



**Framework:** Collaborative Delivery Framework  
**Supplier:** VolkerStevin Ltd  
**Company Number:** 00288392

**Geographical Area:** North West  
**Project Name:** Sluice Back Drain SOC to OBC ESE  
**Project Number:** ENV0002388C

**Contract Type:** Engineering Construction Contract  
**Option:** [REDACTED]

**Contract Number:** 37140

**Stage:** Other

Revision	Status	Originator	Reviewer	Date

**ENGINEERING AND CONSTRUCTION CONTRACT under the Collaborative Delivery Framework**  
**CONTRACT DATA**

**Project Name** Sluice Back Drain SOC to OBC ESE

**Project Number** ENV0002388C

This contract is made on  
between the *Client* and the *Contractor*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 01st day of April 2019 between the *Client* and the *Contractor* in relation to the Collaborative Delivery Framework. The entire agreement and the following Schedules are incorporated into this Contract by reference
- Schedules 1 to 21 inclusive of the Framework schedules are relied upon within this contract.
- The following documents are incorporated into this contract by reference

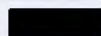
**Part One - Data provided by the *Client***

**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 the Secondary Options of the NEC4 Engineering and Construction Contract June 2017.

Main  
Option



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 *works* are

Provision of ESE Services to support the design options for Middlebank embankment in Crossens

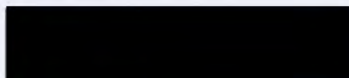
The *Client* is

Environment Agency

Address for communications

Horizon House  
Deanery Road  
Bristol  
BS1 5AH

Address for electronic communications



The *Project Manager* is

Address for communications

Environment Agency  
Richard Fairclough House  
Knutsford Road  
Latchford  
Warrington  
WA4 1HT

Address for electronic communications

The Supervisor is

to be advised by the Client

Address for communications

Address for electronic communications

The Scope is in

NEC4 ECC ESE Contract Scope - The Sluice/Back Drain V4

The Site Information is in

N/A

The boundaries of the site are

N/A

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 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 Contractor's main responsibilities

The key dates and conditions to be met are  
condition to be met

key date

'none set'

'none set'

'none set'

'none set'

'none set'

'none set'

The Contractor prepares forecasts of the total Defined  
Cost for the whole of the works at intervals no longer  
than

4 weeks

## 3 Time

The starting date is

16 September 2022

The access dates are  
part of the Site

date

all people, places & systems

16th September 2022

The Contractor submits revised programmes at  
intervals no longer than

4 weeks

The Completion Date for the whole of the works is

11 October 2023

The Client is not willing to take over the works before the Completion Date

The period after the Contract Date within which the Contractor is to  
submit a first programme for acceptance is

4 weeks

#### 4 Quality management

The period after the Contract Date within which the Contractor is to submit a quality plan is 4 weeks

The period between Completion of the whole of the works and the defects date is 52 weeks

The defect correction period is 2 weeks except that

- The defect correction period for is
- The defect correction period for is

#### 5 Payment

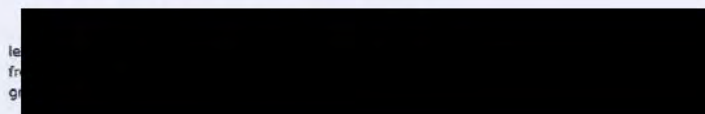
The currency of the contract is the £ sterling

The assessment interval is Monthly

The Client set total of the Prices is £55,360.00

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

The Contractor's share percentages and the share ranges are



#### 6 Compensation events

The place where weather is to be recorded is Crossens

The weather measurements to be recorder for each calendar month are

- the cumulative rainfall (mm)
- the number of days with rainfall more than 5mm
- the number of days with minimum air temperature less than 0 degrees Celsius
- the number of days with snow lying at 09:00 hours GMT

and these measurements:

- 1.
- 2.
- 3.
- 4.
- 5.

