

**What's this document about?** FCRM Operational Framework  
Lot 1 NEC4 ECSC template

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**Who does this apply to?** Area Operations

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**Contact for queries and feedback**

- [National Field Operations](#)
- Anonymous feedback for this document can be given [here](#)

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# NEC4 Engineering and Construction

## Short Contract

FCRM Operational Framework – SE Hub

**A contract between** The Environment Agency

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**And** Amco Giffen

**For** work relating to Reservoir maintenance package work at 4 Flood Defence Reservoirs - ENV0003294C

**SITE 1** Cove Brook Flood Defence Reservoir  
**SITE 2** Bourne Ditch Flood Defence Reservoir  
**SITE 3** Stocklake Flood Storage Reservoir  
**SITE 4** Bear brook Flood Storage Reservoir

**Contract Forms**

- **Contract Data**
- **The Contractor's Offer and Client's Acceptance**
- **Price List**
- **Scope**
- **Site Information**



# Contract Data

## The *Client's* Contract Data

	The <i>Client</i> is	
Name	Environment Agency	
Address for communications	[REDACTED]	
	[REDACTED]	
	[REDACTED]	
The <i>works</i> are	Described in the Contract Data Section of the Site Specific Pack	
The <i>site</i> is	See site specific pack	
The <i>starting date</i> is	To be determined by the successful <i>Contractor's</i> programme, but no earlier than October 2020	
The <i>completion date</i> is	March 31 <sup>st</sup> 2021	
The <i>delay damages</i> are		Per day
The <i>period</i> for reply is	2	weeks
The <i>defects date</i> is	52	weeks after Completion
The <i>defects correction period</i> is	2	weeks
The <i>assessment day</i> is	the last working day	of each month
The <i>retention</i> is	nil	%
The United Kingdom Housing Grants, Construction and Regeneration Act (1996) <b>does</b> apply		
The <i>Adjudicator</i> is :		
In the event that a first dispute is referred to adjudication, the referring Party at the same time applies to the Institution of Civil Engineers to appoint an <i>Adjudicator</i> . The application to the Institution includes a copy of this definition of the <i>Adjudicator</i> . The referring Party pays the administrative charge made by the Institution. The person appointed is also <i>Adjudicator</i> for later disputes.		

# Contract Data

## The *Client's* Contract Data

The interest rate on late payment is		% per complete week of delay.
<b>Insert a rate only if a rate less than 0.5% per week of delay has been agreed.</b>		
For any one event, the liability of the <i>Contractor</i> to the <i>Client</i> for loss of or damage to the <i>Client's</i> property is limited to	██████████	
The <i>Client</i> provides this insurance	None	
<b>Insurance Table</b>		
Event	Cover	Cover provided until
Loss of or damage to the <i>works</i>	The replacement cost	The <i>Client's</i> certificate of Completion has been issued
Loss of or damage to Equipment, Plant and Materials	The replacement cost	The defects Certificate has been issued
The <i>Contractor's</i> liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) arising from or in connection with the <i>Contractor's</i> Providing the Works	██████████ in respect of every claim without limit to the number of claims	
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	
Failure of the <i>Contractor</i> to use the skill and care normally used by professionals providing works similar to the works	Minimum £..... in respect of every claim without limit to the number of claims	6 years following Completion of the whole of the works or earlier termination
The <i>Adjudicator nominating body</i> is	The Institution of Civil Engineers	
The <i>tribunal</i> is	litigation in the courts	

