

This document is executed as a deed and is delivered and takes effect
at the date written at the beginning of it



Framework:	Collaborative Delivery Framework
Supplier:	Ove Arup & Partners Ltd
Company Number:	01312453
Geographical Area:	
Project Name:	Brighthouse FAS
Project Number:	
Contract Type:	Professional Service Contract
Option:	Option C
Contract Number:	project_32972
Stage:	OBC_to_FBC

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework
CONTRACT DATA

Project Name Brighthouse FAS
Project Number [REDACTED]

- This contract is made on 14 February 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
Brighthouse Design scope V07 20211125 final & Asite site information schedule

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)1: Project Bank Account
 - 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 The objective will be to secure approval of the FBC by the Employer's assurance body (LPRG) and, within this, provide a detailed design that is sufficient for a CCE target cost setting stage.

The Client is Environment Agency
Address for communications Horizon House
Deanery Road
Bristol
BS1 5AH

Address for electronic communications [REDACTED]
The Service Manager is [REDACTED]
Address for communications [REDACTED]

Address for electronic communications [REDACTED]
The Scope is in Brighthouse Design Scope V07 20211125 final
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 <i>key dates</i> and <i>conditions</i> to be met are	
<i>conditions</i> to be met	<i>key date</i>
'none set'	'none set'
'none set'	'none set'
'none set'	'none set'
The <i>Consultant</i> prepares forecasts of the total Defined Cost plus Fee and <i>expenses</i> at intervals no longer than	4 weeks

3 Time

The <i>starting date</i> is	21 February 2022
The <i>Client</i> provides access to the following persons, places and things	
access	<i>access date</i>
All Areas	21 February 2022
Fastdraft	21 February 2022
Asite	21 February 2022

The <i>Consultant</i> submits revised programmes at intervals no longer than	4 weeks
------------------------------------------------------------------------------	---------

The <i>completion date</i> for the whole of the <i>service</i> is	07 September 2022
-------------------------------------------------------------------	-------------------

The period after the Contract Date within which the <i>Consultant</i> is to submit a first programme for acceptance is	4 weeks
------------------------------------------------------------------------------------------------------------------------	---------

4 Quality management

The period after the Contract Date within which the <i>Consultant</i> is to submit a quality policy statement and quality plan is	4 weeks
-----------------------------------------------------------------------------------------------------------------------------------	---------

The period between Completion of the whole of the <i>service</i> and the <i>defects date</i> is	26 weeks
-------------------------------------------------------------------------------------------------	----------

5 Payment

The *currency of the contract* is the £ sterling

The <i>assessment interval</i> is	Monthly
-----------------------------------	---------

The *Client* set total of the Prices is

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

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

The locations for which the <i>Consultant</i> provides a charge for the cost of support people and office overhead are	All UK Offices
------------------------------------------------------------------------------------------------------------------------	----------------

If Option C is used

The <i>Consultant's share percentages</i> and the <i>share ranges</i> are:			
	<i>share range</i>		<i>Consultant's share percentage</i>
less than	80 %	to	0 %
from	80 %	to	as set out in Schedule 17
greater than	120 %		as set out in Schedule 17

6 Compensation events

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	MINIMUM AMOUNT OF COVER	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE <i>SERVICE</i> OR TERMINATION
-------	-------------------------	-------------------------------------------------------------------------------

The <i>Consultant's</i> failure to use the skill and care normally used by professionals providing services similar to the <i>service</i>		
Loss of or damage to property and liability for bodily injury to or death of a person (not an employee of the <i>Consultant</i>) arising from or in connection with the <i>Consultant</i> Providing the Service		
Death of or bodily injury to the employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with the contract		
The <i>Consultant's</i> total liability to the <i>Client</i> for all matters arising under or in connection with the contract, other than the excluded matters is limited to		

Resolving and avoiding disputes

The <i>tribunal</i> is litigation in the courts	
The <i>Adjudicator</i> is	'to be confirmed'
Address for communications	'to be confirmed'
Address for electronic communications	'to be confirmed'
The <i>Adjudicator nominating body</i> 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] [redacted]

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 12 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)1:Project Bank Account

The *Consultant* is to pay any bank charges made and to be paid any interest paid by the *project bank*

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

term	<i>beneficiary</i>
The provisions of Y(UK)1	

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 Ove Arup & Partners Ltd

Address for communications 8 Fitzroy Street
London
W1T 4BQ

Address for electronic communications [Redacted]

The *fee percentage* is

Option C

[Redacted]

The *key persons* are

Name (1)
Job
Responsibilities
Qualifications
Experience [Redacted]

Name (2)
Job
Responsibilities
Qualifications
Experience [Redacted]

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

The programme identified in the Contract Data is

5 Payment

The *activity schedule* is
Brighthouse FBC Priced Activity Schedule P03

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)
Address for communications

Address for electronic communications

X10: Information Modelling

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

Y(UK)1: Project Bank Account

The *project bank* is

named suppliers are

Contract Execution

Client execution

Signed as a Deed by [PRINT NAME]

for and on behalf of the Environment Agency

07 April 2022

SignatureDate

Role

In the presence of:

07 April 2022

SignatureDate

Role

Name [Print]

Address

Consultant execution

Signed as a Deed by [PRINT NAME]

as attorney for Ove Arup & Partners Ltd
under a power of attorney dated 1st May 2021

10/02/2022

SignatureDate

Role

In the presence of:

10/02/2022

SignatureDate

Role

Name [Print]

Address

Environment Agency

NEC4 Professional Service Contract (PSC)

Scope

Project / contract information

Project name	Brighthouse Flood Alleviation Scheme
Project SOP code	[REDACTED]
Contract number	project_32972
Date	November 2021

Assurance

Author	[REDACTED]	Date:
Consulted	[REDACTED]	Date:
Consulted	[REDACTED]	Date:
Reviewed	[REDACTED]	Date:
Checked prior to issue	[REDACTED]	Date:
Consulted	[REDACTED]	Various
Consulted	[REDACTED]	Various
Consulted	[REDACTED]	Various

Revision History

Revision date	Summary of changes	Version number
22/06/2021	First issue – Baseline	V.01
02/07/2021	Second issue – Initial review with delivery partner	V.02

