Engineering and Construction Short Contract

Contract Data Forms

June 2017
(with amendments January 2023)

Template version history

V1 (as per bidder pack)	Go live template (this document)

NEC4 Engineering and Construction Short Contract

A contract between	**The Environment Agency** **Horizon House** **Deanery Road** **Bristol** **BS1 5AH**
And	**Land & Water Services Ltd**
For	**EMB Crofts and Laughterton Embankments repair works**
	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 *Client* is	
Name	Environment Agency	
Address for communications	[redacted]	
Address for electronic communications		
The *works* are	Embankment repair works	
The *site* is	Multiple locations: • 2-298_EMB_Crofts • 2-302_EMB_Laughterton	
The *starting date* is	01/05/2025	
The *completion date* is	31/03/2026	
The *delay damages* are	*nil*	Per day
The *period* for reply is	2	weeks
The *defects date* is	52	weeks after Completion
The *defects correction period* is	4	weeks
The *assessment day* is	the last working day	of each month
The *retention* is	nil	%

The United Kingdom Housing Grants, Construction and Regeneration Act (1996) **does** apply
The *Adjudicator* 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 *Adjudicator*. The application to the Institution includes a copy of this definition of the *Adjudicator*. The referring Party pays the administrative charge made by the Institution. The person appointed is also *Adjudicator* for later disputes.

Contract Data

The *Client's* Contract Data

The interest rate on late payment is		% per complete week of delay.
Insert a rate only if a rate less than 0.5% per week of delay has been agreed.		
For any one event, the liability of the *Contractor* to the *Client* for loss of or damage to the *Client's* property is limited to	The Contract Price	
The *Client* provides this insurance	None	

Insurance Table

Event	**Cover**	**Cover provided until**
Loss of or damage to the *works*	Replacement Cost	The *Client's* certificate of Completion has been issued
Loss of or damage to Equipment, Plant and Materials	Replacement Cost	The defects Certificate has been issued
The *Contractor's* 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	Minimum £5,000,000 in respect of every claim without limit to the number of claims	

employee of the *Contractor*) arising from or in connection with the *Contractor's* Providing the Works		
Liability for death of or bodily injury to employees of the *Contractor* 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 *Contractor* to use the skill and care normally used by professionals providing works similar to the works	Minimum Contract Price 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 *Adjudicator nominating body* is	The Institution of Civil Engineers
The *tribunal* is	litigation in the courts

The *conditions of contract* are the NEC4 Engineering and Construction Short Contract June 2017 (including 2023 amendments) and the following additional conditions

Only enter details here if additional conditions are required.

Z1.0	Sub-contracting
Z1.1	The *Contractor* submits the name of each proposed subcontractor to the *Client* for acceptance. A reason for not accepting the subcontractor is that their appointment will not allow the *Contractor* to Provide the Works. The *Contractor* does not appoint a proposed subcontractor until the *Client* has accepted them.
Z1.2	Payment to subcontractors and suppliers will be no more than 30 days from receipt of correct invoice.
Z2.0	Environment Agency as a regulatory authority
Z2.1	The Environment Agency's position as a regulatory authority and as *Client* 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 *Contractor* is responsible for obtaining these and paying fees (unless stated otherwise in the Scope). The *Client's* acceptance of a tender and the *Client's* 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 *Client* and is not a compensation event.
Z3.0	Confidentiality & Publicity
Z3.1	The *Contractor* may publicise the works only with the *Client's* 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 *Client* but is not warranted correct. The *Contractor* 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 *Contractor* to ensure the use of skill and care normally used by professionals providing similar design services.
Z6.2	The *Contractor* designs the parts of the works which the Scope states they are to design.

