



Framework:	Collaborative Delivery Framework
Supplier:	Jackson Civil Engineering Group Ltd
Company Number:	06778819
Geographical Area:	Midlands
Project Name:	River Avon/Severn Eel Pass
Project Number:	ENV0000764C
Contract Type:	Engineering Construction Contract
Option:	Option C
Contract Number:	30219

Revision	Status		Originator		Reviewer		Date

ENGINEERING AND CONSTRUCTION CONTRACT under the Collaborative Delivery Framework CONTRACT DATA

Project Name River Avon/Severn Eel Pass

Project Number ENV0000764C

This contract is made on 08 January 2021
between the *Client* and the *Contractor*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 01st day of April 2019 between the *Client* and the *Contractor* in relation to the Collaborative Delivery Framework. The entire agreement and the following Schedules are incorporated into this Contract by reference
- Schedules 1 to 21 inclusive of the Framework schedules are relied upon within this contract.
- The following documents are incorporated into this contract by reference
ENV0000764C-JHY-00-ZZ-SO-PM-G0300_2-S3-P03.1-G0300-EA4-LOD4-Scope. Version P03.1 dated 11/08/20

Part One - Data provided by the *Client*

Statements given in all Contracts

1 General

The *conditions of contract* are the core clauses and the clauses for the following main Option, the Option for resolving and avoiding disputes and the secondary Options of the NEC4 Engineering and Construction Contract June 2017.

Main
Option

Option C

Option for resolving and avoiding
disputes

W2

Secondary Options

X2: Changes in the law

X9: Transfer of rights

X10: Information modelling

X11: Termination by the *Client*

X18 Limitation of Liability

X20: Key Performance Indicators

Y(UK)1: Project Bank Account

Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996

Y(UK)3: The Contracts (Rights of Third Parties) Act 1999

Z: *Additional conditions of contract*

The *works* are

The River Avon/Severn Eel Pass Scheme comprises two gravity fed eel passes at both Stanchard Pit Weir and Abbey Mill Sluice located at the confluences between the River Avon

The *Client* is

Environment Agency

Address for communications

Address for electronic communications

The *Project Manager* is

TBC

Address for communications

Address for electronic communications

The *Supervisor* is

TBC

Address for communications

Address for electronic communications

The Scope is in
ENV0000764C-JHY-00-ZZ-SO-PM-G0300_2-S3-P03.1-G0300-EA4-LOD4-Scope. Version P03.1 dated 11/08/20

The *language of the contract* is English

The *law of the contract* is
the law of England and Wales, subject to the jurisdiction of the courts of England and Wales

The period for reply is 2 weeks

The following matters will be included in the Early Warning Register

Early warning meetings are to be held at intervals no longer than 2 weeks

2 The Contractor's main responsibilities

The *key dates* and *conditions* to be met are
condition to be met
'none set'
'none set'
'none set'

key date
'none set'
'none set'
'none set'

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

4 weeks

3 Time

The *starting date* is

08 January 2021

The *access dates* are
part of the Site
Stanchard Pit
Abbey Mill

date
15 June 2021
15 July 2021

The *Contractor* submits revised programmes at intervals no longer than

4 weeks

The *Completion Date* for the whole of the *works* is

31 March 2022

The *Client* is willing to take over the *works* before the Completion Date

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

4 weeks

4 Quality management

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

4 weeks

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

52 weeks

The *defect correction period* is 2 weeks except that
• The *defect correction period* for is
• The *defect correction period* for is

5 Payment

The *currency of the contract* is the £ sterling

The *assessment interval* is Monthly

The *Client* set total of the Prices is

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

The *Contractor's share percentages* and the *share ranges* are

	<i>share range</i>		<i>Contractor's share percentage</i>
less than		80 %	0 %
from	80 %	to	120 %
greater than		120 %	as set out in Schedule 17
			as set out in Schedule 17

6 Compensation events

The place where weather is to be recorded is Pershore College Lat 52.0996 Long -2.05856

The *weather measurements* to be recorder for each calendar month are
• the cumulative rainfall (mm)
• the number of days with rainfall more than 5mm
• the number of days with minimum air temperature less than 0 degrees Celsius
• the number of days with snow lying at 09:00 hours GMT

and these measurements:

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

The *weather measurements* are supplied by Met Office
 The *weather data* are the records of past weather measurement for each calendar month
 which were recorded at Pershore College Lat 52.0996 Long -2.05856
 and which are available from Met Office

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

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

These are additional compensation events

1. Managing and mitigating the impact of Covid 19 and working in accordance with Public Health
2. When water levels raise above 9.70m AOD at River Avon at the Upper Pound gauge station -
3. When water levels raise above 8.40m AOD at River Avon at the Upper Pound gauge station -
4. When water levels raise above 10.9m AOD measured at Abbey Mill GATE Monitoring station -
5. When water levels raise above 8.4m AOD measured at Abbey Mill GATE Monitoring station -

8 Liabilities and insurance

These are additional *Client's* liabilities

- 1 'not used'
- 2 'not used'
- 3 'not used'

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

£15,000,000

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

not less than the amount required by law

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

Resolving and avoiding disputes

The *tribunal* is litigation in the courts

The *Senior Representatives* of the *Client* are

Address for communications

Address for electronic communications

Name

Address for communications

Address for electronic communications

The *Adjudicator* is

Address for communications

Address for electronic communications

The *Adjudicator nominating body* is

Z Clauses

Z1 Correctness of Site Information and other documents

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

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

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

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

Z3 Prevention: No change to prices

Delete first sentence of clause 62.2 and replace with:

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

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

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

Z 4 The Schedule of Cost Components

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

Z 6 Payment for

Delete existing clause 11.2 (31) and replace with:

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

Z7 Aggregated Contractor's share

Delete existing clauses 54 and 93.4 and replace with:

54.7 The *Project Manager* assess the *Contractor's* share of the difference between the Aggregated Total of the Prices and the Aggregated Price for Work Done to Date. The difference is divided into increments falling within each of the *share ranges*. The limits of a *share range* are the Aggregated Price for Work Done to Date divided by the Aggregated Total of the Prices, expressed as a percentage. The *Contractor's* share equals the sum of the products of the increment within each *share range* and the corresponding *Contractor's share percentage*.

54.8 If the Aggregated Price for Work Done to Date is less than the Aggregated Total of the Prices, the *Contractor* is paid its share of the saving. If the Aggregated Price for Work Done to Date is greater than the Aggregated Total of the Prices, the *Contractor* pays its share of the excess.

54.9 If, prior to the Completion Date, the Aggregated Price for Work Done to Date exceeds 110% of the Aggregated Total of the Prices, the amount in excess of 110% of the Aggregated Total of the Prices is retained from the *Contractor*.

54.10 The *Project Manager* makes a preliminary assessment of the *Contractor's* share at Completion of the Whole of the works using forecasts of the final Aggregated Price for Work Done to Date and the final Aggregated Total of Prices. This share is included in the amount due following Completion of the whole of the works.

54.11 The *Project Manager* makes a final assessment of the *Contractor's* share, using the final Aggregated Price for Work Done to Date and the final Aggregated Total of the Prices. This share is included in the final amount due.

93.4 If there is a termination, the *Project Manager* assesses the *Contractor's* share after certifying termination. The assessment uses as the Aggregated Price for Work Done to Date the sum of

- the total of
- o the Defined Cost which the *Contractor* has paid and
- o which it is committed to pay for work done before termination

and

- the total of
- o the Defined Cost which the *Contractor* has paid and
- o which it is committed to pay

in the *partner contract* before the date the termination certificate is issued under this contract.

The assessment uses as the Aggregated Total of the Prices the sum of

- the total of
- the lump sum price for each activity which has been completed and
- a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed

and

- the total of
- the lump sum price for each activity which has been completed and
- a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed

in the *partner contract* before the date the termination certificate is issued under this contract.

