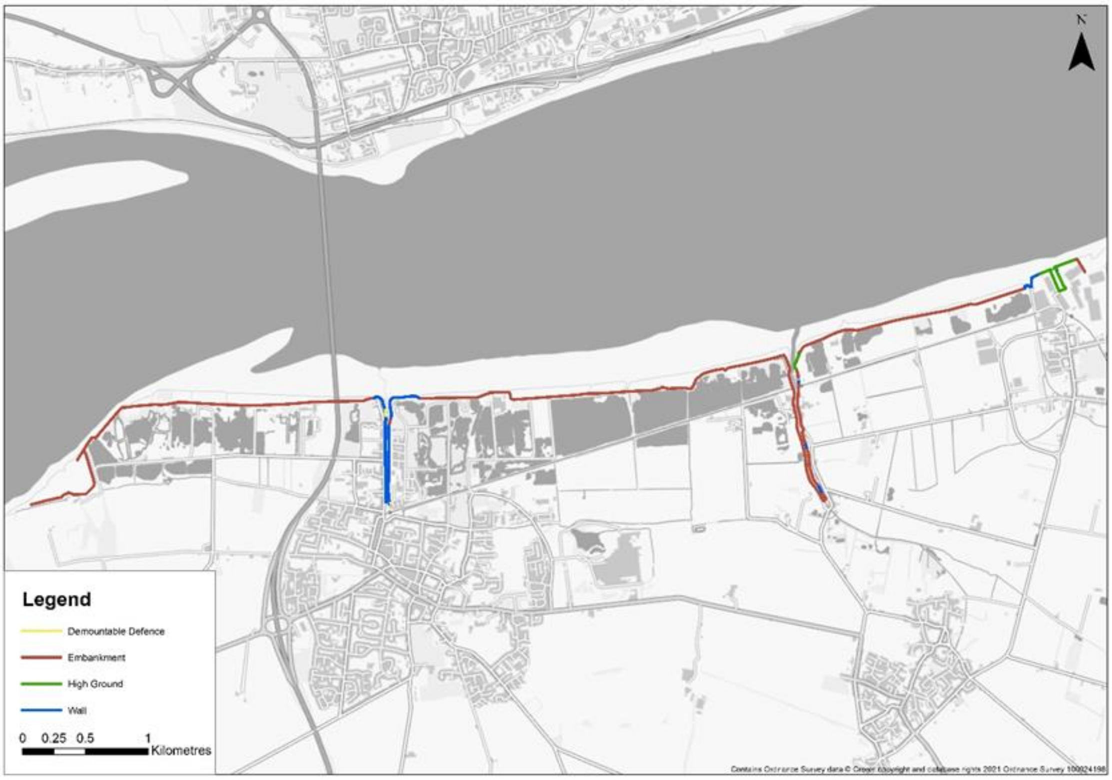

Figure 1 Defence assets across the study area

1.1.2 A Strategic Outline Case (SOC) was completed for this scheme in 2016, although the study area has since been extended.

1.1.3 This Scope is for the development of a Preferred Option.

1.1.4 To define the Preferred Option this Scope details a list of activities to reduce the established long list of options to a short list of deliverable options. The short list must only contain options which meet the Critical Success Factors and have been evaluated against the project objectives.

1.1.5 The short list will include design sufficient to identify the Preferred Option.

1.1.6 The Preferred Option will be discussed with stakeholders and agreed with local partners.

1.1.7 Detailed design of the Preferred Option is not included in this Scope.

1.1.8 Works to design compensatory habitat for environmental losses are not included in Scope.

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 referenced in the data review report [redacted] and ~~produce a short technical summary explaining how~~ best use will be made of historical data~~.~~ Additional Information that has been identified during the development of this Scope has been included in Table 1 as **bold** text.

[redacted]

[redacted]

[redacted]

[redacted]

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 take reasonable steps to 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*.~~ The tasks included in this Scope will refer to existing information and data provided by the *Client*. At the outset of each task the *Consultant* will confirm the existing available datasets and agree how these will inform the task with the *Client*.

1.3 Objective

1.3.1 The purpose of the OBC is to appraise options to identify the optimum standard of protection from tidal flooding for the study area in line with Flood and Coastal Risk Management Appraisal Guidance (FCERM-AG) and identify a preferred option. The initial capital works element of the preferred option must be deliverable within the current 6-year Comprehensive Spending Review period (2021-2027).

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~~ *Client's* 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 ensure that the optioneering process fully considers the environmental impacts of options. The hierarchy of avoid, minimise then compensate shall be applied where possible to offset environmental effects. At this stage the identification, development and design of appropriate compensation is not included in the Scope, as the requirement and nature of any work cannot be identified. The *Consultant* shall allow for the early identification of potential locations for compensatory freshwater habitat within the study area.

2.1.6 The *Consultant* shall ~~produce an outline design~~ identify a preferred option which seeks to provide the optimum economic, technical, social and environmental/sustainability/ carbon outcomes, supported by evidence that will later support the production of ~~enable the *Client* to produce~~ an Outline Business Case.