Z6.3	The *Contractor* submits the particulars of their design as the Scope requires to the *Client* for acceptance. A reason for not accepting the *Contractor's* design is that it does not comply with either the Scope or the applicable law. The *Contractor* does not proceed with the relevant work until the *Client* has accepted this design.
Z6.4	The *Contractor* 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 *works* are affected by any one 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 *Contractor* and sub-contractors • 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 device or thing dropped from them
Z8.0	Framework Agreement
Z8.1	The *Contractor* shall ensure at all times during this contract it complies with all the obligations and conditions of the Framework Agreement made with the *Client*.
Z9.0	Termination
Z9.1	Delete the text of Clause 92.3 and replace with: If the *Contractor* 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 *Client's* Contract Data, Scope and Site Information particular to an individual project is contained within its Site Specific Pack~~
Z110	Inflation At the Contract Date the total of the Prices does not include a sum to cover inflation. The total of the Prices [at the Contract Date] shall be adjusted by a fixed number of Price Adjustments. The number of Price Adjustments shall be equal to: The number of months between the Completion Date included at the *starting date* and the Contract Date.

	The proportion of Price Adjustment shall be equal to: The total of the Prices at the Contract Date / The number of Price Adjustments Each time the amount due is assessed, the Price Adjustment shall be: The proportion of Price Adjustment x [80% x Construction Output Price Indices (OPIs) New work output prices: Infrastructure Index 1 – month rate] The Construction Output Price Indices (OPIs) New work output prices: Infrastructure Index 1 – month rate shall be the value determined by the Office of National Statistics for the applicable month of the amount due assessment Provided always that the fixed number of Price Adjustments has NOT been exceeded. The Price Adjustment adjusts the total of the Prices. If a compensation event under this contract omits original Scope covered by the total of the Prices at the Contract Date the Price Adjustments made under this clause shall be corrected accordingly.

Contract Data

The *Contractor's* Contract Data

	The *Contractor* is
Name	Land & Water Services Ltd
Address for communications	[redacted]
Address for electronic communications	
The *fee* percentage is	
The *people rates* are	
category of person	

The *published list of Equipment* is	As AOMR Lot1 Year 2 Framework
The *percentage for adjustment for Equipment* is	As AOMR Lot1 Year 2 Framework

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 Prices is	[redacted]
	Enter the total of the Prices from the Price List.

Signed on behalf of the *Contractor*

Name	[redacted]
Position	
Signature	
Date	

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

Signed on behalf of the *Client*

Name	[redacted]
Position	

Signature	[redacted]	
Date		

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.

Item Number	Description	Unit	Quantity	Rate	Price
1.0	**Crofts**				
1.1	Advanced Works	Item			
1.2	Preliminaries	Item			
1.3	Site Supervision, Liaison and Project Management	Item			
1.4	Temporary Works	Item			
1.5	Permanent Works				
	Repair works - low sections and rutting (site won topsoil/subsoil)	m2			
	Repair works - excavation, clay filling, site won topsoil, and netting	m2			
	Repair works - removal and replacement of fencing	m			
1.6	Hand Over Documents	Item			
2.0	**Laughterton**				
2.1	Advanced Works	Item			
2.2	Preliminaries	Item			
2.3	Site Supervision, Liaison and Project Management	Item			
2.4	Temporary Works	Item			

2.5	Permanent Works		
	Repair works - low sections and rutting (site won topsoil/subsoil)	m2	2
	Repair works - excavation, clay filling, site won topsoil, and netting	m2	1
	Repair works - removal and replacement of fencing	m	
2.6	Hand Over Documents	Item	
	The total of the Prices		

The method and rules used to compile the Price List are

"This contract is priced and awarded in Year 2, based on the Year 2 Framework Pricing Workbook. ~~After the Year 2 Framework Pricing Workbook is issued, a single compensation event is permitted to change the total of the Prices according to the Year 2 Framework Pricing Workbook."~~

Civil Engineering Standard Method of Measurement 4th edition (CESMM4) as per the Framework Price Workbook.