Add:

- 11.2(37) The Aggregated Total of the Prices is sum of
- the total of the Prices and
- the total of the Prices in the partner contract

11.2(38) The Aggregated Price for Work Done to Date is the sum of

- the Price for Work Done to Date and/
- the Price for Service Provided to Date in the *partner contract*.

Z10 Payments to subcontractors, sub consultants

Subcontractors

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

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

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

Z11Y(UK) 3 The Contracts (Rights of Third Parties)

The design consultant employed by the *Contractor* is required to fulfil the obligations of the warrantor under the primary contract for design works that they complete. This includes:

Transfer of rights clause Z11

Professional indemnity insurance cover to same cover as that specified for the *Contractor*

Z11.1 The *Client* ('the third party') may in its own right enforce the provisions of this clause, subject to and in accordance with the provisions of the Contracts (Right of Third Parties) Act 1999 and the following provisions:

Z11.1.1 the parties may not rescind or vary any provision(s) of this agreement, including this clause, at any time without the consent of the third party; and

Z11.1.2 each third party's rights against party A under this agreement shall be subject to the same conditions, limitations and exclusions as apply to party B's rights against party A under this agreement.

Z11.2 Except as provided in clause Z11.1, this agreement does not create any right enforceable by any person who is not a party to it (Other Party') under the Contracts (Rights of Third Parties) Act 1999, but this clause does not affect any right or remedy of a other party which exists or is available apart from that Act.

Z16 Disallowed Costs

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

- was incurred due to a breach of safety requirements, or due to additional work to comply with safety requirements.
- was incurred as a result of the client issuing a Yellow or Red Card to prepare a Performance Improvement Plan.
- was incurred as a result of rectifying a non-compliance with the Framework Agreement and/or any call off contracts following an audit.

Z18 Payment of pain/gainshare and programme incentivisation

Delete existing clause 54.3 and replace with:

54.3 The *Project Manager* makes regular assessments of the *Contractor's* share until the Completion Date using forecasts of the final Price for Work Done to Date and the final total of the Prices. This share is included in the amount due in the following assessment. The *Project Manager* shall be entitled to take the *Contractor's share* percentage into account when assessing amounts in clause 50 and clause 51 due for payment at each assessment date thereafter. The *Project Manager* shall not assess any amount greater than the amount due when the forecast reaches the top *share range* in the Contract Data Part 1 (120% of the total of the Prices).

Delete existing clause 54.4 and replace with:

54.4 If clause 54.3 does not occur during the *works*, the *Project Manager* makes a preliminary assessment of the *Contractor's* share at Completion of the Whole of the *works* using forecasts of the final Price for Work Done to Date and the final total of Prices. This share is included in the amount due following Completion of the whole of the *work*.

Insert the following new clause 54.5:

54.5 If clause 54.3 does not occur during the *works*, the *Project Manager* makes a final assessment of the *Contractor's* share, using the final Price for Work Done to Date and the final total of the Prices. This share is included in the final amount due.

Insert the following new clause 54.6:

Programme Payments will be made under the Framework in accordance with Schedule 17

Z19 Linked contracts

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

Z21 Requirement for Invoice

Add the following sentence to the end of clause 51.1:

The Party to which payment is due submits an invoice to the other Party for the amount to be paid within one week of the *Project Manager's* certificate.

Delete existing clause 51.2:

51.2 Each certified payment is made by the later of

- one week after the paying Party receives an invoice from the other Party and
- three weeks after the assessment date, or, if a different period is stated in the Contract Data, within the period stated.

If a certified payment is late, or if a payment is late because the *Project Manager* has not issued a certificate which should be issued, interest is paid on the late payment. Interest is assessed from the date by which the late payment should have been made until the date when the late payment is made, and is included in the first assessment after the late payment is made

Z22 Resolving Disputes

Delete W2.1

Z23 Risks and insurance

Replace clause 84.1 with the following

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

Secondary Options

OPTION X2: Changes in the law

The *law of the project* is the law of England and Wales, subject to the jurisdiction of the courts of England and Wales

OPTION X10: Information modelling

The period after the Contract Date within which the *Contractor* is to submit a first Information Execution Plan for acceptance is 2 weeks

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

£5,000,000.00

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

12 year(s)

OPTION X18: Limitation of liability

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

£1,000,000

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

£1,000,000

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

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

£7,000,000

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

OPTION X20: Key Performance Indicators (not used with Option X12)

The *incentive schedule* for Key Performance Indicators is in Schedule 17.

A report of performance against each Key Performance Indicator is provided at intervals of 3 months.

Y(UK)1: Project Bank Account

The Contractor is to pay any bank charges made and to be paid any interest paid by the *project bank*

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

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

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

term beneficiary

term beneficiary

The provisions of
Y(UK)1

Part Two - Data provided by the *Contractor*

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

1 General

The *Contractor* is

Name

Address for communications

Address for electronic communications

The *fee percentage* is

The *working areas* are

The *key persons* are

Name (1)
Job
Responsibilities
Qualifications
Experience

The *key persons* are

Name (2)
Job
Responsibilities
Qualifications
Experience

The *key persons* are

Name (3)
Job
Responsibilities
Qualifications
Experience

The *key persons* are

Name (4)
Job
Responsibilities
Qualifications
Experience

The following matters will be included in the Early Warning Register

2 The Contractor's main responsibilities

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

No contractor design

3 Time

The programme identified in the Contract Data is

Programme Reference: Stanchard to Abbey Mill 24.11.20 Rev

5 Payment

The *activity schedule* is

River Avon / Severn Eel Pass FBC Construction Cost Estimate

Resolving and avoiding disputes

X10: Information Modelling

The *information execution plan* identified in the Contract Data is
to be developed

Y(UK)1: Project Bank Account

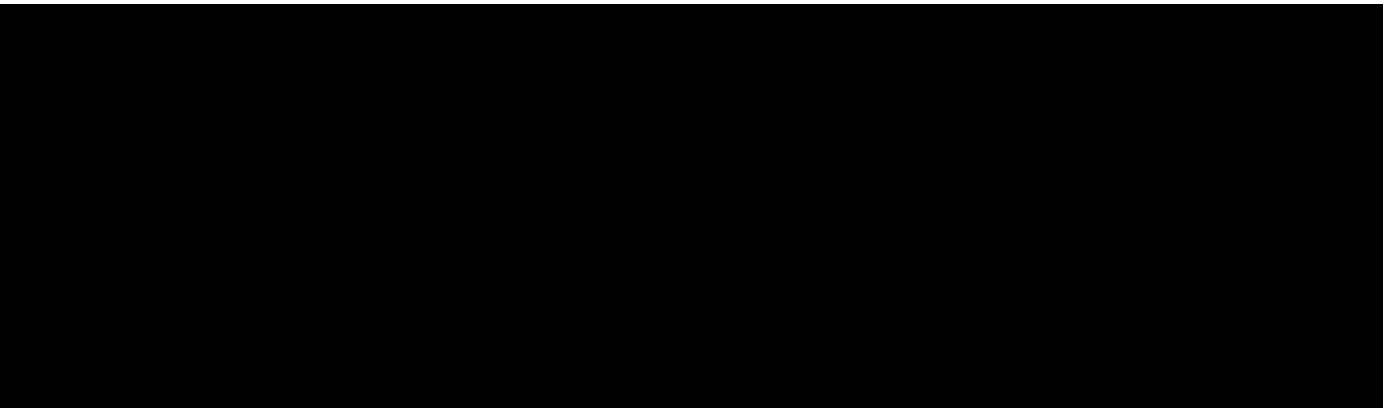
The *project bank* is
To be advised

named suppliers are
To be advised

Contract Execution



Contractor execution



Environment Agency NEC4 engineering and construction contract (ECC)

Scope

Project / contract information

Project name	River Avon/Severn Eel Pass
Project SOP reference	ENV0000764C
Contract reference	30219
Date	11 th August 2020
Version number	P03.1
Author	Environment Agency

Revision history

Revision date	Summary of changes	Version No.
5 th May 2020	First issue	P01
29 th May 2020	Issue following internal EA review	P02
12 th June 2020	Main updates: permits/consents, flood risk, HRA, CEEQUAL	P03
11 th August 2020	Additional CEs for water levels added.	P03.1

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

Document	Document Title	Version No	Issue date
412_13_SD01	Minimum Technical Requirements	9	10/02/2020
801_14	Environmental sustainability, design and management	3	December 2015
801_14_SD01	Cultural heritage and archaeology standards	1	21/12/2015

801_14_SD02	Landscape and environmental design	3	07/07/2017
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S 100 Description of the *works*

S 101 Description of the *works*

The River Avon/Severn Eel Pass Scheme comprises two gravity fed eel passes at both Stanchard Pit Weir and Abbey Mill Sluice located at the confluences between the River Avon and the Severn in Tewkesbury (Gloucestershire). The eel passes are to enable free movement of migrating European eel between both rivers.