The weather measurements are supplied by the Met Office

The weather data are the records of past weather measurement for each calendar month

which were recorded at Crossens

and which are available from The Met Office

Assumed values for the ten year weather return weather data for each weather measurement for each calendar month are

Jan	Jul
Feb	Aug
Mar	Sep
Apr	Oct
May	Nov
Jun	Dec

These are additional compensation events

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



5. 'not used'

## 8 Liabilities and Insurance

These are additional *Client's* liabilities

1 'not used'

2 'not used'

3 'not used'

The minimum amount of cover for insurance against loss of or damage to property (except the *works*, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor* Providing the Works for any one event is

The minimum amount of cover for insurance against death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with the contract for any one event is

not less than the amount required by law

The insurance against loss of or damage to the *works*, Plant and Materials is to include cover for Plant and Materials provided by the *Client* for an amount of

## Resolving and avoiding disputes

The *tribunal* is litigation in the courts

The *Senior Representatives* of the *Client* are

Address for communications

Environment Agency  
Richard Fairclough House  
Knutsford Road  
Latchford  
Warrington  
WA4 1HT

Address for electronic communications

Name

Address for communications

Address for electronic communications

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 Correctness of Site Information and other documents

Z1.1 Site Information about the ground, subsoil, ducts, cables, pipes and structures is provided in good faith by the *Client*, but is not warranted correct. Clause 60.3 does not apply to such Site Information and the *Contractor* is responsible for checking the correctness of any such Site Information they rely on for the purpose of pricing for or providing the *works*.

Z1.2 Information regarding construction methods or processes referred to in pre contract health and safety plans are provided in good faith by the *Client* but are not warranted correct (except for the purpose of promoting high standards of health and safety) and the *Contractor* is responsible for checking the correctness of any such information they rely on for the purpose of pricing for, or providing the *works*.

### Z 2B: Water levels: *Contractor's risk*

Clause 60.1 (12) second bullet point is amended to: "are not weather conditions or floods and"

### Z3 Prevention: No change to prices

Delete first sentence of clause 62.2 and replace with:

"Quotations for compensation events except for the compensation event described in 60.1(19) comprise proposed changes to the Prices and any delay to the Completion Date and Key Dates assessed by the *Contractor*. Quotations for the compensation event described in 60.1(19) comprise any delay to the Completion Date and Key Dates assessed by the *Contractor*."

Delete 'The' At start of clause 63.1 and replace with:

"For the compensation event described in 60.1(19) the Prices are not changed. For other compensation events the..."

## **Z 4 The Schedule of Cost Components**

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

## **Z 6 Payment for Work**

Delete existing clause 11.2 (31) and replace with:

"11.2 (31) The Price for Work Done to Date is the total Defined Cost which the *Project Manager* forecasts will have been paid by the *Contractor* before the next assessment date plus the Fee, not exceeding the forecast provided under clause 20.4 and accepted by the *Client*."

## **Z 7 Contractor's share**

After c154.2 and before c154.3, insert the following additional clause:

54.2A If, prior to Completion of the whole of the works, the Price for Work Done to Date exceeds 110% of the total of the Prices, the amount in excess of 110% of the total of the Prices is retained from the Contractor.

## **Z10 Payments to subcontractors, sub consultants and**

Subcontractors

The *Contractor* will use the NEC4 contract on all subcontracts for works. Payment to subcontractors will be 28 days from the assessment date.

If the *Contractor* does not achieve payments within these time scales then the *Client* reserves the right to delay payments to the *Contractor* in respect of subcontracted work, services and supplies.

Failure to pay subcontractors and suppliers within contracted times scales will also adversely affect the *Contractor's* opportunities to work on framework contracts.

## **Z16 Disallowed Costs**

Add the following bullets to clause 11.2 (26) Disallowed costs

- was incurred due to a breach of safety requirements, or due to 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 result of rectifying a non-compliance with the Framework Agreement and/or any call off contracts following an audit.

## **Z19 Linked contracts**

Delays and additional cost on this contract resulting from the *Contractor's* fault or error on a previous contract on this project or programme will be a Disallowable cost under this contract and not be a Compensation event under this contract.

## **Z21 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 *Project Manager's* certificate.

Delete existing clause 51.2:

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 *Project 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

## **Z22 Resolving Disputes**

Delete W2.1

## **Z23 Risks and insurance**

Replace clause 84.1 with the following

Insurance certificates are to be submitted to the Client on an annual basis.