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*

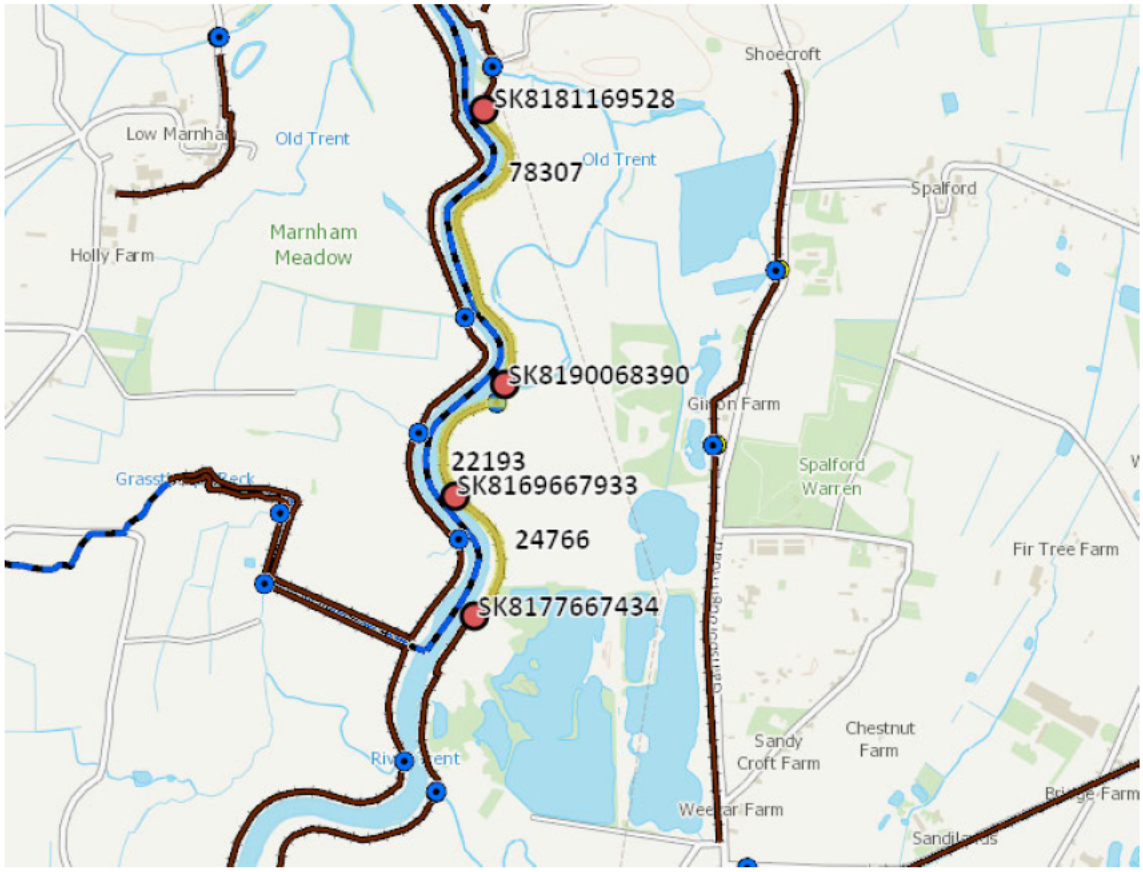
Give a detailed description of what the *Contractor* is required to do and of any work the *Contractor* is to design.

The Environment Agency (the *Client*) maintains a number of flood embankment assets that were impacted by Storm Babet & Henk. This scope refers to remedial works to be undertaken at the Crofts Embankment and the Laughterton Embankment.

The works shall be undertaken considering all required environmental, programme and cost considerations whilst also complying with all relevant *Client* good practice and guidance. Where compliance is not possible, reasonable justification must be provided and a written agreement shall be made with the *Client*.

Croft Embankment.

The Crofts embankment is a flood defence located on the right bank of the River Trent at National Grid Reference Extents: SK8177667434 to SK8181169528, AIMS ID(s): 24766, 22193 and 78307. The embankment consists of a total length of 2581m and crest levels varying from +7.01 to +7.32 mAOD.

