NEC4 Engineering and Construction

Short Contract

FCRM Operational Framework – Midlands Hub

A contract between	**The Environment Agency** [redacted]
And	**Amalgamated Construction Ltd**
For	**Marchington Flood Alleviation Scheme- Design and Build**
	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	[redacted]	
The *works* are	Design and Construction of Flood Alleviation works in Marchington. This includes construction of a flood wall at Church Lane bridge and support geotechnical and structural surveys to inform the design.	
The *site* is	Marchington, Staffordshire- specifically in the vicinity of Church Lane bridge (SK136307) and Church Close Embankment (SK136306)	
The *starting date* is	13/06/22	
The *completion date* is	To be determined by the successful *Contractor's* programme but no later than 31 August 2022	
The *delay damages* are	£79.20	Per day
The *period* for reply is	2	weeks
The *defects date* is	104	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	£100k	
The *Client* provides this insurance	None	

Insurance Table

Event	**Cover**	**Cover provided until**
Loss of or damage to the *works*	The replacement cost	The *Client's* 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 *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 employee of the *Contractor*) arising from or in connection with the *Contractor's* Providing the Works	Minimum £5,000,000 in respect of every claim without limit to the number of claims	
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 £1,000,000. 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 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 subcontractors to the *Client* for acceptance. A reason for not accepting the subcontractors is that their appointment will not allow the *Contractor* to Provide the Works. The *Contractor* does not appoint a proposed subcontractors until the *Client* 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 *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.
Z30.0	Material Price Volatility The *Client* recognises the ongoing pricing uncertainty in relation to materials for the period from 1 July 2021 to 30 June 2022 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 a) 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. b) 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. c) 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: Assessment x MF x L = PVP
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 2022 period compensation event.

Assessment Date	Defined Cost?	Forecasted Cost?
31st Jul 21	In period costs only	No
31st Aug 21	In period costs only	No
30th Sept 21	In period costs only	No
31st Oct 21	In period costs only	No
30th Nov 21	In period costs only	No
31st Dec 21	In period costs only	No
31st Jan 22	In period costs only	No
28th Feb 22	In period costs only	No
31st Mar 22	In period costs only	No
30th Apr 22	In period costs only	No
31st May 22	In period costs only	No
30th Jun 22	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.

Contract Data

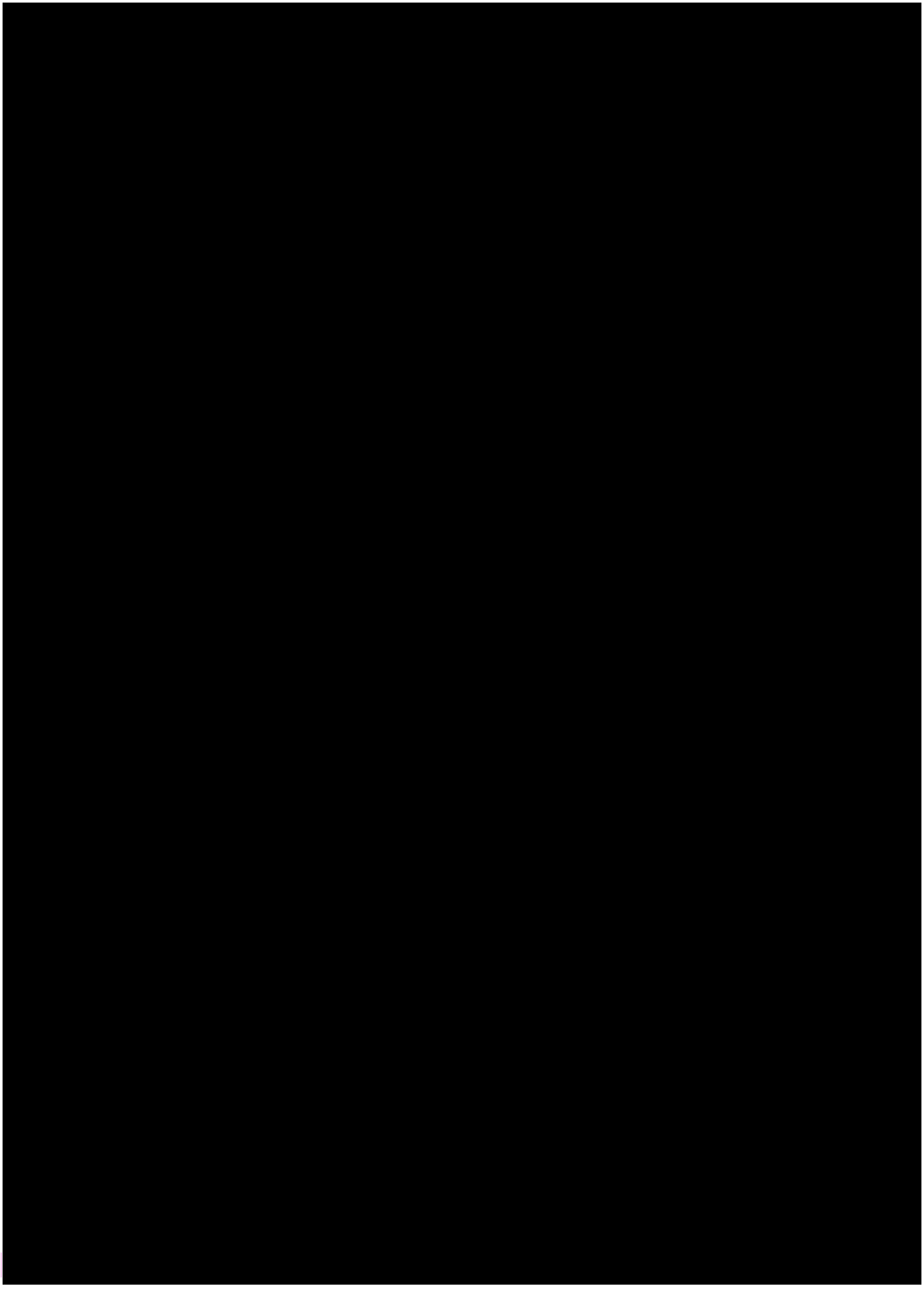
The *Contractor's* Contract Data

	The *Contractor* is	
Name	**Amalgamated Construction Ltd**	
Address for communications	[redacted]	
Address for electronic communications	[redacted]	
The fee percentage is	12% (as per the Framework)	
The *people rates* are		
category of person	**unit**	**category of person**
Project Manager		As per Framework rates
Quantity Surveyor		As per Framework rates
General Foreman		As per Framework rates
The published list of Equipment is		CECA
The percentage for adjustment for Equipment is		12%

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	[redacted]
Signature	[redacted]
Date	[redacted]
The *Client* accepts the *Contractor's* Offer to Provide the Works	
Signed on behalf of the *Client*	
Name	[redacted]
Position	[redacted]
Signature	[redacted]
Date	[redacted]



The method and rules used to compile the Price List are
Civil Engineering Standard Method of Measurement 4th edition (CESMM4) as per the Framework Price Workbook. The total of the Prices (and therefore, the Price for each item) must include all items necessary to deliver the works and meet the requirements of the Scope, including all prelims, overheads and profit. This includes, but is not limited to, items such as: site accommodation; technological provisions (eg. Wifi); progress meetings; and project administration. The *Contractor* may sub-divide each item in the Price List as necessary, but the total of each sub-item must add to the Price for that item, and the total of each Price must add to the total of the Prices.