This contract is for the *Contractor* to deliver the construction of the *works*.

The drawings describing the *works* are included in Appendix 3. In summary, the *works* include:

- **Stanchard Pit eel pass** – Construction of an eel pass to bypass the fixed weir. This pass is an aluminium eel box structure fixed to the weir crest and river wall fitted with a substrate that allows eels to move along the base of the pass. The aluminium eel box structure is circa 14m long and 0.840m wide. Refer to drawings for further details and accuracy.
- **Abbey Mill eel pass** – Construction of an eel pass to bypass the mechanical sluice. The pass consists of two parts, one concrete section below ground on the landward side of the river-wall and the other section is an aluminium eel box structure fixed to the river side of the river-wall. The pass is typically circa 1m wide and is fitted with a substrate that allows eels to move along the base of the pass. The construction requires the formation of two 900mm x 600mm openings through the existing river wall. Refer to drawings for further details and accuracy.

S 102 Purpose of the *works*/Outcome required

The purpose of the *works* is to construct eel passes at both Stanchard Pit Weir and Abbey Mill Sluice that will comply with the *Client's* legal obligations and will increase connectivity between the rivers and enable eels to migrate to currently eutrophic lower reaches of the River Avon.

The *Client's* overall objectives for the *works* are:

- To provide effective passage between the River Severn and the River Avon.
- Construction of passive and low maintenance eel passage systems at Stanchard Pit and Abbey Mill.

Under this contract, the *Contractor* shall deliver the following tasks, but not limited to:

- Undertake the construction of eel passes at Abbey Mill Sluice and Stanchard Pit Weir as defined in this Scope.
- Arrange, manage and maintain any temporary closure and/or diversion of the Public Rights Of Way (PROW) footpath, located along the Severn Ham SSSI, if required to provide the *works*.
- Secure a Flood Risk Activity Permit (FRAP) for both the permanent and temporary works required for the construction of the eel pass at Abbey Mill.
- Maintain in-situ, or replace, all gates, fencing and other street furniture if removed as part of the *works*. Replacement items will be like-for-like as per pre-construction survey and will be agreed with the *Project Manager*.
- Minimise impact to visual amenity, access, flood risk and navigation during the *works*.
- Safeguard the *site*, the *works*, products, materials, and any existing structures affected by the *works* from damage and theft.

- The *works* must not adversely impact upon the operations of neighbouring facilities except where interference or nuisance resulting from carrying out the *works* cannot reasonably be avoided. Where such interference or nuisance cannot reasonably be avoided, the *Contractor* gains acceptance to proceed from the *Project Manager* as soon as any such instances become apparent to the *Contractor*.
- Enable a continuation/improvement of the *Client's* reputation in the affected community around Stanchard Pit and Abbey Mill through good communications and stakeholder engagement.
- Protect known environmental and heritage features that might potentially be affected by the *works* during the construction.
- Undertake a bespoke CEEQUAL assessment determined by the *Client*. The *Client* has scoped for inclusion into the CEEQUAL assessment, 5 assessment issues using Version 6 (V6) of the CEEQUAL manual. These are as follows:
 - o 3.1 Consultation
 - o 4.3 Protection of biodiversity
 - o 5.2 Heritage assets
 - o 6.1 Water pollution
 - o 7.2 Carbon reduction

The *Contractor* shall scope the individual questions within these assessment issues for agreement with the *Client* and provide a qualified CEEQUAL assessor to undertake the assessment and evidence gathering throughout the *works*. Alongside the assessment, the *Contractor* shall be responsible for completing and uploading evidence to the CEEQUAL portal.

The *Contractor* shall complete the River Avon/Severn Eel Pass Scheme such that it proves value for money to the *Client* in line with the available environmental benefits (OM4c) and results in economic efficiencies based on the project budget. Likewise, the *Contractor* shall maximise positive environmental outcomes and demonstrate mitigation has been considered.

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

S 201 General constraints

S 201.1 Use of the Site

The *Contractor* may only use the *site* for purposes connected with the outcomes and deliverables stated in this Scope.

S 201.2 Access to the Site

The *Contractor* is responsible for identifying suitable access routes to the *sites* and working areas (storage, compounds, site roads). Thereafter the *Project Manager*, with the *Contractor's* support, will arrange all necessary consents (including Severn Ham SSSI Assent), agreements, Notice of Entry plus any financial payment or compensation to the relevant owner/operator prior to commencing *works* on *site*. *Contractor's* support will include drawings, discussions, and provision of information where required between contract award and start date on site.

The *Contractor* must identify access routes giving consideration to height, width and weight restrictions. Note that it is for the *Contractor* to confirm the accuracy of these constraints.

The *Client* provides all landownership and occupation of land details. The *Contractor* keeps the *Project Manager* informed of all communications with owners and occupiers. The *Contractor* notifies the *Project Manager* a minimum of 21 calendar days in advance of the intention to first enter or occupy each area of ownership or occupation (following agreement in principle with the owners and operators).

The *Contractor* shall ensure that the *works* do not prevent access to any residential or commercial properties without prior acceptance by the *Project Manager*.

The *Contractor* keeps records of the dates of the first entry onto and departure from all property and lands of each owner and occupier (including public highways, footpaths and thoroughfares) together with the dates of the erection and removal of all temporary fencing. The *Contractor* must take pre-start and completion photographs and video records and submit to the *Project Manager*.

The *Contractor* must notify the *Client* immediately to gain access to the *site* during the defects correction period. The *Client* obtains landowner permission for access on behalf of the *Contractor*. The *Contractor* must not approach the landowner directly unless authorised to do so by the *Client*.

The *Contractor* is responsible for the confirmation, application, management and maintenance of any temporary footpath diversions required.

S 201.3 Parking

The *Contractor* shall provide adequate parking for site-based personnel and visitors within the site compounds or alternative space should be agreed with the *Project Manager*.

S 201.4 Use of cranes

The *Contractor* is responsible for managing all crane and lifting operations.

S 201.5 Storage of fuel and chemicals

The *Contractor* shall carry out the *works* in accordance with Environment Agency's Pollution Prevention Guidelines (PPG) 5 'works and maintenance in or near water', PPG 6 'Working at construction and demolition sites: preventing pollution guidance', PPG7 'Refuelling facilities', PPG 13 'Vehicle washing and cleaning', and PPG 29 'Safe storage of combustible materials'.

The *Contractor* prepares a Pollution Emergency Plan and submits for acceptance by the *Project Manager*, prior to the commencement of the *works*.

