



# Environment Agency NEC4 engineering and construction contract (ECC) Scope

## Project / contract information

Project name	Fowlea Brook Flood Risk Management Scheme
Project SOP reference	IMMI001456
Contract reference	
Date	16.11.23
Version number	1.6
Author	

## Revision history

Revision date	Summary of changes	Version number
16.11.22	First issue	1.0
21.12.22	Second draft	1.1
23.02.23	Updated following comments from team	1.2
04.04.23	Updated following comments from EA commercial manager and ECCPM. Scope transferred to updated template	1.3
17.04.23	Inclusion of carbon clause	1.4
09.05.23	Minor comments from ECCPM and inclusion of C4 services requirement	1.5
16.11.23	Final issue	1.6

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

Document	Document Title	Version No	Issue date
LIT 13258	Minimum Technical Requirements	12	December 2021
LIT 17641	Exchange Information Requirements	3.0	February 2023

customer service line  
03708 506 506  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

incident hotline  
0800 80 70 60

floodline  
0845 988 1188

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## **S 100 Description of the *works***

### **S 101 Description of the *works***

Fowlea Brook flows through Stoke-on-Trent town centre, from north of Longport to its confluence with the River Trent east of the town centre. The brook is heavily engineered, characterised by long stretches of culverted and concrete lined open channels, modified historically due to Stoke-on-Trent's industrial history.

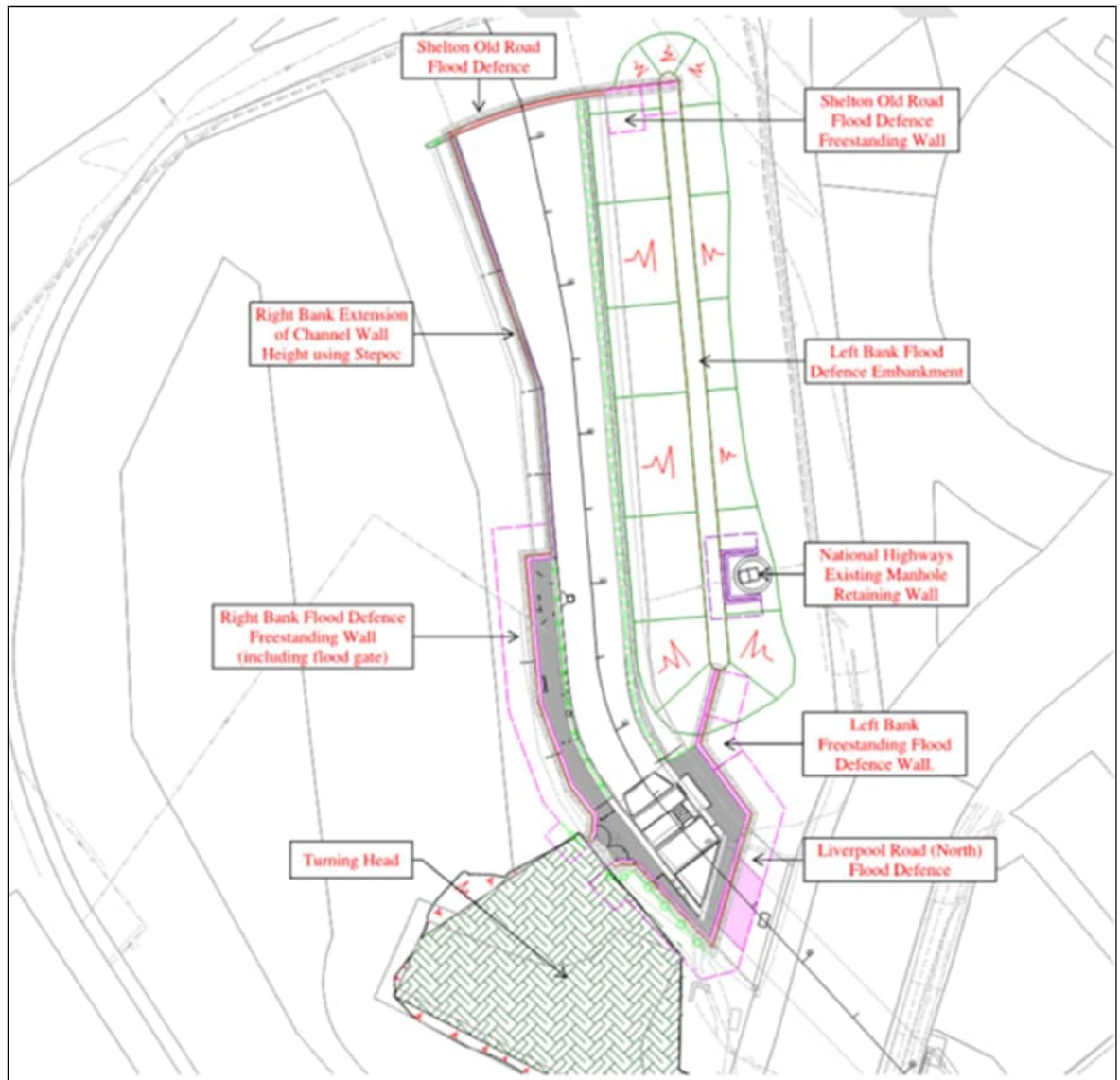
Fowlea Brook Flood Risk Management Scheme (hereafter referred to as “the Scheme”) consists of the construction of flood defences along the Fowlea Brook within the site boundary in Appendix A.

The Scheme is broken down into 3 sites described below. Refer to Appendix B for the detailed designs including the design reports and specification for the works.

**Site 1:** is identified as the area of Fowlea Brook located between Shelton Old Road and Liverpool Road. Figure 2 below shows the proposed arrangement for Site 1 which includes the structures listed below. Refer to Appendix B for lengths and heights of the assets.

- Shelton Old Road Flood Defence (supported on the existing culvert edge beam)
- Left Bank Flood Defence Embankment. Minimum height
- Left Bank Freestanding Flood Defence Wall
- Right Bank Extension of Channel Wall using Stepoc
- Right Bank Flood Defence Freestanding Wall (including flood gate)
- Liverpool Road (North) Flood Defence
- Turning Head
- National Highways Manhole.

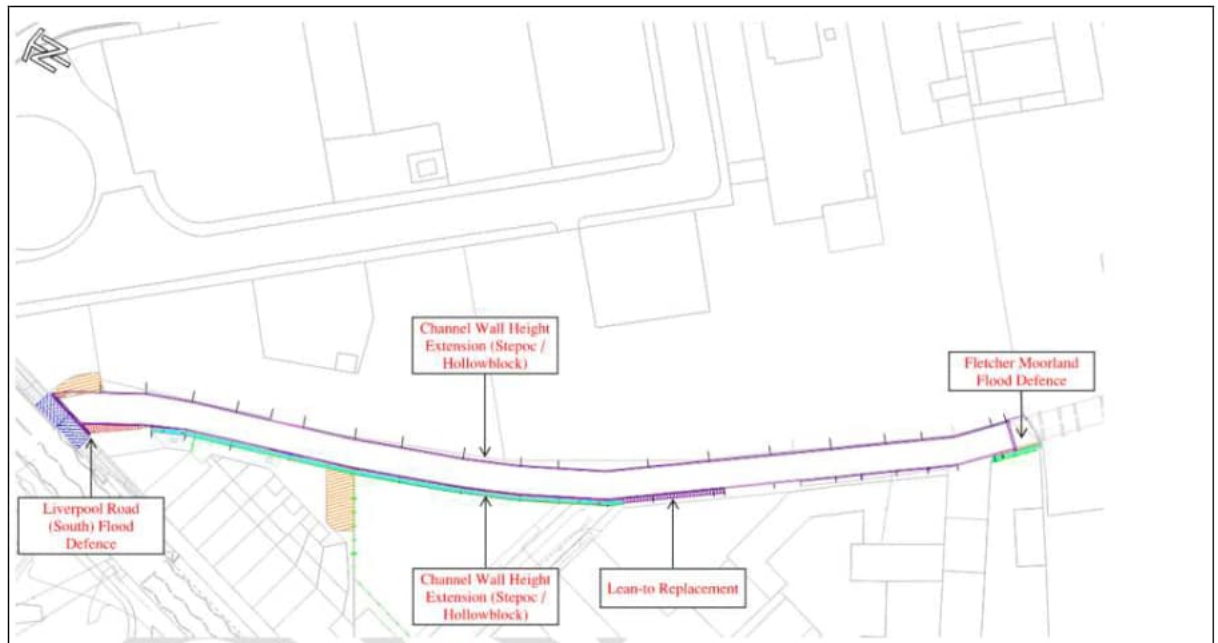




**Figure 2: site 1 arrangements.**

**Site 3:** Site 3 is identified as the area of Fowlea Brook located between Liverpool Road and Elenora Street. Figure 3 below shows the proposed arrangement for Site 3 which includes the following structures:

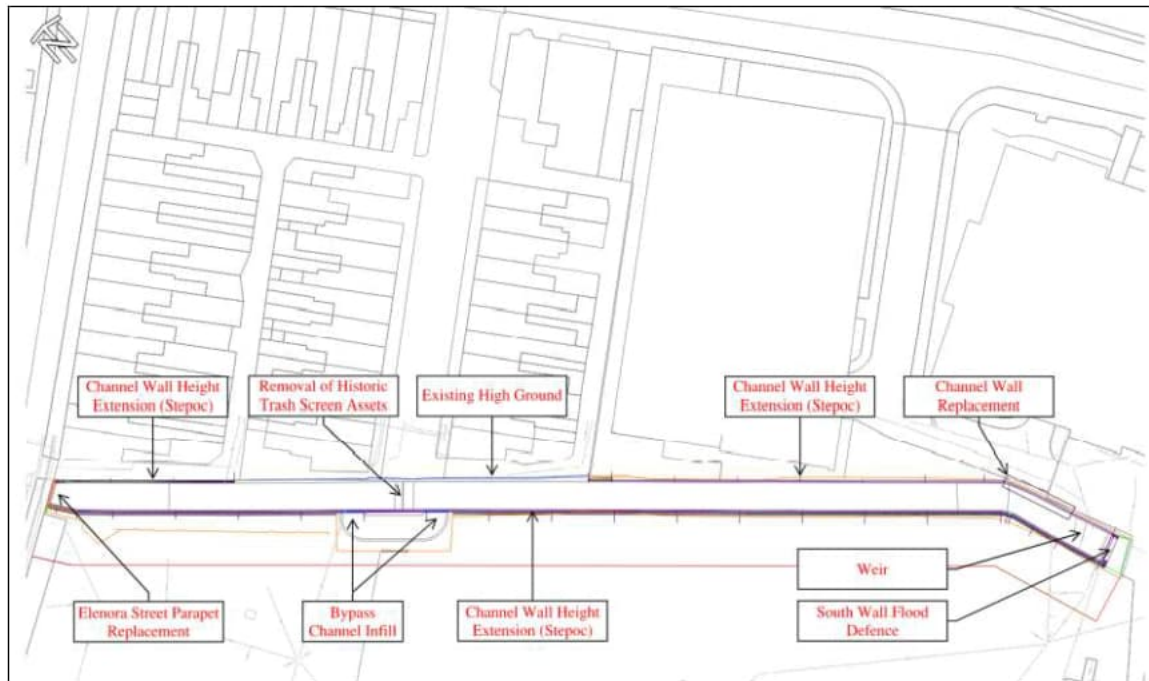
- Liverpool Road (South) Flood Defence (supported on existing culvert edge beam)
- Channel Wall Height Extension (Stepoc / Hollowblock)
- Fletcher Moorland Flood Defence
- Lean-to Replacement
- Demolition of the extension of No.93 Liverpool Road and outbuilding on the Castron development site (No.77 – 87 Liverpool Road).



**Figure 3: Site 3 arrangements**

**Site 4:** identified as the area of Fowlea Brook located between Elenora Street and the Civic Centre. Figure 4 shows the proposed arrangement for Site 4 which includes the following structures:

- Elenora Street Parapet Replacement
- Channel Wall Height Extension (Stepoc)
- Existing High Ground
- South Wall reinforced concrete flood defence
- Bypass Channel Infill
- Removal of Historic Trash Screen Assets
- Wall Replacement
- Weir Works: pre-barrage fish and eel pass



**Figure 4: Site 4 arrangements**

The *Contractor* must maintain the channel throughout the duration of the works. The Client will maintain the trash screen at site 1. The *Contractor* must allow access for the *Client's* field teams to complete the maintenance of the trash screen.