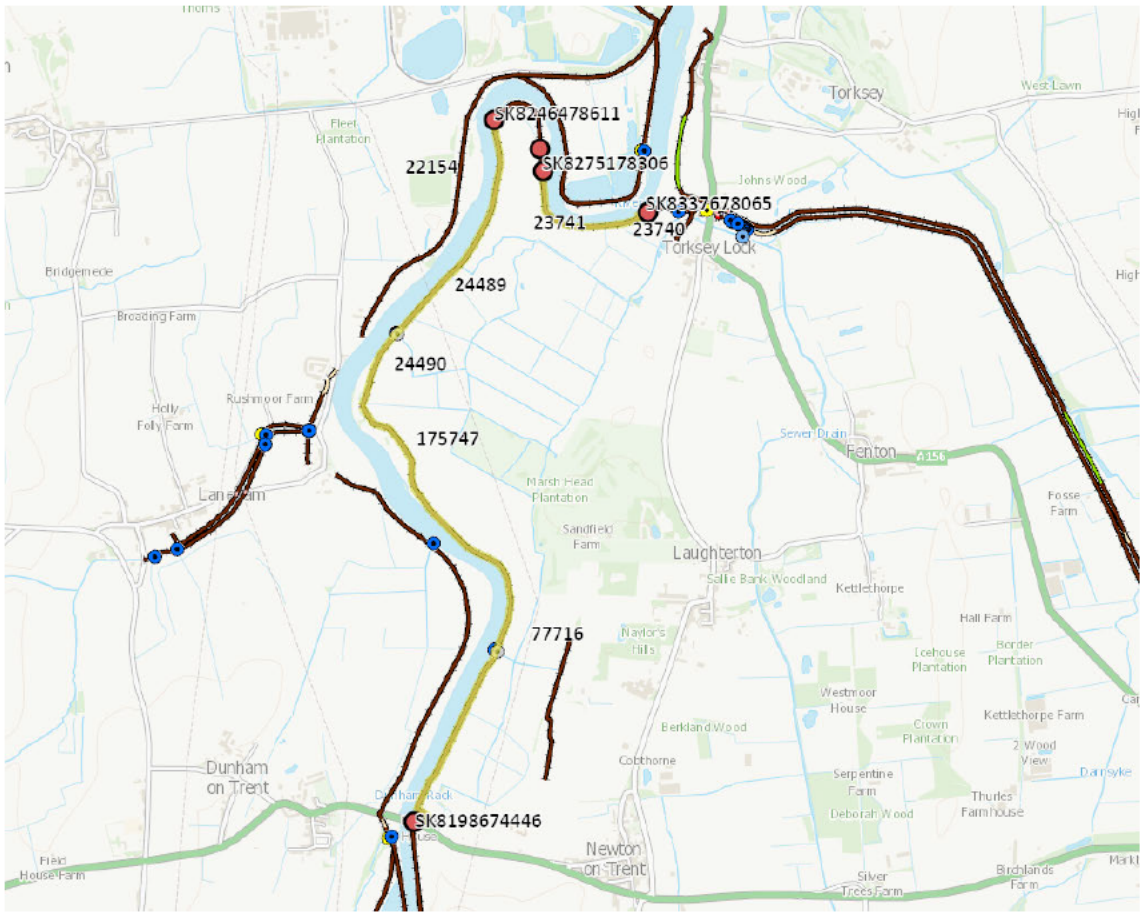


The scope of works comprises Option 2 repairs as per the Initial Assessment Report contained in Appendix A.

The works can be undertaken under a FRA14 Exemption (Repairing bank slips and erosion using the fallen materials); the *Contractor* is responsible for obtaining the FRA14 Exemption.

Laughterton Embankment.

The Laughterton embankment is a flood defence located on the right bank of the River Trent, at National Grid Reference Extents: SK8198674446 to SK8246478611 & SK8275178306 to SK8337678065, AIMS ID(s): 77716, 23740, 23741, 22154, 24489, 24490 AND 175747. The embankment consists of a length of 6604m and crest levels varying from +6.2 to +7.1 mAOD.



The scope of works comprises Option 2 repairs as per the Initial Assessment Report contained in Appendix A.

The works can be undertaken under a FRA8 Exemption (Maintaining a raised river defence or sea defence); the *Contractor* is responsible for obtaining the FRA8 Exemption.

General Requirements

The *Contractor* will undertake a pre-condition survey prior to the start of works (to include as a minimum accesses, adjacent land, storage and compound). These areas must be reinstated prior to the *Contractor* leaving site.

The *Contractor* must make good any damage caused during the works.