## **Z30 Material Price Volatility**

The *Client* recognises the ongoing pricing uncertainty in relation to materials for the period from 1 July 2021 to 30 June 2023 the *Client* will mitigate this additional cost through this clause. Payment is made per assessment based upon a general average material proportion within assessments, calculated at 40%.

### **Z30.1 Defined terms**

- The Latest Index (L) is the latest index as issued by the *Client*. The L, which is at the discretion of the *Client*, is based upon the issued consumer price index ((CPI) based upon the 12-month rate) before the date of assessment of an amount due.
- The Price Volatility Provision (PVP) at each date of assessment of an amount due is the total of the Material Factor as defined below multiplied by L for the index linked to it.
- Material Factor (MF) 40% is used, based on a general average material proportion across our programme. The volatility provision is only associated with material element. No volatility provision is applicable to any other component of costs.

### **Z30.2 Price Volatility Provision**

Through a Compensation Event the *Client* shall pay the PVP. PVP is calculated as:

$$\text{Assessment} \times \text{MF} \times \text{L} = \text{PVP}$$

If an index is changed after it has been used in calculating a PVP, the calculation is not changed and remains based upon the rate issued by the *Client*. The PVP calculated at the last assessment before 30 June 2023 is used for calculating the price increase after that date.

### **Z30.3 Price Increase**

Each time the amount due is assessed, an amount for price increase is added to the total of the Prices which is the change in the Price for Work Done to Date for the materials component only (and the corresponding proportion) since the last assessment of the amount due multiplied PVP for the date of the current assessment.

### **Z30.4 Compensation Events**

The *Contractor* shall submit a compensation event for the PVP on a monthly basis (where applicable) capturing Defined Cost only for the PWDD increase in month. Forecasted costs should only be considered for the June 2023 period compensation event.



Assessment Date	Defined Cost?	Forecasted Cost?
31 July 2021	In period costs only	No
31 August 2021	In period costs only	No
30 September 2021	In period costs only	No
31 October 2021	In period costs only	No
30 November 2021	In period costs only	No
31 December 2021	In period costs only	No
31 January 2022	In period costs only	No
28 February 2022	In period costs only	No
31 March 2022	In period costs only	No
30 April 2022	In period costs only	No
31 May 2022	In period costs only	No
30 June 2022	In period costs only	No
31 July 2022	In period costs only	No
31 August 2022	In period costs only	No
30 September 2022	In period costs only	No
31 October 2022	In period costs only	No
30 November 2022	In period costs only	No
31 December 2022	In period costs only	No
31 January 2023	In period costs only	No
28 February 2023	In period costs only	No
31 March 2023	In period costs only	No
30 April 2023	In period costs only	No
31 May 2023	In period costs only	No
30 June 2023	In period costs only	Forecasted costs for remainder of contract

The Defined Cost for compensation events is assessed using

- the Defined Cost at *base date* levels for amounts calculated from rates stated in the Contract Data for People and Equipment and
- the Defined Cost current at the date the compensation event was notified, adjusted to the *base date* by 1+PVP for the last assessment of the amount due before that date, for other amounts.

## 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 *Contractor* is to submit a first Information Execution Plan for acceptance is 2 weeks

The minimum amount of insurance cover for claims made against the *Contractor* arising out of its failure to use skill and care normally used by professional providing information similar to the Project Information is, in respect of each claim

The period following Completion of the whole of the *works* or earlier termination for which the *Contractor* maintains insurance for claims made against it arising out of its failure to use the skill and care is

6 years

### OPTION X18: Limitation of liability

The *Contractor's* liability to the *Client* for indirect or consequential loss is limited to

For any one event, the *Contractor's* liability to the *Client* for loss or damage to the *Client's* property is limited to

The *Contractor's* liability for Defects due to its design which are not listed on the Defects Certificate is limited to

The *Contractor's* total liability to the *Client* for all matters arising under or in connection with the contract, other than excluded matters, is limited to

The end of liability date is 6 years after the Completion of the whole of the *works*

### 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(UK2): The Housing Grants, Construction and Regeneration Act 1996

The period for payment is 14 days after the date on which payment becomes due

### Y(UK3): The Contracts (Rights of Third Parties Act) 1999

term beneficiary

not used not used



Part Two - Data provided by the Contractor

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.