The baseline setting out information is on the drawings contained in Appendix B. The *Contractor* establishes these lines on site and confirms the position with the *Supervisor* before commencement of any construction works. The *Contractor* checks the provision of any level reference points shown on the drawings and confirms the position and level with the *Supervisor* before use for setting out the works. The *Contractor* informs the *Project Manager* when all setting out reference points have been agreed, checked and confirmed.

A certificate of lawful development for the Scheme is included in Appendix C.

## **S 102 Purpose of the Works/ Outcome required**

Fowlea Brook Flood Risk Management Scheme (FRMS) aims to reduce flood risk to 214 residential properties and 119 commercial properties from the Fowlea Brook. The Scheme also unlocks the economic potential of the area allowing for the levelling up agenda to provide regeneration and growth to the area.

This project aligns with the:

1. River Trent Catchment Flood Management plan (2010)
2. The Fowlea Brook & Trent Headwaters Stoke-on-Trent Flood Risk Management (Stoke-on-Trent City Council)
3. Environmental Improvements Strategic Overview (Stoke-on-Trent City Council).

The project intends to resolve the following issues:



- Existing poor-quality buildings acting as flood defences; Flood water being held at a significant depth against poor quality boundary walls and building walls of properties that back onto both banks stretching for approximately 150m.
- Failing channel wall: There is a 30m section of failing channel wall that has a life of less than 10 years located on the left bank that if it failed, would block the culvert and the channel capacity causing a flood risk.
- Non classified embankment acting as a flood defence: There is an existing low level raised embankment that was formed from poor quality material and is not a designated flood defence. Therefore, there is a risk this embankment could fail during a flood event.
- Public safety and risk to life: The flood depths are a key concern for the safety of the public due to the rapid nature of the catchment (levels can rise by 1m in 15mins).
- The effect of the flood risk mapping limiting development of Stoke City Centre is obvious and this is one of the key drivers for the project to encourage development in a particularly deprived area.

The required outcome of this commission is to construct flood defence works on Fowlea Brook in Stoke on Trent as per the construction drawings in Appendix B. The construction of the flood defence works must be acceptable to the *Client* and all other statutory stakeholders. The *works* must:

- The Flood Defence Levels (FDLs) that the *works* are required to provide are included on the drawings outlined in Appendix B. The FDLs stated in Appendix B are to be achieved for the full period of the design life of the defence.

The overview of the *works* include:

- The *Contractor* must obtain licences, permits and approvals necessary for construction of the *works* other than those the *Client* states in this Scope
- The *Contractor* designs, installs and manages the required temporary works. This includes but not limited to: temporary works designs, fabrication details, design loads and calculations for acceptance by the *Client* and *Project Manager*. The *Contractor* must submit for acceptance four weeks prior to construction or fabrication.
- The *Contractor* arranges all service diversions and other protection arrangements necessary to complete the works within their programme. This is to include any necessary approvals/acceptances by the service providers in sufficient time to carry out the works. The utilities tracker is in Appendix P.
- The *Contractor* must construct the *works* in accordance with the design drawings, Civil engineering Specification in Appendix B and the *Client's* Minimum Technical Requirements v12 in Appendix F.
- The *Contractor* must repair the channel in accordance with the Channel Structural Repair Specification in Appendix B. Any repairs to the parts of the channel that have not been identified in Appendix B will be a Compensation Event.
- The *Contractor* designs and fabricates and installs two sets of access steps over the defence and into the channel. In accordance with the MEICA specifications in Appendix E.

- The *Contractor* designs, fabricates and the installs the specialist flood gate and associated controls located in site 1 and detailed in the design drawings and the Civil Engineering Specification in Appendix B. The gate design must comply with the specification in the Civil Engineering Specification and the requirements of the Master Datasheet Specification in Appendix D and comply with the MEICA Specification Manual Flood defence Gates LIT57831 (Appendix E).
- The *Contractor* commissions and handovers the completed works to the *Client*.
- The *Contractor* must be responsible for the seeding of grass in 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 as per the Maintenance and Management Plan that will be issued by the *Contractor*.
- The *Contractor* must reinstate affected car parks and any areas used for temporary accommodation and welfare.
- The planting of shrubs and trees will be contracted by the *Client's* under the Environment Agency's Landscape framework with an aftercare period of 5 years. The *Contractor* must allow the *Client's* landscape contractor access to Site.
- The *Contractor* cooperates with the *Client*, *Project Manager*, *Supervisor*, design supervisor, ECoW and Principal Designer.
- The *Contractor* must prepare and submit for acceptance the information required to produce the Health and Safety File, Operation and Maintenance Manuals, As Built Surveys, mark ups for As Built Drawings, Project Cost Tool, BIM data and Carbon Report.
- The *Contractor* must provide clear mark ups for the production of the As-built drawings by the designer. The *Contractor* must submit the marked-up drawings to the *Supervisor* and *Client* for acceptance prior to these being issued to the designer. The *Contractor* must liaise with the *Client's* designer to aid with clarification of mark ups.
- The *Contractor* must include for any required topographic survey or ground investigation, including contaminated land.

## **S 200      General constraints on how the *Contractor* provides the works**

### **S 201      General constraints**

In providing the works the *Contractor* must take account of the following constraints:

- a. The *Contractor* must not commence construction on Site without prior written approval from the *Project Manager*.
- b. The *Contractor* must comply with the requirements of all necessary consents, including, but not limited to; Environmental Permits, Site Waste Management Plan, Footpath Closures, Traffic Management.
- c. The *Contractor* must adhere and maintain the Environmental Action Plan (EAP) contained in Appendix I.
- d. The *Contractor* must adhere to the stakeholder and third party requirements outlined in Appendix L.
- e. Any constraints that have been identified in ESE (Early Supplier Engagement) *Contractor's* buildability statement (Appendix J). This statement is included in the appendices to show that the designs are buildable, the *Contractor* has been providing this ESE support throughout the development of the design,
- f. The *Contractor* must understand the Pre-Construction Health and Safety Information which is provided by the *Client* in the PCI.
- g. The *Client* classifies the channel as a confined space and any works within the channel have to be compliant with the confined space regulations 1997. During construction the *Contractor* must assess the in channel working and mitigate the requirement for the works to be designated under the confined space regulations. This must be in agreement with the Principal Designer and the Site Supervisor. If any of the works the *Contractor* proposes do need to comply with the confined space regulations because agreement could not be met with the Principal Designer and the Site Supervisor then the *Contractors* provision to ensure compliance with the confined space regulations is a compensation event. The design at contract award has been assessed by the *Contractor* who has determined that the temporary works are not classified as a confined space working under the regulations any change in design after contract award will be assessed by the *Contractor* and if it is determined that confined space regulations apply this is a compensation event.
- h. The *Contractor* must review the works against the confined space regulations to ensure a safe method of working is in place and agreed with the Principal Designer prior to construction start. This includes ensuring operatives hold the required skills and training in place to safely undertake the works.
- i. The *Contractor* must provide a schedule of access dates for each site at least 4 weeks' notice before entering the Site. The *Client* will then issue a notice of entry to enable access.
- j. The *Contractor* must ensure the works are secure from the general public and vandalism
- k. The *Contractor* must ensure the *Works* are safe from needles and sharps, bird guano and asbestos.
- l. The *Contractor* must provide 24 hour safe access to the maintenance and clearance of the trash screen and the river gauge.

### **S 202      Entry onto Site**

It is the *Client's* responsibility to provide unrestricted entry to the Site as defined in the site boundaries drawings in Appendix A. If the working area is outside of the boundaries of the site this is the responsibility of the *Contractor*.

The *Contractor* must give 4 weeks' notice to the *Client* to gain entry to the site before the commencement of the works (this includes site set up, temporary works and permanent works) and after Completion in order to correct defects. The *Client* arranges the necessary access for the *Contractor*.

The *Contractor* must not enter any part of the Site until the *access date* of that part of the Site as shown on the Accepted Programme.

The *Client* will use its notice of entry powers to enable access. The *Contractor* cannot enter the site until 10 days after the Notice of Entries have been issued by the *Client*.

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

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

The *Contractor* must 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 thoroughfares, within the boundaries of the site) together with the dates of the erection and removal of all temporary fencing.

The *Contractor* prevents as reasonably practicable public access to all Working Areas and to vegetated and grassed parts of the Working Areas during reinstatement until vegetation has established. Completed landscaped areas are protected from damage from construction activities. The *Contractor* removes all temporary fencing in each landscaped area after establishment of grass.

The *Contractor* must keep owners and occupiers informed of the effect of the construction works on their land and property. See section below on Liaison with third parties.

## **S 203      Use of Site**

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

The accepted proposed locations for the main compound and satellite compounds are outlined in Appendix B. The *Contractor* must adhere to these proposals.

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

## **S 204      Occupied premises and users**

The *Contractor* must not gain access to any occupied premises or third-party land without the prior written agreement of the Landowner and Tenant, and the *Client's* Estates Team.

## **S 205      Site Accommodation**

The *Contractor's*, the *Project Manager's*, and the *Client's* staff share facilities as much as possible to maintain a team approach to project delivery. The *Contractor* must provide shared, fully serviced, office accommodation for the duration of the project in a temporary site office and provide facilities as detailed in section 1.1 of the Minimum Technical Requirements. Where there is a discrepancy or

ambiguity between the Scope and Client's MTRs, the requirements of the Scope must take precedence. The *Contractor* must provide accommodation and workstations stated in clause 1.1.6 of the *Client's* Minimal Technical Requirements Minimum Technical Requirements v12 (LIT 13258) for 6 desks.

## **S 206 IT and Projection Facilities**

The *Contractor* must provide the following:

- Internet access via a high-speed broadband wireless network for use by the *Client*, *Project Manager*, *Supervisor* and their staff
- Networked A3 colour laser printing and copying facilities including paper and all other consumables
- Provision of suitable meeting rooms and projection facilities to ensure hybrid meetings can take place for the *Contractor* and *Client*.

The accommodation must be suitable for the *Contractor*, *Project Manager*, *Supervisor* and *Client's* staff to administer the contract. The *Contractor* must allow for and undertake all necessary remedial works to bring any hired or rented premises back to their original condition at the completion of the *works*. The *Contractor*, as appropriate, provides, erects, maintains and subsequently removes all temporary satellite compounds, welfare facilities, stores, parking areas and the like for the use of *Contractor's* staff and work force that are necessary for the completion of the *works* and the correction of defects.

## **S 207 Parking**

The *Contractor* must provide adequate parking for site-based personnel and 6 parking spaces for visitors within the main and satellite compounds. No parking is allowed outside these areas, unless the *Contractor* enters into specific agreements with landowners and/or Authorities. There is no requirement for charge points to be made available on the site.

## **S 208 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 (November 2021) (Appendix F).

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*.

## **S 209 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 services only with the *Client's* written permission.

## **S 2010 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* must 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 all occasions. 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.

The *Contractor* ensures the temporary works are not accessible by the general public and are secure from access by the public at weekends and out of hours.

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.

The *Client* deems the area as an anti-social environment. The *Contractor* must ensure appropriate security measures are in place to protect the *Contractor* and equipment from the anti social behaviour. Drug paraphernalia and sharps are common in this area the *Contractor* needs to ensure the works areas are cleaned of such activities prior to any works and checked regularly.

## **S 2011 Security and identification of people**

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

The *Contractor* is wholly responsible for the security of the Site, passage of vehicles, personnel/pedestrians which may be affected by the works, including personnel, plant, equipment, and materials used in the delivery of the works.

The *Contractor* must identify personnel entering the Site.

## **S 2012 Consideration of Others**

The *Contractor* must register the Site and act in accordance with Considerate *Contractor* Scheme. As such the *Contractor* must work to limit the impacts of the works on local residents and the land uses. The *Contractor* must provide a named individual to act as the single point of contact for local residents and enquiries from the general public.

## **S 2013 Control of site personnel**

The *Contractor* must make appropriate arrangements for the control of people working and visiting the Site.

The *Contractor* must ensure that all persons working on or visiting the Site hold a valid and current Construction Skills Certification Scheme (CSCS) card. Persons without this card must be escorted at all times by a member of the site team.

A visitors' book will be maintained by the *Contractor* in which the date, the time in, the time out, evidence of a specific Health and Safety induction, CSCS number, and the name and company of the person visiting must be noted.

Refer to the *Client's* SHEW CoP (Appendix G) for Health and Safety requirements.