S 201.6 Pollution, ecological and environmental impacts

The *Client* is committed to the environmental principles of stewardship and sustainability and has corporate goals to maintain and enhance the water environment. The *Contractor* shall provide the *works* in accordance with environmental best practice. The *Contractor* must comply with all current and relevant environmental legislation, guidance and other such documentation including, but not limited to the following, in the delivery of the *works*:

- BRE – Green Guide to Specification.
- BRE – Materials Information Exchange.
- CIRIA, SP122 – Waste Minimisation and Recycling in Construction (practical guidance).
- CIRIA, C513 – The Reclaimed and Recycled construction materials Handbook.
- CIRIA, C533 – Environmental Management in Construction.
- CIRIA, C692 – Environmental Good Practice on Site (third edition).
- Considerate Constructor Scheme.
- Understanding Your Environmental Responsibilities – Good Environmental Practices: PPG1.
- Pollution Incident Response Planning: PPG21.

S 201.7 Archaeological requirements

Designated Heritage sites are defined in the Site Information. The *Client* will advise the *Contractor* of any additional constraints or inputs required, following their consultation with the relevant teams regarding the need for Listed Building Consent at Abbey Mill.

S 201.8 Occupied premises and users

The *Contractor* must not approach any landowner directly unless authorised to do so in writing by the *Client*. The *Contractor* shall provide contact cards displaying EA and *Contractor* contact numbers, agreed with the *Client's* Project Manager, to all site personnel. When approached by a third party, landowner or public, members of site personnel should hand over the contact card rather than responding to queries or concerns directly.

S 201.9 Floods

The *Contractor* shall review working methods and make changes where necessary to ensure continued safe working (if feasible) and site security (if on site working cannot continue) are maintained during flood events with a return period of up to 1 in 10 years. The *Contractor* must consider the following flood levels associated with the 1-in-10 year event:

- At Stanchard Pit, the 1-in-10 year flood level is 9.70m AOD upstream and 8.40m AOD downstream, measured at River Avon at the Upper Pound gauge station (upstream of Stanchard Pit). Please note this gauge station is set to river bed level ASD.
- At Abbey Mill the 1-in-10 year flood level is 10.90m AOD upstream and 8.4m AOD downstream measured at Abbey Mill GATE Monitoring station.

The *Contractor* can request historical water level data from the *Client* to help inform the methodology. The nearest gauge stations are: Upper pound (upstream of Stanchard Pit) and Bredon (further upstream of Stanchard Pit).

The *Contractor* must be aware that the sluice at Abbey Mill is an automated structure used to manage river levels. The *Client* will switch the operational regime from automated to manual to manage the risk of lowering the sluice without prior notification.

The *Contractor* registers with the Environment Agency's Flood Warning service (<https://flood-warning-information.service.gov.uk/warnings>) before commencing work on the *site*. The *Contractor* monitors the service during delivery of the *works*.

The *Contractor* arranges regular weather forecast information from the Environment Agency by contacting the area Flood Resilience Team Leader.

The *Contractor* monitors river levels and weather forecasts on a daily basis and promptly provides copies of the information to the *Supervisor*. The weather station will be agreed with the *Project Manager*.

S 201.10 Liaison with third parties

The *Contractor* shall provide contact cards displaying EA and Contractor contact numbers, agreed with the *Client's* Project Manager, to all site personnel. When approached by a third party, landowner or public, members of site personnel should hand over the contact card rather than responding to queries or concerns directly. The *Contractor* records all meetings and agreements with third parties and notifies the *Client* and *Project Manager* of the details.

S 201.11 Third party complaints and claims

Refer to section 1 of CESWI 7 and the additional clause included in Minimum Technical Requirements (412_13_SD01) Procedure for Complaints and Claims. In case of any conflict, the Scope document prevails over CESWI 7 and the Minimum Technical Requirements.

The *Contractor* notifies the *Project Manager* immediately following any damage or injury arising out of the execution of the *works*.

The *Contractor* and *Project Manager* notify each other without delay of all complaints, claims or warnings of intended claims which they may receive.

The *Contractor* informs the *Client* and *Project Manager* immediately of any complaints, claims, damage or injury by owners or occupiers.

The *Contractor* notifies the *Project Manager* immediately of any complaints relating to environmental actions.

S 202 Confidentiality

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

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

S 203 Security and protection on the site

The *Contractor* is responsible for the security of the *site* and for vehicles and pedestrians entering and leaving the *site*. It is the *Contractor's* responsibility to safeguard the *site*, the *works*, products, materials, and any existing structure affected by the *works* from damage and theft. The *Contractor* must also take all reasonable precautions to prevent unauthorized access to the *site*, the *works* and access to adjoining properties via the *site*.

The *Contractor* must take precautions to ensure that any increase in flood risk during construction can be mitigated against using temporary measures e.g. sandbags, temporary pumping arrangements. The *Contractor's* plan shall form part of the Flood Risk Activity Permit application.

The *Contractor* considers the security of neighbouring properties and does not leave unattended scaffolding, ladders, or any equipment, 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.

S 204 Security and identification of people

The *Contractor* adopts their own security, vetting (incl CSCS Cards) and identification of people working on or visiting the *site*. The *Contractor* shall ensure that the *works* do not compromise the security of properties, structures or services within or adjacent to the *site*.

Visitors to the *site* must be accompanied by a representative of the *Contractor*. The *Contractor* provides protective clothing and equipment as required.

S 205 Protection of existing structures and services

The *Contractor* does not damage highways, roads, properties, land, trees, roots, boundaries or any other features, and the apparatus of statutory undertakers, the Highways Authority or others.

The *Contractor* is responsible for any damage to existing roads, properties, Stanchard Pit Weir, Abbey Mill Sluice and other structures caused by its operations. Prior to any work commencing on *site* the *Contractor* provides, for acceptance by the *Supervisor*, photographic and video records of the condition of the existing roads, river walls and any other existing assets which may be affected by their operations. Before Completion, the *Contractor* returns the roads and any other affected existing areas and assets to a condition not inferior to that pertaining at the access date. Following reinstatement, the *Contractor* provides photographic and video records of the condition of the relevant assets and *sites*.

Information concerning the believed location of services is included, where available, in the Site Information. The *Contractor* is responsible for undertaking all necessary searches and surveys to manage the risk of utilities on *site*.

The *Contractor* liaises with all relevant Statutory Undertakers, the Highway Authority and other owners of apparatus before commencing any excavations and satisfies the *Supervisor* as to the exact position of existing apparatus which may affect or be affected by the construction of the *works*. The *Contractor* complies fully with the requirements of the relevant statutory authority when working in the vicinity of their apparatus.

The *Contractor* will notify all service authorities, statutory undertakers and/or adjacent owners of proposed works not less than one week before commencing site operations.

The *Client* procures (including obtaining any additional stats information, necessary permissions, notices, licences or consents) any diversions or removal of apparatus which are required for the permanent works.

The *Contractor* complies with HSE Guidance Notes, Statutory Undertakers and private company requirements when working in the vicinity of their apparatus

S 206 Protection of the works

The *Contractor* protects the *works*, Equipment, Plant and Materials liable to damage either by the weather or by the method used for carrying out the *works*.

The *Contractor* shall ensure the weight of construction plant used is consistent with maintaining the structural integrity of the existing access routes and surrounding assets. Damage attributable to the *Contractor's* activities shall be determined by the *Project Manager* and remedied by the *Contractor*. The cost of rectifying such damage shall be met by the *Contractor*.

The *Contractor* takes all reasonable precautions to prevent unauthorised access to the *site* and the *works*.

S 207 Cleanliness of the roads

The *Contractor* shall take all reasonable steps to minimise dust and mud being deposited on public and private highways during the construction of the *works* in accordance with PPG6 and supplementary clause 1.40 of the Minimum Technical Requirements, and undertake cleaning of public and private highways prior to Completion.

S 208 Traffic Management

The *Contractor* is responsible for traffic safety and management, including obtaining all approvals, e.g. road closure, opening, 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 submitted for acceptance by the *Project Manager*. The *Contractor* agrees with and confirms in writing that agreement has been reached with all relevant authorities.