Template Reference: [REDACTED] Version: [REDACTED] Security marking: [REDACTED] Page 1 of 31

17/08/2021	Third issue – Technical review	V.03
07/10/2021	Fourth issue – Pricing review	V.04
12/10/2021	Fifth issue – Collaborative review	V.05
25/10/2021	Sixth issue – Inclusion of CEEQUAL	V.06
25/11/2021	Seventh issue – Pricing and benchmarking review	V.07

This Scope should be read in conjunction with the version of the Minimum Technical Requirements current at the Contract Date. In the event of conflict, this Scope shall prevail. The service is to be compliant with the following version of the Minimum Technical Requirements:

Document	Document Title	Version No	Issue date
412_13_SD01	Minimum Technical Requirements	LIT 13258	04/05/2021

1 Overview

The Calder Valley has been impacted by flooding on many occasions. With events of 2015 providing a stock take and an immediate response from stakeholders. The result is a programme that introduces new assets and repairs to existing flood defences in Hebden Bridge, Mytholmroyd and Brighouse, to name a few locations, with the aim to improve protection to homes and businesses.

This commission concerns the services required to enable the Client to prepare a Full Business Case for new flood defence assets in Brighouse. It will build on the Outline Business Case developed by the Environment Agency, Arup and BAM as a collaborative team under NGSA that was approved by LPRG in June 2021. The appraisal will then be delivered by the five-case business model submission by the Consultant into a Full Business Case.

The primary strategic objective of the scheme is to significantly increase the capacity of the Brighouse community to cope with major floods. This will be achieved by reducing the risk of flooding to property and infrastructure as far as is practicable and affordable, whilst avoiding increases in flood risk elsewhere. The project comprises:

- Extending the operational life of assets along River Calder by a further 50 years
- Replacing life-expired assets along River Calder
- Replacing temporary assets installed following December 2015 and February 2020 flood events on Clifton Beck and River Calder
- Installation of environmentally-focussed landscape features in Wellholme Park along Clifton Beck to better use the available floodplain storage
- Installation of environmental enhancements to Clifton Beck and its upper catchment to aid slowing the flow and deliver wider environmental benefits

- Installation of those interventions within the upper catchment which deliver downstream flow reductions and wider environmental enhancements which are integral to the delivery of the Brighouse FAS.

Wider objectives include contributing to the economic regeneration of South Calderdale, which is centred on the town, and improving the local environment, making use of partnership funding. Interventions within the Clifton Beck catchment that will slow the flow, increase biodiversity and sequester carbon are a significant component of the scheme.

1.1 Background

Brighouse is situated in the Calder Valley approximately 6 km south east of Halifax within the municipal area of Calderdale Metropolitan Borough Council (CMBC). The River Calder flows from west to east through the town. The town has significant challenges related to flooding.

Brighouse is located in close proximity of the M62 and has a direct train through to London. Calderdale Metropolitan Borough Council (CMBC) Local Plan identifies the town as an area of strategic and economic growth due to its strong transport links. New residential areas are planned at Thornhills, as well as a key strategic business park (Clifton Enterprise Park) to the north east of the town centre. The town centre has a diverse range of businesses and a strong independent retail offer. There is a mixture of residential property types, including traditional weavers' accommodation through to modern apartments. Land use is predominantly commercial in the central area, residential to the north and west with industrial premises lining the banks of the Calder east of its confluence with Clifton Beck.

Much of central Brighouse is within the floodplains of the River Calder and Clifton Beck, both of which are Main Rivers. According to historic records, dating back to 1827, Brighouse has been subject to flooding on at least 43 recorded occasions. Notable floods that have affected the town over the last 20 years include incidents in 2008, 2012, 2015 and 2020.

The primary impacts of flooding are on commercial properties and, to a lesser extent, residential properties. The 2015 Boxing Day flood had a particularly significant impact on Brighouse with much of the town inundated. 20 residential properties and 98 commercial properties are known to have flooded.

1.2 Previous Studies

- 1.2.1 In undertaking the service the *Consultant* shall take account of the previous studies detailed in Appendix 2, the table below and produce a short technical summary explaining how best use will be made of historical data.

Report	Date	Format	Outcomes of study
		E.g. Digital format (enclosed), paper copy (enclosed) or paper copy (available for inspection)	
E.g. Outline Business Case			
E.g. Engineering Investigation Report			
E.g. Topographic Surveys			
E.g. Modelling Reports			
Add more rows as necessary.			

- 1.2.2 The previous studies have been undertaken by or for the *Client* using reasonable skill and care and have been accepted. The *Consultant* shall review the information provided and notify the *Client* if the data is incorrect, contains anomalies, is not adequate for the purposes of detailed design or is based on inappropriate assumptions. Following this review, and completion of any work required to rectify the deficiencies identified, the *Consultant* will take the risk of any deficiencies in existing data quality and quantity which have not been notified to the *Client*.
- 1.2.3 A package of advanced works has been commissioned by the *Client* to be delivered by the *Consultant*. These include CE 042 – Environmental Surveys, Topographical, Bathymetric, Arboricultural surveys, Weir and Sheet pile survey and Ground Investigation specification and supervision; CE043 – Advanced design for River Calder refurbishment of walls and CE044 – Environmental Impact Assessment Design for screening opinion.

1.3 Objectives

The overall objective of the *Client* is to provide a consistent standard of protection (SoP) along River Calder and Clifton Beck against various sources of flooding to properties in Brighouse.

The overall objective of this contract is to model, appraise and develop the preferred option identified in the Outline Business Case to a completed detailed design including interventions on Clifton Beck and the River Calder and the production of a Full Business Case (FBC) for the Brighouse FAS, which is deemed technically and economically viable.

The Clients objective will be to secure approval of the Full Business Case by the *Clients* assurance body (LPRG).

The objectives for Brighouse FAS project are to:

1. Promote a technically viable and cost effective option to reduce fluvial flood risk that is adaptable to future changes in climate;
2. Deliver an option that helps create a better place and that maximises environmental outcomes for people and wildlife;
3. Promote a wider scheme with our partners to reduce surface water flood risk;
4. Minimise safety and environmental risks that may result from operating and maintaining the scheme; and
5. Contribute to the delivery of wider socio-economic benefits through the regeneration and growth of the South Calderdale centred on Brighouse.
6. Produce a defined standard of protection (SOP) for Clifton Beck and River Calder.