## **S 2014 Protection of the works**

The *Contractor* protects the *works*, Material, Plant and Equipment liable to damage either by the weather or by the method used for carrying out the construction of the works. The *Contractor* must ensure the weight of construction plant used is consistent with maintaining the structural integrity of the existing assets including the channel. Damage attributable to the *Contractor's* activities must be determined by the *Client* and remedied by the *Contractor*. The cost of making good any damage must be met by the *Contractor*.

## **S 2015 Protection of existing structures and services**

The *Contractor* must take all reasonable care and precautions not to damage any existing structures, equipment, services, mains, trees and other plants during the works and must keep all areas within their control, or working areas, clean of debris etc. arising from their operations.

The *Contractor* must refer to the Utility Search information included in Appendix P. Existing services located on, or adjacent to, the site are indicated on drawing, included within the Appendix P. Known services diversions as identified in the site information. Known services are anything within 3m of the record drawing. Appendix P contains C3 responses from utility providers. The *Contractor* must obtain C4 quotations from utility providers prior to construction start.

Prior to undertaking intrusive works, the *Contractor* must conduct a services survey to positively identify services. 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 *Contractor* 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. The *Contractor* must carry out positive identification of services as soon as reasonably practicable on their programme to reduce the impact if the services are not as they are shown on the service plans.

The *Contractor* is responsible for the coordination of the diversions.

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

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

The *Contractor* must be responsible for maintaining the existing services within the Site and must 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 must not be interfered with in any way except insofar as may be specified in the contract or otherwise be agreed with the *Client* as the works progress.

The *Contractor* must 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* must 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* must undertake repairs to pre-works condition.

There are outfalls located within the existing defence discharging surface water runoff into the River Trent. Any temporary or permanent works must not adversely affect the operation of these structures.

The *Contractor* must replace any fencing and repair any fencing or gates that may be damaged as a result of 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 must be recorded by the *Contractor* on the drawings.

The *Contractor* must maintain any fencing required for security or the health and safety of others during the works.

Debris burning must not be permitted under any circumstances without the prior written acceptance from the *Client*.

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

The *Contractor* must protect known environmental features listed in the EAP and environmental surveys that might potentially be affected by the scheme during the construction and operational phases. Protection measures must be agreed by the *Client* and the ECoW.

## **S 2016 Client's specified policies and procedures**

The *Contractor* must submit all deliverables to the *Client's* for Acceptance and adhere to the Client's Minimal Technical Requirements v12 (LIT 13258).

## **S 2017 Programming constraints**

All construction methods must adhere to any conditions imposed by any licenses or permits granted. Construction activities must adhere to the Construction Phase Plan.

The *Contractor* must submit all deliverables as listed in S300 to the *Client* for acceptance.

The *Contractor* must incorporate environmental constraints outlined in the EAP into the programme and working methods.

The *Contractor* must sequence the programme so the works taking place on site 1 are planned last. This is to allow the *Client* to secure the relevant technical approval whilst construction on sites 3 and 4 takes place.

The *Contractor* must demolish Castron outbuilding on site 3 identified in Appendix B within 18 weeks of contract award.

The *Contractor* must adhere to the stakeholder requirements in Appendix L.

## **S 2018 Operational constraints**

The *Contractor's* construction methods must 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* must maintain safe access routes for local landowners, residents and business owners where their construction work impacts existing routes during the contract period. The *Contractor* must take this into account when formulating the Programme and when selecting methods of working.

Operational structures within the site area (for example Severn Trent Water and Environment Agency assets) may need to be operated from time to time. Any temporary or permanent works must not impede the operation of these structures unless agreed with the asset owner.

The *Client* will maintain responsibility for the maintenance of the trash screen and the river gauge at site 1 for the duration of the works, this includes ensuring blockages on the screen are removed. The *Client* will require access to these assets at anytime. The river gauge and the camera on the trash screen needs to be operational during the works and the *Client* needs to be able to gain access to undertake any maintenance to these assets during the works. It is the *Contractor's* responsibility to ensure safe and secure access to the site for the *Client* to carry out its operational activities.

The *Contractor* must maintain the channel throughout the duration of the works.

The [REDACTED] building is over the top of the Fowlea Brook. This is a popular place for pigeons to nest, as a result there is a lot of pigeon guano which is a health hazard if it is breathed in. It needs to be assessed and considered by the *Contractor* and a safe system of work in these areas established.

The Fowlea Brook is a fast-reacting watercourse and there will be little or no warning of a sudden increase in water levels of the brook. The *Contractor* needs to ensure there are safe ingress and egress routes from the works in or above the channel.

The *Contractor* must ensure safe access as per SHEW CoP (see Appendix H) and Client's Minimum Technical Requirements v12 (LIT 13258).

## **S 2019 Maintenance of Existing Defence Levels**

Within each Site and to protect existing property, in undertaking the *works* the *Contractor* does not reduce the level of or interfere with existing flood defences unless new defences of the same height or greater have already been constructed, or temporary defences are implemented for the duration of construction.

All solutions must be agreed with the *Project Manager* prior to commencement. The *Contractor* must inform the *Client* of the methods to be used to maintain the defence when works are underway. These methods must not interfere with the *Client's* ability to manage flood risk during periods of possible flooding. The *Contractor's* methods must include contingency plans and 24 hour contact numbers to be used by the *Client* in cases of possible failure or problems with the *Contractors* methods.

The *Contractor* must remove blockages in the channel during the *works*.

## **S 2020 Third party constraints**

Third Party constraints have been captured in Appendix L (Stakeholder Constraints). The *Contractor* must comply with these constraints during construction and programming of the *works*.

## **S 2021 Consents and Permissions**

With the exception of those required for preparing and serving Notices of Entry, obtaining all consents are the responsibility of the *Contractor*.

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

- Utility Companies and Service providers:

The *Contractor* must 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* must include these activities in the programme. If the Utility Companies do not work within their Service Level Agreement timescales shown on the accepted programme and the *Contractor* can prove they operated as required, this will be a Compensation Event.

The *Contractor* must work with third parties to produce a solution with minimal temporary 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.

- National Highways:

The Client will provide the Contractor with the relevant technical approval for the works on National Highway assets. The Contractor must comply with National Highways temporary works and permanent works requirements and is responsible for obtaining formal acceptance from National Highways post construction. Including, but not limited to:

1. Construction Compliance Certificate in line with CG300 Appendix N signed by a competent engineer.
2. Submit Asset Handover documentation to National Highways for their asset data collection in line with CG302.
3. Gain confirmation from National Highways nominated site representative that works have been carried out in accordance with the design and sign the Design and Check Certificate as the Principal Contractor.

The Contractor must allow for co-ordination with National Highways to understand their requirements for completion.

- Stoke on Trent City Council



The Client will provide the Contractor with the relevant Technical Approval for the works on Stoke-on-Trent City Council highway assets. The Contractor must comply with Stoke-on-Trent requirements for obtaining completion and sign off for any works on their asset. The Contractor is responsible for obtaining sign off for the works on site by Stoke-on-Trent their representative and submitting As-builts mark ups and Health and Safety file documentation including Quality Inspection Test Plans (QITPs) to Arup for submission of the completion certificate. The Contractor will need to sign the completion certificate as the principal contractor.

The Contractor must allow for co-ordination with Stoke on Trent to understand their requirements for completion.

The *Contractor* is required to agree land drainage consents, highways access permissions and public rights of way closures with Stoke on Trent City Council for all *works* around their assets.

- Environment Agency

The *Contractor* will be responsible for obtaining the Environmental Permit for the *works*. Individual permits will be required for each section of the main defences. 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* must apply for a Flood Risk Activity Permit (FRAP) prior to construction award and allow for updates.

- Severn Trent Water

The *Contractor* seeks the relevant permissions and permits to complete works in and around Severn Trent Water assets. They must not impede discharge from STW outfalls without agreement from STW.

- Temporary Works

The *Contractor* prepares and applies for Temporary Works Permits for each part of the works, including the arrangement of temporary access routes within or close to watercourses. In preparing the application for Temporary Works Permits, the *Contractor* considers the following:

- Impact on flood risk to property
- Impact on fish, particularly those migrating and spawning in the channels

Where temporary works interfere with the flow of water in a channel or through structures, the *Contractor* prepares an application and secures consent from the Environment Agency's Fish Pass Panel.

In arranging temporary road and footpath closures, the *Contractor* manages closure requests and bookings through Stoke on Trent City Council on behalf of the *Client*. The costs of the application must be borne by the *Client*. The *Contractor* accounts for this in the Traffic Management Plan.

## **S 2022 Interfaces between the works and third party assets**

The *Contractor* must provide staging plans outlining the phases of construction, start and completion dates, anticipated levels of likely disruption for each affected stakeholder.

The *Contractor* will comply with the stakeholder requirements set out in Appendix L.

The *Contractor* will provide local liaison and provide weekly updates to affected stakeholders throughout the duration of the *works*. This will include, but not limited to, the following stakeholders:

1.

2.  
3.  
4.  
5.  
6.



The *Client* will provide the *Contractor* with the relevant technical approval for the works on National Highway assets on site 1. In the construction programme, the *Contractor* must sequence all works on site 1 at the end of the programme. Refer to Appendix B which highlights the ownership of existing assets.

The *Client* will provide the *Contractor* with the relevant Technical Approval for the works on Stoke-on-Trent City Council highway assets. In the construction programme, the *Contractor* must sequence all works on site 1 at the end of the programme. Refer to Appendix B which highlights the ownership of existing assets.

On Site 3 there are many interfaces with third parties where the works tie in to existing buildings either through the flashing or wall returns these works. The *Client* must liaise with the third party for access to do this.

## **S 2023 Condition survey**

At least 2 weeks prior to taking possession of the Site, the *Contractor* must undertake a condition survey of all highways, land and any other features which may be affected by the works including boundaries, gates, fences, buildings, 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 structures and trees adjacent to the working areas. All the private property condition surveys have been completed by the *Client* and are included in the Site Information. The *Contractor* must make a note of any existing damage and bring this to the attention of the landowner or tenant, and must ensure that the precise location and condition of property boundaries that are to be removed during the works is recorded. The *Contractor* must provide a copy of the condition survey to the *Client*. The *Contractor* must notify the *Client*'s Estates Team of any property or structure for which a structural condition survey is required, at least 8 weeks before access is required adjacent or upon; the *Client* must arrange such surveys where they agree one is required. The *Client*'s Estates team must undertake structural condition surveys and pre-condition photographic surveys where required. The *Contractor* is to agree the extent of these surveys with the *Client*.

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 must 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 must 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* must repeat the condition survey on completion of the works and provide a copy to the *Client*.

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

The *Contractor* must 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 must be met by the *Contractor*.

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

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

The survey record should be stored in the BIM archive.

## **S 2024 Reinstatement**

The *Contractor* must design, construct, maintain and afterwards remove from Site and fully reinstate all temporary compounds, storage areas, site roads and access routes, car parks, this includes but not limited to:

- 1) Rebecca Street car park
- 2) Rebecca Street
- 3) Leese Street
- 4) Trent Dale units
- 5) Spode access off Elenora Street
- 6) Liverpool Road
- 7) Shelton Old Road
- 8) Site 4 access routes and compound area

The *Contractor* must submit details of the proposed Compound reinstatement works no less than 4 weeks before these reinstatement works commence.

Refer to the Minimum Technical Requirements v12 Clauses 3.7, 3.9 and 3.22 for additional requirements for the Reinstatement of Maintainable Highways, Unpaved land and Land in Private Ownership.

## **S 2025 Cleanliness of the roads**

The *Contractor* must 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.

## **S 2026 Site cleanliness**

The *Contractor* must keep the working areas tidy and promptly remove rubbish, waste and surplus materials. Materials, Plant and Equipment are to be positioned, stored and stacked in a safe and orderly manner. The *Contractor* should look to segregate the waste and plant and materials away from walkways and traffic as much as possible.

Welfare facilities must be regularly cleaned, and rubbish removed from the Site.

The *Contractor* will need to do a sharps sweep of the sites prior to take over and have a Procedure for how to deal with sharps if they are found on the site including in the channel.

## **S 2027 Traffic Management**

The *Contractor* is responsible for traffic safety and management, including obtaining all approvals, e.g. TTRO, Safety audits and inspections, road closures, openings, or traffic signals consents, and nominates a member of site staff to be responsible for all related activities. Before any work in, or affecting the use of, any highway or road is commenced, the *Contractor's* proposed method of working, including any special traffic requirements, is agreed with and confirmed in writing to, the *Client*, and all relevant authorities.