2.1.7 The *Consultant* shall produce an appraisal report ~~and outline designs~~ to identify a preferred option 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 identification of the ~~final solution~~ preferred option 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 The commission must consider the requirement for planning permission and all other necessary permissions/licences being obtained at detailed design stage. The ~~outline design~~ preferred option 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 short-list, and appraise~~d~~ these to identify a preferred option. ~~and developed this option, its impacts, planning and Environmental Impact Assessment (EIA) requirements scoped to a level that it can be priced. The *Consultant* shall develop a series of options to meet the above objectives~~.

2.1.12 ~~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~~. The *Consultant* shall not assume that the options previously shortlisted are exhaustive and shall review the options developed to date working with the project team and stakeholders to identify any additional options for consideration in the longlist before producing a short-list. The long-list of options included in Appendix 4 will form the basis of the appraisal, the inclusion of any additional long-list options identified through consultation with stakeholders is not included in the Scope for long-list and short-list appraisal. The *Consultant* shall not assume that the preferred option will necessarily be the same as previously identified.

2.1.13 ~~The *Consultant* shall compile the supporting technical documentation required for the *Client* to obtain a screening opinion from the local planning authority~~. The *Consultant* shall support the *Client's* early engagement with the local planning authority (North East Lincolnshire Council) through the provision of technical documentation produced as part of this contract.

2.1.14 The Scope is limited to development of the design and appraisal up to the selection of a Preferred Option. Detailed economic assessment and design work to develop the preferred option for OBC submission does not form part of this Scope.

2.1.15 AD: The *Consultant* shall ensure that the options and identification of the preferred option take into consideration the potential future flood risk management interventions so that the preferred option is considered the first of a series of potential interventions, with a Duration of Benefits of around 25 years. This will require the identification of potential future adaptive pathways to deal with the changing tidal flood risk across the frontage over the full 100-year appraisal period, with consideration of up to two further interventions to confirm if flood risk management is economically viable in the long term. The output of this shall form part of the options appraisal.

2.2 Constraints

2.2.1 The known project specific constraints include:

- Affordability and securing appropriate level of contributions to support the scheme.
- Environmental restriction of options due to requirements for compensatory / mitigation habitat.
- Buildability of and options for increasing the height of existing embankments is limited by environmental restrictions on both the estuary and landward sides.
- The delivery of outcomes by March 2027 may require a phased approach to option delivery/selection.
- Stakeholders may seek to impose numerous constraints on the development of and selection of options, this could introduce additional complexity to the appraisal process.

2.3 *Consultant* Project Management

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

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

- Contribute to monthly updates of the project risk register.
- Provide input to project efficiency CERT Form.
- *Attend monthly commercial meetings in support of the monthly financial updates.*
- Attend progress meetings biweekly collate and prepare agenda and circulate prior to the meeting and prepare record minutes within a week for the *Client* to issue. This is in addition to the weekly project meeting, attended by *Consultant* Project Managers and technical leads.
- 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~~ *Client* deadlines shall be provided by no later than the 10th day of each month, or otherwise agreed at the project start up meeting.
- Deliver a monthly progress report in the *Client's* standard template (Link) giving progress against programme, deliverables received and expected and financial and carbon summary against programme.
- Attend biweekly full project team meeting (Consultant Project Manager and technical Leads to attend) project meetings.
- Attend Project Board meetings as required.
- Attend monthly senior supplier meetings.
- Ensure quarterly input into framework performance assessment/environmental Performance Measures.
- Ensure the *Consultant's* environmental lead provides monthly progress and risk reviews to the *Client* and attends progress meetings, as invited.
- Maintain and show how accurate and up to date information on the whole-life cost and carbon of options is driving optimum solutions at all stages of design development.

- Capture lessons learnt relevant to scheme delivery for the ~~EA PM~~ *Client* to include in the scheme lessons learnt log to be appended to the OBC.

2.3.3 The contract will be administered using FastDraft.

2.4 Outputs and Deliverables

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

2.4.2 The *Consultant* shall produce the following key documents for this commission, being mindful that the outputs are to support the future production of the OBC:

- Modelling report.
- Economics report for the short-list appraisal.
- Options appraisal report up to selection of the preferred option.
- Option definition report for shortlisted options.
- Documentation of the environmental process and considerations including risks and opportunities that informed the selection of the preferred option (~~e.g. Scoping Report~~).
- ~~Outline~~ Concept Design(s) sufficient to support assessment of the short-list options and stakeholders engagement. Concept designs to allow for a sufficient level of detail to illustrate short listed options to key stakeholders.
- ~~Carbon Optimisation Report.~~ Completion of the Carbon Management Tool for the short-listed options to inform the short-list options appraisal of shortlisted options and provide a carbon value. The detailed carbon assessment of the preferred option will be undertaken following the detailed development of the preferred option and does not form part of this Scope.
- The *Consultant* shall support the *Client* in the monthly update of a 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. This programme will be owned by the *Client*.
- ~~Draft text within relevant sections of OBC.~~

2.4.3 Environmental reports to be produced are detailed in Section 7.

3 Site Investigation

3.1 Topographic Survey

3.1.1 The *Consultant* will review previous topographic survey to identify gaps in existing data required for the shortlist option appraisal. The *Consultant* will use this to inform and produce the scope of supplementary topographic survey required for the options appraisal and in the identification of the preferred option. The procurement, undertaking and/or supervision of topographic survey does not form part of this Scope.