The project Scope addresses the development of the preferred Option into Detailed Design in the Inner Study Area (ref. Figure 1 below).

The *inner study area*, see Figure 1, includes the centre of Brighouse and is the area within which existing flood defence assets are located which require repair, maintenance and improvement works to ensure long term flood protection. This inner study area also includes Wellholme Park, within which NFM and landscape enhancements. Together these elements constitute the works considered the inner study area of Brighouse FAS.



Figure 1: Inner study area

The **outer study area**, which includes the upstream catchments of Clifton Beck and Red Beck, across which a range of potential environmental enhancement measures are being considered which meet the objectives of the ESIF. The outer study area works necessary to facilitate the final Design, and not already contracted under the Appraisal contract, will be procured by Compensation Event.

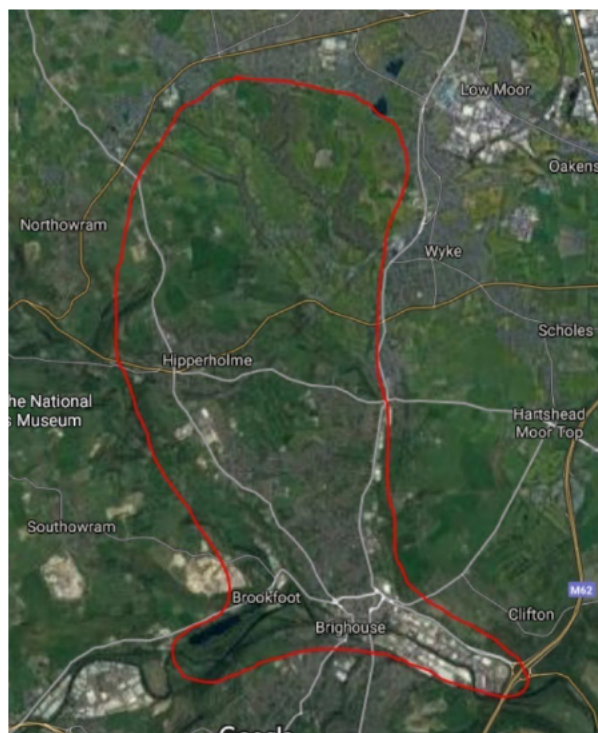


Figure 2 Outer Study Area

2 The service

2.1 Outcome Specification

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

- 2.1.1 The required outcome of this commission is to develop the outline design produced at appraisal stage into a detailed design such that it meets the project objectives and enables the scheme to be priced and constructed under an NEC4 Engineering and Construction Contract.
- 2.1.2 The *Consultant* shall ensure that the detailed design takes into consideration all relevant guidance and legislation and seek to minimise long-term asset/land management, maintenance costs and whole life carbon.
- 2.1.3 The design will also demonstrate that the *Consultant* has learnt from best practice and demonstrate how optimum flood risk reduction, natural processes, recreation, good ecological water quality and visual amenity can be combined.
- 2.1.4 Working with the *Client* and Early Supplier Engagement (ESE) contractor (BAM), the *Consultant* shall be responsible for ensuring the design is acceptable to the *Client* (gaining approval of Gateway 3), is designed to gain planning approval and any other associated approvals and to be acceptable to statutory and key stakeholders.
- 2.1.5 The *Consultant* shall prepare a planning application covering those elements of the FAS for which planning permission under the Town and Country Planning Act 1990 is required. The *Consultant* shall submit the necessary documentation to the relevant Planning Authority for Planning Consent. The *Consultant* shall be responsible for submitting the required documents through the Planning Authority portal. The *services* exclude the payment of Planning Fees. This commission must result in planning permission being obtained, and all other necessary permissions required for construction being identified. Should the *Consultant* become aware that the Planning Authority is not expected to support the scheme, or if the *Consultant* considers the refusal of the Planning Authority was not reasonably foreseeable, the *Consultant* shall raise an early warning notice.
- 2.1.6 For those works which fall under the definition of the Environment Agency's Permitted Development Rights, as set out within the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) the *Consultant* shall prepare and submit a single application for a Certificate of Lawful Development for works.
- 2.1.7 Once planning permission has been obtained, the *Consultant* shall apply for protected species licences, on behalf of the *Client*.
- 2.1.8 The *Consultant* shall seek to develop the detailed design such that the cost and quality of the scheme represents value for money and can be constructed within the approved OBC budget.
- 2.1.9 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.

- 2.1.10 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.
- 2.1.11 The *Consultant* shall ensure the design process fully considers and addresses sustainability including carbon reduction as strategic outcomes.
- 2.1.12 The *Consultant* shall develop the outline design into a detailed design that optimises the project objectives and outcomes identified in the OBC, supported by evidence that will enable the *Client* to produce a Full Business Case.
- 2.1.13 The *Consultant* shall produce a detailed design that supports the *Client* to achieve efficiency targets set for this commission and future stages of the project using the Combined Efficiency Reporting Tool (CERT).
- 2.1.14 The *Consultant* shall prepare the ECC Scope for the main works tender document. The ECC Scope shall not contradict the *Client's* standard documents. If there is a requirement to do so the *Consultant* shall justify the need and obtain the prior written agreement of the *Client*.
-

2.2 Constraints

- 2.2.1 Integration of Flood Alleviation Scheme into Calderdale MBC A641 highway improvement schemes in Brighouse in particular around Clifton Bridge and Mill Royd Lane and ensure stakeholder engagement to ensure the FAS is represented in the CMBC scheme.
- 2.2.2 Scheme design which does not require closure of highway infrastructure.
- 2.2.3 Detailed design that maintains operational integrity of Wellholme Park during construction.
- 2.2.4 Design of a 50 litre per second pumping station for Yorkshire Water Service / Calderdale MBC standard specification and adoption at River Street and Briggate/Mill Royd Street.
- 2.2.5 The *Client* will secure private landowner agreement to adoption of detailed design supported by the *Consultant* through associated consultation.
- 2.2.6 Public and private sector acceptance and adoption to scheme. The *Consultant* shall support the *Client* in obtaining acceptance from affected parties through associated consultation.
- 2.2.7 Potential implications of funding deadlines remain unchanged.
- 2.2.8 The completed Design will rely upon the incorporation of the findings of the NFM studies required in the Outer Study Area indicated in Section 1.3. The Outer Study Area work is not currently included in this Contract Scope but will be procured using the Compensation Event mechanisms once the requirements are clear and this Contract is executed. The Compensation Event will need to be implemented at an early stage in the Contract to conform to programme objectives and to avoid any unnecessary work, and the *Consultant's* best endeavours will be required in this regard.