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.

S101 Project Objectives

The objective of the project is to reduce the flood risk associated with 19 properties from Marchington Brook. The proposed solution involves the following elements:-

1. Design and Construction of a small flood defence (indicative sizing 10m x to a min 68.60 mAoD) to 'close the gap' on Church Lane Bridge where flows currently spill onto the road during flood events.
2. Property Flood Resilience Measures (this will be delivered under a separate contract)
3. Design and Construction of a solution to increase the Flood Defence Level to 69.2mAOD standard of protection of Church Close Embankment to 1:75 year the length of the embankment is approx. 120m, options will need to be considered for this embankment in terms of what is more cost beneficial.
4. Jetting and root cutting and CCTV of the silver Lane Silver Lane Culverts.

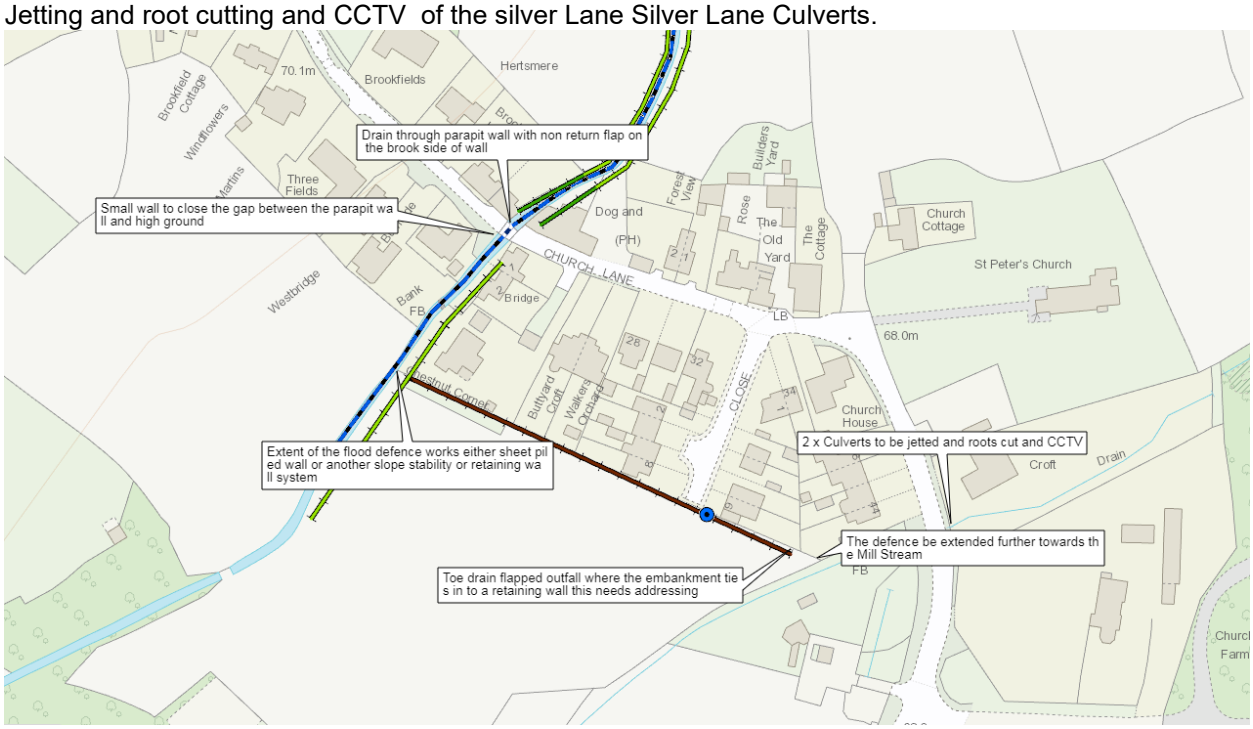


Figure 1 - Locations of the assets that form the scope of this contract

S102 Description of the *works*

The works to be completed by the *Contractor* in this contract are as listed below.

1. **Design and Construction of Flood defence** to 'close the gap' on Church Lane Bridge. The design work includes, but is not limited to- specification for wall, details of interface with existing structures, access details to existing gauging station and production of drawings and supporting designers risk register for construction issue. Indicative detail is shown in Figure 2 below. The defence will be finished to be in keeping with the existing parapet structure and the garden of Willow Bank property. The defence will form a seal with the existing bridge structure but will not load it and the opposite end of the wall will tie into high ground adjacent to neighbouring property boundary. The exact location will need to be surveyed. The wall will have a 50 year design life and is to be designed to provide protection against the 1:5 year flood levels, which indicatively gives a Flood Defence Level of 68.9mAOD (modelling report will be issued as part of PCI). This asset shall have a design life of 50 years.

Figure 2- Indicative detail of works at Church Lane bridge

2. **Design of Works and construction associated with Church Close Embankment-**
The embankment is a third party asset that has an inconsistent crest level and profile. The scope of the works is to increase the flood defence level to 69.2mAOD (this would be the Flood Defence Level) consistently and improving the tie in at the Mill Stream end would to provide the required 1:75 year protection with no uncertainty allowance (modelling report will be issued as part of the PCI). The asset shall have a design life of 75 years.

   The condition of the embankment is poor due to cattle poaching and it doesn't have the desirable shape. Chestnut Corner is classified as high ground however they experience erosion from scour by flood water, this will need to addressed either by slope stabilising options or by a retaining wall (gabion baskets are not acceptable to the *Client*) . There is part of their garden (approx 10m) that is not high ground so the level at this location will need to be increased in this location to reach the 69.2m AOD FDL.
   There are two hedges at Chestnut corner that must be replaced if they need to be taken out by the works.

   The *Client* shall take responsibility for maintenance of the embankment and shall use a robomower to maintain the asset. This means the *Client* shall accept an embankment that has 1 in 2.5 batters, 1m crest and 300mm berms. The proposed embankment shall fit within the footprint of the existing embankment. Any deviation from this will need to be approved by the *Project Manager* at design stage.

   The landowner has shown he would be willing to have the embankment fenced off with cattle proof fencing to protect the asset in the future. All earthworks have a tolerance of +40mm from the Flood Defence Level.

   The existing embankment ties in to a garden retaining wall. The *Client* does not want the function of the flood defence to be reliant on a third party asset so would like to remove this dependency and run the defence further down towards the Mill Stream and tying in a more suitable location. There is a drainage ditch and an outfall pipe with a non-return flap that runs behind the existing embankment this will need to take into consideration during the design as this will still need to function following the works.

   Any earthworks to the embankment must comply with the latest version of the Employer's Minimum Technical Requirements (Appenidx B) and the relevant British standard for clay for the core of the flood defence, and have at least 150mm of top soil protecting the clay. The top soil will be grass seeded as soon as practically possible to protect the embankment and the clay from any shrinkage.

   The works in this area can be accessed from the parish councils play area car park and access the farmers field all works are to be carried out from the field and within the redline boundary provided in Appendix A.

   There is a Western power overhead cables across the field that shall be taken into consideration by the *Contractor* because depending on the methods of working.

3. **Access to the existing river gauge at the bridge is to be maintained.** There is a river level gauge located adjacent to the Church Lane culvert, it can be seen in figure 2. The design is to include any additional works to ensure safe access, for example steps over the wall. The design of the wall will consider the current operating regime of the gauge and will aim not to impact on this. Consultation with the relevant teams within the EA (H&T and Flood Resilience) will be undertaken by the *Contractor's* designer during the design phase.