3.1.2 The topographic survey information will be reviewed by the *Consultant* for its suitability in informing the economic appraisal. If threshold surveys of individual properties are required, the *Client* will be informed. The procurement, undertaking and/or supervision of threshold level surveying does not form part of the Scope.

3.1.3 Upon the agreement of the preferred option the *Consultant* will scope the topographic survey required to complete an Outline Design.

3.1.4 The *Consultant* shall work with the *Client's* NEAS team 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~~.

~~3.1.5 Example text - A cross sectional survey of the main river is being undertaken by Others and will be provided for the *Consultant* to use in constructing the hydraulic model. The *Consultant* shall liaise with the survey team on the requirements of the survey and the format of output.~~

~~3.1.6 Example text - the *Consultant* shall undertake cross sectional survey of the main river and spatial survey of the flood plain sufficient to allow for in bank and floodplain modelling and determination of depths of flooding of properties within the flood plain. Spacing of the survey shall be determined to suit the hydraulic model and shall include a survey of all restrictions, bridges, culverts and structures.~~

~~3.1.7 Example text – A topographical survey is required to provide further details of the existing piles so that the alignment of new piles may be optimised relative to this. A survey is also required to supplement that previously undertaken by XXX in order to identify the location of key features on the quay so that we may clearly define working areas and accesses in the ECC scope. Specific requirements are:~~

- ~~Preparation of a brief and procurement of the survey in accordance with the current version of the Environment Agency's National Standard Technical Specifications for Surveying Services, to enable the above.~~

- ~~Review and agree surveyors' site risk assessment.~~

- ~~Supervision and management of topographic survey company.~~

- ~~Review data / checking deliverables.~~

- ~~AD: The *Consultant* shall undertake the topographic survey necessary to be able to assess the shortlist of options and complete an outline design~~.

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

3.1.9 AD: A hydrographic survey of waterbodies immediately adjacent to or within the footprint of options may be required to reduce the risk of uncertainty in option costs. The *Consultant* shall review information available to assist the *Client* determine whether hydrographic survey is required. Any requirements resulting from this determination are not included in this Scope.

3.2 Ground Investigation

3.2.1 The *Consultant* shall review the existing Ground Investigation Desktop Study ([redacted] and update this study considering any additional information provided by the *Client* or obtained through the Scope of this contract.

3.2.2 The *Consultant* shall undertake a gap analysis of the current Ground Investigation data held against that required to inform the appraisal up to the selection of the preferred option.

3.2.3 The *Consultant* shall scope the extent of the Ground Investigation required to be able to undertake an options appraisal based on the gap analysis undertaken as part of this Scope (3.2.2). ~~and detailed design and agree the scope with the *Client*~~. The Scope for the Ground Investigation shall be developed in conjunction with the *Client* and the *Client's* ESE Contractor based on reasonable assumptions at the time, this is anticipated to take place prior to the shortlisting of options.

3.2.4 The development of the specification for Ground Investigation is excluded from this Scope.

3.2.5 AD: *The Client* (Estates) will obtain land ownership records from HM Land Registry Services and will contact landowners for intrusive surveys using the *Client's* (Estates) formal notice procedure.

3.2.6 AD: If a landowner raises any concerns about access, the *Client* will review the necessity to survey the land parcel/s in question and update the Survey Schedule to share with *the Contractor* who will inform surveyors of any changes.

3.2.7 AD: If landowners raise access concerns, the *Consultant* will review the necessity to survey the land parcel/s in question and update the Survey Schedule and inform surveyors of any changes.

3.2.8 AD: Should it still be deemed necessary by *the Consultant* to carry out surveys on land where a landowner has refused, the *Client* (Estates) will consult with the landowner before enforcing their power by applying for a Magistrates Warrant for Entry. The *Client* will update *the Consultant* so that records can be updated, and surveyors informed.

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

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

3.2.11 ~~The *Consultant* shall identify any contaminated land within the area of the project and specify testing within the Ground Investigation scope such that it can be classified properly for disposal~~. The *Consultant* shall undertake a desk study to consider the risk of contaminated ground and identify potential hotspot areas. The desk study will set out a plan for the staged approach to strengthen the understanding of ground contamination in the study area. This *Consultant* will be used to manage the risk associated with contaminated ground and groundwater in a proportionate manner.

3.2.12 Developing the Scope and specification for contamination testing is excluded from this Scope.

3.2.13 AD: The *Consultant* shall commission a UXO desk study in accordance with the requirements of CIRIA C681 for the study area which will be used to identify areas of concern and inform the appraisal of the short-list options.

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

3.2.15 AD: The *Consultant* is required to review and agree the *Client's* ESE Contractor's methodology for carrying out the Ground Investigation.

3.2.16 ~~The *Consultant* shall supervise the Ground Investigation undertaken by the Lot 2 Contractor. The supervision will be subject to a compensation event.~~

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

3.2.18 The *Consultant* is required to use the *Client's* ESE Contractor's deliverables to inform the *Consultant's* Option Development.