The <i>conditions of contract</i> are the NEC4 Engineering and Construction Short Contract June 2017 and the following additional conditions	
<b>Only enter details here if additional conditions are required.</b>	
Z1.0	Sub-contracting
Z1.1	The <i>Contractor</i> submits the name of each proposed subcontractor to the <i>Client</i> for acceptance. A reason for not accepting the subcontractor is that their appointment will not allow the <i>Contractor</i> to Provide the Works. The <i>Contractor</i> does not appoint a proposed subcontractor until the <i>Client</i> has accepted them.
Z1.2	Payment to subcontractors and suppliers will be no more than 30 days from receipt of invoice.
Z2.0	Environment Agency as a regulatory authority
Z2.1	The Environment Agency's position as a regulatory authority and as <i>Client</i> under the contract is separate and distinct. Actions taken in one capacity are deemed not to be taken in the other.
Z2.2	Where statutory consents must be obtained from the Environment Agency in its capacity as a regulatory authority, the <i>Contractor</i> is responsible for obtaining these and paying fees (unless stated otherwise in the Scope). The <i>Client's</i> acceptance of a tender and the <i>Client's</i> instruction or variation of the works does not constitute statutory approval or consent.
Z2.3	An action by the Environment Agency as regulatory authority is not in its capacity as <i>Client</i> and is not a compensation event.
Z3.0	Confidentiality & Publicity
Z3.1	The <i>Contractor</i> may publicise the works only with the <i>Client's</i> written agreement.
Z4.0	Correctness of Site Information
Z4.1	Site Information about the ground, subsoil, ducts, cables, pipes and structures is provided in good faith by the <i>Client</i> but is not warranted correct. The <i>Contractor</i> checks the correctness of any such Site Information they rely on for the purpose of Providing the Works.
Z5.0	The Contracts (Rights of Third Parties) Act 1999
Z5.1	For the purposes of the Contracts (Rights of Third Parties) Act 1999, nothing in this contract confers or purports to confer on a third party any benefit or any right to enforce a term of this contract.
Z6.0	Design
Z6.1	Where design is undertaken, it is the obligation of the <i>Contractor</i> to ensure the use of skill and care normally used by professionals providing similar design services.
Z6.2	The <i>Contractor</i> designs the parts of the works which the Scope states they are to design.
Z6.3	The <i>Contractor</i> submits the particulars of their design as the Scope requires to the <i>Client</i> for acceptance. A reason for not accepting the <i>Contractor's</i> design is that it does not comply with either the Scope or the applicable law.  The <i>Contractor</i> does not proceed with the relevant work until the <i>Client</i> has accepted this design.
Z6.4	The <i>Contractor</i> may submit their design for acceptance in parts if the design of each part can be assessed fully.
Z7.0	Change to Compensation Events
Z7.1	Delete the text of Clause 60.1(11) and replace by:  The <i>works</i> are affected by any one of the following events <ul style="list-style-type: none"> <li>• War, civil war, rebellion revolution, insurrection, military or usurped power</li> <li>• Strikes, riots and civil commotion not confined to the employees of the <i>Contractor</i> and sub-contractors</li> <li>• Ionising radiation or radioactive contamination from nuclear fuel or nuclear waste resulting from the combustion of nuclear fuel</li> <li>• Radioactive, toxic, explosive or other hazardous properties of an explosive nuclear device</li> <li>• Natural disaster</li> <li>• Fire and explosion</li> <li>• Impact by aircraft or other device or thing dropped from them</li> </ul>

Z8.0	Framework Agreement
Z8.1	The <i>Contractor</i> shall ensure at all times during this contract it complies with all the obligations and conditions of the Framework Agreement made with the <i>Client</i> .
Z9.0	Termination
Z9.1	Delete the text of Clause 92.3 and replace with:  If the <i>Contractor</i> terminates for Reason 1 or 6, the amount due on termination also includes 5% of any excess of a forecast of the amount due at Completion had there been no termination over the amount due on termination assessed as for normal payments.
Z10.0	Data Protection
Z10.1	The requirements of the Data Protection Schedule shall be incorporated into this contract
Z11.0	Liabilities and Insurance
Z11.1	Civil data protection claims and regulatory fines for breaches of Data Protection Legislation are excluded from any limit of liability stated.
Z12.0	Packaging
Z12.1	For contracts containing packages of projects the <i>Client's</i> Contract Data, Scope and Site Information particular to an individual project is contained within its Site Specific Pack
Z7.2	Additional Compensation Event COVID-19  Managing and mitigating the impact of Covid 19 and working in accordance with Public Health England guidance, as may vary from time to time, until 31 October 2020.

# Contract Data

## The Contractor's Contract Data

The Contractor is		
Name	Amalgamated Construction Ltd	
Address for communications	[REDACTED]	
Address for electronic communications	[REDACTED]	
The fee percentage is		[REDACTED]
The people rates are		
category of person	unit	rate
Project Manager		As Operational Framework
Quantity Surveyor		As Operational Framework
General Foreman		As Operational Framework
The published list of Equipment is	CECA	
The percentage for adjustment for Equipment is	[REDACTED]	

# Contract Data

## The *Contractor's* Offer and *Client's* Acceptance

The *Contractor* offers to Provide the Works in accordance with these *conditions of contract* for an amount to be determined in accordance with these *conditions of contract*.

The offered total of the Price

m the Price List.

Signed on behalf of the Co

Sig

Date | 02.11.20

The *Client* accepts the *Contractor's* Offer to Provide the Works

Signed on behalf of the *Client*

Date | 12/11/20

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# Price List

Entries in the first four columns in this Price List are made either by the *Client* or the tenderer.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tenderer enters the amount in the Price Column only: the Unit, Quantity and rate columns being left blank.

If the *Contractor* is to be paid an amount for the item of work which is the rate for the work multiplied by the quantity completed, the tenderer enters the rate which is then multiplied by the expected quantity to produce the Price, which is also entered.

## Site 1 Cove Brook Reservoir (ENV0003294C)

Item Number	Description	Unit	Quantity	Rate
1.	Preliminaries and supervision	SUM	1	
2.	Preparation of a detailed Construction Phase Plan (CPP) in accordance with the SHEW Code of Practice and any other information critical to be produced and accepted by the <i>Client</i> before commencement on site. The production of a Waste Management Plan. Maintenance and adherence to the Environmental Action Plan (EAP).	SUM	1	
3.	All licences, permits and approvals necessary to complete the scope of works ( <i>Contractor</i> to detail)	SUM	1	
4.	Produce detailed design and drawings	SUM	1	
5.	GPR survey of areas of intrusive works and other areas as deemed necessary by <i>Contractor</i>	SUM	1	
6.	Precondition photographic survey of working areas and access routes and photographs and video footage both prior to removal of old surfaces of embankment and spillway, and fencing and gates, etc and after installation of the new fencing gates and embankment for comparative purposes	SUM	1	
7.	Mobilization to site and set up site compound with safety signage and reinstatement on completion	SUM	1	
8.	Supply and install new security fencing and minimum of 1m gate for access over flume. This is to clear any debris/vegetation safely. Remove any waste from site	SUM	1	