Traffic movement to and from the Site is to be the minimum necessary and delivery and removal of Materials, Plant and Equipment must avoid peak traffic hours. The *Contractor* will endeavour to programme heavy goods vehicle (HGV) deliveries and movement outside of peak times, (08.00 to 09.00) and (15.30 to 17.00).

The *Contractor* must produce a Traffic Management Plan to be submitted to the *Project Manager* prior to construction of the works. The Traffic Management Plan is to include, but is not limited to, the following:

- Access routes to be taken by heavy vehicles, noting any height or weight restrictions;
- Structural assessment of any weak farm crossings/culvert/bridges which need to be crossed;
- Details for keeping roads clear of dust and mud;
- Timings for heavy load movements;
- Vehicular routing;
- Parking areas
- Parking restrictions for construction vehicles on the public highway surrounding the Site;
- Pedestrian walkways around the Site;
- Storage areas;
- Timetable for removal of site compound equipment.
- Timings of heavy pedestrian presence (such as school opening and closure times)

The *Contractor* co-operates with the relevant authorities concerning works in, or access to, the highway. The *Contractor* informs the *Client* of any requirements or arrangements made with the relevant authorities.

The *Contractor* must be responsible for liaising with the public with regard to road closures and regular movements on the highway. The *Contractor* must minimise disruption, avoiding full road closures and undertaking the works with partial closures involving:

- Opening up the road at the end of the working day;
- Opening up the road during the working day at pre-arranged and advertised times; and
- Closing the minimum length of road to facilitate access to adjacent property.
- No vehicles will be permitted to block the right of way.
- In areas of the Site up to the public highway and the interface between the Site and the public highway where conflict between members of the public and the site plan could occur, all plant must have a banksman to the front and rear during moving operations.

## **S 2028 Borehole information**

Details of Ground Investigations and the UXO Desk Study for Fowlea Brook Flood Risk Management Scheme have been carried out are included in Appendix B.

## **S 2029 Noise and vibrations**

No works must take place until a programme for baseline monitoring, monitoring of noise and vibration has been submitted 3 weeks prior to the commencement of the works and accepted by the *Project Manager*. The programme must specify measurement locations and maximum permitted noise and vibration levels at each location depending on the sensitivity of the surrounding infrastructure. Noise and vibration levels must not exceed the specified levels in section 1.26 of the MTRs unless otherwise approved in writing by the *Project Manager*.

Refer to clause 1.26 Client's Minimum Technical Requirements v12 (LIT 13258) for noise control and working hours, including requirements for vibration disturbance

The *Contractor* must liaise with the relevant Local Authority for each location and comply with their requirements for noise control and any particular restrictions on working hours. The *Contractor* is responsible for establishing contact with the relevant officers within each Local Authority.

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

## **S 2030    Pollution, ecological and environmental impacts**

The *Contractor* is responsible for adhering to and completing all actions designated in the Environmental Action Plan (EAP) contained in Appendix I

The EAP will be monitored by the Environmental Clerk of Works (ECoW).

The *Contractor* must manage the EAP as detailed in the Environment Agency Safety, Health, Environment and Wellbeing Code of Practice (June 2022). As an iterative document, the EAP will require regular updating by the *Contractor*. These updates will include:

1. A review to check that no changes have been made to the mitigation measures outlined in the draft EAP through subsequent conversations and agreements with the local councils, Natural England, and others following the publication of the Environmental Statement (Appendix Q).
2. Any subsequent conditions in the EAP, including planning conditions from Stoke on Trent City Council as well as any conditions as part of the marine licence and any other required consents and permissions (e.g. FRAPs, Section 61 etc..).
3. Any additional mitigation measures developed through the survey stages leading up to construction (for example, any measures applied as part of EPS licencing etc).

The *Contractor* must report any non-compliance to the *Project Manager* as soon as reasonably practicable. Any work required to manage previously unidentified protected or invasive species will be a Compensation Event.

In particular, the *Contractor* must :

- Ensure appropriate management of any invasive species, such as Japanese knotweed or Himalayan Balsam.
- Management of signal crayfish as per the EAP
- Management of nesting birds as per the EAP
- Management of bats as per the EAP
- Minimise and appropriately fence working areas
- Reinstate, upon completion, all areas temporarily affected by construction activities.
- Implement best practice construction mitigation measures to prevent impacts from dust, noise, run-off or other potential pollutants.

- Adhere to water pollution prevention measures, such as the Environment Agency's Pollution Prevention Guidelines (PPG 5: Works and maintenance in or near water), or similar guidance provided by CIRIA "Control of water pollution from linear construction projects", technical guidance (C648D).
- Restrict site clearance activities to day-time working only.

## **S 2031 Traffic Management**

See Clause S 2027

## **S 2032 Archaeological requirements**

The *Contractor* must comply with the requirements outlined in the Environmental Action Plan in Appendix I.

The *Contractor* liaises and coordinates with the *Client's* Archaeological contractor who provides archaeological monitoring in the form of toolbox talks and watching briefs during excavation activities. The *Contractor* must give 2 weeks' notice in writing to the *Client's* Archaeological contractor and Site Supervisor for the requirement to attend Site.

In the event of the uncovering of archaeological artefacts or paleo-environmental deposits, the affected construction works are stopped, the *Project Manager* is informed immediately, and assistance is provided by the *Contractor* to the Archaeological contractor to enable investigation. Construction only recommences once agreement has been received from the *Project Manager*. This will be a *Client* risks. Delays will be managed as a Compensation Event.

## **S 2033 Storage of fuel and chemicals**

To minimise the risk of pollution, the *Contractor* must 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) (January 2023)' (Appendix H) and the 'Pollution prevention for businesses' guidance on WWW.GOV.UK.

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

## **S 2034 Waste materials**

The *Contractor* prepares a Site Waste Management Plan and undertakes the *works* in accordance with this plan. Refer to clause 1.40 of the MTR. The plan must include but not limited to:

a location plan identifying waste storage areas, and provisions for each type of waste which will be encountered

classification of all waste including special waste according to current legislative provisions;

recording of the quantity, classification and location of all waste arising

limiting the generation of waste arising on site, and identifying those wastes which have a potential for reuse either on or off site

recording of proposed waste carriers and the terms of their respective licences

an indication of the *Contractor's* intentions regarding the use of disposal sites for all types and classifications of waste (including special and hazardous waste), and the relevant requirements of the respective licences and planning permissions

an appropriate audit trail encompassing waste disposal activities and waste consignment notes; and

measures to avoid fly tipping and vandalism by others.

The Contractor must ensure arisings from the works are incorporated into the Site where possible. No arrangements have been made with landowners for disposal of material on Site. It is for the *Contractor* to make arrangements that represent the best value for money to the *Client*, taking into account the cost of the works, the environmental impacts and the cost of any additional compensation paid.

Any other construction related materials must be disposed of away from Site without any contamination of the waterways or surrounding land. Disposal must be in accordance with the Site Waste Management Plan and by a licensed waste disposal *Contractor* with procedures to provide an audit trail.

The *Contractor* determines volumes of waste to be disposed of offsite and applies for the appropriate licences from the Environment Agency.

Any invasive species will need to be disposed of in alignment with the Invasive Species Management Plan that will be prepared by the *Contractor* to ensure no spread during construction. Bio security measures should be applied throughout the project.

## **S 2035 Deleterious and hazardous materials**

All substances potentially harmful to human health must be stored in a locked store in accordance with manufacturer's storage recommendations.

The *Contractor* must provide a list of substances forming part of the works which are covered by the COSHH Regulations to the *Project Manager*. For each substance listed a detailed product sheet must be submitted to the *Project Manager* at the design stage.

Refer to the Ground Investigation report contained in the Site Information for further details on deleterious and hazardous materials which may exist on site.

## **S 2036 Asbestos**

The *Client* is responsible for providing surveys to identify the type, location and condition of the asbestos. There is a survey in Appendix N. Additional surveys are being carried out and will be issued to the *Contractor*.

The *Contractor* must inform the *Client* if they suspect the presence of asbestos within the site boundaries. Delays on Site as a result of the presence of asbestos which is not currently known will be managed as a Compensation Event. The *Contractor* must assess the risks and provide a asbestos management plan to manage the risk, implement the plan and monitor and review the plan throughout the works. For future record the asbestos management plan must be kept up to date. All works around asbestos must be compliant with the Asbestos Control regulations 2012.

## **S 2037    Control of pollution**

The *Contractor* must 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)' (January 2023) and the 'Pollution prevention for businesses' guidance on [www.GOV.UK](http://www.GOV.UK)."

The *Contractor's* attention is drawn to the control of pollution provisions in the Water Resources Act 1991. The *Contractor* takes all necessary precautions to ensure that no polluting discharge either of solid or liquids is made to any watercourse or to the underground strata and that no work carried out in any watercourse is done in such a manner as to cause pollution. Any materials which accidentally fall into any watercourse are to be removed immediately.

The *Contractor* will produce method statements and Pollution Prevention Plans for each Site (as appropriate).

The *Contractor* will produce a Pollution Emergency Response Plan for each site. The *Contractor* must be aware of and comply with the recommendations of the Environment Agency Pollution Prevention Guidelines.

The *Contractor* obtains the consent of the Environment Agency before making any discharge to any watercourse or the underground strata.

The *Contractor* takes all necessary precautions to protect all watercourses, together with water in underground strata, against silting, erosion and pollution.

The *Contractor* will produce a method statement for any over-pumping requirements. The *Contractor* must ensure that the pumps are of adequate capacity and that additional emergency pumps are available during appropriate high flow periods. The additional pumps are to be maintained in working order. Discharges from pumps must be at a suitable location to prevent erosion and pollution and must be agreed with the *Supervisor* in advance of any discharge being made. The *Contractor* obtains the consent of the *Client* prior to any over-pumping.

The *Contractor* ensures that:

- All stores are kept locked when not in use, and all containers are clearly labelled with their contents. Leaking or empty oil drums or chemical containers are removed from the Site immediately;
- Equipment which leaks any fuel, lubricant or hydraulic fluid is not used, and all static equipment using fuel oil is located as far away as reasonably possible from any watercourse and surrounded with oil-absorbent material to contain spills or leaks;
- Refuelling or servicing of equipment is undertaken in designated locations away from watercourses or drains, and refuelling is supervised and carried out by pumping through a trigger type delivery nozzle;

- An adequate supply of oil absorbent material is readily available on Site at all times. Any spillage is immediately contained, removed from Site and disposed of to a licensed tip and the *Supervisor* promptly informed;
- Silted or discoloured water pumped from excavations is either irrigated over grassland or settled in a lagoon prior to any discharge to a watercourse;
- Equipment is not used in a watercourse or to ford a watercourse without the consent of the *Client*. Regular river crossings are by way of temporary bridges or culverts by agreement of the *Client*;
- Haul roads and approaches to watercourses are regularly scraped and maintained free from deposits of slurry. Any slurry so removed is disposed of in a location agreed by the *Supervisor* avoiding pollution of the watercourse. Precautions are taken to ensure surface water drains are not contaminated by solids from workings and associated transport;
- There is no discharge or seepage of cement slurry from any concreting work, mixing plant or ready-mix vehicle into any watercourse;
- Equipment parking and servicing areas and wheel washing facilities are located in agreement with the *Client*;
- Any imported fill or construction material is free from polluting or toxic substances where drainage from the material can directly enter surface or underground waters;
- Suitable sheeting is provided under any structure over a watercourse which is to be cleaned by mechanical or chemical means and/or painted in order to prevent material entering the watercourse.
- All machinery working within 5m of a watercourse is checked daily for fuel and oil leaks.
- No uncured concrete or concrete residue is to enter any watercourse or standing water.
- Any soil accidentally contaminated during the works by potentially polluting substances such as fuels, oils, chemicals etc., is removed to a licensed tip. Absorbent materials used to contain spills are to be dealt with in the same manner.
- Any stationery equipment, such as pumps, compressors, generators, etc., must be sited on impermeable drip trays in such a way as to prevent spillage or overflowing. Drip trays must be maintained daily.
- All engines are to be switched off when not in use and not left idling.
- Any water pump inlet hoses should be fitted with filters to prevent ingress of fish and eels.

Without the consent of the *Client*, the *Contractor* does not remove from a watercourse deposits accumulated due to a dam, weir or sluice, nor promotes the removal of deposits by causing them to be carried away in suspension in the waters.