1 General

The Contractor is

Name

VolkerStevin Ltd

Address for communications

Hertford Road  
Hoddesdon  
Hertfordshire  
EN11 9BX

Address for electronic communications

The fee percentage is

The working areas are

The Site, Head Office and any other area required to deliver t

The key persons are

Name (1)

Job

Responsibilities

Qualifications

Experience

The key persons are

Name (2)

Job

Responsibilities

Qualifications

Experience

The key persons are

Name (3)

Job

Responsibilities

Qualifications

Experience

The key persons are

Name (4)

Job

Responsibilities

Qualifications

Experience

The following matters will be included in the Early Warning Register

## 2 The Contractor's main responsibilities

The Scope provided by the *Contractor* for its design is in

## 3 Time

The programme identified in the Contract Data is

## 5 Payment

The *activity schedule* is

## Resolving and avoiding disputes

The *Senior Representatives* of the *Contractor* are

Name (1)  
Address for

Address for

Name (2)  
Address for


Address for

## X10: Information Modelling

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

Contract Execution

Client execution

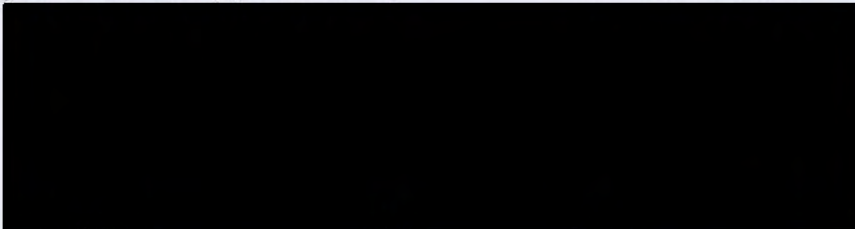
Signed Underhand by [PRINT NAME]  


for and on behalf of the Environment Agency

EA Project Executive

SignatureDateRole

Contractor execution

Signed Underhand by [PRINT NAME]  


for and on behalf of

VolkerStevin Ltd

SignatureDateRole



# Environment Agency NEC4 engineering and construction contract (ECC)

## Scope Project / contract information

Project name	The Sluice/Back Drain
Project 1B1S reference	ENV0002388C
Contract reference	37140
Date	15 <sup>th</sup> August 2022
Version number	4
Author	

## Revision history

Revision date	Summary of changes	Version number
26/01/2022	First issue	1
28/01/2022	CSM comments	2
04/08/2022	PE comments	3
15/08/2022	Monthly progress reports to be provided taken out, attendance at one risk workshop added and risk register reviews to be incorporated into monthly progress meetings.	4

This *Scope* should be read in conjunction with the version of the Minimum Technical Requirements (MTR) current at the Contract Date. In the event of conflict between the *Scope* and the MTR, this *Scope* shall prevail.



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 between this *Scope* and the Minimum Technical Requirements, the *Scope* shall prevail.

## Contents List

- WI 100 Description of the *Scope***
- WI 200 General constraints on how the *Contractor* provides the *Scope***
- WI 300 *Contractor's* design**
- WI 400 Completion**
- WI 500 Programme**
- WI 600 Management of the *Scope***
- WI 700 Tests and inspections**
- WI 800 Working with the *Client* and Others**
- WI 900 Services and other things to be provided**
- WI 1000 Health and safety**
- WI 1100 Subcontracting**
- WI 1200 Accounts and records**
- WI 1300 *Client's* work specifications and drawings (Project specific changes to the MTR)**



## SI 100 Description of the Scope

### S 101 Description of the Scope

The *Scope* requires the *Contractor* to provide construction related advice to the designer (Jacobs) and the *Client* (Environment Agency) to support the development of the detailed appraisal of the scheme to extend the life of existing Flood Risk Management (FRM) assets which form part of the Crossens pumped catchment drainage system (The Sluice / Back Drain). This system benefits an extensive area of productive agricultural land and the village of Banks and outskirts of Southport. The project is considering only Middle Bank and one other FRM asset that has been identified as requiring repair, a boat jetty at Three Pools Waterway. The *Contractor* shall also support the *Client* to develop cost estimates and a delivery programme for inclusion in the Outline Business Case (OBC).