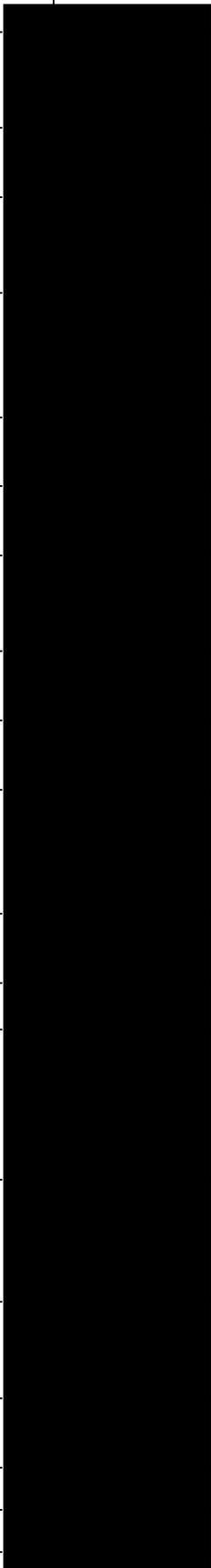
9.	Cut and Remove vegetation over and within flume	SUM	1	
10.	Remove and dispose of steel bars over the flume	SUM	1	
11.	Design a suitable safe platform over the concrete flume to enable operatives to remove blockages/debris from the flume mouth	SUM	1	
12.	Supply and install a suitable safe platform over the concrete flume to enable operatives to remove blockages/debris from the flume mouth	SUM	1	
13.	Spillway and flume - Remove existing expansion joint sealant that has rotted and remove any vegetation or loose concrete from within the joints. Clean joints of any debris	SUM	1	
14.	Supply and install new flexible joint sealant into cracks on spillway crest, slope, and flume wall	SUM	1	
15.	Design a suitable wearing surface on the crest of the flood defence embankment from SU8554455328 to SU8555754893 to allow public to walk safely and minimise erosion of the crest. Crest level should be maintained at minimum of 62.63m AOD along the length of the defence at this point	SUM	1	
16.	Supply and install a suitable wearing surface on the crest of the flood defence embankment from SU8554455328 to SU8555754893 to allow public to walk safely and minimal erosion of the crest. Crest level should be maintained a minimum of 62.63m AOD along the length of the defence at this point	SUM	1	
17.	Design and Formalise any footpath crossings on the upstream and downstream slopes from SU8554455328 to SU8555754893 to prevent further damage to the embankment, and to resist wave overtopping	SUM	1	
18.	Supply and install footpath crossings on the upstream and downstream slopes from SU8554455328 to SU8555754893 to prevent further damage to the embankment, and to resist wave overtopping	SUM	1	
19.	Fill areas of desiccation along the flood defence, particularly in the rear garden of 9, 15 17, 19 and 21 Cranleigh Court; with sand first, for smaller cracks followed by compacted seeded topsoil or compacted topsoil, followed by grass seed	SUM	1	
20.	For deep burrows and cracks remove topsoil, cohesive embankment material to be benched and topsoil replaced with seeded topsoil. Burrows to be checked before work by EA prior to filling	SUM	1	
21.	Remove tree stump at chainage 730, cohesive embankment material to be benched and replaced with seeded topsoil	SUM	1	
22.	Remove debris from the embankment toe at chainage 870 – 915. Fill any low spots and burrows as above	SUM	1	
23.	Supply and install hit and miss fencing to the gardens from 9 Cranleigh Court to 21 Cranleigh Court from existing fencing, over the embankment to the boundary with Cove Brook. Supply and install 2 x 1m gates within each hit and miss fence line (location TBC with homeowner) to allow for	SUM	1	

	future access in an emergency. Locks to be placed both sides of the gate so that both sides can be padlocked. One with EA 16B padlock, the other with a combination lock given to the homeowner				
24.	Remove vegetation to allow for installation of hit and miss fencing. (to be discussed and agreed with home owner)	SUM	1		
25.	Supply and install 6 x combination padlocks on above gates	SUM	1		
26.	Fell or thin out tree canopy to approximately 5 trees to increase light to the defence embankment. (TBC during site walkover)	SUM	1		
27.	Supply and lay turf in larger areas with no grass cover. Smaller patches of bare earth on the bund to be covered with seeded topsoil	SUM	1		
28.	Reset Thames Water manhole cover if required				
29.	Relevant internal Engineer to sign off all designs before they are progressed to construction phase	SUM	1		
30.	Preparation of 'as built' drawings and provision of information to the Principal Designer to compile the Health and Safety File (including information on materials used and maintenance).	SUM	1		
31.	All surplus wastes generated by the works to be disposed of off-site in accordance with the current Waste Management Regulations.	SUM	1		
32.	Completion of the Environment Agency's Carbon Calculator and Carbon Optimisation Report to inform the design stage, and a Carbon Calculator and Final Carbon Report for the 'as built' project to be provided within a month of project completion.	SUM	1		
33.	Heras fencing for security and temporary works as required. Temporary netting in areas to be seeded	SUM	1		
34.	Supply approx 300m2 of scrub plants within the reservoir site (position TBC)				
35.	plant approx 300m2 of scrub plants within the reservoir site (position TBC)				
<b>Site 2 Bourne Ditch (Spitalfield) Reservoir (ENV0003294C)</b>					
1.	Preliminaries and supervision	SUM	1		
2.	Preparation of a detailed Construction Phase Plan (CPP) in accordance with the SHEW Code of Practice and any other information critical to be produced and accepted by the <i>Client</i> before commencement on site. The production of a Waste Management Plan. Maintenance and adherence to the Environmental Action Plan (EAP).	SUM	1		