3.2.19 The *Consultant* will work with the *Client* to keep the Ground Investigation requirements for the next stages of the project under review with consideration to the likely environmental working windows.

3.2.20 AD: The *Consultant* shall create an Environmental Action Plan (EAP) for the first phase of Ground Investigation works. The *Consultant* is to allow for the production of one Environmental Action Plan for the first phase of Ground Investigation works.

3.2.21 AD: The *Consultant* is to assume that Natural England's consent is required for the Ground Investigation works and shall prepare a Habitats Regulations Assessment for the initial Ground Investigation works. The *Consultant* shall assume that the *Client's* NEAS team will submit the consent application.

3.2.22 AD: The *Consultant* shall provide support to the *Client's* ESE Contractor who will produce and submit the Environmental Permit application for the initial Ground Investigation works.

3.3 Services Search

3.3.1 The *Consultant* shall obtain services data from utility companies and shall ensure services data is requested from relevant landowners. ~~This shall include direct costs of obtaining data~~ Direct costs for obtaining the data from the statutory utilities providers is included. Additional direct costs of obtaining data from other landowners and utilities such as Local Highways Authority, Network Rail, the IDB and the Humber Bridge Board are not included in this Scope. This shall be incorporated into the appraisal, including the preparation of plans. Digitisation of data where required is not included in this Scope.

3.3.2 The *Consultant* will allow for services data to be obtained once at the outset of the project.

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

3.3.4 The *Consultant* shall provide a Site Supervisor to manage the survey supplier. The *Consultant* is to assume that 4 day visits to site are required to supervise the *Client's* survey contractor.

3.3.5 The outputs from ~~this survey~~ the services searches shall be ~~included~~ considered in the appraisal~~, including revising the plans.~~

4 Hydrology and Hydraulics

4.1 General

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

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

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

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

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

4.1.6. Existing model data is identified in Section 2.1 (Northern Area Tidal Model Study). This model has been updated for use on this project and has been reviewed and approved by the EA Evidence and Risk team. The model has already been used to undertake model runs for Do Nothing and Do Minimum (DN/DM) scenarios.

4.1.7. The *Consultant* shall undertake modelling of breach, overtopping and over-spilling to support the assessment of flood damages and appraisal of short-list options.

4.1.8. For the short-list option inundation modelling runs an approach similar to that taken for the already completed DN/DM model runs will be adopted by the *Consultant*. The approved modelling technical Scope for the DN/DM modelling is included in Appendix 2.

4.1.9. As defined in Clause 7.1.2, 4 Do Something short-listed options (for the study area) are to be modelled. Details of the return periods and epochs to be run are defined in Appendix 2 to be consistent with already completed DN/DM hydraulic modelling.

4.1.10. The *Consultant* shall undertake additional model runs that do not include wave action for the previously completed DN/DM model runs and the Do Something option runs. This is required to inform stakeholder engagement.

4.1.11. Model results including depth and duration grids will be an output for use in the economic assessment.

5 Economics Appraisal

5.1.1 The *Consultant* shall undertake an economic appraisal in line with FCERM – Appraisal Guidance (FCERM-AG), Supplementary guidance and the HM Treasury 'Green Book'. This will include a valuation of all the key economic 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 will be provided ~~is required~~. The *Client* will provide support and costs where possible to complete this estimate~~.~~ with the Cost and Carbon Lead (CCL) and *Client's* ESE Contractor costing construction elements. The *Client* will provide details of their costs to be included in the appraisal.

5.1.3 The *Consultant* will compile and manage the build-up of project costs.

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

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

5.1.6 The costing of risks within the risk workshop and subsequent development of the risk register will be a collaborative approach with the best placed project team member (*Client, Consultant*, CCL, or *Client's* ESE contractor) costing risks most appropriate to their area of familiarity.

5.1.7 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.

5.1.8 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.

5.1.9 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.

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

Economic, Sustainability and Carbon Appraisal Deliverables

5.1.11 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.

5.1.12 AD: The *Consultant* will collaborate with key members of the *Client's* Humber Strategy team to discuss key assumptions of the economic appraisal.

6 Environmental Assessment

6.1.1 The *Consultant* shall confirm in the Activity Schedule the expected environmental outputs agreed through engagement with the *Client's* NEAS team. 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~~ development of the Preferred Option 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 report on the CEEQUAL assessment in accordance with the hub workload plan.~~

6.1.7 The *Client* shall provide all relevant templates and / or agree deliverable structure from the outset.

6.1.8 The key environmental deliverables are as follows (caveats and exclusions as detailed below):

- Outline Preliminary Environmental Appraisal Report (PEIR).
- Outline Preliminary Ecological Appraisal Report (PEA).
- AD: Ornithology Baseline Report for one year.
- AD: Baseline Biodiversity Net Gain (BNG) Report.
- Preliminary Habitats Regulations Assessment (HRA) Stage 1: Screening. The Preliminary HRA Stage 1: Screening shall exclude consideration of the Preferred Option.
- AD: Strategic Environmental Opportunities Matrix.

