Framework:	**Collaborative Delivery Framework**
Supplier:	**Ove Arup & Partners Ltd**
Company Number:	**01312453**
Geographical Area:	**Midlands**
Project Name:	**Surfleet Flood Risk Management Scheme**
Project Number:	**ENV0001311C**
Contract Type:	**Professional Service Contract**
Option:	**Option E**
Contract Number:	**29672**

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework
CONTRACT DATA

Project Name Surfleet Flood Risk Management Scheme

Project Number ENV0001311C

This contract is made on 30 June 2020
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
  Surfleet Reservoir PSC Scope v 003 Final

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 E	Option for resolving and avoiding disputes	W2

Secondary Options

X2: Changes in the law

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 The objective of this work is to demonstrate the viability of an upstream storage area which would reduce the risk of flooding to the residents of Surfleet Reservoir.

The *Client* is Environment Agency

Address for communications [redacted]

Address for electronic communications [redacted]

The *Service Manager* is
Address for communications [redacted]

Address for electronic communications

The Scope is in
Surfleet Reservoir PSC Scope v 003 Final

The *partner contract* is
Na

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: 30 June 2020

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

access	*access date*

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

The *completion date* for the whole of the *service* is: 31 December 2020

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 *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

6 Compensation events

These are additional compensation events

1. Managing and mitigating the impact of Covid 19 and working in accordance w
2. 'not used'
3. 'not used'
4. 'not used'
5. 'not used'

8 Liabilities and insurance

These are additional *Client's* liabilities

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

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

EVENT	MINIMUM AMOUNT OF COVER	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE *SERVICE* OR TERMINATION

The *Consultant's* failure to use the skill and care normally used by professionals providing services similar to the *service*	**£5,000,000** in respect of each claim, without limit to the number of claims	12 years after Completion
Loss of or damage to property and liability for bodily injury to or death of a person (not an employee of the *Consultant)* arising from or in connection with the *Consultant* Providing the Service	**£15,000,000** in respect of each claim, without limit to the number of claims	12 years after Completion
Death of or bodily injury to the employees of the *Consultant* arising out of and in the course of their employment in connection with the contract	*Legal minimum* in respect of each claim, without limit to the number of claims	*For the period required by law*
The *Consultant's* total liability to the *Client* for all matters arising under or in connection with the contract, other than the excluded matters is limited to	**£5,000,000**	

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

Z6 The Schedule of Cost Components

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

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 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

£1,000,000.00

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

£1,000,000.00

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: Ove Arup & Partners Ltd

Address for communications: [redacted]

Address for electronic communications: [redacted]

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

The *key persons* are

Name (1) [redacted]
Job
Responsibilities
Qualifications
Experience

Name (2) [redacted]
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

Model instability
Impact of Covid-19 - delayed site visit and/or availability of EA/Cor
EU exit - risk of impact on modelling support from Polish office
Hourly rates are yet to be agreed with client at Framework level
Data - Limited access to available data/incorrect format/drip fed to
Hydrology review identifies requirement for additional work beyonc
Model update identifies requirement for additional work beyond scc

3 Time

The programme identified in the Contract Data is

Resolving and avoiding disputes

The *Senior Representatives* of the *Consultant* are

Name (2)
Address for communications

Address for electronic communications

X10: Information Modelling

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

Contract Execution

Client **execution**

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

Signature Role

Consultant **execution**

Consultant **execution**

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

Signature Role

Environment Agency
NEC4 professional services contract (PSC)
Scope

Project / contract Information

Project name	Surfleet Reservoir Flood Risk Management Scheme
Project SOP reference	ENV0001311C
Contract reference	29672
Date	27 May 2020
Version number	001
Author	[redacted]

Revision history

Revision date	Summary of changes	Version number
	Second Draft	002
	Final Draft	003

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

Document	Document Title	Version No	Issue date
412_13_SD01	Minimum Technical Requirements	To be agreed under issue of Employer Instruction- PMI	Insert date of latest version of MTR on ASite

Details of the *services*

Details of the *services* are:

The objective of this work is to demonstrate the viability of an upstream storage area which would reduce the risk of flooding to the residents of Surfleet Reservoir.
1. Description of the work:

'Surfleet Reservoir' is on the River Glen, located close to the confluence of the River Glen and River Welland, approximately 3km downstream of Surfleet village and approximately 9km inland from the sea.

Normally, tidal influences would extend into the River Glen, but 'Surfleet Sluice', a twin-arch bridge over the River Glen (original construction c.1824), incorporates two large mitre gates on the downstream side of the bridge, which close against incoming tides in the River Welland and prevent tidal ingress beyond it.

In tide-locked situations, discharge of flow from the River Glen to the River Welland is prevented and water accumulates upstream of Surfleet Sluice in the River Glen channel.

The 'Reservoir' occupies the 260m-long river reach immediately upstream of the Sluice, where raised river banks are set back from the channel. This creates an area of approximately 2.4Ha between the raised banks, which is filled as the River Glen water level rises. When Surfleet Sluice was devised and built, 'the Reservoir' was so named for the water temporarily stored in this area and released at low tide, which has the appearance of a small lake. In fact, the volume of water stored in 'the Reservoir' is only a small portion of the water released from the River Glen channel during low tide.