3.	All licences, permits and approvals necessary to complete the scope of works ( <i>Contractor</i> to detail)	SUM	1	
4.	Produce detailed design and drawings	SUM	1	
5.	GPR survey of areas of intrusive works and other areas as deemed necessary by <i>Contractor</i>	SUM	1	
6.	Mobilization to site and set up site compound with safety signage and reinstatement on completion.	SUM	1	
7.	Defence wall - Remove existing expansion joint seals that have rotted and remove any vegetation or loose concrete within the joints. Clean joints of any debris	SUM	1	
8.	Supply and install suitable joint sealant into cracks on the wall to make it resistant to water pressure from any reservoir impoundment	SUM	1	
9.	Fill any areas of desiccation along the flood defence, with sand then compacted topsoil and grass seed	SUM	1	
10.	For deep burrows and cracks remove topsoil, cohesive embankment material benched then topsoil replaced and seeded.	SUM	1	
11.	Design of a suitable wearing surface on the crest of the flood defence embankment from SU9604575266 to SU9538875399 to allow public to walk safely and minimal erosion of the crest. Preferably with a slight slope to allow water drainage. Crest level should be maintained at minimum of 27.4m AOD along the length of the defence at this point, and minimum of 26.9m AOD at the spillway	SUM	1	
12.	Supply and install a suitable wearing surface on the crest of the flood defence embankment from SU9604575266 to SU9538875399 to allow public to walk safely and minimal erosion of the crest. Crest level should be maintained at a minimum of 27.4m AOD along the length of the defence at this point, , and minimum of 26.9m AOD at the spillway	SUM	1	
13.	Design to Formalise any footpath crossings with a hardwearing surface on the upstream and downstream slopes from SU9604575266 to SU9538875399 to prevent further damage to the embankment, and to resist wave overtopping	SUM	1	
14.	Supply and install footpath crossings on the upstream and downstream slopes from SU9604575266 to SU9538875399 to prevent further damage to the embankment, and to resist wave overtopping	SUM	1	
15.	Repair unauthorised worn path crossing spillway with topsoil and seed to prevent further damage.	SUM	1	
16.	Design a suitable hard wearing surface to the crest of the defence at SU9576575332 to SU9573375327 in front of the defence wall. Surface with a slight slope to allow water drainage as it can become boggy and slippery in wet weather, and a retaining edge to prevent the surface encroaching onto the embankment slope	SUM	1	

17.	Install additional topsoil and seed to areas where shrinkage away from the defence kerbs is evident along the embankment.	SUM	1		
18.	Design of the mitre area (connection between the embankment dam and the adjoining land) to make it less susceptible to scour. Remove large vegetation, rubble and trees from the mitre area, and locate manhole.	SUM	1		
19.	Reset manhole sections and cover within bund once found, Supply and lay turf suitable for the area	SUM	1		
20.	Left Wing Embankment (saddle embankment, near housing) make good damage to the headwall on downstream slope	SUM	1		
21.	Clean out and fill any gaps between the flood kerb and the concrete, with a suitable flexible sealant. Top with seeded topsoil to kerb height to encourage grass growth.	SUM	1		
22.	Repair flood kerbs along the upstream side of the crest. Break out and replace any broken, unevenly settled or loose flood kerbs along the embankment to the correct level.	SUM	1		
23.	Right Wing Embankment 1 (east of track over embankment) Design a new track crossing over the embankment at the low point where the crest profile has been rounded and is below the standard of protection	SUM	1		
24.	Right Wing Embankment 1 (east of track over embankment) Supply and reinstate the full crest width/level of the defence using a suitable hardwearing surface that will withstand vehicular movement	SUM	1		
25.	Fill desiccation cracks along the bund with sand then compacted seeded topsoil	SUM	1		
26.	Design and Install a post and rail fence along the exposed flood defence wall on the upstream face to prevent slips and falls by the public climbing the wall.	SUM	1		
27.	Design a reinforced bank either side of the watercourse immediately upstream of the trash screen eroded by dogs entering the water.	SUM	1		
28.	Supply and install material to reinforce the banks immediately upstream of the trash screen.	SUM	1		
29.	Design, supply and install material to repair damaged geotextile adjacent to the control structure steps, topsoil and seed.	SUM	1		
30.	Relevant internal Engineer to sign off all designs before they are progressed to construction phase	SUM	1		
31.	Preparation of 'as built' drawings and provision of information to the Principal Designer to compile the Health and Safety File (including information on materials used and maintenance).	SUM	1		
32.	All surplus wastes generated by the works to be disposed of off-site in accordance with the current Waste Management Regulations.	SUM	1		
33.	Completion of the Environment Agency's Carbon Calculator and Carbon Optimisation Report to inform the design stage, and a Carbon Calculator	SUM	1		