The *Contractor* is required to support the *Client* and *designer* in the development of the *Scope* of necessary ground investigation (GI) works and once finalised and agreed, the undertaking of the physical GI works will be instructed into this contract under a CE.

The Environment Agency has completed a Strategic Outline Case (SOC) Business Case to secure approval to further investigate and develop a preferred option for Middle Bank to manage flood risk to the community within the Crossens Pumping Catchment. The SOC had indicated that for the benefit area defined for this project, the current FRM service delivers a standard of protection of 4% annual exceedance probability (AEP) with 5 properties at risk in the 1% AEP event. Under Do Nothing (walk-away from FRM, no pumping) there is risk to 1,731 properties, 32km<sup>2</sup> of agricultural land, two environmentally designated sites and critical infrastructure (A565 road and Manchester to Southport railway).

A number of OM2s have already been claimed by the previous Crossens Pumping Station scheme and therefore an apportionment model has been developed by the *Client's* Consultant to avoid double counting. On this basis the initial PF calculator is 95%, based on claiming 200 OM2s.

This contract is to be let under the Collaborative Delivery Framework (CDF).

### S 102 Purpose of the Scope

The *Contractor* shall provide the following services and support functions:

- **Confirmation of Scope** – upon commencement of *works* the *Contractor* shall confirm the full requirements of this *Scope* with the *Client* and including delivery dates and format of submissions.
- **Site Visits** - Attendance at site visits to identify access requirements, physical constraints, easement requirements, required Working Areas, compound areas and general familiarisation with the *Scope*.
- **Meeting attendance** - The *Contractor* shall attend and contribute to, monthly project meetings with the project team.
- **Review of outline design options / drawings** – the *Contractor* shall review the outline design details as provided by the designer which will define the planned flood defence construction works. In addition, the *Contractor* shall provide advice on buildability, construction methods, SHE compliance, access requirements and similar for the for the proposed outline design option.
- **Review of survey and investigation Scope proposals, recommendation and drawings** – the *Contractor* shall review the survey and ground investigation *scope* proposals, recommendation and drawings as provided by the designer which will define the planned GI works that are to be instructed

to the Contractor under a CE. Identification and advice shall be provided by the *Contractor* on working methodology, SHE compliance, access requirements and similar.

- **Review of high-level programme** – the *Contractor* shall provide advice into the activities, durations and sequence of the proposed works and identification of long lead items. In addition, the *Contractor* shall provide advice on the constraints, consents, robust delivery durations considering risk e.g. appropriate time of the year to commence works to reduce delays if weather or limited access dates are a consideration.

- **Review of pre-construction information** – The *Contractor* is to review the *Client's* pre-construction information for the agreed and defined ground investigation works and advise whether it is adequately developed.

- **Identification of temporary works** – The *Contractor* shall identify any significant temporary works designs associated with the preferred option outline design and confirm resource and time requirements necessary to complete these designs.

- **Carbon Planning Tool** – The *Contractor* is to provide appropriate information for the CPT as the preferred option is developed during this stage.

- **Cost estimating** – The *Contractor* shall produce specialist areas of the high-level cost estimates provided for 3 options, against the outline *scope*, as requested by the project team. These cost estimates will be provided by the *Contractor's* PM/QS or similar. The *Contractor* is to provide advice to the *Client* on the development and detail of the risk allowance.

- **Project level risk register** – the *Contractor* shall allow for attendance at one risk workshop to provide their input into identification of risk and opportunities. The *Contractor* shall also assist the *Client* and the *designer* in the identification and assessment of project risks on an ongoing basis to be incorporated into risk register at the monthly progress meetings.

- **Project Management support** - The *Contractor* shall assist the *Client* and the designer in the identification, assessment and resolution of project issues and in maintaining the Project Issues Log.

- **Preferred Option Definition** – the *Contractor* shall support the *Client* to ensure that the preferred option defined in the business case is sufficiently detailed and clearly communicated including risk.