The *Contractor* shall produce a Traffic Management Plan to be submitted to the *Project Manager* prior the *works*. Traffic movement to and from the *site* is to be the minimum necessary. Delivery and removal of materials and Equipment shall avoid peak traffic hours.

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 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.

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

The *Contractor* shall be responsible for liaising with the public with regard to road closures and regular movements on the highway. The *Contractor* shall minimise disruption, avoiding full road closures and undertaking, where required, 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
- Closing the minimum length of road to facilitate access to adjacent property and fields.

S 209 Condition survey

The structural condition of the Stanchard Pit Weir crest and Abbey Mill Sluice river wall/wingwall where the eel pass cradles and boxes are to be fixed, as well as the loading capacity of the river wall adjacent to the Boat House Pub at Stanchard Pit is unknown.

The *Client* is satisfied that these structures are adequate for the support of the permanent *works*. The *Contractor* must make assessments of any temporary loading imposed on all existing structures.

Shortly before first entry, the *Contractor* undertakes comprehensive 'Pre-construction and Post-construction photographic surveys' of the above mentioned structures, all highways, property and land (including trees, boundaries and any other features which may be affected by the *works*) within the boundaries of the *site* on dates agreed with the *Supervisor*.

The *Contractor* provides a copy of each survey to the *Project Manager*, *Supervisor*, landowners, occupiers and other invitees, within 5 working days of the date of the survey.

The *Contractor* notifies the *Project Manager* and *Supervisor* any changes in level or damage identified between the pre- and post-construction condition surveys.

S 2010 Consideration of Others

The *Contractor* shall register the *site* and act in accordance with the Considerate Contractor Scheme. Subject to unavoidable disturbance caused by providing the *works*, the *Contractor* does not interfere with land rights which may be enjoyed on or near the *site* and causes the least possible interference with existing amenities whether natural or man-made. The *Contractor* shall provide a named individual to act as the single point of contact for local residents and enquiries from the general public.

The *Contractor* agrees fencing requirements with landowners to allow the continued use of the rest of the landowners' holdings, with the exception of the *site* during the *works*. The *Contractor* confirms fencing requirements with the *Project Manager* at least seven days prior to the access date.

Before interfering with any access to property, apparatus or service, the *Contractor* identifies the access to property, apparatus or service requirements and provides alternative arrangements. The *Contractor* notifies the *Project Manager* and the relevant owners and occupiers in writing, a minimum of 14 calendar days in advance of any such interference and confirms to the *Project Manager* that alternative arrangements have been agreed. The *Contractor* identifies any such interference within the Clause 31 programme and Clause 32 programmes so that early landowner liaison can be achieved.

Should it become impractical to maintain vehicular access to any property, apparatus or service at any time during the construction of the *works*, the *Contractor* provides and maintains alternative arrangements. The *Contractor* also provides assistance to the owner/occupier or tenant affected by the *works* to enable them to undertake all aspects of their normal activity.

The *Contractor* takes all reasonable precautions during the progress of the *works* to prevent or reduce nuisance or inconvenience caused by noise to occupiers of adjacent properties and to the general public including ensuring no radios are to be used on *site*.

Without prejudice to the obligations of the *Contractor* as stated above, the *Contractor* at all times ensures that there is no trespass by the *Contractor*, its servants, agents, Sub-Contractors or suppliers on or over any adjoining or neighbouring property arising out of, or in the course of, or

caused by the carrying out of the *works* and the *Contractor* takes all reasonable safety and other measures to prevent damage or injury to any persons (including, but without limitation, the occupiers of adjoining or neighbouring property and members of the public).

S 2011 Control of site personnel

In addition to the requirements of their own site management plan, the *Contractor* ensures all site staff, operatives and visitors comply with any measures and/or procedures required by landowners/tenants operating requirements.

The *Contractor* shall 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 shall be escorted at all times by a member of the site team.

A visitor 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 shall be noted.

The *Contractor* ensures that all staff, employees any Sub-contractor's or supplier's employees do not make any remarks, noises, gestures, movements or other activities that could be considered to be racially or sexually offensive.

The *Contractor* is responsible for promoting and implementing good industrial relation practices and, in conjunction with his Sub-contractors, is responsible for "day to day" industrial relations as they affect the *works* in particular and the project as a whole. This includes, but is not limited to:

- Race relations.
- Equal opportunities.
- Training opportunities.

The *Contractor* submits his Industrial Relations Policy for acceptance by the *Project Manager* and requires Sub-contractors to submit, with their tenders, details of their Industrial Relations Policy, training schemes and management initiatives.

S 2012 Site cleanliness

The *Contractor* shall keep the working areas tidy and promptly remove rubbish, waste and surplus materials. Equipment, Plant and Materials are to be positioned, stored and stacked in a safe and orderly manner.

S 2013 Waste materials

The *Contractor* shall 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 shall be disposed of away from the 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 organisation 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.

S 2014 Deleterious and hazardous materials

The *Contractor* shall notify the *Project Manager* of any hazardous material and contaminated material found on *site*.

S 300 Contractor's design

S 301 Design responsibility

The *Contractor* has no design responsibility for the permanent works.

The *Contractor* shall undertake the detailed design of all temporary works including crane bases and lifting platforms, scaffolding, trench support, confined spaces access, fencing and access required for the construction to meet the objectives of the *works*. The design shall ensure that the cost and quality of the construction work represents value for money and is affordable by the *Client*.

The *Contractor* shall check the provision of any level reference points shown on the drawings provided as Site Information and confirm the position and level with the Supervisor before use for setting out the works. The *Contractor* shall notify the *Project Manager* when all setting out reference points have been agreed, checked and confirmed.

The *Contractor* shall demonstrate his proposals to minimise environmental impacts and to comply with environmental best practice principally through the content of and adherence to his Method Statements.

S 302 Design submission procedures

The *Contractor* shall submit design of all temporary works and other deliverables to the *Project Manager* for acceptance. The *Contractor* shall allow a minimum period of 2 weeks for the *Project Manager* to review deliverables and 1 week for amendments. Acceptance periods shall be clearly shown on the Clause 31 programme and Clause 32 programmes.

S 303 Design approval from Others

The *Client* will secure any additional approval within the timescales stated above.

S 304 Client's requirements

None.

S 305 Design co-ordination

The *Contractor* is deemed to have sufficient information to undertake the construction of the *works* in accordance with this contract.

The *Contractor* shall agree and manage changes with the *Project Manager* via a change management log which will record the potential cost of each change. The *Contractor* shall be responsible for maintaining the log and keeping it up to date.

S 306 Requirements of Others

Licenses/Consents	Owner
Severn Ham SSSI Assent (CRoW and HRA) for both permanent and temporary works.	<i>Client*</i>
Common Land.	<i>Client**</i>
Flood Risk Activity Permit (FRAP) from the Environment Agency under the Water Resources Act 1991 for the permanent and temporary works at Abbey Mill.	<i>Contractor</i>
Waste Management consents and approvals.	<i>Contractor</i>
Arrange, manage and maintain temporary closures or diversions of highways, road or PROW where these are solely required for the <i>Contractor's</i> temporary works.	<i>Contractor</i>

Temporary protective measures and/or diversion of services where these are solely required for the <i>Contractor's</i> temporary works.	<i>Contractor</i>
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*The *Contractor* shall provide high level input into the Habitats Regulation Assessment (HRA) if and where required.

**The *Client* will lead on the Common Land consent process and the *Contractor* will provide inputs.

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

The *Contractor* shall provide all information relevant to the *works* to the *Project Manager* following Completion. The *Contractor* shall retain copies of all information for inspection by the *Project Manager* for the duration of the contract liability period.

S 309 Site investigations

Previous ground investigation outcomes are provided in the Site Information.