Two vertically-moved gates have been fixed to the upstream side of the Sluice openings, each 4.6m wide and approximately 3.2m high (see Image 2, below). These function to prevent outflow during low tides and to retain water in the River Glen within a specified range for irrigation, abstraction and navigation.

The Reservoir embankments are continuous with high ground and raised embankments extending upstream for over 20km on each bank of the River Glen, as shown in Figure 1 below. The very shallow- sloping river bed (see Image 7 below) has also been lowered over the centuries as improvements to Fenland drainage were made. The river is a high level carrier and perched above the surrounding drained fenland. Were there no Sluice, tidal influence would extend well over 5km into the river channel.

Outcome Specification

The *Consultant* shall deliver a technical note and updated hydraulic model focussing on the suitability and viability of an upstream storage area at Bourne Fen which would reduce the risk of flooding to the residents of Surfleet Reservoir.

1. Technical Note

The *Consultant* shall produce a technical note which discusses the feasibility of an upstream storage area based on the findings of the updated modelling. This note shall build upon the existing available data but focus specifically on an upstream storage area which would double as a wetland area, in line with Lincolnshire Wildlife Trust proposals.

This technical note shall address the potential volume needed for flood storage, the costs of construction and future maintenance. Also provide a variable option for inflow and outflow mechanism, assessment of the frequency of use, and any resulting impacts at Surfleet Reservoir including reduced depth or frequency of flooding, taking into account tide cycles. Following completion of the modelling work, the technical note shall also include recommendation and conclusions for further work including, , the consideration of other areas for flood storage, funding implications, data gaps and suggestions for further work with the possibility, if the scheme is proven viable, to move to production of a SOC.

[redacted]

2. A high-level review of the existing hydrology used in the Welland model will be undertaken to understand the potential implications of updates to methods which taken place since the Welland model was completed, and whether these are likely to impact the feasibility of the scheme. This includes updates to ReFH2.3 which will be assessed via a sensitivity test, updating the model to ReFH2.3 is not included in the Scope. Climate change will be updated in the model to reflect the most recent guidance from the National Planning Policy Framework.

3. Hydraulic Model.

The *Consultant* shall use the model supplied, which now includes the EA draw down procedure, to illustrate if an upstream storage area has the possibility to reduce the risk of flooding to the residents at Surfleet Reservoir. The *Client* shall make available the existing hydraulic models of the River Welland and Glen systems as well as historic flooding information. This review shall assess what volumetric storage area is required to reduce the risk of flooding to the residents in the Reservoir, which currently floods during tide lock situations. The results of this modelling shall be presented in the aforementioned technical note, whether shown to be viable or unviable with justification and evidence to support the findings.

Specific Project Requirements

1. Undertake site visit if possible under Covid-19 restrictions. If not possible at the start of the project, an extended inception meeting (via teleconference) will take place with relevant Environment Agency operational staff to understand current operation of system
2. Undertake modelling to assess what volumetric storage area is required that results in water level at the gate not exceeding 3.5mAOD
3. Provide support to expand on the initial assessment with options for potential flood storage options within the catchment, allow 3 days' time.
4. Price to produce a technical note on the modelling results and options for flood storage, this would only be required if the outputs of points 1-3 above prove viable for further development.

Working Hours

Refer to section 1 of CESWI 7 and the additional clauses included in Minimum Technical Requirements (412_13_SD01) Noise Control and Working hours. In case of any conflict, the Works Information in this document prevails over CESWI 7 and the Minimum Technical Requirements.

For this project, the normal working hours are 8.00am to 5.00pm Monday to Friday, all other times are to be agreed with the *Project Manager* and *Client*.

1. Services and other things provided by the *Client.*

a) Existing information.
- Final IA from Motts
- Model outputs (sent via sharefile)
- Longlist of options
- Modelling Technical Note v2
- Modelling licence
- Environmental Checklist
- FCRM appraisal spreadsheet
- Historic Flooding photos (to follow)
- 2016 Welland Glen Model report (sent via sharefile)

b) ASite.
c) FastDraft
d) *Client*'s Advisors.
e) Access to sites.
f) BIM (IDP)
g) Data and information management and intellectual property rights
All of the data listed as being supplied to the *Consultant* as part of this study remains the IP of the *Client*.
h) Data custodianship
The data custodian for project deliverables from this commission will be the PCM team.

Appendices

Appendix A Existing information

Title	Comments
Final IA from Motts	Issued 1/11/2019
Model outputs (sent via sharefile)	Issued 1/11/2019
Longlist of options	Issued 1/11/2019
Modelling Technical Note v2	Issued 1/11/2019
Modelling licence	Issued 1/11/2019
Environmental Checklist	Issued 1/11/2019
FCRM appraisal spreadsheet	Issued 1/11/2019
Historic Flooding photos (to follow)	Issued 1/11/2019
2016 Welland Glen Model report (sent via sharefile)	Issued 1/11/2019

Appendix B BIM Protocol – Production and Delivery Table

www.Pow.bim4.info

N.B. You need google chrome for this link to work.

IDP to be printed and included in final version of scope.

All *Client* issued information referenced within the Information Delivery Plan requires verifying by the *Consultant* unless it is referenced elsewhere within the *Scope.*