4. **Provide a drain with a non-return wall through the existing Church lane culvert parapet wall.** A relief drain for the flood water that pools on Church Lane with a non-return valve on the Marchington Brook face of the parapet wall. This shall have a design life of 25 years.

5. **Ground Investigation Surveys-** Scoping and undertaking of ground investigation works in the areas around Church Lane culvert and Church Close Embankment to support the design of these elements as required. This includes both the physical works and laboratory testing. Procurement and management of sub-contractors to deliver these works will be required.

   Indicative scope of Ground Investigation work is as outlined below (details to be confirmed by the *Contractor*)
   a. Window Samples (5no.) to depth of up to 8mbgl. Regular sampling and insitu testing to be undertaken as boreholes progress. Sampling to be undertaken using tracked equipment. At 8m penetration or refusal, continue with dynamic cone penetration testing to 10m.
   b. Hand excavated trial pit (1no.) up to 1.2mbgl to expose footing to bridge abutment. Regular sampling and insitu testing to be undertaken as borehole progress.
   c. Backfilling on a 'like for like' basis of all excavations.
   d. Laboratory geotechnical and contamination testing as appropriate
   e. Onsite management by suitably qualified site supervisor

   Output- Production of factual and interpretive reports suitable for use in developing the detailed design

6. **Structural Condition Surveys and assessment-** Scoping and undertaking of structural survey of Church Lane bridge and the tie ins of the proposed new wall and Church Close Embankment including all tie ins. Procurement and management of sub-contractors as required. Output- Production of interpretive report outlining the existing condition of the two structures, their suitability for reuse in the design proposed and/or any further works required to enable the delivery of the proposed solution.

7. **Topographic survey of the Church Lane and the surrounding land -** the topo survey in the area shall be extended to satisfy the requirements of the design to ensure that the flood wall can tie in to high ground and the embankment can tie in to the Mill Stream.

8. **Service Searches-** Undertake desktop analysis followed by onsite GPR surveys to confirm locations of all services in the working areas, following guidance outlined in PAS128. Liaison with service providers if any diversions are required for the works. All third-party approvals must be in place prior to construction. Output of design phase- production of drawings detailing location of services and recommendations for protection works during construction phase including compliance with HSG47.

9. **Buildability/Pre Construction Review-** Undertake a buildability review to identify additional constraints during the construction phase, such as but not limited to; temporary design and works requirements (if required), access and lifting requirements, production of red line drawings, traffic management, material storage requirements, production and subsequent updates to the environmental action plan, reinstatement details, notices to be served to land owners.

10. **Jetting and root cutting and CCTV of the silver Lane Silver Lane Culverts** approx. 100m long 2x450mm diameter pipes.

11. **Undertaking the role of Principal *Contractor*.**

12. **Submission of any permits required** for the ground investigation and construction phases. This includes but is not limited to Traffic Regulation Orders and Flood Risk Activity permits. Planning permission is not required as the works can be completed under permissive powers under part 13 class D of the GPDO.

    The works will require a flood risk activity permit from the EA. This is because the 'closing the gap' option is within 8m of a main river, the embankment work occurs within the floodplain of a main river and both activities will be diverting floodwater. Any temporary/enabling works may also be classed as separate activities on the permit. Flood protection devices attached to buildings however are excluded from

requiring a permit. Note that once all the required information is received the EA have a statutory obligation to determine a permit application within 2 months.

13. **Application for any Public Rights of Way diversions or temporary closures and footpath management**

14. **Liaising with *Client* and Principal Designer teams** as required for weekly progress and design meetings and risk reduction meetings.

15. **Production of RAMS/CPP/SWMP-** the Construction Phase plan is to be submitted to the Principal Designer as early as practical but at least 2 weeks prior to the planned start of any construction phase (including site investigation). Traffic management plan including footpath management plan.

16. **Production of the Clause 31 programme and monthly Clause 32 programmes** and monthly financial forecasts and monthly submissions of Applications for Payment.

17. **Design of any temporary works that are required for the permanent construction.**

S103 Design Responsibility

The *Contractor* is responsible for the design as listed in S102.

The *Contractor* shall provide the *Client* with plans for all temporary works and Construction programme in order to allow early consultation with affected parties.

The *Contractor* shall also be responsible for the following activities:

- Constructing the accepted designs to the *Client's* Minimum Technical Requirements (MTRs).
- Providing technical support to the EA's *Project Manager;*
- Updating the risk register
- Updating and providing a design and construction programme
- Managing any services outages and diversions
- Providing a Traffic Management Plan
- Providing and updating a Footpaths Management Plan

The *Contractor* is responsible for agreeing maintenance requirements are to be agreed with the *Client* representative during the design phase. This will include agreement of any deviations from standards, equipment required to undertake maintenance and structural protection requirements associated with the embankment work (for example from cattle).

S104 Design submissions procedures and Acceptance Criteria

The *Contractor* shall submit design and other deliverables to the *Project Manager* for acceptance. The *Contractor* shall allow a minimum period of 2 weeks for the *Project Manager* to review deliverables and 1 week for amendments. Design shall be clearly shown on the *Contractor's* Accepted Programme

As part of the services the *Contractor* is to produce the following outputs/ deliverables as part of the design:

Design and construction:

- Detailed designs;
- Drawings & specifications for construction of main works;
- As-built drawings;
- Information to complete the H&S File;
- Temporary works design
- Working area drawings/Red line boundary drawings (updates as required);

The Detailed Design submission will include, as a minimum:

- Design report for each asset explaining the design philosophy and decisions during the design process.
- Design calculation control sheet identifying standards, loadings, methods of analysis and checking and review procedures
- All drawings required to enable the construction of the scheme, including but not limited to general arrangement, cross sections, long sections, reinforcement and detail drawings; Detail design drawings for the scheme, Temporary arrangement drawings
- All specifications required to enable construction of the scheme
- Designer's Risk Assessment
- Public Safety Risk Assessment
- The *Contractor* shall review the Outline Design CDM risk register, address the relevant hazards in detailed design and develop the CDM risk register further in line with the requirements of the scheme

The *Contractor* will establish the final alignment and setting out points during the detailed design stage.

Design Specifications:

1. Cladding and copings:

- To prevent water ingress, cappings shall be used on walls in preference to brick copings. Cappings shall be laid with a sufficient fall to prevent the pooling of water. Where applicable to marry in with existing detail, bricks used as copings must not have a riven surface that collects water and are laid with a sufficient crossfall. Tile creasings are used to act as an over-sailing to prevent water staining the face of the wall, where appropriate in the local environment, as agreed through the discharge of planning conditions.
- Copings/cappings and facework shall be sufficiently impermeable and durable to resist weathering and spalling from freeze-thaw action.
- Movement joints in copings and facework shall be designed to align with structural movement joints to prevent differential movement between components. The locations of joints shall be positioned to minimise any adverse impact on the aesthetics of the wall. Mastic finish colour is to be agreed with the Landscape Clerk of Works and forms part of the sample panel for the Planning Authority to inspect. Locations of piers or mock piers should be integrated into the design and the *Contractor's* attention is drawn to the Environment Agency's Landscape and Environmental Design Guidance (LEDG) (Appendix S).