If the *Contractor* deems further site investigations are necessary and are agreed with the *Project Manager*, the *Client* specifies, procures, manages and undertakes the site investigation, and subsequently the *Project Manager* provides the *Contractor* with the final Factual Report of this investigation in digital format.

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*:

- 1 hard copy of Operating and Maintenance Manuals and one electronic version.
- 1 hard copy of red pen mark-ups As Built drawings.
- Population of the *Client's* latest version of the Project Cost Tool, or its successor.
- Transfer to the *Client* databases of BIM data.
- Delivery of the Final Carbon Calculator* and Carbon Report following provision of all other information by the *Project Manager*.

*The *Contractor* must keep the carbon calculator up to date and submitted monthly. In addition, the *Contractor* shall look to minimise carbon throughout the *works*. Where a lower carbon solution is of higher cost, it should be identified and submitted to the *Project Manager* for consideration. Efficiencies shall be identified throughout construction and any savings submitted to the *Client's* Project Manager every quarter.

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

S 402 Sectional Completion definition

Not required.

S 403 Training

The *Contractor* is responsible for providing one-day training on all completed assets prior to handover. The training shall be provided to both the *Client's* Asset Performance team and the local Field Services team.

S 404 Final Clean

The *Contractor* shall leave the *site* in a clean, tidy condition and having removed all Equipment, Plant and Materials not required for the permanent works, to the satisfaction of the *Client*, landowners and stakeholders.

S 405 Security

Upon Completion, the *Contractor* ensures the sites remain secure to the same standard or better, than at the Contract Date.

Any gates not within the boundaries of the *site*, but used for access are kept as they were at the point of entry (status and condition); unless requested to be renewed by the *Client*; and any keys are returned to the relevant party.

S 406 Correcting Defects

The *Project Manager* arranges for the *Client* to allow the *Contractor* access to and use of a part of the *works* which has been taken over if it is needed for correcting a Defect. In this case the *defect correction period* begins when the necessary access and use have been provided.

Any Defects found by either the *Project Manager*, *Client's* staff or the *Contractor* are to be reported to the *Supervisor* within 24 hours of any such Defect being found. The *Supervisor* notifies the *Contractor* of the Defect and confirms whether the Defect is considered to be critical and requires emergency correction within 24 hours. See Contract Data for defect correction period.

S 407 Pre-Completion arrangements

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

S 408 Take over

The *Contractor* shall provide operational and maintenance access to Stanchard Pit Weir and Sluice as well as Abbey Mill Sluice as required by the *Client* throughout the duration of the *works* prior to Completion. Access to this part of the *works* by the *Contractor* may be restricted during these periods.

The *site* is returned to the management of the *Client* following issue of the Defects Certificate.

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).

In delivering the *works* the *Contractor* shall submit all programmes to the *Client* initially as 'draft for review' followed by 'final for acceptance'. Formal advance notice of submission shall be given to the *Client* and all product submissions will be subject to a two-week review period by the *Client*.

The submission dates and review periods shall be included on the Programme.

The *Contractor* shall provide a detailed programme in both PDF and Microsoft Project 2016 format meeting all requirements of the conditions of the contract. A baseline programme shall be provided for the project start-up meeting and this shall be updated for progress meetings with actual and forecast progress against the baseline. Programmes shall be provided by the *Contractor* to the *Project Manager* for acceptance on a monthly basis and will be subject to a two-week review period.

In delivering the *works* the *Contractor* shall ensure the stakeholder engagement plan is proactively used to deliver the *works*. All key activities required to deliver the *works* shall be identified on the programme.

The programme shall cover all the activities to be undertaken by the *Contractor* and other members of the project team. To gain acceptance, the programme must specifically include the following as a minimum:

- All major project milestones and gateways from commencement to the end of the reporting, consultation and approvals stage.
- Review and consultation periods for deliverables.
- Internal project team/board decision gateways; these gateways are critical in managing project expenditure, programme and scope creep and shall be well considered and managed to ensure project remains on time and cost.
- Decision milestones and meetings.

S 502 Programme arrangement

Any specific arrangement of the programme, including any requirement for the programme to be produced in levels (summary levels to detail level).

S 503 Methodology statement

Particular requirements for methodology statements, including any specific requirements for resource information.

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

The *Contractor* submits a programme to the *Project Manager* no less frequently than once every 4 weeks. The programme is submitted in electronic copy in MS Project format, with a copy in Adobe PDF. The *Contractor* adopts appropriate version control on the programme so that there is an auditable trail of how the project has evolved as compensation events materialise.

The programme indicates:

- Elements of work compliant with the Scope (and subsequent changes to Scope) with key milestone dates.
- Progress of work during the previous month and cumulative progress to date.
- Float (i.e. "spare time within the Contract programme after time risk allowances have been included" (CI 31.2)).
- Time risk allowances.
- Cause and effect to any delay/advancement of the Completion Date.
- Any Safety and Health or Environmental (SHE) incidents and/or near misses together with work done to prevent a repeat event.

S 506 Revised programme

Any revised submitted programme is submitted with an explanation of changes.

In addition to the monthly revision, the *Contractor* revises and reissues the programme with every compensation event unless otherwise agreed with the *Project Manager*.

S 600 Quality management

S 601 Samples

No sample materials are required for the *works*.

S 602 Quality Statement

The *Contractor* shall submit a quality plan for the *works* to the *Project Manager* within 4 weeks of the Contract Date. The following items are deemed to be quality critical and should appear as specific sections within the quality statement:

- Eel substrate, (including concrete and steel support beneath substrate) must be fitted to levels and gradients as specified on the drawings. Eel substrate dimensions and specifications must be met to achieve effective passage.
- The eel pass operates on very small amounts of water and any leakage from the structure will reduce the effectiveness.

S 603 Quality management system

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

The *Contractor* describes the Quality Management System in a Quality Plan, which is provided to the *Project Manager* for acceptance within 14 calendar days of the Contract Date.

The quality of the *works* is self-certified by the *Contractor* as set out in the Quality Plan accepted by the *Project Manager*.

The *Contractor's* Quality Control manager certifies that activities have been carried out in accordance with the Scope when:

- an experienced and qualified surveyor has checked and certified that the work is in its correct position, level and alignment;
- a works checker has checked and certified that Plant and 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 their certificate.

The *Project Manager* and or the *Supervisor* may at any time audit the quality control process and for this purpose is given assistance and access by the *Contractor* to:

- audit 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 604 BIM requirements

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

The *Client* produces the project's Information Delivery Plan (IDP). The *Contractor* develops a BIM Execution Plan (BEP) to meet the requirements set out in Appendix 1 and 2. As a minimum the BEP includes a description of how the Project's IDP is to be delivered. The BEP is to be submitted to the *Client's* Project Manager for acceptance four weeks after Contract Date. The accepted plan is adhered to for the duration of the Contract.

The *Contractor* complies with the Employer's Information Requirements (EIR, v2.4).

S 700 Tests and inspections

S 701 Tests and inspections

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

The *Contractor* shall inspect that all steelwork and aluminium structures have been executed as per design specifications prior to delivery to the *working area* and installation.

The *Contractor* shall undertake an as-built survey of the eel passes prior to Completion to demonstrate that the design levels and eel tiles gradients have been achieved. The survey record shall be stored in the IDP in accordance with the Employer's BIM protocols (refer to Appendices 1 and 2).

S 702 Management of tests and inspections

The *Contractor* undertakes all the inspections and tests of Plant and Materials, and methods of construction as required by the relevant clauses in the Scope. The *Contractor* may need to carry out additional testing to substantiate that all aspects of the *works* will comply with the *Client's* requirements.

The *Contractor* provides adequate lighting where work is being executed and provides and installs any additional lighting that the *Supervisor* may require in order to watch and supervise the *works* and carry out any testing and examination of materials. All temporary lighting is to the approval of the *Supervisor*.