- **Lessons learned** – where appropriate the *Contractor* will provide lessons learned from the *Contractor's* wider organisation that could mitigate risks and support the effective delivery of the scheme

- **Providing advice on available materials and products** – the *Contractor* is to provide advice including information on carbon and sustainability implications using amongst other tools the Carbon Planning Tool. The *Contractor* is also required to share knowledge and awareness of any innovative and alternative products, construction plant and working methodology that would benefit the project.

- **Liaison with statutory undertakers** – Where needed the *Contractor* is expected to provide support to the designer by engaging with utility companies to discuss service diversion requirements and proposed plant activities in the immediate vicinity of services which may be affected by the scheme. The *Contractor* shall advise the *Client* on the most appropriate and efficient strategy for these proposed diversions.

- **Providing technical advice** – The *Contractor* shall provide advice on the use of specialist operations and their most effective use. It is expected that the *Contractor* shall seek support from specialist subcontractors if needed.

- **Advance Procurement** – The *Contractor* shall advise the *Client* on the selection, advanced procurement and storage of materials where this delivers efficiencies in cost and time to the project.
- **Procurement** – The *Contractor* shall provide advice into the *Client's* optioneering process and support selection of best procurement methods to meet cost and programme expectations.
- **Advance works** – Providing advice to the *Client* on the benefits of advance works if needed and enabling these if required.

**S 103** It is anticipated that the *Contractor* shall be required to be available approximately two days per month for attendance to provide the services and support functions detailed above during the SOC-OBC period of the contract. **Location of interest**

The project is considering Middle Bank and one other specific FRM asset, a small Jetty at Water Lane which form part a small sub-set of the overall system of interdependent FRM assets in the Crossens system. Tidal defences protect the low-lying area and inland drainage of the fluvial catchment is wholly reliant on Crossens Pumping Station (PS) as there is no gravity outflow. The system includes an extensive network of ditches, main drains and embankments.

Crossens PS is configured for pumping at two levels: an upper level drained by The Sluice and the Three Pools Waterway, and a lower level drained by Back Drain. As Middle Bank separates these levels, any breach of it would result in flows into the lower level which could not be pumped out as effectively.

The system of FRM and land drainage assets has been very successful at reducing the chance of flooding throughout the catchment. The wider combined Alt and Crossens system benefits large rural land areas and centres of population at Formby, Southport, Banks and Maghull that could suffer from flooding. The agricultural land is valuable and highly productive. The area is environmentally rich and there are national and international sites of environmental value protected under legislation, including Martin Mere SSSI/Ramsar and Mere Sands Wood SSSI.

Tidal defences are the most important assets maintained, comprising 7km of embankment seaward of Banks village, on Banks Marsh, and 7km of tidal defence in Southport. Without such defences more than 10,000 ha of agricultural land would be severely damaged by saline flood water and over 20,000 properties in Formby and Southport would be at high risk of flooding (0.5% AEP).

So long as the tidal defences are sustained, it is necessary to invest in measures to reduce fluvial flood risk (i.e. if tidal defences were abandoned then tidal flood risk would dominate over fluvial flood risk). The Alt and Crossens internal drainage system includes two large pumping stations (at Crossens and Altmouth), 12 smaller satellite pumping stations, 59km of river embankments (includes 2.6km of Middle Bank) and 635km of ditches and watercourses.

## **S 104 Study Area**

The EA maintained and owned Middle Bank in Crossens between the Sluice and Back Drain has been visually assessed as being in poor condition. The Middle Bank commences approximately 600m downstream of The Sluice Farm and continues for some 2.4km, terminating approximately 300m upstream of Crossens Pumping Station. Middle Bank separates Back Drain and The Sluice watercourses which drain separate areas of the Crossens Catchment and operate at different levels. They are both approximately 20m wide. The bed level of The Sluice is approximately 3.5m below the crest of Middle Bank, whilst Back Drain is typically 5-7m below the crest of Middle Bank. The width of the crest of Middle Bank varies but is typically 4m and side slopes are generally within the range of 1 in 1.5 to 1 in 2. However, the crest widths and bank slopes vary considerably outside this range along Middle Bank, between the existing pipe bridge and Water Lane. The bank from Water Lane to the old railway (100m) is significantly sloping towards Back Drain with cracks evident along the section.