2.3 **Consultant Project Management**

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

2.3.2 The overall management of the commission shall:

- Contribute monthly to the updates to the project risk register.
- Provide input to project efficiency CERT Form.
- Attend progress meetings.
- Produce monthly financial updates and forecasts meeting the *Client's* project reporting timetable together with progress reports. Monthly financial updates and forecasts to meet EA deadlines provided by no later than the 10th day of each month or otherwise agreed at the project start up meeting.
- Deliver a monthly progress report in the *Client's* standard template [REDACTED] giving progress against programme, deliverables received and expected and financial and carbon summary against programme.
- Attend project board meetings as required.
- Ensure quarterly input into framework performance assessment/environmental Performance Measures.
- Ensure the *Consultant's* environmental lead provides monthly progress and risk reviews to the *Client* and attends progress meetings, as invited.
- Maintain and show how accurate and up to date information on the whole-life cost and carbon is driving optimum solutions at all stages of design development.
- Capture lessons learnt relevant to scheme delivery for the EA PM to include in the scheme lessons learnt log to be appended to the FBC.

2.3.3 The contract will be administered using FastDraft.

2.4 Outputs and Deliverables

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

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

- Detailed Design.
- Updated Programme showing milestones to construction completion including funding and environmental constraints and opportunities. The Programme shall take account of the timeframe required for all approvals necessary for mitigation and enabling works to be carried out in advance of main construction.
- Update Carbon Optimisation Report.
- Draft text within relevant sections of the FBC.

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

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

3 Site Investigation

The available existing topographic or GI survey information is identified in Section 1.2. The *Client* will provide, as required, access requirements for the delivery of any surveys and assessments undertaken by the *Consultant*.

A package of Advanced Works including in Compensation Event [CE's 042,043 and 044] has been commissioned and these will support the development of detailed design.

3.1 Topographic Survey

3.1.1 The *Consultant* will review previous topographic survey to identify gaps in existing data. The *Consultant* will use this to inform the scope of supplementary topographic survey required.

3.1.2 The *Consultant* shall work with NEAS to ensure that environmental and sustainability constraints within the likely scheme footprint are identified and included in the survey and to determine if efficiencies can be made by joint working.

3.1.3 In undertaking any surveys the *Consultant* shall adhere to the following specific requirements:

- Preparation of a brief and procurement of the survey in accordance with the current version of the Environment Agency's National Standard Technical Specifications for Surveying Services, to enable the above.
- Review and agree surveyors' site risk assessment.
- Supervision and management of topographic survey company.
- Review data / checking deliverables.

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

3.1.5 AD: The *Consultant* will undertake supplementary topographic survey and assessment of the Rokt building area with review of the sheet piles and mill race including 3D underwater surveying techniques.

3.2 Ground Investigation

- 3.2.1 The *Consultant* shall scope any additional Ground Investigation required to undertake the detailed design and agree the scope with the *Client*.
- 3.2.2 The *Consultant* shall ensure that the environmental risks and opportunities associated with the Ground Investigation, including the collection of environmental evidence to support Appraisal and Assessment, are identified and addressed.
- 3.2.3 In scoping the Ground Investigation works the *Consultant* shall include the necessary works to facilitate efficient and sustainable materials management planning and re-use within the project.
- 3.2.4 The *Consultant* shall identify any contaminated land within the area of the project and specify testing within the Ground Investigation scope such that it can be classified properly for disposal.
- 3.2.5 The *Consultant* shall clearly communicate the scope of the Ground Investigation to the Lot 2 contractor for the Lot 2 contractor to undertake.
- 3.2.6 The *Consultant* shall supervise the Ground Investigation undertaken by the Lot 2 contractor. The supervision will be subject to a Compensation Event.
- 3.2.7 The *Consultant* shall produce a summary of key interpretative decisions based on the Ground Investigation undertaken by the Lot 2 contractor
- 3.2.8 The *Consultant* shall ensure the design and supervision of any ground investigation surveys is undertaken in accordance with the Health and Safety requirements set out in the SHEW CoP.

3.3 Ecological surveys

- 3.3.1 **AD: Detailed Species Surveys** – Undertake additional surveys and associated reporting consistent with current guidelines, where these are essential to securing permissions or are essential to achieving good environmental design such as informing the Biodiversity Metric. Utilise project information regarding habitat condition as well as the distribution of species and the current understanding of the factors governing their distribution. Use habitat, species and survey information in a scientific and informed way to justify environmental decision making.
- 3.3.2 In accordance with the Brighthouse FAS OBC PEA, detailed species surveys are anticipated to include:
- Bat survey
 - Otter survey
 - Badgers survey
 - Amphibians survey
 - Reptiles survey
 - Breeding birds
 - Fish population survey
 - Aquatic Invertebrate survey
 - Arboricultural survey (BS5837:2012)

Template Reference: Version: Security marking: Page 11 of 31

Project Reference:

Uncontrolled when printed

- 3.3.3 AD: **Biodiversity Net Gain Baseline Surveys** - The *Consultant* shall undertake a baseline Biodiversity Unit calculation (BNG baseline assessment) for all habitat areas, hedgerows and watercourse length with the potential to be directly impacted by the proposed scheme in the inner study area.
-