The *Contractor* compiles and submits to the *Project Manager* for acceptance, a test and inspection schedule containing all relevant information. The schedule is updated on a monthly basis and the revision submitted to the *Project Manager* for acceptance five working days before the scheduled Monthly Progress Meetings.

The *Contractor* notifies the *Supervisor* of the times when work, articles and materials will be ready for inspection so that the *Supervisor* may inspect the work, articles or materials without delaying dispatch to the *site*. Such notices are given at such times as will permit inspection of the whole of the work by the *Supervisor* at all stages of the processes of manufacture, and not only when the goods are completed ready for dispatch.

S 703 Covering up completed work

No operation is 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 deemed necessary for inspection and checking. Except for reasons outside the control of the *Contractor*, the minimum period of notice is two working days unless otherwise agreed with the *Supervisor*.

During the *works*, the *Contractor* submits to the *Supervisor* full and detailed particulars of any proposed amendments to the arrangements and methods submitted. The minimum period of notice is two working days unless otherwise agreed with the *Supervisor*.

S 704 Supervisor's procedures for inspections and watching tests

The *Supervisor* can give notice of any activity that is to be inspected or watched.

S 800 Management of the works

S 801 Project team – Others

As defined in the Contract Data.

S 802 Communications

All administrative communication between the parties includes distribution to the *Project Manager* and the *Contractor's* representative on site.

Commercial communications to and from the *Contractor* are administered through the *Project Manager* on FastDraft. Project files and knowledge is administered through the *Client's* Project Manager on the *Client's* Common Data Environment (CDE).

The *Client's* standard contract forms are administered through FastDraft.

All contract communications contain unique reference numbers and are appropriately titled. Numbering logic and sequencing to be agreed with the *Project Manager*, in compliance with the BEP.

The *Contractor*, *Project Manager* and *Supervisor* attends a weekly issues meeting, chaired by the *Project Manager*.

S 802.1 Monthly Progress Meetings

The *Contractor* attends formal monthly progress meetings including during the design period, construction, installation and commissioning works. The *Contractor* arranges for appropriate attendance at these meetings by relevant staff and Sub-contractors. The *Client*, *Project Manager* and Others will attend the meetings as necessary and at the request of the *Project Manager*.

The *Contractor* shall also attend Project Board meetings when required by the *Client*. It is assumed that Project Board meetings will take once every 8 weeks.

S 802.2 Progress Reports

Weekly Progress Reports

The *Contractor* submits a weekly report of work done, Equipment on site and all personnel including Sub-contractors and materials to the *Supervisor* by Monday (12pm) of the following week.

Monthly Progress Reports

The *Contractor* submits formal monthly progress reports using the *Client's* 'standard' template available on the *Client's* CDE. The report covers all aspects of the works highlighting any actual or anticipated deviations from the applicable programme together with details of the actions proposed to rectify each deviation. Progress photographs are to be provided with each monthly report.

The progress report includes those details listed in the Minimum Technical Requirements CI 1.30.

- Any other issue/subject requested by the *Project Manager*.

S 900 Working with the *Client* and Others

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

In accordance with Clauses 25.1 and 60.1(5) of the ECC conditions of contract the *Contractor* co-operates and shares the Working Areas for the duration of the *works* as detailed below:

- Environment Agency staff, who will access the *site* for operation and inspection of the existing assets.
- With the Landowner(s) and their representatives.
- Users of the access track.

S 902 Co-operation

The *Contractor* co-operates with the affected landowner(s) and other Contractors in the area and obtains and gives the necessary permits to/from them in accordance with their site safety procedures prior to commencing any work on any land where permission/agreement to work is required.

S 903 Co-ordination

No specific co-ordination required.

S 904 Authorities and utilities providers

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

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

The *Contractor* considers the following diversity measures and how they are addressed on this contract:

- **Public:** how to effectively engage with, and how they perceive us, the diverse public throughout projects?
- **Project team:** how to create an inclusive environment for our project team?
- **Framework:** identify opportunities to support diverse workforces on our projects across our organisations.

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*

S 1001.1 Services and other things for the use of the *Contractor*

The *Contractor* provides all Services, welfare facilities and other ancillary items that are required for the safe delivery of the works

The *Contractor* provides first aid facilities, materials and personnel trained in first aid, for the benefit of their own people, those of Sub-contractors and the site staff of the *Project Manager*, *Supervisor* and *Client*.

S 1001.2 Services and other things for the use of the *Project Manager* and *Supervisor*

The *Contractor* allows the use of *site* facilities by the *Supervisor*, *Project Manager* and their staff.

The *Contractor* provides, maintains and removes on completion a meeting room suitable for 10 people to attend meetings complete with conference table and chairs.

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

The *Client* provides the *Contractor* with Access to the *site*; agrees and negotiates compound areas; issues Notices of Intended Entry (NOIE) for access routes and is responsible for agreeing all compensation payments to landowners (compensation payments are the responsibility of the *Client*); all as per S 201.2.

- The *Client* arranges (including obtaining any necessary permissions, notices, licences or consents) any diversions or removal of apparatus which are required for the permanent works.

S 1100 Health and safety

S 1101 Health and safety requirements

Health and safety is of the highest priority for the *Client*. The *Contractor* shall promote and adopt safe working practices for their own activities and Sub-contractors working for them and shall, along with the *Client*, deliver preferred options that take due regard for health and safety in construction, maintenance, operation and demolition and are safe for the public and other users.

The *works* are delivered in accordance with the Environment Agency 'Safety, Health, Environment and Wellbeing Code of Practice (SHEW CoP) April 2019. Procedures and policies as outlined in this document are applied throughout the Contract. The *Contractor* becomes familiar with this document and acts in accordance with it.

The *Contractor* provides first aid facilities; materials and personnel trained in first aid, for the benefit of their own people, those of Sub-contractors and the site staff of the *Project Manager*, *Supervisor* and *Client*.

The Construction (Design and Management) Regulations 2015 (the CDM Regulations) apply to the *works*.

The CDM Pre-construction Information does not form part of the Contract. The PCI for the *site* is stored in the Site Information.

The *Contractor* copies to the *Project Manager* all correspondence with the Principal Designer/CDM Advisor.

The *Contractor* provides information to the Principal Designer/CDM Advisor to allow the Principal Designer/CDM Advisor to complete a stop go form to inform the *Client* that all relevant documentation is in place prior to commencement of site *works*.

S 1102 Method statements

The *Contractor* is required to submit method statements and risk assessments for all construction *works* to the *Project Manager* stating how they will undertake each element of the construction *works*.

Method statements provided to support a programme for acceptance include full particulars of the methods, timing and sequence of construction, including the use and design of temporary works, Equipment, Plant and Materials proposed by the *Contractor*.

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

Method statements shall be submitted for acceptance, to include but are not limited to the following matters:

- Health & safety measures.
- Lifting and crane activities.
- Excavation activities
- Works over water
- Works that could be affected by flooding.

The *Contractor* shall submit method statements to the *Project Manager* at least 2 weeks in advance of carrying out items of work. The *Contractor* allows a period of 2 working days for the *Project Manager's* reply, acceptance or rejection of method statements. The works shall not commence until the *Project Manager* has accepted the relevant method statements. The *Contractor* provides the *works* in accordance with the accepted method statement.

S 1103 Legal requirements

The *Contractor* is the 'Principal Contractor' under the CDM Regulations 2015.

The Client duties under the CDM Regulations 2015 is undertaken by the *Client*.

The Principal Designer duties are undertaken by the *Client* via the appointed organisation.

S 1104 Inspections

The *Project Manager* is entitled to inspect all Registers, reports and certificates, which the *Contractor* is required by law to keep and issue in respect of safety matters and accidents.

The *Client* or the Appointed *Client's* Safety Representatives reserve the right to visit and inspect the *site* at any time.

The *Contractor* appoints a competent health and safety officer whilst any work is carried out on the *site*.