	and Final Carbon Report for the 'as built' project to be provided within a month of project completion.				
34.	Heras fencing for security and safety during works as required. Temporary netting in areas to be seeded to stop public walking over	SUM	1		
35.	Heras fencing around ancient trees to safeguard from damage	SUM	1		
36.	Additional item as TQ clarification log no.5 - Repair depression at SE end of upstream bund as photo Bourne Ditch SE depression in bund(1.0)	SUM	1		
<b><u>SITE 3 - STOCKLAKE FLOOD DEFENCE RESERVOIR</u></b>					
01	Mobilisation and establishment of works and reinstatement on completion	SUM	1		
02	Vegetation removal from embankment, stump grinding and preparation for seeding.	SUM	1		
03	stump grinding and preparation for seeding to areas already cleared of vegetation but without grass	SUM	1		
04	Backfill voids under concrete stairs adjacent to both sides of control structure	SUM	1		
05	Remove section of tarmac crossing footpath and reinstate crest footpath to existing flood curb level.	SUM	1		
<b><u>SITE 4 – BEAR BROOK FLOOD DEFENCE RESERVOIR</u></b>					
01	Mobilisation and establishment of works and reinstatement on completion	SUM	1		
02	Pollard 6 x mature Willow trees	SUM	1		
	Clear vegetation and silt from fixed crest weir to fully expose the weir structure. Dredge a 3m wide channel from the fixed crest weir to the culvert downstream to restore water conveyance to the existing pond.	SUM	1		
03	Free up and Repairs to 10 (TQ log no.6) x toe drain manhole frames/covers clear out debris from manhole chambers and flush through toe drain to outfall. Observations to be compiled in a report.	SUM	1		
04	Erect sections of timber post and rail fence in selected locations along the boundary line with Canal towpath.	SUM	1		
05	Reinstate post and sign located adjacent to public right of way access point	SUM	1		





# Scope

The Scope should be a complete and precise statement of the *Client's* requirements. If it is incomplete or imprecise there is a risk that the *Contractor* will interpret it differently from the *Client's* intention.

## 1. Description of the works

Give a detailed description of what the *Contractor* is required to do and of any work the *Contractor* is to design.

**For all sites**, the *Contractor* must prepare a detailed Construction Phase Plan (CPP) in accordance with the SHEW Code of Practice and any other information critical to be produced and accepted by the *Client* before commencement on site. Note: A suitably developed Construction Phase Plan must be issued for approval not less than 10 days prior to planned mobilisation. Please refer to the Pre-Construction Information (PCI) at Appendix 7 for further clarification of requirements.

The *Contractor* must produce a Site Waste Management Plan (SWMP). The *Contractor* is to allow for the cost associated with waste not suitable for reuse within the permanent works. This must be disposed of off-site in accordance with the site specific Site Waste Management Plan (SWMP) and the current Waste Management Regulations.

Maintenance and adherence to the Environmental Action Plan (EAP) is also a requirement. (See Appendix 2 for project specific EAPs).

Upon award, the *Contractor* will satisfy himself with all dimensions for all works.

The *Contractor* must accept any risk surrounding likely damage caused by his method of working for all works.

The *Contractor* is to cost for all preliminary activities and supervision including welfare, site accommodation etc.

The *Contractor* must independently obtain and include all costs associated with any environmental permits, licences and approvals required to deliver the works.

The *Contractor*, as Operator, will in accordance with clause Z2.2 be required to sign and pay for the Flood Risk Activity Permit (FRAP). The *Contractor* will need to prepare and submit the FRAP application (which will be required for each project) within a week of Contract Award to enable works to start on site in line with the timescales set out in Section 5 of this Contract.

The *Contractor* will carry out detailed design and submit drawings of the proposed works to the *Client* for approval with at least 10 days allowed in the programme for review.  
The *Contractor* shall include any temporary works required to undertake the *Contractor's* method of working as deemed necessary to meet the works scope.

A detailed photographic record of access routes and all working areas (including vertical and horizontal alignments and close proximity photos of elements of the structure included in the scope of works e.g. alignment of top of fender with existing concrete walkway) must be carried out by the *Contractor* prior to works commencing on site and provided to the *Client*.

Public Safety Risk Assessments (PSRAs) are included within the Site Information (Appendix 6). The design for each project must be approved by the *Client*, including the Environment Agency's PSRA Assessor, and time allowed in the programme for review.

All access routes and working areas must be reinstated on completion of the works.

Prior to completion and for each project, a suitably developed Health and Safety File (the required template is at Appendix 8) must be issued to the Principal Designer along with 'as built' drawings (provided in CAD and pdf format) showing any changes from the original approved design.