2. Reinstatement

- The *Contractor* reinstates all surfaces of the site to a condition that meets or exceeds the existing condition as recorded in the pre-condition surveys. This includes the reinstatement of soft ground with grass or wildflower seeding . These areas are defined in the *Contractor's* accepted landscape design. In these areas of soft ground the *Contractor* grades, de-compacts and prepares the subsoil and topsoil and ground conditions in readiness for seeding by the *Contractor*, and obtains the acceptance of the quality of this work from the Landscape Clerk of Works for handover to the landscape *Contractor*. Specific requirements include, but are not limited to:
  - Areas for grass seeding: minimum 150mm depth of topsoil.
  - Areas for wildflower seeding: as defined in the *Contractor's* accepted landscape design such that soil conditions are appropriate to the lower nutrient requirements of these species, does not encourage rapid growth of grasses, and deters weed growth.
- The *Contractor* assesses the suitability of existing soils for re-use as topsoils and subsoils, produces a Soil Resource Plan for approval, and undertakes all soil stripping, handling, stockpiling and spreading works, in accordance with BS4428, BS3882 and the DEFRA publication 'Code of Practice for the Sustainable Use of Soils on Construction Sites', 2009, and to the acceptance of the Landscape Clerk of Works and *Project Manager*.

- The *Contractor* arranges inspection and handover meetings of their reinstatement with the Landscape Clerk of Works, ESBC's Landscape Manager and *Project Manager* for acceptance prior to Completion.
- The positions of all root barriers are clearly marked on the *Contractor's* design so the landscape *Contractor* can readily locate them.

S105 Approval from others

The *Contractor* is responsible for all third party approval these include but are not limited to:

- Homeowners/landowners as per Land referencing plans
- East Staffordshire Borough Council
- Marchington Parish Council
- Staffordshire Country Council (including approval to undertake work on embankment structure)
- Service Providers as required (including liaison associated with any diversion works identified)

2. Drawings

List the drawings that apply to the contract.

Drawing Number	Revision	Title
	V1	Redline drawing

3. Specifications

List the specifications which apply to the contract.

S301 Specifications

Title (in order of precedence)	Date or Revision	Tick if publicly available
Environment Agency SHEW-COP	2018	yes
Works Information (including the Appendices)		
Client's Minimum Technical Requirements / Landscape Minimum Technical Requirements The *works* are provided in accordance with the Environment Agency's Minimum Technical Requirements version 11, May 2021. Within the Minimum Technical Requirements "Environment Agency" and "*Client*" shall both be interpreted as "Environment Agency and / or the *Client*". In the event of any ambiguity or inconsistency between the Minimum Technical Requirements and any other Works Information the other Works Information shall take precedent. The *Contractor* uses the Environment Agency's Landscape Specification as the basis for the *Client's* Landscape *Contractor* tender package.	V11, May 2021	yes
CESWI / ICE Specification for Piling and Embedded Retaining Walls / Specification for Highway Works Any piling works are undertaken in accordance with the specification section only of the ICE Specification for Piling and Embedded Retaining Walls 3rd Edition, published by Thomas Telford Ltd in 2016. In relation to the piling works where there is ambiguity or inconsistency between CESWI7 and the ICE Specification for Piling and Embedded Retaining Walls, the requirements of the ICE Specification for Piling and Embedded Retaining Walls takes precedence. The technical specification is the 'Civil	2011	yes

Engineering Specification for the Water Industry, 7th Edition', (CESWI7) published by the UK Water Industry Research Ltd in 2011. Amendments to this are included in the' Minimal Technical Requirements'. The specification for roadworks/highway works is the 'The Specification for Highway Works, Volume 1 of the Manual of Contract Documents for Highway Works (MCHW)'. Where this specification is in conflict with the general text of the CESWI specification, the requirements of MCHW document shall take precedence.		

S302 Tests and Inspections

The *Contractor* shall produce and follow a testing and inspection schedule suitable to confirm that the *works* have been constructed in accordance with this Works Information and the accepted design.

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*.

S401 Access to Site

Approval to start works

The *Contractor* shall not commence construction on Site without prior written approval from the *Project Manager*.

No other access is used without the *Project Manager*'s written agreement.

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. These are to be received by the Principal Designer at least 2 weeks before the start of the works.

No works will be allowed to commence until the CPP is deemed suitable by the **Principal Designer** on behalf of the *Client* and an instruction is given by the *Client* for commencement.

Access to Site/Notice of Entry

It is the *Client's* responsibility to provide entry to the Site (refer to red line boundary areas in Appendix A). If the working area is outside of the boundaries of the site this is the responsibility of the *Contractor*.

The *Contractor* shall notify the *Project Manager* 4 weeks in advance of his intention to first enter or occupy each area of ownership or occupation within the Site. The *Client* in turn will alert each occupier of the *Contractor's* impending first entry or possession of their land by serving Notice of Entry a minimum of 10 days prior to entry to ensure delivery.

The *Contractor* must give 4 weeks' notice to the *Client* to gain entry to the Site during the defects correction period. The *Client* will seek landowner permission for access on behalf of the *Contractor*. The *Contractor* must not approach the landowner directly unless authorised to do so by the *Client*.

The *Client* shall determine and obtain all consents necessary where statutory powers are required to gain entry into the Site. The *Contractor* will support the *Client* in preparing and serving Notices of Entry through the submission and confirmation of all relevant dates, periods and activities relating to entry to the Site.

To enable the *Client* to prepare the Notice of Entry, the *Contractor* shall provide the following information with the notification in advance of the required issue date:

- Marked up plan of the Working Area required
- Schedule of affected properties
- Duration of the works and entry requirements
- Details of the works to be undertaken
- Access arrangements
- Site safety requirements per Notification of Entry

Subject to condition surveys having been established and agreed with the *Project Manager* and copies of the Notice of Entries are given to the *Contractor* with the access date then the *Contractor* is authorised to gain access to the identified area.

Copies of formal entry notices, details of particular agreements with landowners and/or powers of entry will be made available to the *Contractor* 12 working days in advance of the confirmed access date.

The *Contractor* shall not enter any part of the Site until the access date of that part of the Site is shown on the Accepted Programme. The *Contractor* may enter any part of the Site earlier than the access date if given authority to do so by the *Project Manager*, provided that a formal Notice of Entry from the *Client's* Estates team has been served.

The *Contractor* shall keep records of the dates of his first entry onto and departure from all property and lands of each owner and occupier (including public highways, footpaths and thorough fares, within the boundaries of the site) together with the dates of the erection and removal of all temporary fencing.

Emergency Access

The *Contractor* shall ensure that the *Client* will be able to access the Site in an emergency. The *Contractor* shall include within method statements, measures to ensure acceptance by the relevant stakeholder and the *Client*.

Access to Existing Assets

Access to the existing river gauge will be maintained during the construction phase and the design will take into account both the access to and the future operational/maintenance requirements associated with this asset. Liason with the Employers Hydrometery and telemetry team to determine what is acceptable in terms of access steps or arrangements need to happen as part of the design.

Access to the embankment will be across a field to reduce the impact of the works on the marshy field the Contractor is to provide adequate temporary haul road arrangements that will on the least adverse impact and therefore reduce the amount of reinstatement we will need to do and won't lead to any permanent damage.

S402 Use of the Site

The *Contractor* does not enter or use the Site for any purpose not connected with the works.