3.4 Services Search

- 3.4.1 The *Consultant* shall review previous services information including desktop, utility searches, GPR (including PAS 128) to identify future services searches to inform detailed design.
- 3.4.2 The *Consultant* shall obtain services data from utility companies and shall ensure services data is requested from relevant landowners. This shall include direct costs of obtaining data. This shall be incorporated into the design, including preparation of plans.
- 3.4.3 The *Client* will arrange for a non-intrusive survey to detect key utilities (e.g. GPR) to inform SI and/or detailed design. The *Consultant* shall determine the extent of the survey and produce a specification for the survey in accordance with EA Guidance and Principal Designer discussion; defining type and purpose of survey including extents and available information.
- 3.4.4 The *Consultant* shall also provide a site supervisor to manage the survey supplier.
- 3.4.5 The outputs from this survey shall be included in the design, including revising the plans. The output shall be used to make recommendations for any further surveys required which would include intrusive investigations to inform the detailed design.
-

4 Hydrology and Hydraulics

4.1 General

Detailed design

- 4.1.1. The model is to be used for updating levels with detailed design components, if the Consultant feels this is necessary. It is not intended for the whole range of options to be re-run, only the scheme design at the design flow(s).
- 4.1.2. The *Consultant* shall provide the *service* in accordance with the Modelling Technical Scope and the MTR (LIT 18686), as noted in Appendix 3.
- 4.1.3. Following completion of the study, the completed models (updated Baseline and updated Options) and associated project deliverables will be handed over to the *Client* (for the deliverables contained in Section this is defined as Yorkshire Data and Evidence Team) in accordance to the MTR. This delivery is to include all previously finalised materials within this Scope and already delivered to the *Client* as part of the developmental review process.

Delivery

- 4.1.4. The *Consultant* shall deliver outputs in the following format:
- a. Model: To include all model binary files in zip format (FM.zip & TUFLOW.zip) including results and log files.
 - b. Outputs:
 - i. Grids: ESRI ASC or TIFF format for all listed AEPs, for all areas modelled in 2d, and for all modelled scenarios
 - ii. Velocity Vectors: The *Consultant* shall supply any velocity vectors created as part of the work
 - iii. Animations: The *Consultant* shall supply any animations created as part of the work.
 - iv. Outlines: The *Consultant* shall provide any flood outlines created as part of the work in Esri shapefile format
 - v. Flood Warning: The *Consultant* shall provide all materials associated with the delivery of the Flood Warning Scope, as set out in appendices.
 - c. Reports: All reporting including method statements, technical appendices and review commentary.
 - d. Project_Files:
 - i. MapEdit Geodatabase
 - ii. Any hydraulic model review paper trail, and hydrology review paper trail;
- 4.1.5. AD: The *Consultant* shall incorporate and recalibrate the baseline model based on data derived from the installed temporary flow gauge at Bailiff Bridge.
- 4.1.6. AD: The *Consultant* shall scope the installation of temporary flow gauge to monitor flows on Hoyle House Beck. The *Consultant* shall incorporate and recalibrate the baseline model based on data derived from the installed temporary flow gauge at Hoyle House Beck.
- 4.1.7. AD: NFM - The *Consultant* shall incorporate any NFM features into the detailed design model.

5 Economics Appraisal

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

- 5.1.1 AD: The *Consultant* shall include the assessment of the economic benefits derived from the inclusion of the NFM interventions in the Brighthouse FAS.
-

6 Environmental Assessment

- 6.1.1 The *Consultant* shall give due consideration of the environment and sustainability risks and opportunities throughout the design evolution of the project to maximise the delivery of *Client* and project objectives.
- 6.1.2 The *Consultant* shall ensure that the project level assessment sits within the context of any previous strategic environmental assessment and additional information developed in support of the OBC through the Appraisal Stage. This commission will bring forward all relevant information and conclusions.
- 6.1.3 The *Consultant* shall be able to demonstrate how the information from the environmental assessment has been used to inform and adapt the detailed design. Surveys identified in Section 3.3 will be used to inform the production of the environmental assessment.
- 6.1.4 Should the preferred option or the design significantly change (unless instructed to do so by the *Client*), the scope of the environmental assessment shall be adapted accordingly.
- 6.1.5 The *Consultant* shall ensure that the detailed design includes all of the necessary information to assure the delivery of all mitigation, management and monitoring measures and the delivery of wider benefits during construction.
- 6.1.6 The *Consultant* shall report the findings of the environmental assessment as required which will form an Appendix to the FBC with relevant summary details incorporated into the relevant section(s) of the FBC main text.
- 6.1.7 The *Consultant* shall be able to demonstrate how they have taken account of the *Client's* wider sustainability aspirations in the development of the detailed design and the associated benefits.

AD: Water Framework Directive (WFD) Assessment

- 6.1.8 AD: The *Consultant* shall update Water Framework Directive (WFD) assessment for the scheme to ensure compliance with the regulations and to identify any risks that the developing scheme may pose to WFD objectives
- 6.1.9 The *Consultant* shall actively seek opportunities for enhancement to water body status.

AD: Biodiversity Net Gain

- 6.1.10 AD: The *Consultant* shall undertake a Biodiversity Net Gain assessment, including all necessary baseline assessments, to determine the requirements to achieve a minimum 20% net gain target across the scheme in its entirety. The *Consultant* shall undertake any work relating to Biodiversity Net Gain in accordance with e:Mission 2030 and the 'Hub A Sustainability Targets'.
- 6.1.11 AD: The *Consultant* shall utilise an assessment of baseline Biodiversity Units to inform the development of the detailed design via iterative calculations which evaluate alternative mitigation/compensation measures. The associated BNG Assessment report will include a high level rationale for the selection of the preferred measures.
- 6.1.12 AD: The *Consultant* shall calculate and report on a post development biodiversity unit calculation (BNG post development assessment) utilising the baseline assessment and the identified preferred option. This assessment shall demonstrate the likely change in biodiversity as a result of the proposed scheme and identify proposals for habitat retention, enhancement and creation in order to meet planning requirements and the BNG target of 20% net gain across the scheme in its entirety.
- 6.1.13 AD: Where the assessment identifies the need for off-site areas of compensation (off-sets), the *Consultant* shall provide appropriate evidence to demonstrate these can realistically meet BNG targets and are proportionate to the project. The evidence shall also include an appropriate level of baseline checks for other environmental (e.g. heritage) and other constraints, to delivery.