## **S 2038 Hedgerows/shrubs/bushes**

The *Contractor* must submit proposals and programme for the removal of trees, hedges, fences or gates, either temporary or permanent, to the *Project Manager* for acceptance.

Any mature trees and shrubs which, due to the *Contractor's* negligence, are uprooted, destroyed, or, in the opinion of the *Project Manager*, damaged beyond reasonable chance of survival in their original shape, are replaced by the *Contractor* with those of a similar type and age. Protection measures include avoidance of:



- Dumping of spoil or rubbish, excavation or disturbance of topsoil, parking of vehicles or plant, storage of materials or placement of temporary accommodation within the branch spread.
- Severance roots exceeding 25mm in diameter.
- Changing level of ground.
- Lighting of bonfires.
- Use of rippers or rotovator to break up the ground, or machinery which will cause compaction.
- Use of the trees as an anchor for ropes.
- Alteration of the drainage characteristics or water table by any site operations under the control of the *Contractor* within an area 3m beyond the branch spread.

Where the *Contractor* plans to take possession of parts of the working areas, where grass heights are initially greater than 400mm, strimming or mowing to be undertaken in stages, successively and gradually reducing the height and reducing the area of vegetation to displace any reptiles present. Initially, grass is cut vegetation to 400mm above ground level, next day to 200mm and on the final day, cut to 50mm above ground level to maintain the vegetation in a state unsuitable to reptiles. If reptiles are found to be present during the *works* following these mitigation

### **S 2039 Tree vegetation and topsoil protection**

The *Contractor* protects all trees within the boundaries of the Site or whose canopies cross the boundaries of the Site, that are to be retained in accordance with the Tree Management Plan (Appendix M), in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction – recommendations.

The *Contractor* does not remove or prune any trees, shrubs or hedges unless indicated on the accepted Detailed Designs or authorised by the *Project Manager*. Any tree which is found to have been removed without prior acceptance must be replaced by the *Contractor* at no additional cost to the *Client*. The replacement must be of the same species and equal in size and maturity to that of the tree removed or create a similar mature impact, and to the acceptance of the *Project Manager*.

Where specified or accepted, pruning is undertaken by a qualified tree surgeon recognised as a full member of the Arboriculture Association. Branches to be removed are cut back to a joint to BS 3998:2010 Tree work – Recommendations and Health and Safety Executive (HSE) “Forestry and arboriculture safety leaflets”.

The *Contractor* ensures that topsoil heaps do not exceed 2.0m in height, the angle of repose is suitable for the material and does not slip or is easily washed away, the angle is typically less than 40 degrees. The stockpiles should be segregated and are kept weed and wildlife free and are not contaminated with other materials, compacted, or tracked over by Equipment.

The *Contractor* must replace any tree that dies or is severely damaged because of their operations with one or more trees of the same or similar approved species to give an equivalent mature effect. Branches of trees likely to interfere with the working of plant must be tied back or removed at an early stage if required. Any tree damaged as a result of the *Contractor*'s operations must be pruned back where necessary to encourage growth, and rough edges cleaned off with a sharp implement by an approved tree surgeon in accordance with BS 3998. Any scarred area cuts or wounds are to be treated with an approved fungicidal sealant within 24 hours.

The *Contractor* is responsible for applying for the relevant license prior to tree removal or felling.

### **S 2040 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 must be excavated, stored separately from other materials, covered with plastic sheeting and reinstated in the same areas from which it originated. A method statement must be agreed with the *Supervisor* for the handling, storage and use of soil and materials contaminated with Himalayan Balsam. The *Contractor* must 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)* (January 2023).

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 must be left within the river channel overnight.

## **S 2041 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.

## **S 2042 Flood risk**

The *Contractor* must 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 must be manned by the *Contractor*, or the *Contractor's* security staff within the working hours defined in the Client's Minimum Technical Requirements v12 (LIT 13258) 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* must set up a process to respond to the Environment Agency's Flood Incident Duty Officer's call to erect temporary defences when required. In the event this is required, time and cost associated with the instruction will be a compensation event.

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.

## **S 2043 BREEAM**

1. A BREEAM Infrastructure assessment and evidence-gathering during detailed design is contained in Appendix U. In complying to BREEAM, The *Contractor* must:
  - A) Provide a qualified BREEAM Infrastructure assessor to collate, review and upload evidence associated with the construction stage. This must be an ongoing process throughout the project.
  - B) Update the project team on progress, highlight where evidence is incomplete and indicate evidence expected before construction completion.
  - C) Must use the *Client's* specified BRE online tool (BREEAM Projects) and any accompanying BREEAM Infrastructure guidance.
  - D) On completion of the Construction Stage Assessment the *Contractor* must ensure commentary, credits and evidence are entered on BREEAM Projects for all relevant criteria. The *Contractor* must submit the completed assessment for verification; notify the verifier that the project is available for verification; and copy the *Client* into this notification.

## **S 2044 Carbon**

The *Contractor* must Implement opportunities for further reductions to the carbon forecast during construction, this includes but not limited to the use of lower carbon products and services that meet the project Scope and deliverables.

A completed project must aim to minimise carbon emissions by:

1. Agreeing to a target (forecast) of emissions from construction that is set out in a verified carbon assessment with business case approval.

2. Exploiting the most likely opportunities for further reductions to the agreed forecast during construction.
3. Reporting the outturn of actual emissions against the agreed forecast and further reductions in a verified 'as built' update to the carbon assessment at project completion.

The project should be looking at how to minimise actual carbon emissions against the agreed forecast throughout the construction stage working with their suppliers on lower carbon products and services that meet the project scope and deliverables. A monthly report must be provided via FastDraft (using the carbon form – see application for payment section) providing:

1. actual emissions to date,
2. (latest) outturn forecast (based on actuals and remaining emissions to outturn) and
3. (Latest) outturn budget / target (set to the verified forecast)

The FastDraft carbon form may be supported by details of actual emissions to date against an agreed breakdown of asset/service/product lines taken from the verified carbon assessment.

This will inform the EA of progress in reducing carbon during construction in the form of a variance between a latest outturn forecast (reported on FastDraft) and verified forecast. The EA may require the project to set out actions to mitigate significant variances or where there is a significant change in scope to provide 'updated' versions of the carbon assessment, carbon budget and carbon appendix that will reset the construction stage outturn forecast and outturn budget.

Projects at completion must provide via Asite an 'as built' carbon appendix supported by an updated carbon assessment with outturn actual emissions reported against a previously verified forecast. The 'as built' carbon appendix and updated assessment must be verified by an EA appointed carbon specialist before completion of the project is approved. The verification process requires project team engagement with the verifier and may result in actions to:

1. update the carbon appendix and supporting carbon assessment and budget (i.e. ERIC).
2. set out the reasons for outturn actuals emissions being above/below the verified forecast

The verified outturn actuals and forecast from this process will be required for the performance measure set out in this contract as well as for an EA process of carbon budget authorisation managed by EA Project Sponsor.

Refer to S 507 for the requirements on carbon reporting.

Refer to S 400 for the requirements on carbon required to meet completion.

## **S 300      *Contractor's deliverables***

The permanent works have been designed and are included in Appendix B.

The *Contractor's* design refer to the elements of design the *Contractor* is responsible for that includes but is not limited to all the temporary works, demolition plans, management of temporary service diversions, fabrication and any elements of design the *Contractor* is responsible for involved in the permanent works.

The *Contractor* is responsible for the following deliverables that are relevant to the temporary and permanent works and must submit the following:

- All temporary works designs including but not limited to tree protection, access routes, platforms, demolition, fencing and edge protection, lifting and piling operations, support to existing structures and groundworks dewatering and fish passage
- Design and fabrication of the steps for sites 3 and 4 and supply of specialist flood gate required for site 1 (more detail in S301).
- Component specifications, including materials, fixings, component weights, craneage or handling requirements and reference to relevant standards for temporary works
- Design standards and codes of practice for temporary works
- Fabrication drawings where relevant for permanent works
- Loading and capacity requirements and calculations (including any modelling) for temporary works
- Temporary works Risk Assessments
- Updated Construction Phase Plan Information for permanent and temporary works
- Operation and maintenance manuals
- Electronic copies of all drawings and specifications for BIM archive
- Inspection and testing quality plan for defences independently procured via specialist suppliers/*Contractors*.
- Inspection and test quality plans for self-delivered work
- As-built drawing mark ups
- Information to allow for the Provision of the Health & Safety File;
- Construction red line boundary
- Risk Assessments and method statements
- Site Waste Management Plan
- Production of the As built carbon appendix
- Update the Project Cost Tool based on the construction phase
- Asset handover forms to enable the Client to update the Asset Information Management System (AIMS). The Client must provide the Contractor with a template for the Contractor to complete.
- Update of EAP
- Traffic Management Plan
- Footpath Management Plan
- Soils Management Plan
- Construction programme and monthly updates
- Post construction topographic survey of defence levels
- Assessment of existing buildings
- Laser survey pre and post scheme (Refer to S 235)

### **S 301     Design responsibility**

The *Contractor* must refer to Clause 300

The *Contractor* is responsible for the design and fabrication of access steps over the flood defence into the channel to allow for safe ingress and egress for future maintenance. The Steps need to be secure to prevent the public using them but allow the *Client* to access and use them. The steps will be in site 3 and site 4 the exact location will be provided by the *Client*. The steps need to comply with the MTR (Appendix E) and the MEICA – Specification – Materials and Mechanical Installations LIT13220 and LIT13219 (Appendix E). The steps must have a system to prevent them being submerged in water permanently and be designed to both prevent and withstand debris being captured on them. The steps must be manufactured from a Corrosion resistant material, suitable for a marine environment and compliant with the MEICA – Specification – Painting and Protection Systems LIT 13221 (Appendix E). The *Contractor* will provide the As Built Drawings for the Access Steps and the associated security.

The *Contractor* is responsible for the design, fabrication and the installation of the specialist flood gate and associated controls located in site 1 and detailed in the design drawings and the Civil Engineering Specification in Appendix B. The gate design must comply with the specification in the Civil Engineering Specification and the requirements of the Mater Datasheet Spec in Appendix D and comply with the MEICA Specification Manual Flood defence Gates LIT57831 (Appendix E).

### **S 302     Design submission procedures**

The *Contractor* must submit all design works to the *Project Manager* and Principal Designer for acceptance. The *Contractor* must allow a max period of 2 weeks for the *Project Manager* to review deliverables, 1 week for *Contractor* amendments and 1 week for *Project Manager* to review revised deliverables. Submission of temporary work design(s) must be clearly shown on the *Contractor's* Accepted Programme.

### **S 303     Design approval from Others**

The *Contractor* will coordinate design approval from others.

The *Contractor* is required to involve the Principal Designer in the design work or design changes after the start of construction activities to enable the Principal Designer to fulfil the duties imposed by the Construction Design Management regulations. This includes the design of temporary supports, props and structures including false work and formwork.

### **S 304     Client's requirements**

With any design works the *Contractor* must comply with the following *Client* requirements:

- 1) The Civil Engineering Specification and the Channel Repair Specification (Appendix B)
- 2) Minimum Technical Requirements v12 (Appendix F)
- 3) MEICA Specifications (Appendix E)
- 4) SHEW CoP (Appendix H)
- 5) In coordination with the relevant asset owners and affected landowners, the *Contractor* identifies all existing structures (including buildings, headwalls, quaysides, bridges, retaining walls and foundations and so forth) that are affected by the *works*. This includes impacts on visibility of navigation lights and markers, and access to all existing assets for inspection and maintenance.



- 6) The *Contractor* implements or procures all necessary measures and appropriate monitoring for the protection and avoidance of damage to the existing structures (including reinstatement) both in the temporary and permanent condition.
- 7) In designing the temporary *works*, including interfaces with existing structures, the *Contractor* refers to the *Client's* information in the Site Information including but not exclusive to the Topographical and Structural Condition surveys for current surface finish levels and geometry. The *Contractor* refers to *Client's* Ground Investigation and Utilities Surveys for information relating to existing site conditions.
- 8) For the avoidance of doubt the *Contractor* is responsible for investigating, procuring and providing all known and unknown service diversions and / or protection measures necessary to ensure safety and continuity of services to the satisfaction of the utilities companies or service owner. The *Contractor* must outline where diversion of services are required. The cost of diversion is paid for by the *Client*. The *Contractor* will be responsible for liaising with third parties and for programme delays (dependent on SLAs).