Reduced crest width and uncertainty of the structural integrity of Middle Bank has prevented on-going maintenance of the bank. The lack of maintenance has also contributed to the gradual deterioration in



the condition of Middle Bank. The concern / assumption identified within previous assessments produced is that if the bank fails completely, then all flows from The Sluice will drain into Back Drain. Pumps at Crossens Pumping Station will be unable to cope with these additional flows and will likely burn out. Residential properties, large areas of grade 1 agricultural land and areas of Martin Mere wildlife reserve (RAMSAR) may be affected.

The area also provides habitat for protected species including water voles. A water vole survey was undertaken in July and September 2018 which confirmed the presence of water voles. There is the potential for the presence of great crested newts also. These environmental constraints need to be built into any future work.

The proposed works only apply to the assets in failing condition within the Crossens system and this project is considering only Middle Bank and one other specific FRM asset, a small jetty at Water Lane. other failing assets in the area are being covered under other projects.

The project seeks to extend the residual life of the assets by at least 23 years, to 2045.

## S 105 Previous Studies

The following studies, which will be provided by the *Client*, may support the delivery of this contract.

The *Contractor* can assume the documentation supplied by the *Client* to be accurate and correct. However, if the *Contractor* shall discover that any of the existing scheme documentation or supporting information provided is not correct, contains anomalies, its accuracy is not adequate for the intended purpose, or the designer disagrees with assumptions made in deriving said information, then the designer shall inform the *Client* and seek instruction on how to proceed.

Ref	Report	Date	Format	Outcomes of study
P1	Strategic Outline Case	March 2022	PDF	The report supports the development of the project from SOC to OBC and FBC.

## S 106 Additional Data Provided by the *Client*

The following data, which will be provided by the *Client*, may support the delivery of this contract.

Ref	File Name	Date	Format
P3	SOC-OBC Project Programme	July 2022	PDF

## WI 100 General constraints on how the *Contractor* provides the Scope

### WI 201 General constraints

The *Contractor* and relevant Project Team members must be available to attend all monthly progress meetings and optioneering/risk/outline design development Workshops.

**WI 202 Confidentiality**

The *Contractor* does not disclose information in connection with the Works except when necessary to carry out their duties under the contract or their obligations under the contract.

The *Contractor* may publicise the Works only with the *Client's* written permission.

**WI 200      *Contractor's design***

No *Contractor* design is required for this contract.

## **WI 300          Completion**

### **WI 401 Completion definition**

It is an absolute requirement of the contract that Completion is only certified when:

- i. All of the deliverables have been provided and accepted by the *Client*.
- ii. The *Client's* latest version of the Project Cost Tool, or its successor has been populated.
- iii. All BIM Data has been transferred to the *Client's* databases
- iv. The relevant phase of the *Client's* carbon tool has been completed.
- v. Clause 11.2(2) work to be done by the Completion Date has been satisfied.

## **WI 400          Programme**

### **WI 501 Programme requirements**

The *Contractor* provides the programme in accordance with the contract Microsoft Project Format (Version 2016).

The *Contractor's* programme should be compatible and in-line with the *Client's* whole life programme for the overall project (available on request).

The *Contractor* shall ensure that the programme includes appropriate time allowances for the internal quality assurances and review of all deliverables prior to issue to the *Client*.

The *Contractor* shall allow the *Client* a two-week period to review each of the deliverables prior to their finalisation and this should be reflected in the programme.

The programme for the *works* will be defined by the *Client* and designer. The *Contractor* will be required to input into this programme as required by the *Client* and *designer*.

### **WI 502 Revised programme**

The *Contractor*, in any submission of revised programmes, will notify the *Client* in advance of planned programme submissions, and provide an explanation of any changes.

## **WI 500          Management of the Scope**

### **WI 601 Project team – Others**

On appointment the *Contractor* is to provide a detailed contract list of their team who will be delivering the *works*.

### **WI 602 Communications**

As part of the general project management duties the *Contractor* shall, as a minimum, communicate with the *Client* and wider Project Team in the following ways:

- Monthly Progress Reporting (including progress update report, record of deliverables issued, and/or advice provided to the *Client/designer*, comments on the programme, financial updates & forecasts and risk management updates meeting the *Client's* project reporting timetable).