The *Contractor* shall confirm suitable locations for any welfare units, site storage and parking, and submit his proposals to the *Client* for acceptance. Delays to the approval of the compound area will be a Compensation Event if the *Client* or Others do not work within the times shown on the accepted programme and the *Contractor* can prove they have operated as required.

The *Contractor* shall provide all support necessary to the *Client's* Estates team to secure landowner acceptance for suitable sites for the *Contractor's* compound and satellite locations.

The *Contractor* shall liaise with and work in conjunction with the *Client* to co-ordinate operations and work on private land with the landowner and tenants.

S403 Site Security

Security measures are to be put in place to segregate the public from all works in line with CDM regulations

S404 Protection of existing Structures and services

The *Contractor* shall take care to avoid disturbance and damage to existing features and assets, including: roads, footpaths, habitats, private property, street furniture, services, signage, embankments, flood walls and outfalls. The *Contractor* shall have in place methodologies for dealing with such risks prior to commencing works on Site. These methodologies shall be accepted by the *Project Manager* prior to commencement of works. Should any damage occur, the *Contractor* shall immediately inform the *Project Manager* and the Statutory Undertaker, Highway or Roads Authority or owner concerned, as appropriate. The *Contractor* is responsible for repairing or replacing and safe storage of the affected apparatus.

Prior to undertaking intrusive works, the *Contractor* conducts a services survey. This includes the preparation of scopes, procurement, site management, surveys, production of drawings and reports, and the checking and review of deliverables. As a minimum, this survey meets the requirements of PAS128 Specification for underground utility detection, verification, and location.

The *Contactor* must verify that the services shown on the drawings are complete and correct. The *Contractor* must clarify either on site or with the utility companies and owners of the services when the *Contractor* is unclear of their size, use and location. The *Contractor* undertakes everything reasonably practical to identify services and verify the position of services to ensure that there are no unidentified services prior to starting construction.

Any services found by the *Contractor* shall be identified and recorded in the Health and Safety File.

The *Contractor* shall confirm services, their exact location and must avoid damaging them.

The *Contractor* shall be responsible for maintaining the existing services within the Site and shall allow for the relocation of any services to allow satisfactory completion of the *works*. All existing services are to be maintained without interruption during the *works*. They shall not be interfered with in any way except insofar as may be specified in the contract or otherwise be agreed with the *Project Manager* as the *works* progress.

The *Contractor* shall comply fully with the requirements of the relevant statutory authority when working in the vicinity of their apparatus, both for the permanent and temporary works, including all access off the public highway.

The *Contractor* shall avoid damage to highways, roads, properties, land, trees and other vegetation, boundaries, structures and any other features of the apparatus of Statutory undertakers, the Highways Authority, Internal Drainage Board, Landowners and Others. In the event of damage the *Contractor* shall undertake repairs to pre-works condition.

There are outfalls located within the existing bridge structure and embankment discharging surface water runoff into Marchington Brook and Mill Stream respectively. Any temporary or permanent works must not adversely affect the operation of these structures.

The *Contractor* shall replace any fencing that he is permitted to remove, and repair any fencing or gates that may be damaged as a result of his operations to the higher standard of pre-works condition or the minimum requirements of Clause 2.89 of the Minimum Technical Requirements. The location of any fences and gates to be removed and replaced under the Contract shall be recorded by the *Contractor* on the drawings.

The *Contractor* shall maintain any fencing required for stock control or the health and safety of others during the *works*.

Debris burning shall not be permitted under any circumstances without the prior written acceptance from the *Project Manager*.

The *Contractor* shall repair any structure or service damaged during the execution of the *works*. The *Contractor* shall make safe and restore any structure to its operative condition to the satisfaction of the *Project Manager* and the owner. The requirements of this clause shall extend to any structure and service wherever it may be.

Any service strikes by the contractor of known services that have been recorded on the *Contractors* service drawings and searches is the risk of the contractor. Any services strikes by the *Contractor* of unknown services that have not been identified on services searches and not present on drawings are the risk of the *Client*.

S405 Traffic Management

TTRO may be required for the construction phase. The *Contractor* must ensure all Traffic Management Notices are in place prior to construction.

The *Contractor* shall maintain safe access and egress routes for pedestrians and vehicles requiring access to areas affected by the works. The safe access and egress route shall be agreed with the *Project Manager* at least 4 weeks before the works in this part of the Site commence. The vehicle access routes will be in agreement with those identified in the Traffic Management Plan and the pedestrian routes will be in agreement with those in the Footpath Management Plan.

Plant moving along the access/egress routes between each location shall be fully supervised by the *Contractor*. All plant shall have a banksman to the front and rear during moving operations. Any damage, including any significant rutting, caused shall be dynamically risk assessed and identified mitigations implemented. Vehicle or plant movements must not compromise the flood defences.

Where access cannot be maintained, a closure or diversion route shall be agreed with the *Project Manager*, the Local Authority and the Landowner.

S406 Reinstatement

The *Contractor* shall design, construct, maintain and afterwards remove from Site and fully reinstate all temporary compounds, storage areas, site roads and accesses. The *Contractor* shall submit details of the proposed reinstatement works not less than 4 weeks before these reinstatement works commence.

Refer to the Minimum Technical Requirements Clauses 3.7, 3.9 and 3.22 for additional requirements for the Reinstatement of Maintainable Highways, Unpaved land and Land in Private Ownership. Areas in private gardens will require specialist reinstatement by the *Contractor* in agreement with the *Client*.

The *Contractor* shall be responsible for the grass and wildflower seeding of areas affected by the *works* and temporary works areas together with the establishment of aftercare for a minimum of 3 cuts, once a successful sward has been established.

S407 Signboards

Signboards will be in accordance with section 1.28 of the MTRs and will be provided by the *Client*.

The size, layout and content of signboards supplied by the *Client* will be in-line with the *Client's* NCPMS Capital Projects Site Branding Guide (July 2017) (Appendix I).

The *Contractor* will erect the signboards in a location agreed with the *Project Manager* and gains any necessary permissions, approvals and consents for their establishment.

The *Contractor* does not erect any other signboards without the written consent of the *Project Manager*.

S408 Storage of fuel and chemicals

To minimise the risk of pollution, the *Contractor* shall carry out the works in accordance with pollution prevention guidance in the Environment Agency's 'Safety, Health, Environment and Wellbeing (SHEW) Code of Practice (CoP) (Version 2, October 2017)' (Appendix J) and the 'Pollution prevention for businesses' guidance on WWW.GOV.UK.

The *Contractor* shall prepare, for the acceptance of the *Project Manager*, a Pollution Incidence Response Plan prior to the commencement of the construction works.

S409 Archaeology

There are no designated heritage assets at the site of the bridge or in the area of the proposed earthwork bund extension to the south of properties fronting onto Church Lane although the bridge which spans the Marchington Brook does lie within the Marchington Conservation Area.

The bridge does contain elements of historic character and whilst it has no protected status the design should minimise impact and maintain the character of the structure.

Marchington has early medieval origins and therefore there is potential for the presence of previously unrecorded archaeological remains close to the earthwork bund. Any further archaeology that is found is the EA's risk; if anything is found this will be added in as a Compensation Event.