For the purposes of this contract, flooding is considered to be weather and is included within Clause 60.1(9)

The Information Delivery Plan (IDP) is a schedule of how the *Client* expects data to be shared between the *Client* and the *Contractor(s)* working on the project as part of Building Information Modelling (BIM). The *Contractor* must ensure that this protocol is adhered to. It reflects the information that is already held for each project and the information that the *Client* expects to receive from the *Contractor*.

All surplus wastes generated by the works to be disposed of off-site in accordance with the current Waste Management Regulations.

Completion of the Environment Agency's Carbon Calculator and Carbon Optimisation Report to inform the design stage, and a Carbon Calculator and Final Carbon Report for the 'as built' project to be provided within a month of project completion.

Preparation of 'as built' drawings and provision of information to the Principal Designer to compile the Health and Safety File (including information on materials used and maintenance).

### **SITE 1 - COVE BROOK FLOOD DEFENCE RESERVOIR**

The contractor will supply Preliminaries and supervision throughout the whole project  
Preparation of a detailed Construction Phase Plan (CPP) in accordance with the SHEW Code of Practice and any other information critical to be produced and accepted by the Client before commencement on site. The production of a Waste Management Plan. Maintenance and adherence to the Environmental Action Plan (EAP).

All licences, permits and approvals necessary to complete the works (Contractor to detail)

Production of detailed design and drawings which need to be signed off by a qualified CE

GPR survey of areas of intrusive works and other areas as deemed necessary by Contractor

Precondition photographic survey of working areas and access routes and photographs and video footage both prior to removal of old surfaces of embankment and spillway, and fencing and gates, etc and after installation of the new fencing gates and embankment for comparative purposes

Mobilization to site and set up site compound with safety signage

Remove and dispose of existing platform over the flume. Supply and Make good any damage to the concrete flume following removal of the grille, with a suitable material. Design a suitable safe platform over the concrete flume to enable operatives to remove blockages/debris from the flume mouth in a safe way

Supply and install a suitable safe platform over the concrete flume to enable operatives to remove blockages/debris from the flume mouth

Supply and install new palicade or similar security fencing to include a minimum 1m gate for access over flume to enable safe clearance of debris/vegetation in the future by operatives.

Cut and Remove vegetation over and within flume

Spillway and flume - Remove existing expansion joint sealant that has become brittle and has rotted, remove any vegetation or loose concrete from within the joints. Clean joints and cracks of any loose debris

Supply and install new flexible joint sealant into cracks on spillway crest, slope, and flume wall. Spillway crest to be maintained at a minimum of 62.13m AOD

Supply and plant new locally native scrub area within the reservoir site to mitigate against damage from internal maintenance works. The area is approx 300m<sup>2</sup> and the area to be planted is to be specified by Rushmoor BC

Design a suitable wearing surface on the crest of the flood defence embankment from [REDACTED] points. Allow for a slight slope for drainage of water from the crest for drainage  
Remove tree stump at chainage 730, cohesive embankment material to be benched and replaced with seeded topsoil

[REDACTED] be maintained at a minimum of 62.63m AOD along the length of the defence at this point

Design and Formalise any footpat [REDACTED]

[REDACTED] to the embankment, and to resist wave overtopping

Fill areas of desiccation along the flood defence, particularly in the rear garden of 9, 15 17, 19 and 21 Cranleigh Court; with sand first, for smaller cracks followed by compacted seeded topsoil or compacted topsoil, followed by grass seed.

Fill deeper burrows and cracks along the bund by removing loose topsoil, benching cohesive embankment material and replacing with seeded topsoil. All burrows to be checked by EA operatives to ensure they are not inhabited

Remove debris from the embankment toe at chainage 870 – 915. Fill any low spots and burrows with compacted seeded topsoil to encourage grass growth.

Supply and install hit and miss fencing to the gardens from 9 Cranleigh Court to 21 Cranleigh Court from existing fencing, over the embankment to the boundary with Cove Brook. Supply and install 2 x 1m gates within each hit and miss fence line (location TBC with homeowner) to allow for future access in an emergency. Locks to be placed both sides of the gate so that both sides can be padlocked. One with EA 16B padlock, the other with a combination lock given to the homeowner

Remove vegetation to allow for installation of hit and miss fencing. (to be discussed and agreed with homeowner)

Supply and install 6 x combination padlocks

Thin out tree canopy to approximately 5 trees to increase light to the defence embankment.

Supply and lay turf in larger areas with no grass cover. Smaller patches of bare earth on the bund to be covered with seeded topsoil

Reset Thames Water manhole cover within the area between existing palisade fence and 11 Welbeck Close Relevant internal Engineer to sign off all designs before they are progressed to construction phase

Supply and install Heras fencing for security and temporary works as required.

Supply and install Temporary netting in areas to be seeded to stop public walking over

Removal and dispose of all waste from site and supply transfer notes to the project manager

## **SITE 2 - BOURNE DITCH (SPITALFIELD) FLOOD DEFENCE RESERVOIR**

The contractor will supply Preliminaries and supervision throughout the whole project

Preparation of a detailed Construction Phase Plan (CPP) in accordance with the SHEW Code of Practice and any other information critical to be produced and accepted by the Client before commencement on site. The production of a Waste Management Plan. Maintenance and adherence to the Environmental Action Plan (EAP).