AD: CEEQUAL

- 6.1.14 The *Consultant* shall complete the CEEQUAL assessment in line with the provided CEEQUAL scoping note based on the CEEQUAL V6 Technical Manual requirements (Brighthouse CEEQUAL Scoping Note Final-October 2021). For these Services, the assessment issues have been scoped in in Appendix 4.
- 6.1.15 The *Consultant* shall provide a qualified CEEQUAL assessor and scope the individual criteria within the assessment issues identified for agreement with the *Client*. The "CEEQUAL assessment will need to assess 'strategy', 'design' and 'construction' elements.
- 6.1.16 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/Contractor shall ensure that all of the evidence is uploaded within 1 month of completion of the Services.
- 6.1.17 The *Consultant* shall support the Client with scope submission to BRE as well as provide supporting information to the Client when handling verifier consultation.

6.1.18 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.

6.1.19 The *Consultant* shall provide all evidence to the *Client* upon request, to enable programme-level external verification.

AD: Natural Flood Management (NFM)

6.1.20 The Brighthouse FAS Outline Business Case was based upon the realisation of flood risk and environmental benefits via interventions within the inner study area in Wellholme Park and interventions in the outer study area. Specifically, a number of conservative assumptions were included within the cost/benefit analysis supporting the OBC regarding habitat creation and reduction in flows to be delivered of Wellholme Park. Specifically, the stated benefits identified in the approved OBC include:

- 15.7 hectares of habitat creation
- A 13% reduction in flow rate

6.1.21 In the delivery of the activities the *Consultant* shall identify and coordinate the delivery of the above noted outcomes derived from the inner study area and outer study area.

7 Preferred Option Development – Detailed Design

7.1.1 The *Consultant* shall assist with pricing and buildability which will be led by the ESE contractor.

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

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

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

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

7.1.6 The *Consultant* shall facilitate design workshops, attend/ facilitate risk workshops to produce a risk register with analysis in accordance with [REDACTED] Risk Guidance for Capital Flood Risk Management Projects

7.1.7 AD: The *Consultant* shall contribute to the production of the Detailed Construction Logistics Plan.

8 Stakeholder Engagement

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

9 Health and Safety

- 9.1.1 Health, Safety and Wellbeing (HSW) is the number one priority of the *Client*. The *Consultant* shall promote and adopt safe working methods and shall strive to deliver solutions that provide optimum HSW to all.
 - 9.1.2 The *Consultant* shall follow and comply with the requirements outlined in the Safety, health environment and wellbeing (SHEW) Code of Practice [REDACTED].
 - 9.1.3 The *Consultant* shall supply designer risk assessments, drawings and any other data required to fulfil their duties under CDM.
 - 9.1.4 The works on site included in the geotechnical section will be subject to notification to the HSE. Detailed design work shall be treated as if it was notifiable.
 - 9.1.5 The *Client* will appoint a CDM Advisor to support the delivery of the Clients CDM duties. The *Consultant* will be notified of such an appointment from the CSF.
-

10 Business Case Submission

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

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

The *Consultant* will provide update to Strategic and Economic case in the five case business model and provision of tables required in sections 3, 4 and 5 of the FBC.

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

FBC Delivery to be in accordance with the *Client*’s submission programme for LPRG. 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.

11 Carbon

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

11.1.2 The carbon budget for the project has been set to 2718 tCO₂e of Capital Carbon and 15716 tCO₂e of Whole Life Carbon. The Consultant is required to work with the Client and the ESE contractor to reduce the project carbon footprint by 45% in accordance with Yorkshire and North East FCERM Sustainability targets. The *Consultant* shall demonstrate how they have met the corporate requirement for carbon reduction using the Carbon Tool, 'ERIC' and;

- *Ongoing updates to the carbon calculator and use of the carbon calculator to inform design and construction methodology decisions.*
- *Completion and submission of the carbon calculator and Carbon Optimisation Report at the pre-defined stages.*
- *Inclusion of a whole-life carbon appraisal to ensure optimisation of lowest carbon in detailed design.*

11.1.3 The Consultant shall attend a low carbon workshop.

12 General

12.1.1 Identify and report project innovation.

13 Relevant guidance

13.1.1 The *Consultant* shall deliver the *service* using the following guidance:

Ref	Report Name	Where used
LIT 16559	Safety, health environment and wellbeing (SHEW) Code of Practice	Throughout
183_05	Data management for FCRM projects	Mapping and modelling
379_05	Computational Modelling to assess flood and coastal risk	Modelling
LIT 14847	Risk Guidance for Capital Flood Risk Management Projects	Detailed design

Template Reference: Version: Security marking: Page 19 of 31

Project Reference:

Uncontrolled when printed

Ref	Report Name	Where used
OI 120_16	Whole-life Carbon Planning Tool	Detailed design
LIT 14284	Whole Life (Construction) Carbon Planning Tool User Guide	Detailed design
	Access for All Design Guide	Detailed design
	Project Cost Tool	Costs
LIT 12982	Working with Others: A guide for staff	Consultation & Engagement
LIT 12280	Lessons Log template	FBC
LIT 55096	Integrated Assurance & Approval Strategy	Approvals
LIT 55124	LIT- Write a Business Case	Business Case

14 Requirements of the Programme

- 14.1.1 The *Consultant* shall provide a detailed programme in Microsoft Project format version X meeting all requirements of clause 31 of the *conditions of contract*.
- 14.1.2 The *Consultant* shall provide a baseline programme for the project start up meeting and shall update the programme monthly for progress meetings with actual and forecast progress against the baseline. The programme shall also include alignment and submission of the BIM Execution Plan (BEP) and Master Information Delivery Plan (MIDP).
- 14.1.3 The programme shall cover all the activities and deliverables in the project and include all major project milestones from commencement to the end of the reporting, consultation and approvals stage.
- 14.1.4 The programme shall include review and consultation periods for drafts, scoping letters, statutory consultation etc.
- 14.1.5 Include internal project team/board decision gateways (as a minimum) for:
- a) Gateway 3, to ensure the detailed design and costings are complete and the works can be constructed within the allowed time and budget.
- 14.1.6 The following consultation periods should be incorporated into the programme, with adequate allowance for review and revision of documents by the project team where appropriate:
- a) *Consultant* internal review (as per *Consultant's* quality review procedures) and *Client* review of all outputs before circulation to the wider project team to ensure high quality of all output.
 - b) Sufficient allowance for internal and external consultation. Statutory consultation periods at scoping & draft stages. Note local authority approvals through cabinet prior to public consultation can take a long time.
 - c) Local Authority time for planning approval.
 - d) *Client* approvals as required to include for Reservoirs Act, impoundment licence and working in watercourse approvals.
 - e) Time for pricing up of the works by the Lot 2 contractor.
 - f) Submission for approval and time allowance for the *Client's* approval process.