- Outline Water Environment Regulations (WER) Screening Assessment. The Outline WER Screening shall exclude consideration of the Preferred Option.
- Outline Heritage Desk-Based Assessment (DBA. The Outline DBA shall exclude consideration of the Preferred Option.
- Landscape and Environmental Design:
    - Environmental Design Concept (EDC) Vision Statement and Plan
    - Outline Environmental Site Appraisal Plan (ESAP). The Outline ESAP shall exclude consideration of the Preferred Option.
    - Option Plan(s) - based on short-listed solutions.
    - Baseline Landscape and Visual Appraisal (LVA) Report. The Baseline LVA Report shall exclude consideration of the Preferred Option.
- AD: Civil Engineering Environmental Quality and Assessment Scheme (CEEQUAL).

6.1.9 AD: The *Consultant* shall be responsible for advising the *Client* which relevant permits, consents and assessments are required prior to undertaking Ground Investigation. ~~The *Consultant* shall provide the requisite information and prepare draft applications for *Client* approval prior to submission.~~ Preparing permits, consents and assessments required to undertake Ground Investigation are not included in this Scope (with the exception of those activities mentioned in section 3.2).

6.1.10 *The Client* will be responsible for obtaining land ownership records from HM Land Registry Services and sharing them with *the Consultant* in an Excel spreadsheet format. This will include a named registered owner, address of the registered land in question, their postal address and title number/s.

6.1.11 *AD: The Consultant* will produce letters - drafts of which to be approved by the *Client,* to be sent to landowners to give notice of upcoming surveys, no less than four weeks prior to surveys taking place. Letters will be signed by the Project Manager and provide a phone number and team inbox address.

6.1.12 The *Client* will lead on formatting/mail-merge of any mail-outs, printing and posting. The *Client* will record any feedback received to the letters on the Survey Correspondence Log shared with the *Consultant* via SharePoint.

6.1.13 *AD: The Consultant* will draft responses to any landowner queries in response to the mail-out, coordinating information from the relevant project specialists, as necessary. The *Client* will issue responses.

6.1.14 AD: If a landowner raises any concerns about access at this stage, *the Consultant* will review the importance of surveying that site and in agreement with *the Client*, if it is deemed necessary, *the Client* will issue a formal notice and the relevant *Client* process be followed. The *Consultant* will communicate feedback from landowners to surveyors.

6.1.15 Ecological

6.1.16 In support of the Outline Business Case up to the identification of a Preferred Option, the *Consultant* shall:

- AD: Undertake ornithology surveys from 1st April 2022 to 1st January 2023, as described in the *Client's CDF Barton-on-Humber to New Holland FCERM_Ornithology Survey Strategy* [the '*Ornithology Strategy*'] shared with Natural England [April 2022]. Ornithology survey to include wintering, breeding and passage birds and discrete surveys for bittern and marsh harrier.
- Undertake UK Habitats Classification Survey of the agreed study area to support Biodiversity Net Gain (BNG) and clarification of subsequent survey requirements.
- AD: Prepare a Baseline Biodiversity Net Gain (BNG) Report including Condition Assessment scoring of habitats recorded during the UK Habitats Classification Survey, implementing Defra BNG Metric 3.0. Subsequent BNG deliverables are currently excluded.
- Prepare an Outline Preliminary Ecological Appraisal Report (PEA) to record the outcomes of proportionate ecological desk study, stakeholder engagement and any initial survey observations. The Outline PEA shall exclude consideration of the Preferred Option.
- Prepare a Preliminary Habitats Regulations Assessment (pHRA) to record the baseline scenario and potential risk associated with International Sites. The pHRA shall comprise a draft HRA Stage 1: Screening.

6.1.17 The following are excluded:

- Any additional data, survey or reporting requirements identified by preliminary reporting. Such as any species-specific, detailed habitat surveys or detailed BNG surveys (waterbody assessments, MoRPH, Intertidal Biotope Survey, etc.).

Environmental

6.1.18 In support of the Outline Business Case up to the identification of a Preferred Option, the *Consultant* shall:

- Ensure that environmental considerations are fully considered within the options appraisal. 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.
- Prepare a Preliminary Environmental Information Report (PEIR), undertaking proportionate desk-based environmental assessment and seeking external input as appropriate. The PEIR will support the identification of any additional surveys or assessment requirements; delivery of additional activities is excluded. The PEIR shall exclude appraisal of the Preferred Option.
- AD: Identify strategic opportunities for wider environmental enhancements, via a Strategic Environmental Opportunities Matrix, considering potential initiatives to provide multiple benefits inclusive of biodiversity enhancement, social value and high-level opportunities for offsetting, BNG and if necessary compensatory measures.

6.1.19 The following are excluded:

- EIA Screening Opinion Request(s) – pending identification of the Preferred Option.
- EIA Scoping Report (if required) – pending identification of the Preferred Option and receipt of EIA Screening Opinion(s).
- Any consents, permits, licences or assessments required to support surveys, investigations or on-site activities (with the exception of those activities mentioned in section 3.2).