The *Contractor* shall safeguard the site, the works, products, materials, and any existing structures affected by the works from damage and theft.

All regular testing and material certifications used on site shall be recorded and shared with the *Client* during the works.

The *Contractor* shall be familiar with all information shared by the *Client* in the project folder on SharePoint.

Construction works:

The *Contractor* will provide the following after the *Client* has accepted the CPP and agreed the start date:

- Construction work required to deliver the scope of works for each location
- Ongoing liaison with the Principal Designer (if PD is required)
- *Contractor* to take photos at the first and the last day of each working week to show the progress of the works. Photos to be saved in project folder on SharePoint weekly and shared with the *Client*
- *Contractor* to engage with the Stakeholders
- Carbon reporting to be carried out in line with the guidelines provided on the EA AOMR Framework requirements
- A final site visit to be arranged by the *Contractor* with the *Client* and the Senior User after the completion of works
- Provides information for Health & Safety File about the completed works including any electronic copies of the as-built drawings and/or details of installed crack monitoring gauge, in both pdf and dwg formats;
- Copies of all certificates of materials testing carried out as part of the work

The *Contractor* shall assume that ground conditions require no supplementary ground improvements and that any excavated material is inert. The ground conditions allow excavation utilising a machine bucket with no hard obstructions

Access to working areas; is shown in the respective Initial Assessment Reports contained in Appendix A. The works may involve access to private land, initial introductions and any ongoing matters concerning powers to undertake the works will be undertaken by the *Client*. The details for known contacts will be provided by the *Client* and the *Contractor* will work collaboratively with the *Client* to engage with the stakeholders. It is therefore envisaged that input from the *Contractor's* Public Liaison Officer will be required.

Based on the location of the works, welfare facility shall be proportionate and shall have minimum impact of works on the local residents.

Utility Services

The *Contractor* is to identify and mark up all overhead and underground cables following the requirements of the *Client*'s SHEW CoP. Where services are identified, suitable control measures are required prior to work commencing.

The *Contractor* shall assume no impact on the works from services or utilities.

Methodology Statement

Prior to the start of construction work, the *Contractor* must produce a Construction Phase Plan that, amongst other things, contains:

- A schedule of activities for which risk assessments and method statements must be prepared;
- The *Contractor* arrangements for the preparation and approval of risk assessments and method statements;
- The schedule of risk assessments and method statements must meet the requirements of the Construction Design and Management Regulations;
- The *Contractor* will be free to add to the schedule as the work progresses.
- The *Contractor* will ensure the risk assessments and method statements for each operation includes;
    - Risk assessments of the work;
    - People and resources proposed;

- Timing and sequencing of construction, materials, plant and equipment;
- Details of temporary works;
- Indication of activities that represent a higher level of safety, health and environmental risk;
- Safety, health and environmental controls proposed; and
- Any permit to work proposals, if required.

The *Contractor* submits the required risk assessments and method statements to the *Client* two weeks before starting the tasks to which they refer. The *Contractor* must ensure that risk assessments and method statements are approved by the authorised individual within their own organisation before submission.

Method statements shall include full particulars of the methods, timing and sequence of construction.

The *Contractor* must obtain any CPP approvals required by a PD where appointed or by the *Client*. The *Contractor* does the work in accordance with the method statement.

Contractor shall be familiar with ecological constraints identified in the draft PCI document before the works starts. Any new and additional ecological constraints will be treated as change.

CDM Requirements

The *Contractor* shall assume the role of Principal *Contractor* upon award of the Contract and receipt of the PC appointment letter from the *Client*.

The *Contractor* is required to liaise with the *Client*'s CDM Principal Designer (where applicable).

If required a copy of the HSE Notification (F10) shall be provided to the *Contractor* by the Principal Designer prior to commencement of the works and be put up in a visible location on site

The *Contractor* shall be cognisant of the CDM Pre-construction Information, the AOMR Framework Requirements and the current SHEW CoP. The *Contractor* shall ensure that all parties under sub-contract are cognisant of the requirements of these documents.

The *Contractor* shall prepare the Construction Phase Plan before work commences on site. The *Contractor* shall issue the Construction Phase Plan to the *Client* for acceptance. The Construction Phase Plan must be accepted by the *Client* before work can commence on site.