### **S 305     Design co-ordination**

The *Contractor* is responsible for the co-ordination in preparing their own designs and that of any Sub Contractor.

In developing the design, as a minimum the *Contractor* must consult with:

- 1) The Client.
- 2) The Principal Designer appointed by the Client.
- 3) Project Manager.

### **S 306     Requirements of Others**

The *Contractor* designs the temporary works and constructs the works in cooperation with Others to comply with all required permits and consents.

The *Contractor* designs any elements specified on the permanent works designs that are specific for the *Contractor* to design.

The *Contractor* designs, procures and manages the diversion of services and associated protection works in accordance with the requirements of the utilities companies affected.

### **S 307     Copyright/licence**

All information produced by the *Contractor* in connection with the works may be used or copied by the *Client* within the general locality of the works and subject to any restrictions imposed by copyright.

### **S 308     Access to information following Completion**

Not used

## **S 309    Site investigations**

Existing site information is provided in the Site Information package.

The *Contractor* undertakes the following Site Investigations and Surveys:

- Pre-construction surveys of Utilities (inc GPR) refer to SHEW CoP (January 2023)
- A structural survey of existing assets which interface with the temporary works design to ensure safe working practices.
- Post construction topographic survey of defence levels
- Pre and Post Condition Survey of surrounding structures and roads impacted by the works.

## S 400 Completion

### S 401 Completion definition

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

- Provide all information to the *Principal Designer*. The Health and Safety files are to include:
  - RAMS Register (inclusive of ASite Links for all RAMS)
  - TW Register (inclusive of ASite Links for all TW)
  - Quality Inspection Test Plans (QITPs) register (inclusive of ASite Links for all QITP's)
  - Relevant COSHH data sheets
  - Pre, During and Post Works Pictures for each area
  - As-built Drawings – these will be provided by the *Client*
- 1 hard copy of Operating and Maintenance Manuals and one electronic version.
- 1 hard copy of As Built Markup drawings and one electronic version that are signed off and agreed with the Supervisor.
- Population of the *Client's* latest version of the Project Cost and Carbon Tool (PCCT), or its successor
- 'As built' carbon appendix supported by an updated carbon assessment with outturn actual emissions reported against a previously verified forecast. The 'as built' carbon appendix and updated assessment must be verified by the Client's appointed carbon specialist before completion of the project is approved. The verification process requires project team engagement with the verifier and may result in actions to:
  - update the carbon appendix and supporting carbon assessment and budget (i.e. ERIC).
  - set out the reasons for outturn actuals emissions being above/below the verified forecast
  - The verified outturn actuals and forecast from this process will be required for the performance measure set out in this contract as well as for an EA process of carbon budget authorisation managed by EA Project Sponsor.
- Transfer to the *Client* databases of BIM data these include:
  - RAMs
  - Temporary works designs
  - Relevant COSHH Data sheets
  - QITP's (signed of by SS prior to upload)
  - DWG files of as-built drawings – to be provided by the *Client*
  - Noise and vibration surveys (S 2024) Noise and vibrations)
  - As built survey of FDL level across the scheme
  - Post condition surveys (S235 Condition surveys, S 404 Final Clean )
- Completion of EA Asset Handover Form for each asset.
- *Contractor* concludes construction works
- *Contractor* gains acceptance from *Supervisor* of the ITP's
- *Contractor* issue through *Contractor* communication Area ready for handover in line with S 407
- *Client*, *Project Manager*, *Supervisor*, LCoW/ECow undertake walk through of the Area put forward for handover raising any snags *Contractor* undertake and close any snags through the snag system
- Lead on 1 training session with the Client upon scheme completion
- *Project Manager* issues completion certificate
- The *Contractor* must grass seed the embankment and the grass areas prior to the completion of the works.

Clause 11.2(2) Work to be done by the Completion Date.

## **S 402 Sectional Completion definition**

Option X5, X5.1 Work to be done for each Sectional Completion.

The following are absolute requirement for Sectional Completion to be certified:

- Civic Centre Undercroft car park entrance and exit (grid reference 387873,345377). The *Project Manager* will issue the certificate of acceptance to confirm sectional completion. Sectional Completion is defined as when the works that led to the closure of the access to the Civic Centre Undercroft carpark and the Civic building are complete, and access is reopened. Access for car park users must be maintained until 31<sup>st</sup> March 2024. The date for this sectional completion can be found in the Contract Data Part 1. The Client will not take over the works until the whole of the works is complete or unless instructed.
- The [REDACTED] site that is being access through the [REDACTED] units (Grid Reference 387734, 345482 to 387742, 345480). The *Project Manager* will issue the certificate of acceptance to confirm sectional completion. Sectional Completion is defined as when the works that led to the closure of the access to the Trentdale units are complete, and access is reopened. The date for this sectional completion can be found in the Contract Data Part 1. Access to Leese street and [REDACTED] units to be maintained until 31<sup>st</sup> July 2024. The Client will not take over the works until the whole of the works is complete or unless instructed.

## **S 403 Training**

Refer to S401 for the required training sessions.

## **S 404 Final Clean**

The *Contractor* must 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.

## **S 405 Security**

The Site must be secured to the same standard or better than before the start of the works. Refer to S 200

## **S 406 Correcting Defects**

The *Client* must arrange access to the Site for the correction of defects following completion. The *Contractor* must provide the *Project Manager* and *Client* with at least 4 weeks' notice of his intention to gain entry to the Site; the *Contractor* must not gain entry to the Site following completion without the prior written approval of the *Project Manager* and *Client*.

## **S 407      Pre-Completion arrangements**

Prior to any works being offered for take over or Completion the *Contractor* must arrange a joint inspection with the *Supervisor*, *Project Manager*, *Client* (scheme *Project Manager*) and Senior User. The initial inspection must take place a minimum of two weeks in advance of the planned take over or *Completion*.

## **S 408      Take over**

The *Contractor* and the *Client* may want to take over particular sites prior to contract completion to do this the *Contractor* will ask the *Project Manager* in writing to certify if a red outlined area can be taken over by the *Client* following the production and acceptance by the *Client* of the relevant sections of the H&S file, the relevant section of the O&M file, all ITP's have been signed off, As built drawing mark ups, asset handover forms uploaded on to Asite and Final inspection by the *Client* and the Supervisor.

The *Project Manager* in writing is to certify if a red outlined area can be taken over by the *Client* following the production and acceptance by the *Client* of the relevant sections of the H&S file, the relevant section of the O&M file, All ITP's have been signed off, As built drawing mark ups, asset handover forms, uploaded on to Asite Final inspection by the *Client* and the Supervisor.

## **S 500 Programme**

### **S 501 Programme requirements**

The programme complies with the requirements of Clause 31.2 and includes alignment and submission of the BEP and Master Information Delivery Plan (MIDP).

The programme must cover the activities to be undertaken by the *Contractor* and other members of the project team. Include all major project milestones from contract award to completion including:

- Submission dates for permanent and significant temporary works in each reach for review and acceptance and required return dates.
- Consent and licences
- Critical path shown in red and baseline against the previous revision.
- Provisions for float, time risk allowance tasks clearly identified as separate task bars.
- Dates for submissions of any materials and samples for acceptance by the *Client*.
- *Contractor's* shutdown periods.
- Temporary and permanent service diversions.
- Works subject to environmental restrictions.
- Project risk profile.

The *Contractor* must develop the programme incorporating the constraints outlined in S200.

### **S 502 Programme arrangement**

The *Contractor* must submit a programme as required by Clause 31 in the form of a Resource Analysed Critical Path Network linked bar chart showing start and finish dates for each activity. It must clearly identify those activities forming the critical path. The programme is to be produced in an electronic format in Microsoft Project (\*.mpp), and pdf formats.

A base line plan must be provided for the project start up meeting and this will be updated monthly for progress meetings with actual and forecast progress against the baseline in line with Clause 31.

### **S 503 Methodology statement**

Schedule of method statements and risk assessments as set out in the Environment Agency Operational Instruction 300\_10\_SD06 must be updated and provided with each programme.

Method statements must be submitted, for information only, to the Supervisor and Environmental Clerk of Works two weeks in advance of the associated activities taking place. The statements must be referenced in the programme submitted for acceptance to the Project Manager.

### **S 504 Work of the *Client* and Others**

The order and timing of the work of the *Client* and Others to be included in the programme and information to be provided. Refer as necessary to sections S 901 and S 902.



## **S 505 Information required**

Method statements and Risk Assessments are provided by the *Contractor* to the *Project Manager* and other statutory consultees a minimum of two weeks prior to the planned commencement date of the activities covered and submitted to the *Client* and the Principal Designer.

## **S 506 Revised programme**

The *Contractor* must submit a revised and updated programme in accordance with Clause 32 of the contract at intervals stated in Contract Data Part 1. The *Contractor* to provide an accompanying narrative in pdf format of changes from the last accepted programme and in line with contract management system (FastDraft).

## **S 507 Monthly reports**

**In managing the service the *Contractor* shall:**

- Contribute monthly to the updates to the project risk register.
  - Produce monthly financial updates and forecasts meeting the *Client's* project reporting timetable together with progress reports. Monthly financial updates and forecasts to meet EA deadlines provided by no later than the 10<sup>th</sup> day of each month, or otherwise agreed at the project start up meeting.
  - Deliver a monthly progress report in the *Client's* standard template giving progress against programme, deliverables received and expected, financial summary against programme and forecast project carbon. [Construction Monthly Report](#)
  - Commission capital forecast profile to be entered on FastDraft monthly & Project forecast outturn project carbon profile to be entered onto FastDraft monthly. The *Consultant/Contractor* is required to provide a monthly forecast on FastDraft for both carbon and cost in accordance with Framework Heads Up 54 and 57 in Appendix R.
  - Ensure quarterly input into framework performance assessment/environmental Performance Measures.
  - Maintain and show how accurate and up to date information on the whole-life cost and carbon of options is driving optimum solutions at all stages of design development.
- Capture lessons learnt relevant to scheme delivery for the EA PM.

## **S 600    Quality management**

### **S 601    Samples**

The *Contractor* provides samples of the following materials and products to the *Project Manager* for acceptance prior to commencing construction. Programming of provision of samples and construction of trial panels to be agreed with the *Project Manager*.

- Bricks
- Mortar
- Copings
- Stone masonry
- Handrails and guardrails

Samples are submitted before production run begins.

### **S 602    Quality Statement**

The *Contractor* must submit the quality plan for the works to the *Project Manager* within 6 weeks of the starting date.

The *Contractor's* Quality Control manager certifies that activities have been carried out in accordance with the contract when an experienced and qualified:

- a surveyor has checked and certified that the work is in its correct position, level and alignment,
- a works checker has checked and certified that materials, workmanship cleanliness and other matters not checked by the surveyor are correct and a testing technician has certified materials tests.

Copies of relevant supporting certificates relied on by the Quality Control manager are attached to his certificate.

The *Project Manager* and/or the *Supervisor*, may at any time, audit the quality control process and are given assistance and access by the *Contractor* to documents used in connection with the certification process, including but not limited to site diaries, calibration certificates, memos, and to interview persons involved in providing the works.

### **S 603    Quality management system**

The *Contractor's* quality management system must comply with the requirements of ISO 9001 and ISO 14001.

The *Contractor* appoints a named member of staff who is responsible for delivery of the works in accordance with the Scope, the Quality Management System and the CDM 2015 Construction Phase Plan.

The *Contractor* monitors and audits the delivery of all parts of the works being undertaken in reference to the Scope and reports to the *Project Manager* each week with the results of the audits and makes proposals regarding any corrective actions instructed to ensure compliance.

## **S 604    BIM requirements**

The BIM Information Manager is the *Client's* Project Manager

The *Contractor* develops a Information Execution Plan (IEP) to meet the requirements set out in this is the Exchange Information Requirements V3.0 in Appendix Q. As a minimum, the IEP includes a description of how the Project's Information Delivery Plan (IDP) is to be delivered. The IDP is available in the projects BIM space and the download at the time of the scope of the project is available in Appendix O. The IEP is to be submitted to the *Project Manager* for acceptance two weeks before starting on Site. The accepted plan is adhered to for the duration of the Contract.

The project is to be undertaken in accordance with the *Client's* BIM protocols which is available in Appendix O.



## **S 700      Tests and inspections**

### **S 701      Tests and inspections**

The *Contractor* must issue compaction testing results made available within 2 weeks of placement.