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

Date	Event
August 2021	Early Works Instruction for Surveys Scoping, EIA Screening, advanced works, GI Scoping, advanced works package detailed design [REDACTED]
December 2021	OBC-FBC Detailed Design Contract award - Arup
September 2021	Commence stakeholder engagement
August 2021	Commence surveys including ecology
January 2022	Planning consultation
April 2022	Submission of planning applications(s)
September 2021	Commence detailed design – River Calder
January 2022	Commence detailed design – Clifton Beck
February 2022	Ground Investigation
April 2022	Works Information Package
April 2022	Construction contract
May 2022	Submission of FBC to LPRG
August 2022	FBC approval from LPRG

14.1.8 The following are absolute requirements for Completion to be certified:

- Population of the *Client's* latest version of the Project Cost and Carbon Tool, or its successor.
- Transfer to the *Client* of BIM data.
- Clause 11.2(2) work to be done by the Completion Date.

14.1.9 The Consultant/Contractor shall have completed the CEEQUAL process including provision of all evidence onto the CEEQUAL online tool prior to contract completion.

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 Site access authorisation letter(s).

15.1.3 Previous studies listed in Section 1.2.1. The *Client* will provide the previous studies within two weeks of contract award.

16 Data

16.1 Requirements for the handling of project data are covered by the framework schedules.

16.2 The *Client* will provide guidance in respect to the treatment of third party data.

17 *Client's* Advisors

17.1.1 The *Client* for the contract is represented by the Programme & Contract Management (PCM) team, primarily the EA Project Manager and in their absence the Project Executive. Instructions may only be given by these staff.

17.1.2 The *Client* has a number of advisory departments. Instructions will only be deemed enacted from them when they are confirmed by an instruction from the *Service Manager*. These departments include Asset Performance, Partnership & Strategic Overview, NEAS and others.

17.1.3 The *Client's* organisation has a regulatory function. Communications from the Environment Agency in its capacity as a regulator are not to be confused with communications as the *Client* or the *Service Manager*.

18 *Client* Documents the *Consultant* Contributes to

18.1.1 The *Client* maintains several project documents, the *Consultant* is required to contribute to these *Client* owned documents:

- Project Risk Register.
 - Project Efficiency CERT Form.
 - Scheme Lessons Learnt Log.
 - Project Cost Tool (PCT).
 - Add any project specific requirements.
-

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.

Appendix 2 – Profile of previous studies

Extract from Asite and BIM Workspace, relates to Section 1.2

Appendix 3 – Modelling Technical Scope

Modelling Technical Scope for Brighthouse, referenced in Section 4.

Appendix 4 – CEEQUAL - Project Scoping Advice Note

This advice note outlines the CEEQUAL Project Scoping process that has been undertaken and includes:

- Project overview.
- Summary of CEEQUAL scoping decisions to assessment issue level.
- Summary of consultation undertaken as part of the CEEQUAL scoping process.

Project Name	Brighthouse Flood Alleviation Scheme
Location	Brighthouse

Template Reference: Version: Security marking: Page 25 of 31

Project Reference:

Uncontrolled when printed

Project Objectives	<ul style="list-style-type: none"> Promote a scheme which provides a technically viable and cost effective option that is adaptive to climate change (contributing to national outcome measures OM1; OM2); Deliver an option which helps create a better place, and maximises environmental outcomes for people and wildlife measures Promote a jointly funded scheme with our partners to reduce fluvial and surface water flood risk to people and property; Minimise and mitigate for adverse impacts and safety and environmental risks that may result from the scheme.
Project Description	<p>Brighouse in West Yorkshire has been affected by flooding on several occasions most recently on Boxing Day 2015, having a detrimental impact on both residential properties but also the core of the town centre and the adjacent business estate. The flooding was combination of the River Calder overtopping, Clifton Beck (main river) not being able to adequately discharge into the Calder, the Calder & Hebble Navigation Canal being inundated by the Calder and there were associated surface water problems. The Boxing day floods of 2015 had a significant impact on Brighouse. According to Calderdale Metropolitan Borough Council (CBMC) records in excess of 96 businesses were affected by floods, from fluvial, canal inundation and surface water. Many of these businesses accessed the Recovery Gran [REDACTED]</p>
Project Cost	[REDACTED]
Delivery Timescale	G6 Porject Closure Sep 2024
Stage of project when advice note completed	SOC
Outline of information which forms basis of scoping advice note	Scoping has been based on the initial assessment, a desk-based assessment, site visits and outputs from environmental surveys.

Brighouse is situated in the Calder Valley and is located 4 miles south east of Halifax within the municipal area of Calderdale Metropolitan Borough Council (see Figure 2). The town is located in close proximity of the M62 and has a direct train through to London. Through the CMBC Local Plan the town is identified as an area of strategic and economic growth thereby exploiting the town's strong communication links. New residential areas are planned alongside the development of a strategic business park to the north east of the town centre. The town centre is home to a diverse range of businesses and has a strong independent retail offer. The town also has a mixed tenure of residential, with traditional weavers' accommodation through to modern apartments. Brighouse has mixed land use with predominately commercial usage in

the central area, residential to the north and west with industrial premises lining the banks of the Calder east of its confluence with the Clifton Beck.

In line with EA CEEQUAL scoping draft guidelines, the level of CEEQUAL assessment should be proportionate to the value, scale and impact of the project.