S410 Vegetation Removal

The *Contractor* shall submit proposals and programme for the removal of trees, hedges, fences or gates, either temporary or permanent, to the *Project Manager* for acceptance. No trees will be removed in bird nesting season unless approval has been granted by the *Project Manager*.

S411 Noise and Vibration

The *Contractor* takes all reasonable measures to minimise the generation of noise and vibration resulting from his activities, including:

- employing 'best practicable means' as defined in the Control of Pollution Act 1994 to minimise the noise and vibration resulting from his operations
- complies with the recommendations and requirements of BS 5228 Code of Practice for Noise Control on Construction and Demolition Sites and any conditions placed upon the application for consent under Section 61 of Part III of the Control of Pollution Act 1974.;
- all Equipment is fitted with effective exhaust silencers, maintained in good repair and in accordance with the manufacturer's instructions and operated as to minimise noise emissions
- only 'sound reduced' compressors or other alternatives approved by the *Supervisor* are used and any parts fitted by the manufacturer for the purpose of noise reduction is maintained and operated so as to minimise noise
- any pneumatic operated percussive tools are fitted with approved mufflers or silencers which are kept in good repair
- any machinery which is intermittent in use is shut down in intervening periods of non-use or where this is impractical is throttled back to a minimum
- stationary equipment (e.g. pumps, compressors, generators, etc.) are situated as far as possible from residential property and acoustic screens are erected if required by the *Supervisor*. Other equipment is screened if necessary
- equipment known to emit noise strongly in one direction is, where practical, orientated so that noise is directed away from noise sensitive areas and
- as far as possible, construction operations are not so noisy as to be a danger to those on or about the *works* or to be a nuisance to the neighbourhood

S412 Consents and permissions

Approval is required from, but not limited to, the following organisations:

- Utility Companies and Service providers

  The *Contractor* shall consult and liaise with the Utility Companies and Service providers and agree a programme with them for any utility or service diversions, disconnections or temporary works etc. The *Contractor* shall include these activities in the programme. If the Utility Companies do not work within the times shown on the accepted programme and the *Contractor* can prove they operated as required, this will be a Compensation Event.

  The *Contractor* must design a solution with minimal utility diversions to keep these costs to a minimum. Any costs incurred by the Utility Companies and Service providers for the identified diversions will be met by the *Client*. The effects of stationary and/or moving heavy vehicles and plant over and/or in the vicinity of services must be carefully considered, and statutory undertakers and service owners should be consulted to agree procedures and/or mitigation/protection measures to protect that service and the *Contractor* is responsible for any damage that is caused to services if this is to occur. Any previously unforeseen utilities which require diversion will be a Compensation Event.

- Staffordshire County Council

  The *Contractor* is required to agree, highways access permissions and public rights of way closures with Staffordshire County Council for all *works* around their assets, such as the bridge parapet where the small wall will tie into the existing structure.

- Environment Agency

  The *Contractor* will be responsible for obtaining the Environmental Permit for the *works*. The *Contractor* must determine what flood risk activities are being undertaken according to The Environment Agency (Environmental Permitting) (England) Charging Scheme 2018 to formulate the total cost of the Environmental permits. The *Contractor* is responsible for obtaining the permit for the spraying of Herbicides and Pesticides. This will need to be considered if there is any in channel working.

S413 Cleanliness of the roads

The *Contractor* shall take all reasonable steps to minimise dust and mud being deposited on public and private highways during the construction of the *works* in accordance with PPG6 and supplementary clause 1.7, and undertake cleaning of public and private highways if necessary prior to Completion.

S414 Condition surveys

At least 2 weeks prior to taking possession of the Site, the *Contractor* shall undertake a condition survey of all highways, property, land and any other features which may be affected by the *works* including boundaries, gates, fences, walls as well as land and surfaces (including the depth and condition of any topsoil, if present) within the working areas, access routes, compounds and all private properties and structures and trees adjacent to the working areas. The *Contractor* shall make a note of any existing damage and bring this to the attention of the landowner or tenant and shall ensure that the precise location and condition of property boundaries that are to be removed during the *works* is recorded. The *Contractor* shall provide a copy of the condition survey to the *Project Manager*. The *Contractor* shall notify the *Client's* Estates Team of any property or structure for which a structural condition survey is required, at least 4 weeks before access is required adjacent or upon; the *Client* shall arrange such surveys where they agree one is required. The *Client's* Estates team shall undertake structural condition surveys and pre-condition photographic surveys where required. The *Contractor* is to agree the extent of these surveys with the *Project Manager* during design.

The *Contractor* will take a photographic record of the condition of all access roads, site entry points and the area where they will be constructing. This shall be on the day that they take entry onto the site. The *Client's* Estates will also undertake a photographic record of condition of the site where the asset is being built (or works undertaken) this will be the week before the *Contractor* takes entry of the site.

The condition survey of the road shall include the following:

- All proposed access routes proposed by the *Contractor; and*
- A similar length of road which is in a similar condition but will not be used for works access.

The *Contractor* shall repeat the condition survey on completion of the *works* and provide a copy to the *Project Manager*.

Photographs, surveys and inventories must be date stamped, GPS referenced, and copies held by the *Contractor*. The *Contractor* shall provide these to the landowner(s) affected, the *Client's* estates officers, the *Project Manager* and the *Supervisor*.

The *Contractor* shall undertake condition surveys with the *Supervisor*, and any others invited by the *Contractor*, *Project Manager* or *Supervisor*. The *Contractor, Project Manager* and *Supervisor* notify each other in advance if any others are invited. The *Contractor* will remedy damage attributable to his activities. The cost of making good any damage shall be met by the *Contractor.*

The *Contractor* gives at least 1 week notice to the *Project Manager* and *Supervisor* prior to undertaking any condition survey.

All record photographs and videos shall comply with the requirements of Supplementary Clause 1.35 of the MTRs.

The survey record should be stored in the BIM archive.

S415 Health and Safety

Maintaining Health and safety at work is an absolute priority for the *Client*. The *Client* expects all *works* to be undertaken on-site in line with their Safety, Health, Environment and Wellbeing Code of Practice (SHEW CoP).

The *Contractor* shall;

1. promote and adopt safe working practices for their own activities and Sub-*Contractor*s working for them and shall, in consultation with the *Client*, deliver the *works* with due regard for health and safety in their performance with regard to the public and anyone else concerned.
2. demonstrate that they have followed the principles of hazard identification, elimination and management in their *works*.
3. report to the *Client* any near miss, hazard or accident that happens during the delivery of the *works*, in addition to any statutory body such as the HSE.
4. report to the *Client* any brilliant safety behaviours highlighted during the delivery of the services.

The *Contractor* shall comply with all current Health and Safety Legislation. The *Contractor* shall discharge their duties in accordance with the requirements of the Construction (Design and Management) Regulations 2015. The *Contractor* shall use the guidance given in the Approved Code of Practice L153 – Managing health and safety in construction. .Figure 1 of 'Constructing a Better Environment SHEW CoP' (Appendix C) diagrammatically shows the CDM process to be followed and details who needs to be involved at what stage.

Designs produced must be in compliance with the Employer's Minimum Technical Requirements (Appendix F), and must take suitable account of future use and maintenance. The Contractor shall ensure that the design shows full compliance with the Environment Agency Red Amber Green (RAG) list.