All licences, permits and approvals necessary to complete the works (Contractor to detail)

Production of detailed design and drawings which need to be signed off by a qualified CE

GPR survey of areas of intrusive works and other areas as deemed necessary by Contractor

Precondition photographic survey of working areas and access routes and photographs and video footage both prior to removal of old surfaces of embankment and spillway, and fencing and gates, etc and after installation of the new fencing gates and embankment for comparative purposes

Mobilization to site and set up site compound with safety signage

Defence wall - Remove existing expansion joint seals that have rotted and remove any vegetation or loose concrete within the joints. Clean joints of any debris

Supply and install suitable joint sealant into cracks on the wall to make it resistant to water pressure from any reservoir impoundment

Fill any areas of desiccation or burrows along the flood defence, with compacted topsoil and grass seed

[REDACTED]  
[REDACTED] as it can become boggy and slippery in wet weather. Crest level should be maintained at 27.4m AOD along the length of the defence at this point, and 26.9m AOD at the spillway

[REDACTED]  
[REDACTED] along the length of the defence at this point, , and 26.9m AOD at the spillway

Design by [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] crossings on the upstream [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] mitre area (connection between the embankment dam and the adjoining land) to make it less susceptible to scour.

Remove large vegetation, rubble and trees from the mitre area, and locate manhole. Supply material and Install the newly designed mitre area (connection between the embankment dam and the adjoining land) to make it less susceptible to scour

Reset manhole sections and cover within bund once found, Supply and lay turf suitable for the area

Left Wing Embankment (saddle embankment, near housing) made good damage to the headwall on downstream slope

flood kerb along the upstream side of the crest- Fill any gaps between the flood kerb and the concrete, with a suitable flexible sealant. Top with grass seeded topsoil to encourage grass growth

Break out and Replace any broken or loose flood kerbs along the embankment to the correct level

Right Wing Embankment 1 (east of track over embankment) Design a new track crossing over the embankment at the low point where the crest profile has been rounded and is below the standard of protection

Supply and reinstate the full crest width/level of the defence using a suitable hardwearing surface that will withstand vehicular movement

Supply and Fill desiccation cracks along the bund with sand then compact with seeded topsoil

Fill deeper burrows and cracks along the bund by removing loose topsoil, benching cohesive embankment material and replacing with seeded topsoil. All burrows to be checked by EA operatives to ensure they are not inhabited

Design a post and rail fence in keeping with others on site; to be positioned along the exposed flood defence wall on the upstream face to prevent slips and falls by the public climbing the wall. Get design signed off by trained PSRA inspector and ARPE before construction

Supply and install a wooden post and rail fence (as seen elsewhere on site) to prevent slips and falls from the flood defence wall.

Design a reinforced bank either side of the watercourse immediately upstream of the trash screen which has been eroded by dogs entering the water

Supply and install materials to reinforce the banks immediately upstream of the trash screen

Relevant internal Engineer to sign off all designs before they are progressed to construction phase

Supply and install Heras fencing for security and temporary works as required.

Supply and install Temporary netting in areas to be seeded to stop public walking over

Supply and install Heras fencing around ancient trees close to the embankment to safeguard from possible damage during the works

Removal and dispose of all waste from site and supply transfer notes to the project manager

### **SITE 3 - STOCKLAKE FLOOD DEFENCE RESERVOIR**

1. Significant vegetation has established on the embankment over many years. Recent S10 inspection resulted in a statutory maintenance action to remove all vegetation from the embankment with the aim of restoring good swards of grass. The vegetation consists of small to medium sized trees surrounded by dense shrubs. We require the entire embankment to be cleared of all vegetation including a 1m strip away from the toe on the downstream side and a strip from the upstream toe to the boundary fence along the entire length of the embankment. All arising's to be removed off site for disposal.

Following the vegetation clearance, all stumps to be ground out to 50mm below ground level including areas of vegetation previously cleared by EA field team. Embankment surfaces to be cleared of all woody debris and prepared for sowing grass seed. All woody debris to be removed off site for disposal.

Sow grass seed (seed mix to be confirmed)

2. The control structure (flume) located at the spillway midpoint passes the stocklake brook through the embankment and allows the flood storage area to impound flood water once the inflow is greater than the designed discharge flow. The structure is constructed from reinforced concrete and includes concrete steps either side of the structure, which are cantilevered off the main control structure. Over time, a combination of settlement and burrowing animal activity has undermined the stairs on both sides of the flume.

We require the voids to be back filled using a cement based material to avoid further damage to the embankment, in particular the clay core. Imported material is required to be well compacted to ensure all the voids are filled.

3. Two m<sup>2</sup> section of tarmac located on embankment crest footpath near to the left side of the flume to be broken up and re used elsewhere on site. Footpath level at this location to be reinstated to design level indicated by existing flood curbs. If identified that the flood curbs under the tarmac have been previously removed, we require new flood curbs to be re-laid to tie into existing curb line and level (EA to supply curbs) Broken up tarmac can be used on site to improve footpath at eastern access point to the embankment footpath.