Completion

Prior to Completion, the *Contractor* provides the following information in electronic format to the *Client* or Principal Designer (if appointed) for inclusion in the Health & Safety File:

a. Description of the works including quantities of materials and photographs
b. COSHH – lists substances hazardous to health & specific precautions that must be taken as a result of their presence;
c. Information on any unforeseen hazards encountered during construction;
d. Residual hazards & risk assessment; and
e. *Contractor* to undertake a photographic condition survey on completion of the works and provide a copy to the *Client*.

The above list is not exhaustive and reference is required to *Client*'s Health & Safety File requirements. The *Contractor* shall make allowance in their programme for liaison with the Principal Designer and the *Client* in providing the relevant information for the Health & Safety File prior to Completion.

The works required to be done by the Completion Date is:

- The whole of the works.

On Completion, the *Contractor* returns the roads, footpaths, car parks and any other areas affected by the works to a condition not inferior to that pertaining at the commencement of the works. All debris, unused materials, equipment and temporary works are to be dismantled and cleared from the site.

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
Earthworks Specification (Appendix B)	Contract Date	Yes (Appendix B)

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*.

Working times

The *Contractor* will be permitted to work between 7.30am and 6.00pm on weekdays (Monday to Friday)

5. Requirements for the programme

State whether a programme is required and, if it is, state what form it is to be in, what information is to be shown on it, when it is to be submitted and when it is to be updated.

State what the use of the *works* is intended to be at their Completion as defined in clause 11.2(1).

The *Contractor* submits his programme with the *Contractor's* Offer for acceptance. The *Contractor* shows on each programme which they 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) starting date

(c) Each of the activities listed within the Price List

(d) 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.

(e) Completion date

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

Describe what the *Client* will provide, such as services (including water and electricity) and "free issue" Plant and Materials and equipment.

Item	**Date by which it will be provided**

Site Information

Refer to Initial Assessment Reports contained in Appendix A

Proposed sub-contractors

	Name and address of proposed subcontractor	Nature and extent of work
1.	Form of Contract:	
2.	Form of Contract:	
3.	Form of Contract:	

4.	Form of Contract:	

Appendix A
Initial Assessment Reports

Initial Assessment - Crofts

Initial Assessment - Laughterton

Appendix B
Earthworks Specification

Embankment damaged in excess of 300mm in depth (including the rectification of vermin damage)

Topsoil

Locally sourced or imported material as required.

If locally sourced, material should be sourced and pre-tested prior to any works to make sure it meets the following specification: -

If the material is imported then certificates should be provided to show the soil meets the following specification: -

1. Topsoil shall not contain stones greater than 20mm in size, nor have a stone content exceeding 10% by mass.

2. Topsoil shall have a clay content of between 10 and 20%. This should be based upon a visual assessment on site.

3. Topsoil shall be free of propagules e.g. stolons, rhizomes, or other vegetative fragments or seeds of aggressive perennial weeds such as couch grass, docks, Japanese Knotweed, and Himalayan Balsam. The material shall also be free of sticks, subsoil, foreign matter and contaminants and shall be from an approved source.

Embankment Material

1. The basis of the design of earthworks embankments is the use of a sandy/silty clay, with properties as shown in the table below. As indicated by the grading, the material shall contain generally not less than 15% or more than 35% clay, with the remainder being well graded sand, silt and gravel. Stones greater than 100mm size shall not be incorporated in the fill material.

TABLE A

Location	Minimum Undrained Shear Strength	Dry Density	Moisture Content	Grading	
				Particle Size (mm)	% Passing
Embankments	60 kN/m²	95% of Standard Proctor	Optimum -1% to Optimum +3%	100	100
				60	95-100
				2	75-100
				0.06	40-80
				.002	15-35

Locally sourced or imported material as required.

If locally sourced, material should be sourced and pre-tested prior to any works to make sure it meets the specification.

If the material is imported then certificates should be provided to show the soil meets the specification.