An Inspection, Test and Commissioning Plan for the *works* is to be prepared by the *Contractor* and submitted to the *Project Manager* for acceptance a minimum of 4 weeks prior to commencing the fabrication or the construction of the *works*.

The Inspection, Test and Commissioning Plan is to include inspections, tests and commissioning required to check the workmanship and/or measure the performance of the *works* or an item of Plant or Materials including the following:

- Samples of plant or materials provided by the *Contractor*.
- Samples of workmanship.
- Equipment, Plant and Materials outside the Working Areas before payment or delivery.
- *Works* in the Working Areas.
- Plant and Materials, and work prior to Completion.
- Plant and Materials, and work after take over but before the *defects date*.

The Inspection, Test and Commissioning Plan is to incorporate any inspections, tests and commissioning identified in the Scope, Clause 40.1, 40.2, 41.1 and 60.1 (16). The Inspection, Test and Commissioning Plan is to provide details of any inspection, test and commissioning including the following:

- Objective, procedure and standards to be used.
- When they are to be done.
- Where they are to be done.
- Who does the tests, and who is in attendance.
- Testing and inspection method.
- The equipment required and who provides it.
- Access arrangements.
- Information or instructions required to be provided.
- Materials, facilities and samples to be provided.
- Involvement of specialists.
- Acceptable results and deviations.
- Test environment.
- Documents to be provided before and after the test.
- Whether or not authorisation to proceed to the next stage of the work depends on the test results.

The Inspection, Test and Commissioning Plan is to state the materials, facilities and samples to be provided by the *Contractor* and the *Client* for tests and inspections, and the timing of these.

Any test or inspection of the Equipment, Plant and Materials outside the Working Areas which have to be passed by the *Supervisor* for payment should also be stated in the Inspection, Test and Commissioning Plan.

Plant and Materials are to be tested and/or inspected prior to delivery to the Working Areas in accordance with the accepted Inspection, Test and Commissioning Plan.

## **S 702      Management of tests and inspections**

No additional requirements

## **S 703      Covering up completed work**

No operation must be carried out or covered up without full and complete notice being given to the *Supervisor* by the *Contractor*, sufficiently in advance of the time of the operation to enable the *Supervisor* to make such arrangements as he deems necessary for inspection and checking.

The *Contractor* may cover up *works* which have been successfully tested against the minimal technical requirements.

## **S 704      Supervisor's procedures for inspections and watching tests**

A minimum of 24 hours' notice of any test or covering up of completed work must be provided to the *Supervisor*.

A minimum of 24 hours' notice of any test or commencement of *works* in a new section of the site must be provided to the Ecological Clerk of Works.

The *Contractor*, or his appointed Sub-Contractor, must be responsible for undertaking appropriate witness testing, with the *Supervisor*, of any Plant provided.

The *Contractor* allows the *Supervisor* any reasonable opportunity and facility to inspect and monitor the samples and testing processes. The *Contractor* notifies the *Supervisor* of who, where and when samples and testing are being carried out.

The following test and inspection procedures checklist must be followed as a minimum:

- All tests are fully recorded on appropriate result recording sheets;
- All covers removed for testing are replaced and all areas made safe.

## **S 800      Management of the works**

### **S 801      Project team – Others**

Refer to Contract Data for details

The project must be administered in accordance with this contract and the Parties identified within the Contract Data will have the responsibilities assigned to them by the contract.

For information the following other Parties (in addition to those identified in the contract) are involved in the overall management of the project:

- a. Project Board – this comprises senior members of the *Client's* staff including the Project Sponsor, Project Executive, Senior User, Senior technical staff and a Senior Supplier representative. The Project Board provide oversight and direction to the overall project.
- b. *Client's* Project Delivery Team – including the *Client's* Project Manager, Senior User representative and *Client's* technical staff responsible for the delivery of the project.



c. Principal Designer – appointed under the CDM Regulations. Duties are as defined in the CDM regulations and the *Client's* Health, Safety, Environment and Welfare Code of Practice.

d. Cost Manager – responsible for managing the cost aspects of the project on behalf of the *Client*.

The *Contractor's* Project Manager must be demonstrably experienced in delivering projects of a similar size and complexity.

## **S 802      Communications**

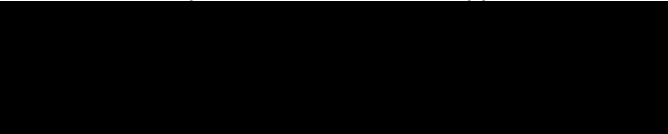
- All administrative communication between the Parties is directed through the *Project Manager* and the *Contractor's* project manager. All contractual communication and documentation must be transmitted and stored via the *Client's* contract management system (FastDraft).
- The *Contractor* must document all forms of communication with third parties and maintain the Stakeholder Engagement Plan.
- The *Contractor* must provide a resource that can support the project with legal landowner issues, complaint handling and attending site meetings.
- Weekly progress meetings must be held either at the Site or on Microsoft Teams and are to be attended by a minimum of the *Contractor's* Project Manager. Other members of the *Contractor's* team must attend the meeting if required. These meetings will be chaired by the *Client* and are a general update and coordination meeting and to discuss any issues.
- Monthly Progress meetings will be more in depth meetings, ideally face to face meetings, that will require the *Contractor* to produce a progress report detailing works progress since the last meeting, health and safety checks and incidents, progress against programme, public relations/interaction, planned works, commercial situation, any other issues. The *Project Manager* must organise the meetings, produce the agenda and produce the minutes of the meeting.
- Financial and programme reporting is required on a monthly basis, to be issued no later than the 10<sup>th</sup> day of each month.
- The *Contractor* must develop and maintain an Emergency Contacts List for the duration of construction. Copies of the Emergency Contacts List must be provided to the *Client*, *Project Manager*, and *Supervisor*.
- The *Contractor* must use the *Client's* project collaboration tool, Asite, for the duration of the *works* for sharing all electronic information including drafts. The *Contractor* will adhere to the standard naming format used by the *Client*.
- The *Contractor* must allow for fortnightly Early Warning meetings
- The contract is administered on FastDraft.

## **S 900 Working with the *Client* and Others**

### **S 901 Sharing the Working Areas with the *Client* and Others**

The *Contractor* must provide the *Client* with access to the Site at any time during construction to undertake any activities that do not form part of the *works*. In particular, the *Contractor* will provide the *Client* 24 hour access to the trash screen and river gauge monitoring at Site 1.

The *Contractor* is required to co-operate and liaise with others in sharing the Working Areas. The Contractor will act as the Principal Contractor and will be required to comply with the relevant CDM procedures and SHEW CoP, January 2023. As part of this, the *Contractor* must adhere to the stakeholder requirements outlined in Appendix L, this includes but not limited to:

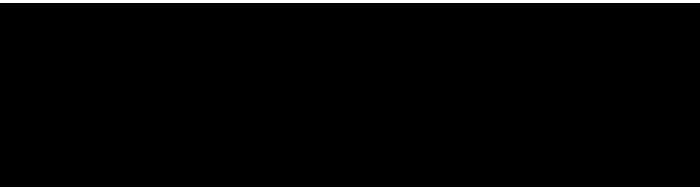


The *Contractor* must liaise with Seven Trent Water and other identified service providers to inform any crossing or excavating arrangements on or in close proximity of the service.

The *Contractor* must involve the *Project Manager* on decisions made with third parties in regard to working area arrangements.

The *Contractor* must erect suitable temporary safety fences, plate over unattended openings, and make other provision as required to ensure that such shared access is safe for use by the *Client* and Others. Where shared access routes are necessary, these must be kept clear of any obstructions.

The *Contractor* may need to share working areas, including but not limited to:



The *Contractor* must co-cooperate and liaise with Others and comply with the relevant CDM procedures as the Principal Contractor.

### **S 902 Co-operation**

The *Contractor* must co-operate and liaise with landowners and tenants in conjunction with the *Client's* Land Agent and Public Liaison Officer prior to commencing any work on their land.

### **S 903 Co-ordination**

The *Contractor* will liaise with and work in conjunction with the *Client's* Public Liaison Officer and appointed Land Agent to co-ordinate operations and work on private land with the landowner and tenants.

## **S 904     Authorities and utilities providers**

The *Contractor* must be responsible for arranging and managing all of the appropriate Highway Authority consents and roads/ footpath closure that may be required.

The *Contractor* must be responsible for arranging and managing all of the *works* by utility providers to enable water, gas, telecommunication and electricity service connection necessary to provide the *works*.

The *Contractor* is responsible for the enquiry, management, procurement and provision of notices and payment for any temporary or permanent service diversions required to be undertaken for the *works*.

The *Client* is responsible for arranging and managing all of the appropriate S278 agreements with Stoke on Trent City Council and National Highways.

## **S 905     Diversity and working with the *Client*, Others and the public**

The *Client* will lead communications with the public. The *Contractor* must support the *Client* by preparing material for public consultation sessions.

The *Contractor*, Sub-contractors and designers are expected to:

- Use local employment and local training initiatives where appropriate and practicable;
- Look for opportunities to enhance community benefits;
- Encourage a diverse supply base that includes local Small and Medium Enterprises, social enterprises and the Voluntary in the Community Sector;
- Develop and integrate modern apprenticeship opportunities and encourage the consideration of diversity and equality in our decisions. Demonstrate compliance with the Equality Act 2010 through the work delivered. Projects and community engagement should be inclusive and accessible for all. The Environment Agency “Access for All Design Guidance” is available to support this approach;
- Adopt a policy of equal opportunities to encourage a diverse workforce; and
- Offer training and development to all staff, including the to meet individual, project and company needs.

The *Contractor* must register with the Considerate Constructor's Scheme (CCS).

Findings from CCS audits must be promptly copied into the project team and the *Client*'s Senior Health, Safety and Wellbeing Business Partner.

## **S 1000 Services and other things to be provided**

### **S 1001 Services and other things for the use of the *Client, Project Manager* or Others to be provided by the *Contractor***

For the use of the *Contractor's* employees and workforce, the *Contractor* must provide temporary offices, sanitary arrangements, stores, workshops, compounds and the like necessary for the Completion of the *works* and correction of Defects. The general siting and layout of these must be accepted by the *Project Manager*.

The *Contractor* must be responsible for arranging his own electricity, lighting, water, telephone supplies and drainage facilities for the compound and for the execution of the Contract and must be responsible for all costs and charges in connection therewith.

All temporary installations must comply with statutory regulations and must be in accordance with current best practice.

The *Contractor* must provide:

- Site Compound
- first aid.
- Welfare facilities
- Recreation,
- Sanitation,
- Security,
- Copying,
- Telephone, fax, radio and CCTV
- Computer equipment and services,
- Sign boards and other signage,
- Safety equipment and services,
- Fences, screens and hoardings,
- Postage,
- Maintenance of access roads,
- Temporary facilities,
- Utilities, eg. Water, sewerage, drainage and power,
- Meter readings

The *Contractor* must clean the accommodation adequately, maintain it for the duration of the project and remove it on Completion. All items provided must revert to the *Contractor's* ownership on Completion.

All offices and their contents must be insured by the *Contractor* for a sufficient sum to cover damage or loss by fire or theft, and any damage or loss is made good by the *Contractor*.

Accommodation and services are removed by the *Contractor* on Completion, or at such other date as directed by the *Project Manager*.

## **S 1002    Services and other things to be provided by the *Client***

- The *Client* will enable access to the Site.
- The *Client* will undertake grass cuts of the Site starting 1 year after construction completion.
- The *Client* will provide the *Supervisor* and Environmental Clerk of Works.

## **S 1100 Health and safety**

### **S 1101 Health and safety requirements**

The *Contractor* must review the works to ensure a safe method of working is in place prior to construction start for in channel working.

The *Contractor* must maintain safe access and egress routes for pedestrians and vehicles requiring access to areas affected by the works. The safe access and egress route must be agreed with the Project Manager at least 4 weeks before the works in this part of the Site commence

The *Contractor* must comply with all current Health and Safety Legislation. The *Contractor* must discharge their duties in accordance with the requirements of the Construction (Design and Management) Regulations 2022. The *Contractor* must use the guidance given in the Approved Code of Practice L153 – Managing health and safety in construction. Appendix J.1 of ‘*Constructing a Better Environment SHEW CoP*’ diagrammatically shows the CDM process to be followed and details who needs to be involved at what stage.

The *Contractor* must 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 G) must be applied throughout the Contract. In particular, the *Contractor* must adhere to the specific competence and training requirements detailed in section 4.2. The *Contractor* must demonstrate how H&S training will be carried out, the reporting procedures and commitment to the process.