### **SITE 4 – BEAR BROOK FLOOD DEFENCE RESERVOIR**

1. There are many mature Willows trees located along the Bear Brook alignment through the flood storage reservoir. Several of the Willow trees require maintenance to ensure public safety and to avoid them outgrowing their locations. We require six Willow trees (identified with spray paint marking) to be pollarded. All arising's to be removed off site for disposal.

2. . Over many years the weir structure and the upper pond has fully silted up resulting in the flood storage area not operating as designed.

The weir is covered with vegetation including 300mm (approx) of silt. The contractor is required to carefully remove all vegetation and material from the weir structure avoiding damage to the concrete armourflex weir surface, allowing detailed asset inspection. The weir structure is 22m in length.



outline of the dredging area is shown on the map showing the dredge area located in PCI appendices.

The excavation depths in the pond adjacent to the weir is required to be 1m below crest level of the weir or down to firm ground, whichever comes first. The 3m wide channel to the culvert is required to be 500mm below crest level of the weir or down to firm ground whichever comes first. The excavated silt is to be left on site and placed as far to the sides of the excavation area as the machine boom will allow. Long reach excavator will be required for this task.

3. The Western embankment has a toe drain located along the downstream side of the embankment. We require all toe drain manhole lids and frames to be inspected, repaired or replaced accordingly. We require each toe drain manhole frame to be securely attached to its base and that each lid can easily be lifted for periodic toe drain chamber inspections. The *contractor* is required to clear out debris from manhole chambers and flush through drain to outfall. All blockages in toe drain to be jetted with water to free up blockages. All findings and observations to be compiled in a report.
4. The existing boundary between flood storage reservoir and Canal towpath consists of intermittent natural hedge. We require short sections of timber post and rail fence to be erected in selected locations along the boundary line with Canal towpath to improve the fence line, which will encourage pedestrians to use existing formal access points. (Exact locations TBC during site visit) Total length of required new fence approximately 20m.

New timber fence to consist of 100mm x 100mm posts and three 75mm x 50mm horizontal rails connecting the posts. All timber to be tanalized and FSC certified.

## 2. Drawings

List the drawings that apply to the contract.

Drawing Number	Revision	Title

## 3. Specifications

List the specifications which apply to the contract.

Title	Date or Revision	Tick if publicly available
Environment Agency Blockage Management Guide (Gov.uk)	12/2019	yes
Latest Ciria Guidance: Culvert, screen and outfall manual - New CIRIA guidance	12/2019	yes
SHEW CoP – Constructing a Better Environment.	2018	Yes

## 4. Constraints on how the *Contractor* Provides the Works

**State any constraints on the sequence and timing of work and on the methods and conduct of work including the requirements for any work by the *Client*.**

The *Contractor* shall not commence any work on the *site* until the *Client*, or their representative, has accepted the method statements and risk assessments related to this contract.

The *Contractor* is to prepare, for the *Client*'s acceptance, the Construction Phase Plan (CPP) prior to starting the *works*

The *Contractor* shall notify the *Client* of any issues that may affect residents or the public and the dates and times of expected disturbances.

Due to the proximity to residential housing, noise levels shall be monitored and kept to a minimum whenever possible.

The projects have been screened by the Environment Agency's National Environmental Assessment Service (NEAS) as low risk, however, the *Contractor* should manage all activities in line with the Environmental Action Plan (EAP) for each project to minimise and mitigate environmental risks e.g. pollution.

The *Contractor* shall notify the *Client* of any issues that may affect residents or the public and the dates and times of expected disturbances.

The *Contractor* (or any of his *Sub Contractor*s or suppliers) shall not publish information about the works or use the site to demonstrate equipment or material to third parties without the written acceptance of the *Client*.

Public rights of way to be maintained throughout the works

Trees and grassland within SSSI at Bourne Ditch must be protected from damage

The *Contractor* shall not commence works on filling burrows until the *Client*, or their representative have checked for animals.

Careful consideration is required in respect to plant used on the sites, due to restrictive crest levels and possible damage to the flood defence.

### **Working times**

The *Contractor* will be permitted to work between 8.00am and 6.00pm on weekdays (Monday to Friday)

No work will be permitted outside of these hours or on Public Holidays without the prior written acceptance of the *Client*.

Delivery restrictions are limited to normal working hours as stated above.

## 5. Requirements for the programme

The *Contractor* submits his programme with the *Contractor*'s Offer for acceptance. The *Contractor* shows on each programme which he submits for acceptance (in form of Gantt chart showing the critical path, proposed order and timing to undertake the works and proposed plant and labour resources) the following:

- (a) Period required for mobilisation/ planning & post contract award
- (b) Design activities
- (c) Contractor start date
- (d) Construction starting date
- (e) Each of the activities listed within the Price List
- (f) Any key third party interfaces: lead in periods for materials and sub-contractors; time required to obtain consents/waste permits; stated constraints; *Contractor*'s risks.
- (g) Completion date
- (h) Anything required from the client



[REDACTED]




# Proposed sub-contractors

	Name and address of	Nature and extent of work
1.		Contract package excluding design, jointing works, steel specialist vacuum silt removal
2.		vacuum silt removal at Bear Brook weir site
3.		
	Form of Contract:	
4.	Form of Contract:	