The *Contractor* shall inform the Principal Designer of the following:

- The appointment of any *Designers* (ground investigation, temporary works, specialists, etc.).
- Design changes where safety considerations are required for all permanent and temporary works.
- Proof that safety is considered for all design changes and variations.
- Any design work still to be carried out

Procedures and policies as outlined in the Environment Agency 'Constructing a better environment Safety, Health, Environment and Wellbeing (SHEW) Code of practice (CoP)' document (Appendix J) shall be applied throughout the Contract. In particular, the *Contractor* shall adhere to the specific competence and training requirements detailed in section 4.2. The *Contractor* shall demonstrate how H&S training will be carried out, the reporting procedures and commitment to the process.

The *Contractor* shall provide first aid facilities, materials and personnel trained in first aid, for the benefit of his own people, those of his subcontractors and the site staff of the *Project Manager*, *Supervisor* and *Employer*.

The *Contractor* shall copy the *Project Manager* in all correspondence with the Principal Designer.

The *Contractor* shall provide regular toolbox talks to site personnel to ensure that health and safety issues, the requirements of the contract and the design and the contents of the method statements are communicated throughout the site team.

The *Contractor* shall report any health and safety incidents, "near misses", and instances of bad practice observed during the works period using the procedure outlined in "Environment Agency Operational Instruction 300_10_SD20: Reporting incidents at *Contractor*s' sites" (Appendix Q). The *Contractor* shall follow the RIDDOR reporting procedure detailed in Appendix A of 'Constructing a Better Environment SHEW CoP' (Appendix J).

In undertaking the Works, the *Contractor* shall ensure the following:

- Zero utility strikes based on compilation of utility records pre-works
- Working near water to be managed.
- Interface with public to be managed, including zero incidents with members of the public and dust management in place.
- Access and egress routes to be agreed and assessed by the *Contractor*.
- Site PPE requirements enforced
- Site induction process in place.
- Emergency procedures for accidents, fire, evacuation in place.
- Parking facilities and traffic route information provided.
- Site access and security arrangements in place.

Where works are taking place on or adjacent to 3rd party operational sites (e.g. builder's yard, school etc.) the *Contractor* shall ensure that they arrange site inductions with the landowners to ensure they comply with their own health and safety procedures.

The *Contractor* shall carry out suitable fire risk assessments and arrange his own procedures and fire plan. Details must be included in the Construction Phase Plan prior to commencement of work on site. It is expected that site-specific plans are produced covering:

- Main compound area
- Fuel and chemical storage facilities
- Other areas as assessed by the *Contractor*

The *Contractor* shall produce site-specific emergency plans covering:

- Water rescue and recovery, including contingencies for those parts of the site that may be subjected to flooding
- Confined space incidents
- Working at heights and harness recovery
- Working in the vicinity of overhead and underground services (service strike)
- Working adjacent to live traffic
- Environmental Incidents
- Flooding

The *Contractor* shall provide full welfare provision for the site in accordance with schedule 2 of the CDM Regulations 2015, plus additional provisions as stated in Constructing a Better Environment SHEW Code of Practice 2017 sections 2.6, 2.7 and 4.8. Proposals, which will include a schematic showing the compound layout and welfare facilities, shall be fully detailed in the Construction Phase Plan submitted to the *Employer* for review under Regulation 16.

The *Contractor* shall submit site progress reports to the *Employer* or his representative, which include, as a minimum, the following information:

- Accident Reports – Reportable Accidents, Near Misses, etc
- Site Safety Audits carried out during the month

- Update on site Welfare facilities supplied to works
- Tool Box Talks given during the month
- Health & Safety Initiatives
- CDM Issues:
  - Update Information for F10 if one has been issued.
  - Design Changes
  - Update Information for Construction Phase Plan
- Collation of information for Health & Safety File.

S416 Security and protection on the Site

The *Contractor* is responsible for the security of the Site and for vehicles, pedestrians and livestock entering and leaving the Site.

In areas where work is undertaken in private property, the *Contractor* maintains at least the level of security at the property that existed before the works commenced.

The *Contractor* shall ensure that the works do not compromise the security of properties within or adjacent to the Site.

The *Contractor* is responsible for the security of the Site and of vehicles and pedestrians entering and leaving the Site.

The *Contractor* ensures that the Site gates are closed after the passage of vehicles or personnel on each and every occasion. Gates are not to be left open.

The *Contractor* considers the security of neighbouring properties and does not leave unattended scaffolding, ladders, or any condition, which provide or assist access to neighbouring properties. Where permanent security fencing to neighbouring properties is removed as part of the works, it is replaced by suitable temporary fencing when the Site is unoccupied.

The *Contractor* ensures that the Site is left properly secured at the end of each working day.

The main compound will be made safe.

Any plant, materials or equipment that is not fenced will be fully supervised by the *Contractor* until such a time it is moved off site or fenced off.

S417 Working times

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

S418 Works in the water course

The *Contractor* shall not undertake any temporary works or use of plant in the river which adversely affects the flow of the river and increases flood risk to the surrounding area. The *Contractor* must ensure that the current level of flood risk is maintained during the construction of the scheme and not increased and provide temporary barriers and arrangements to provide protection to the surrounding area during the *works*.

S419 Operational constraints

The *Contractor's* construction methods shall ensure that disruption to Landowners and Tenants of land and property affected by the *works* is kept to a minimum and that land and property is restored to the pre-works condition as early as possible. The *Contractor* shall maintain safe access routes for local landowners/residents, cattle (when being moved between fields for grazing or milking etc.) where their construction work impacts existing routes during the contract period. The *Contractor* shall take this into account when formulating the Programme and when selecting methods of working.

The *Contractor* shall ensure that the *Client* will be able to access the Site in an emergency. The *Contractor* shall include within method statements, measures to ensure acceptance by the relevant stakeholder and the *Client*.

S420 Flood Risk

The *Contractor* shall register the Site on the *Client's* high-risk sites log and establish a liaison procedure with the Environment Agency's Flood Warning team to obtain advance weather, fluvial and tidal flood warnings.

Where existing defences are to be replaced or construction works reduce the standard of protection provided, the *Contractor* should provide temporary defences during the work to maintain the existing level of protection. Where temporary defences are deployed, they shall be manned by the *Contractor*, or the *Contractor*'s security staff at all times to prevent their unauthorised removal by Others. Where it is necessary to deploy security staff to temporary defences outside of normal working hours during forecast flooding events, the costs for this will be a Compensation Event.

The *Contractor* shall set up a process to respond to the Environment Agency's Flood Incident Duty Officer's call to erect temporary defences when required.

Hydrometric and flood warning information is available from the *Client.*

The *Contractor* registers with the *Client's* Flood Incident Management team before commencing *works* on Site and gives them telephone and/or fax numbers where Flood Warnings can be sent.

Contact details for Floodline and the 24 hour National Incident Communication Service are to be provided via the Environment Agency Representative. The Environment Agency Floodline number is 0845 988 1188 and National Incident Communication Service 0800 80 70 60

The *Contractor* may arrange regular weather forecast information from the Environment Agency's National Incident Communication Service. The information would be provided free of charge.

The *Client* is not liable for any consequences if it is unable to provide either flood warnings or weather forecasts, or if they prove inaccurate.

S421 Land drainage matters

The *Contractor* complies with the Land Drainage Act 1991, the Water Resources Act 1991 & Byelaws.

The proposals for the *works* and/or temporary works, to be carried out in, over, under or adjacent to a watercourse may require the prior statutory consent of the Environment Agency. A consent application is submitted to the Environment Agency with full and detailed information of the proposed *works*.