CEEQUAL

6.1.20 AD: The *Consultant* shall complete the CEEQUAL assessment in line with the provided CEEQUAL scoping note based on the CEEQUAL V6 Technical Manual requirements. For these Services, 21 assessment issues have been scoped in. The CEEQUAL scoping document is in Appendix B.

6.1.21 AD: The *Consultant* shall draft the individual questions within the assessment issues identified for agreement with the *Client* and provide a qualified CEEQUAL assessor.

6.1.22 AD: The *Consultant* shall set up and undertake the assessment and evidence-gathering throughout the Services, using the CEEQUAL online tool via BREEAM Projects. The *Consultant* shall ensure that evidence is uploaded within one month of completion of the services.

6.1.23 AD: The *Consultant* shall support the *Client* with 'CEEQUAL Scope' submission to BRE as well as provide supporting information to the *Client* when handling verifier consultation.

6.1.24 AD: The sustainability (CEEQUAL) lead is an integrated member of the project team attending progress meetings, key project workshops including but not limited to options / design and risk as required providing an update against CEEQUAL targets and championing sustainability across the project team.

6.1.25 AD: The *Consultant* shall provide all evidence to the *Client* to enable programme-level external verification.

Cultural Heritage and Archaeology

6.1.26 The archaeological services provided by the *Consultant* shall be designed and undertaken to influence optioneering and identification of a preferred solution with a view to avoiding and minimising heritage constraints where practicable. The proposed archaeological work and the timing of such will be agreed with the *Client.*

6.1.27 The *Consultant* shall:

- Produce an Outline Heritage Desk-Based Assessment (DBA) to inform optioneering and identification of the Preferred Option.
- Be responsible for the quality of the cultural heritage survey output.
- All work undertaken by the *Consultant* shall be reviewed by an appropriate cultural heritage specialist who will be a full member of the Chartered Institute for Archaeologists (CIfA) or the Institute of Historic Building Conservation (IHBC) or equivalent.

6.1.28 The following are excluded:

- Any heritage requirements necessary to support any invasive or impactful surveys or investigations (such as Ground Investigation) with potential to affect known or unknown archaeology or cultural heritage. To include any archaeological supervision and precursor activities or post-activity reporting (Written Scheme of Investigation, Watching Brief Report, etc.). The *Client* shall procure any archaeological watching brief (and associated actions – Written Scheme of Investigation, archaeological investigations, etc.) that may be required to enable Site Investigation activities.

Landscape Assessment and Appraisal

6.1.29 The *Consultant* shall:

- Undertake a landscape desk study and site walkover survey to identify key landscape and environmental design constraints and opportunities and key landscape stakeholders.
- Use the Landscape and Environmental Design (LED) products developed from the desk-based assessment, site walkover survey to inform optioneering, consultation and identify strategic opportunities for enhancement.
- Be responsible for the timing of surveys and any consultation with landscape stakeholders and for the quality of LED products.
- Provide deliverables to the *Client* in accordance with MTR-LED and with reference to LED guidance. LED Deliverables shall exclude consideration of the Preferred Option.

6.1.30 All work undertaken by the *Consultant* shall be quality assured and approved prior to submission by their landscape architect who will be a Chartered Member of the Landscape Institute.

6.1.31 The *Consultant* shall undertake the following landscape activities and deliver the following EA standard LED products. LED Deliverables shall exclude consideration of the Preferred Option.

- Proportionate Landscape Desk Study.
- Landscape Walkover Survey.
- Environmental Design Concept (EDC Statement): Vision Statement and Plan – excluding consideration of the Preferred Option.
- Environmental Site Appraisal Plan(s) (ESAP) – excluding consideration of the Preferred Option.
- Option Plan(s) - based on short-listed solutions. Baseline Landscape and Visual Appraisal Report – excluding consideration of the Preferred Option.

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

6.1.33 ~~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.~~

6.1.34 ~~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.~~

6.1.35 ~~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.~~

6.1.36 ~~AD: The *Consultant* shall report on the CEEQUAL assessment in accordance with the hub workload plan.~~

7 Option Development

7.1.1 The *Consultant* shall undertake ~~an options appraisal, which will include a review of the previous work, to prepare a long list of options~~ a long-list options appraisal. The currently expected long-list options to be appraised are set out in Appendix 4. ~~The long list shall not be constrained by previous work and will be agreed with the *Client* at an options meeting, where the *Client* will invite representation from (add or delete as necessary) area FCRM, the ESE contractor's representative, NEAS, MEICA, Field Services and the Principal Designer~~. The *Consultant* shall screen and assess this long list of options for technical, environmental, sustainability, carbon and economic suitability, as considered appropriate.

7.1.2 Following the long list screening, the *Consultant* shall prepare a short list of viable options for the *Client's* approval, giving reasons for including or excluding each of the long list options. The most sustainable option shall be included in the short list. On the agreement of the *Client*, the *Consultant* shall assess in detail these options for technical, environmental and economic suitability, as discussed in the relevant sections of this brief, utilising the evidence and data collated as part of this commission. An option to raise defences across the whole frontage will still be retained through the short-list appraisal to provide robust confirmation whether this is the preferred option. The *Consultant* shall model and appraise 2 baseline options and 4 Do Something options.