The delivery timescale is expected to be 37 months from OBC approval, with an estimated project value of [REDACTED]. This scope has included 16 of 30 assessment issues from 5 of the 8 categories. Priority has been given to those categories and issues which are most relevant and add most value to the project in delivering sustainable outcomes, as well as considering the design, desk-based assessments and site visits/surveys.

The Brighouse CEEQUAL scoping has been refined through consultation with the project team. A summary of the rationale behind the decisions is outlined below.

N.B. CEEQUAL Scoping for the Brighouse Flood Alleviation Scheme was undertaken prior to the latest guidance on the CEEQUAL Scoping process, which has resulted in the entirety of the 'Resources' category being 'scoped in'. This does still include the mandatory assessment issue 7.2 ('Whole life carbon emissions').

CEEQUAL Category (Technical manual v6)	Assessment Issue	Scoping decision	Rationale
Management	1.1 Sustainability leadership	In	Scoped in given the opportunities to closely embed sustainable development principles into the scheme.
	1.2 Environmental Management	In	Scoped in as the scheme has several potential environmental and social risks, in addition to enhancements.
	1.3 Responsible Construction Management	In	Scoped in, given the proximity to local business and residential properties, in addition to many service users associated with Wellholme Park.
	1.4 Staff and supply chain governance	In	While this assessment issue may be better suited to other schemes, it's applicable across the programme and to this scheme and

			all assessment issues across this category have been scoped in.
	1.5 Whole life costing	In	Scoped in as there will be opportunities to reduce whole life cost through detailed design.
Resilience	2.1 Risk assessment and mitigation	Out	Scoped out as although reducing flood risk is a core element of the scheme and there is a need to consider climate change over the design life of the works, other assessment issues are considered to add more value given the scale of the project.
	2.2 Flooding and surface water run off	Out	Scoped out as although minimising the negative effects of flooding is a key part of the scheme, given the number of assessment issues associated with this scheme, other issues will add more value to the project.
	2.3 Future needs	Out	This has been scoped out as other assessment issues are better-suited to the scheme.
Communities and Stakeholders	3.1 Consultation and Engagement	In	Scoped in due to the presence of several stakeholder groups, including 'Friends of' organisations.
	3.2 Wider social benefits	In	Scoped in as a key objective of the scheme is to protect local business. There are opportunities to improve recreation and education alongside some of the more 'green' options and enhancements.
	3.3 Wider economic benefits	In	This has been scoped in as, while the opportunity to promote new jobs as a result of the scheme is limited, the improved flood protection of local business is likely to promote growth.
Land and Ecology	4.1 Land use and value	In	This has been scoped in as, while land use for the majority of the scheme will remain the same, there is some scope for added value within the park and in recreational improvements across the study area.
	4.2 Land contamination and remediation	In	While this assessment issue may be better suited to other schemes, it's applicable across the

Template Reference: Version: Security marking: Page 28 of 31

Project Reference:

Uncontrolled when printed

			programme and to this scheme and all assessment issues across this category have been scoped in.
	4.3 Protection of biodiversity	In	Scoped in – the scheme study area contains extensive Invasive Non-Native Species and has the potential for protected species. Works may be disruptive to these species.
	4.4 Change and enhancement of biodiversity	In	Scoped in given the opportunities, predominantly around Welholme Park to provide enhancements to biodiversity and existing habitats.
	4.5 Long term management of biodiversity	In	Scoped in – given the link to Biodiversity Net Gain and potential enhancement opportunities for biodiversity and habitats, long-term management has been scoped in.
Landscape and historic environment	5.1 Landscape and visual impact	Out	Although considerable landscape improvement works will be required within Welholme Park, much of the Calder defence works are in a less sensitive area from a visual impact perspective, so this has been scoped out.
	5.2 Heritage assets	Out	There are a limited number of listed or scheduled heritage assets within the working area, so this assessment issue has been scoped out.
Pollution	6.1 Water pollution	Out	Scoped out as although there is a risk of pollution to the River Calder during construction, any risks will be managed through pollution prevention best practice. Value could therefore be better added by scoping in other assessment issues.
	6.2 Air, noise and light pollution	Out	Scoped out – although much of the work is in close proximity to residential and commercial areas, a good proportion of the works is within a public area.
Resources	7.1 Strategy for resource efficiency	Out	Scoped out as the assets associated with the scheme are likely to be passive and not require water, power etc. in operation.

	7.2 – whole life carbon emissions	In	Inclusion of this assessment issue is mandatory for all EA projects and is scoped in to ensure projects meet emission targets and the EA's target for net zero.
	7.3 Environmental impact of construction products –	Out	This assessment issue is better suited to other schemes, it's applicable across the programme so this assessment issue has been scoped out.
	7.4 Circular use of construction products	Out	This assessment issue is better suited to other schemes, it's applicable across the programme so this assessment issue has been scoped out.
	7.5 Responsible sourcing of construction products	Out	Scoped out due to limited potential for responsible materials selection, including limited potential for timber use.
	7.6 Construction waste management	Out	Scoped out as, other than clearance of invasives, there are more suitable assessment issues than construction waste management.
	7.7 Energy use	Out	Once operational the defences are unlikely to use any energy and, therefore, energy consumption should be considered throughout construction. Therefore this assessment issue has been scoped out.
	7.8 Water use	Out	While water use will not be an issue during construction nor operation, and while other assessment issues are considered to add more value to the project, the entire 'resources' is scoped in.
Transport	8.1 Transport networks	In	Scoped in due to the potential to improve Public Rights of Way, Cycleways and other transport networks.
	8.2 Construction logistics	In	Scoped out as much of the works are contained to areas not accessed regularly by the public and works within the park will cause minor disruption to user groups.

CEEQUAL Scoping consultation log			
Action	Action completed by	Name (s)	Date
Undertake CEEQUAL Scoping	[REDACTED]	[REDACTED]	10/02/2020
Agree scope and proportionality of Scoping with project team	[REDACTED]	[REDACTED]	01/04/2021
Draft Final CEEQUAL Scoping note	[REDACTED]	[REDACTED]	19/10/2021
Final CEEQUAL Scoping note reviewed and approved	[REDACTED]	[REDACTED]	
Handover to Supplier	[REDACTED]	[REDACTED]	20/10/2021