The *Contractor* must 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 Client*.

The *Contractor* must copy the *Client’s* Project Manager in all correspondence with the Principal Designer.

The *Contractor* must 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* must report any health and safety incidents, “near misses”, and instances of bad and good practice observed during the works period using the procedure outlined in “Environment Agency Operational Instruction 300\_10\_SD20: Reporting incidents at Contractors’ sites”. The *Contractor* must follow the RIDDOR reporting procedure detailed in Appendix P of ‘Constructing a Better Environment SHEW CoP’ (Appendix G).

In undertaking the Works, the *Contractor* must 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* must ensure that they arrange site inductions with the landowners to ensure they comply with their own health and safety procedures.

The *Contractor* must 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* must 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* must provide full welfare provision for the site in accordance with schedule 2 of the CDM Regulations 2022, plus additional provisions as stated in Constructing a Better Environment SHEW Code of Practice June 2022. Proposals, which will include a schematic showing the compound layout and welfare facilities, must be fully detailed in the Construction Phase Plan submitted to the *Client* for review under Regulation 16.

The *Contractor* must submit site progress reports to the *Client* or 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 by the *Client*.
  - Design Changes

- Update Information for Construction Phase Plan
- Collation of information for Health & Safety File.

The sites are very constrained by existing buildings of variable condition the *Contractor* needs to satisfy themselves prior to works that there is not any risk to their safety posed by these buildings and if there are issues this is communicated prior to the commencement of the works. The *Contractor* needs to ensure there is safe ingress and egress from the works in adequate time for the staff as they will require working on and in the channel.

The works do require demolition works on some existing structures the adequate demolition plans need to be made and any pre demolition surveys carried out to understand the risk of the waste and any issues during construction.

Client will ensure demolition of the existing buildings carried out by others do no delay or disrupt the programmed works.

## **S 1102 Method statements**

The *Contractor* provides the *Project Manager* with a schedule of method statements and risk assessments prior to the works commencing and issues updates monthly.

The *Contractor* provides all method statements and risk assessments requested by the Project Manager for acceptance.

Method statements contain sufficient information to enable the *Project Manager* to assess any likely detriment to either the proposed or the existing works or to the *Client's* overall objectives.

The *Contractor* must submit the documents at least two weeks prior to the commencement of the works. Where the submission of Method Statements is required in order to discharge planning conditions these will be submitted by the *Contractor* at least 4 weeks prior to works.

The *Contractor* is required to submit method statements and risk assessments for all work activities associated with completing the works, including all temporary works.

Method statements for environmentally sensitive works will be submitted by the *Contractor* to the *Project Manager* for review (as required by the EAP).

## **S 1103 Legal requirements**

The Construction (Design and Management) Regulations, 2022, apply.

The *Contractor* must fulfil the roles of Designer and Principal Contractor under the Construction Design and Management Regulations 2022 for the duration of the works.

The *Client* will employ a Principal Designer for the duration of the works.

The *Client* will undertake the *Client* duties under the Construction Design and Management Regulations 2022.

## **S 1104 Inspections**

The *Project Manager* will undertake regular checks on the *Contractor's* Health and Safety procedures including record of site inductions, tool box talks, confined space procedures and certifications, PPE.

## **S 1200 Subcontracting**

### **S 1201 Restrictions or requirements for subcontracting**

The *Contractor* appoints, manages and supervises Subcontractors (as ECC clause 11.2(17)) and other suppliers to ensure Completion of the works in accordance with the Scope, the Quality Management System and the CDM 2022 Construction Phase Plan. The *Contractor* monitors and audits the performance of Subcontractors and reports to the *Project Manager* each week with the results of the audits and makes proposals regarding any corrective actions instructed to ensure compliance.

Landscape planting works must be carried out by specialist landscape Contractors registered with the British Association of Landscape Industries (BALI).

The *Contractor* must seek approval from the *Client* at least 2 weeks prior to any external procurement commitments.

### **S 1202 Acceptance procedures**

Refer to Clauses 26.3 of the NEC ECC contract.

## **S 1210     Procurement of subcontractors**

Sub-contractors need to be selected using best value processes and submitted to the Project Manager for acceptance.

This requires the *Contractor* to demonstrate that they have made reasonable attempts to obtain three competitive tenders for all work in excess of £25,000.

The only exception to this is work which has been accepted (in writing) by the hub Commercial Services Manager for strategic suppliers or for emergency work.

**S 1300    Title**

**S 1301    Marking**

There are no requirements for marking equipment, plant and materials which are outside the working areas.

**S 1302    Materials from Excavation and demolition**

As per Clause 73.2

## **S 1400 Acceptance or procurement procedure (Options C and E)**

A Project Bank Account is to be set up by the *Contractor* and used for the Payment of the *Contractor* and all Subcontractors in accordance with Y(UK)1: Project Bank Account.

## **S 1500 Accounts and records (Options C and E)**

### **S 1501 Additional Records**

In addition to Clause 52.2 of the NEC ECC contract the following additional records must be kept by the *Contractor*. This may include but not be limited to the following:

- Timesheets and site allocation sheets,
- Equipment records,
- 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 *Project Manager*.

### **S 1502 Application for Payment / Invoice**

The *Contractor* is required to provide the backup to their application for payment in the following format in Appendix S.

Submission of an application for payment without this format of backup sheet will **not** be recognised or treated as a compliant submission.

A monthly report must be provided via FastDraft (using the carbon form) providing:

1. actual emissions to date,
2. (latest) outturn forecast (based on actuals and remaining emissions to outturn) and
3. (Latest) outturn budget / target (set to the verified forecast)

The FastDraft carbon form may be supported by details of actual emissions to date against an agreed breakdown of asset/service/product lines taken from the verified carbon assessment.

This will inform the EA of progress in reducing carbon during construction in the form of a variance between a latest outturn forecast (reported on FastDraft) and verified forecast.

**S 1600    Parent Company Guarantee (Option X4)**

Not required



## **S 1700    *Client's* work specifications and drawings**

### **S 1701    *Client's* work specification**

The order of precedence if there is any conflict between specifications is:

1. Scope (including the Appendices)
2. *Client's* Minimum Technical Requirements v12
3. Landscape Minimum Technical Requirements (Appendix T)

The works are provided in accordance with the *Client's* Minimum Technical Requirements version 12, December 2021. Within the Minimum Technical Requirements "Environment Agency" and "*Client*" must both be interpreted as "Environment Agency". In the event of any ambiguity or inconsistency between the Minimum Technical Requirements and any other Scope the other Scope must take precedent.

### **S 1702    Drawings**

The drawings are included in the Scope in Appendix B and are listed below:

Site 1 AFC		
Drawing Number	Drawing Name	Revision
ENVIMMI001456-ARUP-ZZ-01-DR-C-300099	Site 1 General Site Plan	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300099	Site 1 General Site Plan	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300100	Site 1 North Wall Plan	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300101	Site 1 North Wall Elevations	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300102	Site 1 North Wall Sections	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300103	Site 1 North Wall Brick Cladding and Coping Detail	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300104	Site 1 General Site Elevations	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300105	Site 1 Embankment General Arrangement	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300106	Site 1 Channel Sheet Sections	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300107	Site 1 Channel Sheet Sections Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300108	Site 1 Details Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300109	Site 1 Details Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300110	Site 1 South Wall Plan	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300111	Site 1 South Wall Elevations	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300112	Site 1 South Wall Sections	C01

ENVIMMI001456-ARUP-ZZ-01-DR-C-300113	Site 1 South Wall Brick Cladding and Coping Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300114	Site 1 Turning Head General Arrangement	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300115	Site 1 Turning Head Setting Out Plan	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300116	Site 1 Turning Head Sections Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300117	Site 1 Turning Head Sections Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300118	Site 3 Stepoc Wall Reinforcement	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300119	Site 1 Reinforcement North Freestanding Walls	C01
ARUP-ZZ-01-SH-C-300119	Site 1 – Walls SH1 + SH2 Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300120	Site 1 - Concrete Reinforcement Shelton Old Road Parapet Extensions & Manhole retaining wall base	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300121	Concrete Reinforcement Right Bank Freestanding Walls – North Sheet 1	C01
ARUP-ZZ-01-SH-C-300121	SITE 1 North Walls - A(N), B(N) & C(N) Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300122	Site 1 Concrete Reinforcement Right Bank Freestanding - North Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300123	Site 1 Concrete Reinforcement Right Bank Freestanding - North Sheet 3	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300124	Site 1 Concrete Reinforcement Right Bank Freestanding - south Sheet 1	C01
ARUP-ZZ-01-SH-C-300124	Site 1 South Walls - A(S) to E(S) Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300125	Site 1 Concrete Reinforcement Right Bank Freestanding - south Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300126	Site 1 Concrete Reinforcement Right Bank Freestanding - south Sheet 3	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300127	Concrete Reinforcement Right Bank Freestanding Wall – South Sheet 4	C01
<b>Site 3 AFC</b>		
ENVIMMI001456-ARUP-ZZ-01-DR-C-300310	Site 3 General Arrangement Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300311	Site 3 General Arrangement Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300312	Site 3 Elevations Left Bank	C01



ENVIMMI001456-ARUP-ZZ-01-DR-C-300313	Site 3 Elevations Right Bank	C01
ENVIMMI001456-ARUP-ZZ-01-SK-C-300314	Site 3 Sections Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300315	Site 3 Sections Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300316	Site 3 Fletcher Moorland Flood Defence Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300317	Site 3 Fletcher Moorland Flood Defence Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300318	Site 3 Fletcher Moorland Flood Defence Sheet 3	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300319	Site 3 Details Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300320	Site 3 Details Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300321	Site 3 Lean To Replacement Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300322	Site 3 Lean To Replacement Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300323	Site 3 Liverpool Road Flood Defence Wall Plan	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300324	Site 3 Liverpool Road Flood Defence Wall Sections Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300325	Site 3 Liverpool Road Flood Defence Wall Sections – Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300326	Site 3 Liverpool Road Flood Defence Wall Sections – Sheet 3	C01
ARUP-ZZ-01-SH-C-300327	Site 3 Stepoc and Hollow Block Walls Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300327	Site 3 Stepoc Wall Reinforcement	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300328	Site 3 Hollow Block Wall Reinforcement	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300329	Site 3 Insitu Concrete Reinforcement	C01
ARUP-ZZ-01-SH-C-300329	Site 3 Fletcher Moorland & Parapet Wall Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300330	Site 3 Drainage Details Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300331	Site 3 Drainage Details Sheet 2	C01
<b>Site 4 AFC</b>		
ENVIMMI001456-ARUP-ZZ-01-DR-C-300400	Site 4 General Arrangement Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300401	Site 4 General Arrangement Sheet 2	C01

ENVIMMI001456-ARUP-ZZ-01-DR-C-300402	Site 4 Elevations Left Bank	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300403	Site 4 Elevations Right Bank	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300404	Site 4 Sections Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300405	Site 4 Sections Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300406	Site 4 Bypass Channel Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300407	Site 4 Details Sheet 1	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300408	Site 4 Details Sheet 2	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300409	Site 4 South Wall Flood Defence Wall	C01
ARUP-ZZ-01-SH-C-300410	Site 4 Stepoc Walls Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300410	Site 4 Stepoc Wall Reinforcement	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300411	Site 4 Insitu Concrete Reinforcement	C01
ARUP-ZZ-01-SH-C-300411	Site 4 Walls Reinforcement Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300412	Site 4 Fish Passage Details	C01
ENVIMMI001456-ARUP-ZZ-01-DR-C-300413	Site 4 Insitu Concrete Reinforcement	C01
ARUP-ZZ-01-SH-C-300413	Site 4 Fish Passage Reinforcement Details	C01

### **S 1703 Standards the *Contractor* will comply with**

Site Wide Specs and Report		
Drawing Number	Drawing Name	Revision
ENVIMMI001456-ARP-ZZ-01-RP-YE-000003	Fowlea Brook Flood Risk Management Scheme Water Framework Directive (WFD) Assessment Addendum	P02
ENVIMMI001456-ARUP-ZZ-01-HS-Z-000001	Design Decision & Hazard Risk Register	Ver2
ENVIMMI001456-ARUP-ZZ-01-RP-Z-000007	Fowlea Brook Flood Risk Management Scheme Design Report	P01
ENVIMMI001456-ARUP-ZZ-01-SP-C-000002	Civil Engineering Specification	P01
ENVIMMI001465-ARUP-ZZ-01-SP-S-000001	Channel Structural Repair Specification	Issue2