7.1.3 AD: The *Consultant* shall consider the potential long-term future (75 to 100 years) of the frontage and in collaboration with other members of the project team include in the appraisal a mechanism to ensure the short-listing process for each coastal frontage considered allows for future adaptation. As noted in 2.1.15, the preferred option is expected to be the first of a series of potential interventions, with a Duration of Benefits of around 25 years, and up to two further interventions are to be considered across the frontage over the full 100-year appraisal period.

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

7.1.5 The *Consultant* shall analyse and appraise the carbon footprint of options as outlined in Section 12.

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

7.1.7 The *Consultant* shall use these outputs to select a preferred option. The *Consultant* shall facilitate ~~design workshops~~, ~~attend/ facilitate (decide who to facilitate)~~ risk workshops to produce a risk register (plus if facilitating) with analysis in accordance with LIT 14847 Risk Guidance for Capital Flood Risk Management Projects.

7.1.8 The *Consultant* shall produce an Options Appraisal Report including an appraisal summary table and economic analysis report/technical note to present the economic analysis undertaken.

7.1.9 The *Consultant* shall produce an Options Report including option sketches, alignment plans and a detailed option description. The *Consultant* will assume that 5 primary option types and 4 do something short-list option combinations are documented within the Options Report.

7.1.10 ~~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.~~

7.1.11 ~~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.~~

7.1.12 AD: The *Consultant* shall work with the *Client* to agree an approach to the apportionment of benefits.

7.1.13 AD: The *Consultant* shall draft the PSC Scope for the next stage (development of the preferred option and production of the OBC) to support the *Client* and provide a cost and programme for delivering the Scope of Services at this stage.

7.1.14 Stakeholders may seek to impose numerous constraints on the development of and selection of options, where this introduces additional complexity to the appraisal process, the *Consultant* will work with the *Client* to determine the most appropriate course of action.

8 Stakeholder Engagement

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

8.1.2 The *Consultant* shall attend bi-weekly progress meetings, provide engagement updates, circulati~~on~~e ~~of~~ communications material for review and circulate an updated communications record ~~at progress meetings~~.

8.1.3 The *Consultant* shall provide technical support, prepare information ~~for and attend a key stakeholder meeting~~ and produce communications material to be updated at key milestones in the project as listed in the Engagement Plan, as well as preparing information and reviewing external communications prepared by Others. ~~(e.g. quarterly newsletters).~~ Communications to include;

- E-Newsletter – Approx. quarterly - dependant on milestones / announcements to make.
- Citizen Space – the online engagement and consultation tool.
- Produce and maintain a key messages / lines to take document.
- Support the *Client* with social media messaging / stakeholder group updates.
- Produce presentations for stakeholder meetings and liaise with wider team to articulate technical information.
- Supporting the team to respond to stakeholder enquiries via the team inbox. Including processing, responding and monitoring.

8.1.4 The *Consultant* shall provide technical and administrative support and attend 8 no. meetings (additional to those described in 9.1.5, 9.1.6 and 9.1.8) with key external organisations/individuals impacting upon option selection process. The current known stakeholders are identified in the Engagement Plan (Barton to New Holland Stakeholder Engagement Plan).

8.1.5 AD: The *Consultant* shall attend 6 stakeholder Resilience Advisory Group (RAG) meetings, in person, and provide technical and administrative support. To include invites, agendas, meeting minutes and presentation slides.

8.1.6 AD: The *Consultant* will attend stakeholder Steering Group meetings bi-monthly (virtually) and record and produce minutes of the meeting to be distributed by the *Client.*

8.1.7 AD: The *Consultant* shall hold a workshop with the project team to carry out the *Client's* Stakeholder Engagement Risk Assessment (SERA) Tool and Equalities Impact Assessment and use findings to support all project engagement and communications (supporting 9.1.12).

~~9.1.8 The Client will arrange and advertise XX no. public meeting/workshops. The Consultant shall provide technical support, prepare information for input into the consultation documents and prepare site plans and typical outline design drawings for public display. Attendance at these meetings shall include the Consultant project manager, environmental lead and other roles as necessary.~~

8.1.8 AD: The *Client* will arrange and advertise public information/engagement events. The *Consultant* shall plan, facilitate and attend 3 events to promote the project to communities and will collate feedback on the long list to shortlist of options. The *Consultant* shall produce a summary report of stakeholder feedback to share with the *Client.* This shall all be undertaken in accordance with the Governments Consultation Principles.

8.1.9 ~~The *Consultant* shall provide technical support, prepare information for input into the communications material and prepare site plans and typical drawings for public display. Attendance at these events shall include the *Consultant* project manager, environmental lead and other roles as necessary.~~

8.1.10 The *Consultant* shall work with the *Client* to prepare for the second round of stakeholder engagement events (short-list to preferred option, provisionally Autumn 2023).

8.1.11 AD: The *Consultant* shall create a virtual engagement space for stakeholder engagement using their Virtual Engage tool in time for the first public information events and updated as appropriate in agreement with the *Client.* This will entail scoping and planning to agree the format and content with the project team, then creating content, text, maps, video and work with the *Consultant's* Virtual Engage team to create the platform specific to this project in a basic 'village hall' format. This will include testing, launching and making regular updates by the *Consultant,* up until July 31st 2023.