2. The Contractor shall submit results of testing of samples from any of the above sources to the Project Manager for reference. Approval of a source of material shall not be construed as constituting approval of material contained therein and approval may be withdrawn by the Employer if the properties of the material are shown to be subsequently out with the specification. For large quantities of fill material, testing of materials should be carried out at a rate of one sample every 100m³ or as otherwise directed by the Employer. For smaller quantities of fill material, testing of materials should be carried out at a rate of one sample for each and every location (for either site won material or imported material) or as otherwise directed by the Employer.

3. Laboratory compaction tests to establish maximum dry density and optimum moisture content shall be carried out on a sample taken from all sources at the rate of at least two samples from different locations within the source (either site won locations or imported). Test results shall be provided to the Employer prior to the start of use of material from the source.
4. Materials for placing in embankments shall be processed/mixed in temporary storage areas or before delivery to the site to remove deleterious material such as stone and adjust soil fractions as are necessary to comply with the specification or to adjust moisture contents prior to hauling to placement areas.
5. Prior to the commencement of the earthworks the Contractor shall submit to the Employer for perusal a method statement detailing preparation, protection and use of borrow areas and other sources. The statement shall include the methods of processing, mixing and stockpiling and details of the equipment and plant to be employed.
6. All embankment materials used in the works shall be free from leachates and other materials which are harmful to the natural environment of the site. Fill materials shall be free from Rhizomania and other diseases and also from unwanted plant species.
7. Where materials from the existing embankments or adjacent borrow areas do not comply with the specified requirements, the Contractor may be permitted to mix the materials with imported materials in the storage areas to achieve the required properties. The Contractor shall provide mixing proposals to the Employer for perusal.
8. Where local materials are available by agreement, testing must be undertaken to determine if the material complies with the above specification. Results to be provided to the Employer prior to any works.

Procedure

(The following is the proposed method of works. The Contractor may offer an alternative as long as the minimum conditions are met following testing).

1. Where embankments / flood bunds subject to vermin damage are being repaired, the resident vermin is to be eradicated prior to works commencing. In the case of badgers, the relevant badger licence is to be obtained from Natural England, and the badgers excluded from the area via the EA FBG team (or other suitably certified body).
2. Strip the topsoil where the vermin damage / defect is located.
3. In the case of vermin damaged areas, the full length of all burrows, animal runs, chambers etc is to be fully exposed and excavated. The excavated area is then to be benched to receive the fill material (the bench height shall not exceed 500mm).
4. In the case of damage to embankments in excess of 300mm, but where no vermin damage is present, the defect is to be excavated. The excavated area is then to be benched to receive the fill material (the bench height shall not exceed 500mm).
5. Place the approved fill material in layers and compact in order to meet the requirements of: -

   ➢ Volume 1 – Specification for highway works, Series 600, Table 6/4

   The proposed method of compaction (i.e. the type of compaction plant to be utilised) will dictate the thickness of the layer of fill material to be placed, and the number of passes to achieve the required compaction.
6. Suitable site testing of the compacted fill material is to be undertaken at regular intervals to confirm that the requirements of Table A, above, have been met (i.e. compacted to a dry density not less than ninety-five per cent of the maximum dry density, undrained shear strength not less than 60KN/m2 and moisture content falls within the permitted range).

7. Trim the newly compacted fill material to the required lines, levels, gradients and profiles.
8. Place 150mm of topsoil, and compact by tracking-in.
9. Reinstate embankment to existing flood defence level.
10. Re-profile as required, and re-seed using amenity seed mix.

Testing

Undertake on fill material only: -

1. Hand shear vane testing shall be undertaken by the Contractor to determine undrained shear strength.

Embankment Repairs around headwalls:

- A minimum of 3no. Shear vane tests should be undertaken on each headwall (6no. Total) as minimum: layer around base of headwall, mid-height and top clay layer

Clay cut-off Trench along floodwall:

- A minimum of 2no. shear vane tests to be undertaken at 2no. locations along length of floodwall (4no. total)

2. A record must be kept, by the Contractor, of the testing locations and the shear strengths at those locations.

3. Test results are be provided to the Employer as work progresses.

Client representative to be present when these tests take place and records and photos to be taken of each location and reading