- Attend a start-up *Workshop* within 2 weeks of contract award with the *designer* and all internal *Client* project stakeholders.
- Attend monthly progress meetings arranged by the *designer* and/or *Client*.
- Provide project updates to the *Client* via phone or telecon on at least a monthly basis.
- Provide input to a project issues log which will be reviewed at monthly progress meetings and determine the appropriate actions necessary to resolve the identified issues.
- Contribute to lessons learnt relevant to scheme delivery on the scheme lessons learnt log, this is to be reviewed at progress meetings.
- Co-operate with the *Client* and *designer* using the BIM Implementation Plan and MIDP structures provided by the *Client*.
- Provide input to the Project Efficiency Register at monthly progress meetings.
- The *Contractor* is to make full use of the *Client's* web-based project collaboration tool (Asite/Adoddle/FastDraft) for the handover of project deliverables. All project and contract communications and records are to be distributed and stored using this project collaboration tool.
- Provide input to carbon and sustainability reporting at key project milestones.
- Attend an Option Review Meeting at an appropriate stage arranged by the *Client* or *designer*
- Attend formal risk workshop to agree risk mitigation measures and budgets for input to the OBC.

## **WI 600      Working with the *Client* and Others**

### **WI 701 Co-operation**

It is expected that the *Contractor* will communicate and cooperate directly with the entire *Client* team, their *designer*, other suppliers and stakeholders.

The *Contractor* shall support the *Client* to provide detailed information on how the project will be delivered to the *Client's* end user. This may involve discussing and agreeing preferred methods of construction to accommodate local constraints or long term maintenance requirements of the asset

## **WI 700      Services and other things to be provided**

The services required by this *Scope* is detailed in W102 'Requirements of the *Scope*'.

The physical Site and Ground Investigation works developed by the designer will be instructed into this contract.

## **WI 800      Health and Safety**

Health and safety is the number one priority of the *Client*. The *Contractor* will promote and adopt safe working methods and shall strive to deliver solutions that provide optimum safety to all.

The *Contractor* is to ensure that the *works* developed and implemented in accordance with the requirements of the Environment Agency's Safety, Health, Environment and Wellbeing Code of Practice.

The *Contractor* is to make use of Environment Agency Health and Safety application reporting tools – eg: AirsWeb.

The *Contractor* shall assume that this project is notifiable under the CDM 2015 Regulations and ensure that they comply with their duties under the CDM Regulations 2015.

The *Client*, through the *designer*, will be appointing a Principal Designer (PD) under the CDM 2015 Regulations for this project.

The *Contractor* shall liaise with the appointed Principal Designer during the development and delivery of the *works*.

At least 7 days in advance of any site visit the *Contractor* must contact the *Client* to assess and understand the existence of any potential hostile sites within the Study Area.

The *Contractor* shall assist the *designer* to produce Public Safety Risk Assessments for any planned site activities.

## **WI 900          Subcontracting**

The *Contractor* shall seek the *Project Manager's* approval prior to the sub-contracting of any part of the *works*.

## **WI 1000          Account and Records**

### **WI 1101 Additional Records**

Clause 52.2 list the additional records to be kept by the *Contractor*. This may include but not be limited the following:

- Timesheets
- Forecasts of the total Defined Cost,(Forecasts are to include, but not be limited to costs to date, costs to completion including detailed breakdown of staff, sub-contract and major material items)
- Specific procurement and cost reports

The format and presentation of records to be kept are to be accepted by the *Client*.

## **WI 1100          Client's work specifications and drawings**

### **WI 1201 Drawings**

To be confirmed and issued when the GI works are instructed.

### **WI 1202 Standards the Contractor will comply with**

The *Contractor* shall undertake the *works* in accordance with the following guidance.

Ref	OI No	Report Name
1	412_13_SD01	Minimum Technical Requirements
2	183_05	Data management for Flood Risk Management projects and good data management considerations

3	120_16	Who Life (Construction) Carbon Planning Tool User Guide
4	300_10_SD10	Buried Service Survey Specification
5		[Sustainability] V6 Manual