Any consent issued by the Environment Agency does not relieve the *Contractor* of his responsibilities regarding temporary *works* and the *Client* will not be held liable for any damage resulting from the construction thereof.

Whilst working in a river channel, drainage course or flood plain, the *Contractor* takes all necessary measures for the adequate discharge of flood waters and for the continued operation of all land drainage systems in the area.

Any proposal for temporary diversion, obstruction or piping of a watercourse during construction is subject to the consent of the Environment Agency as is the temporary obstruction of the floodplain by spoil heaps or by any other means.

On completion of the *works* the access road is removed and the route reinstated to the original condition and ground levels, or other agreed level to the satisfaction of the *Client*

No material is placed within the channel or floodplain during the construction of the temporary works without the *Client's* consent and the *Contractor* removes any such material and surplus, however arising, as soon as its function has been fulfilled. Floodplain within the Working Areas is kept clear at all times of all Materials, Plant and Equipment that will float.

The new flood defences will not adversely affect the drainage of the land either side of the defences.

S422 Conservation and fisheries requirements

All necessary precautions are to be taken to prevent the spread of Japanese Knotweed, Himalayan Balsam and Giant Hogweed. In particular, any spoil contaminated with the seeds, rhizomes or roots of these species is not to be spread to areas where the plants are not currently growing. Soil known to contain seeds of Himalayan Balsam shall be excavated, stored separately from other materials, covered with plastic sheeting and reinstated in the same areas from which it originated. A method statement shall be agreed with the *Supervisor* for the handling, storage and use of soil and materials contaminated with Himalayan Balsam. The Contractor shall develop an Invasive Species Management Plan as stated in the EAP and adhere to the standards stipulated in Section 4.32 of the Environment Agency's *Safety, Health, Environment and Wellbeing* (SHEW) *Code of Practice* (CoP) (Version 2, October 2017).

Should consent be granted for any temporary working platforms within the river channel then these are to be kept to a minimum size and are to be cleared of material and debris daily. No materials shall be left within the river channel overnight.

S423 Final Clean

The *Contractor* shall leave the Site in a clean, tidy condition and having removed all Temporary structures, Equipment, Plant and Materials not required for the permanent *works*, to the satisfaction of the *Client*, Landowners and Stakeholders.

The *Contractor* undertakes similar 'Post-completion condition surveys' when the work is complete and on dates agreed with the *Supervisor*. Copies of the 'Post-completion condition surveys' are distributed in the same format and to the same recipients as the Pre-starting condition surveys no later than two weeks after Completion.

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).

S501 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) 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

(f) A programme will be submitted on the 1st of every month

S502 Completion

The following are absolute requirement for Completion to be certified, without these items the *Client* is unable to use the *works*:

- Full set of Completion Certificates, which are in accordance with the *Contractor's* quality management system and endorsed by the *Supervisor*.

- 2 copies of Health and Safety File as agreed with the Principal Designer.
- 2 copies of Operating and Maintenance Manuals.
- 2 copies of As Built drawings signed off and agreed with the Supervisor

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

Marchington is a small village located south east of Uttoxeter, Staffordshire. The village is subject to frequent flooding from Marchington Brook, which is a tributary of the River Dove. An ordinary watercourse, referred to as Mill Stream, also contributes to the fluvial flood risk in the area, acting as a flow route for out of bank flows from Marchington Brook which results in flooding to residential properties. The confluence of Marchington Brook with the River Dove is approximately 900 metres downstream (north) of the village. Marchington is at risk of flooding at events as low as the 20% AEP event or greater. This means the village is particularly vulnerable to frequent flooding.

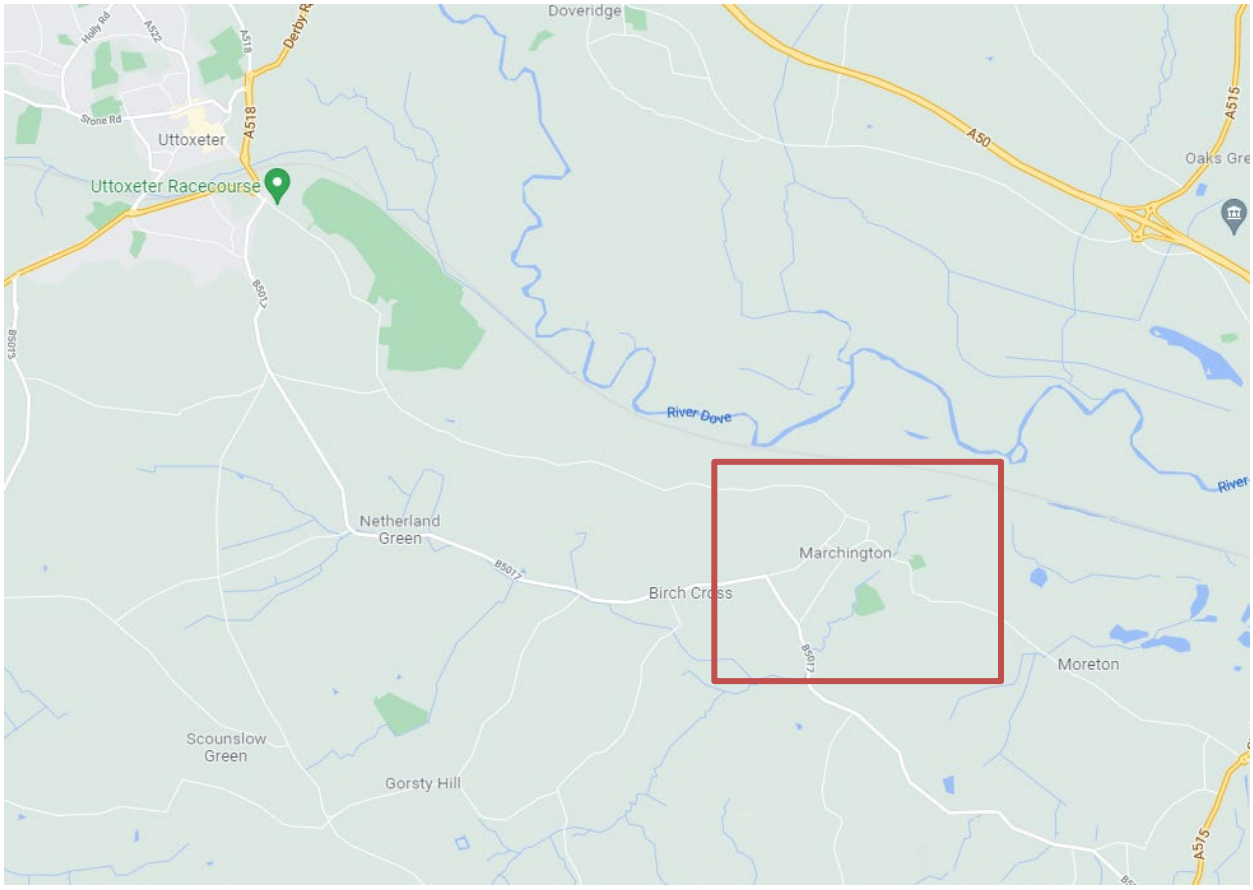


Figure 3- Site Location Plan

Proposed sub-contractors

	[redacted]	
1.		
2.		
3.		