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

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

9 Health and Safety

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

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

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

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

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.

9.1.10 AD: The *Consultant* and Principal Designer shall liaise with the *Client's* appointed Health & Safety Advisor.

10 Business Case Submission

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

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

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

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

10.1.5 ~~The *Consultant* Shall assist the *Client* in the production of an Outline Business Case following the identification of a preferred option. The *Client* will instruct this further work as a compensation event.~~

10.1.6 AD: The *Consultant* shall undertake all work on this commission with the expectation that the preferred option will be taken forward to Outline Business Case stage with approval at LPRG. The development of the Preferred Option to Outline Business Case stage or production of the OBC document does not form part of this this Scope.

11 Carbon

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

11.1.2 The carbon budget for the project has been set to 45,603, (tCO_2). The *Consultant* is required to work with the *Client* and the ESE contractor to reduce the project carbon footprint by 45% between SOC and FBC (this is not a maximum and 100% reduction should be the aim).

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

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

12 General

12.1.1 The *Consultant* shall inform and agree any site surveys and site visits with the *Service Manager*. The *Consultant* shall inform the *Client* in writing at least 8 weeks before any planned site survey and at least 2 weeks for any planned site visits. The *Consultant* will provide the *Client* the risk assessment and method statement for review and agreement at least 4 weeks prior to commencement of the work.

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

Ref	Report Name	Where used
~~379_05~~LIT 11327	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
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 55096	Integrated Assurance & Approval Strategy	Approvals
LIT 57759	Write a Business Case	OBC
LIT 14953	FCRM Efficiency Reporting – capital and revenue	OBC
LIT 12280	Lessons Log template	OBC
LIT 56527	Standards for modelling and forecasting flooding in estuaries	Modelling
LIT 13879	Landscape and Environmental Design Guidance (LEDG)	OBC
LIT 14174	Business Case template	OBC

14 Requirements of the Programme

14.1.1 The *Consultant* shall provide a detailed programme in Microsoft Project 2016 ~~format version~~ ~~X~~ meeting all requirements of Cl.31 of the Conditions of Contract.

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

14.1.3 The programme shall cover all the activities and deliverables in this ~~project~~ commission. It shall also incorporate all the major project milestones from commencement to the end of the reporting, consultation and approvals stage.

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

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

14.1.6 The *Consultant* shall produce a Programme ~~such that the following~~ which includes key milestones ~~dates are~~ to be achieved.

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.

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 requested ~~the previous~~ studies within two weeks ~~of contract award~~ if held by the EA.

15.1.5 The *Client* will provide HM Registry landowner information as detailed in 6.1.10.

16 Data

16.1.1 None at this time.

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 *Service Manager* ~~*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).
- Project whole life programme.
- CEEQUAL.

Appendices

Appendix 1 – BIM Protocol

~~The *Consultant* shall adhere to the Environment Agency's Employers Information Requirements (EIR) framework level minimum technical requirements.~~
~~All *Client* issued information referenced within the Information Delivery Plan (IDP) requires verifying by the *Consultant* unless it is referenced elsewhere within the Scope.~~
https://www.asite.com/login-home
The *Consultant* shall register for an Asite Account and request access to the project workspace to view the IDP.

18.1.2 The BIM Information Manager is the *Client's* Project Manager.

18.1.3 The *Consultant* is to identify a suitably qualified/experienced Supplier BIM Project Information Manager who will be appointed and working on this project.

18.1.4 The *Consultant* is to supply information to the *Client* as identified within this Scope of work and referenced on the Information Delivery Plan (IDP). Deliverables shall be submitted via the *Client's* Common Data Environment (E-CDE) for acceptance.

18.1.5 The *Consultant* shall produce a BIM Execution Plan within 6 weeks of contract award which sets out their approach to ensure that the project and the deliverables arising from its completion are delivered in accordance with *Client's* BIM Level 2 Standards.

18.1.6 The *Consultant* is to update the Master Information Delivery Plan (MIDP), to outline the deliverable items expected to be produced to achieve the requirements as set out in the Scope. The MIDP is a living document and should evolve through the delivery of the project.

18.1.7 The supply of BIM deliverables shall be in accordance with the *Client's* Information Requirements (EIR) (currently version 2.5) which can be [redacted].

18.1.8 The *Consultant* shall provide a completed Construction Operations Information Exchange (COBie) file at the completion of the works in accordance with the EIR

Appendix 2 – Modelling Technical Scope

The approved DN/DM modelling technical scope document can be accessed on the projects SharePoint site using the following hyperlink:

[redacted]

Appendix 3 – List of known stakeholders

The PSC version of the B2NH stakeholder engagement plan which summarises the list of know stakeholders at the time of enacting this contract can be accessed on the projects SharePoint site using the following hyperlink:

[redacted].

Appendix 4 Long list of options report

The PSC version of the B2NH long list report which summarises the long list options can be accessed on the projects SharePoint site using the following hyperlink:

[redacted]