The *Contractor's* health and safety officer carries out fortnightly audits of the *site* and submits copies of audit reports and proposed remedial actions to the *Supervisor* prior to the end of the following week.

The *Client* may carry out site audits. The *Contractor* assists in these audits and complies with any recommendations made during such audits.

S 1200 Subcontracting

S 1201 Restrictions or requirements for subcontracting

The *Contractor* is to comply with the *Client's* Procurement rules.

The *Contractor* is responsible for reviewing and agreeing the Sub-contractor's method statement and risk assessments.

The *Contractor* shall supervise and manage the Sub-contractor and shall review data and check the Sub-contractor's deliverables

The Sub-contractor must:

- operate a certified Quality Management System (QMS);
- operate a certified Environmental Management System (EMS);
- operate a certified Occupational Health & Safety Management System (OHS).

As part of the Sub-contract tendering process the *Contractor* is to ensure a schedule of rates is devised and populated for use in the assessment of quotations in the event of unforeseen circumstances. This includes, but is not limited to rates for the following:

- People
- Plant
- Lifting equipment
- Fee percentage

The exact format is to be agreed with the *Project Manager* prior to the acceptance of the proposed Sub-contractor and the award of any Sub-contract.

The *Contractor* may not subcontract any part of the *works* to suppliers currently engaged on the CDF framework, without prior consent from the *Client*. Consent, if granted, will include conditions to ensure the *Client* will not pay more for works or services than would be the case if they were procured directly by the *Client*.

S 1202 Acceptance procedures

The basic requirement for submission and acceptance is dealt with in subclause 26.3.

S 1300 Title

S 1301 Marking

Not Required.

S 1302 Materials from Excavation and demolition

The *Contractor* has no title to the following materials from excavation and demolition.

Where practicable the *Contractor* will seek to sell on any surplus materials, whether as a result of excavation, demolition or quantity change of value, with the proceeds benefitting the *Client* as a credit against the defined cost.

Any payment received by the *Contractor* for disposal of scrap metals associated with the *works* is to be applied as a credit to costs on this contract by the *Contractor*.

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

Immediately upon receipt of payment, the Contractor issues to the *Client* a VAT receipt. The *Client* may retain further payments due to the *Contractor* if the *Contractor* does not provide a VAT receipt until the receipt is provided and any other consequential requirements of the VAT regulations are satisfied.

The *Contractor* ensures that, in its procurement agreements, warranty on all items of Plant will commence only when that item of Plant is commissioned.

S 1500 Accounts and records (Options C and E)

S 1501 Additional Records

S 1501.1 Accounts and records to be kept by the *Contractor*

Records will be in accordance with ECC clause 52.2.

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

S 1501.2 Cost forecasts

The *Contractor* prepares forecasts of the total Defined Cost and Fee for the whole of the *works* in consultation with the *Project Manager* and submits them to the *Project Manager* for acceptance.

Forecasts are prepared every month from the starting date until Completion of the whole of the *works*. An explanation of the changes made since the previous forecast is submitted with each forecast.

Forecasts of the total Defined Cost include but are not limited to costs to date, costs to completion including detailed breakdown of staff, sub-contracts and major material items.

S 1600 Parent Company Guarantee (Option X4)

Not required.

S 1700 *Client's work specifications and drawings*

S 1701 *Client's work specification*

The technical specification for the civil works is the 'Civil Engineering Specification for the Water Industry, 7th Edition', (CESWI 7) published by UK Water Industry Research Ltd in March 2011, augmented by the Environment Agency's Minimum Technical Requirement.

In so far as any Environment Agency's Minimum Technical Requirement Clause conflicts, or is inconsistent, with any provision of CESWI 7, the Environment Agency's Minimum Technical Requirement Clause always prevails. Any further specifications or clauses included within the design drawings (section S 1702) will prevail over the Environment Agency's Minimum Technical Requirement Clauses in case of conflict.

The Minimum Technical Requirements referred to in this contract are found on the *Client's* CDE.

(a) Engineer or Contract Administrator

In the ECC, these functions are performed not by the Engineer or Contract Administrator but by the *Project Manager* known as the ECC PM and the *Supervisor*.

The ECC PM is responsible for managing the contract on behalf of the *Client*, and deals with time, money, and changes to the contract.

The *Supervisor's* duty is to ensure that the *Contractor* provides the *works* in accordance with the contract documents – in particular the Scope (the specifications and drawings).

References in the specification to the Engineer or Contract Administrator are read as references to the *Supervisor* or the *Project Manager*, as appropriate.

If the *Contractor* is in any doubt as to whether a matter is raised with the ECC PM or the *Supervisor*, the *Contractor* asks the *Project Manager* to decide the issue.

(b) Approval

Under the ECC, the *Contractor* makes submissions for acceptance rather than for approval. References in the specification to "submission for approval" or to "approval" is read as "submission for acceptance" or "acceptance" respectively.

(c) Plant and Equipment

In the ECC, the term Plant refers to items for permanent inclusion in the *works*, while Equipment refers to items provided by the *Contractor* and used by him to provide the *works* but not for inclusion in the *works*.

If the *Contractor* is in any doubt as to the interpretation on Plant and Equipment the matter is raised with the *Project Manager* who decides the issue.

(d) Client Purchaser

References in the specification to the Client or Purchaser is read as references to the *Client*.

S 1702 Drawings

The detailed design drawings for each eel pass are listed below:

- Stanchard Pit:
 - o ENV0000764C-JHY-SE-Z10-DR-C-3041-S4-C01-B1300-EA4-LOD4-StanchardPitDetailedDesign1
 - o ENV0000764C-JHY-SE-Z10-DR-C-3042-S4-C01-B1300-EA4-LOD4-StanchardPitDetailedDesign2
 - o ENV0000764C-JHY-SE-Z10-DR-C-3043-S4-C01-B1300-EA4-LOD4-StanchardPitDetailedDesign3
 - o ENV0000764C-JHY-SE-Z10-DR-C-3044-S4-C01-B1300-EA4-LOD4-StanchardPitDetailedDesign4
 - o ENV0000764C-JHY-SE-Z10-DR-C-3045-S4-C01-B1300-EA4-LOD4-StanchardPitDetailedDesign5
- Abbey Mill
 - o ENV0000764C-JHY-SE-Z10-DR-C-3031-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign1
 - o ENV0000764C-JHY-SE-Z10-DR-C-3032-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign2
 - o ENV0000764C-JHY-SE-Z10-DR-C-3033-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign3
 - o ENV0000764C-JHY-SE-Z10-DR-C-3034-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign4
 - o ENV0000764C-JHY-SE-Z10-DR-C-3035sht1of3-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign5
 - o ENV0000764C-JHY-SE-Z10-DR-C-3035sht2of3-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign5
 - o ENV0000764C-JHY-SE-Z10-DR-C-3035sht3of3-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign5
 - o ENV0000764C-JHY-SE-Z10-DR-C-3036-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign6
 - o ENV0000764C-JHY-SE-Z10-DR-C-3037-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign7
 - o ENV0000764C-JHY-SE-Z10-DR-C-3038-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign8
 - o ENV0000764C-JHY-SE-Z10-DR-C-3039-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign9
 - o ENV0000764C-JHY-SE-Z10-DR-C-3040-S4-C01-B1300-EA4-LOD4-AbbeyMillDetailedDesign10
 - o SHWG - Abbey Mill - 3035 C01 Sht 3of3 - Bar bending schedule
 - o SHWG - Abbey Mill - 3035 C01 Sht1of3 - Bar bending schedule
 - o SHWG - Abbey Mill - 3035 C01 Sht2of3 - Bar bending schedule

Refer to Appendix 3 to get access to the relevant *Client's* CDE folder.

S 1703 Standards the *Contractor* will comply with

The *Contractor* carries out their work using the following Environment Agency's guidance.

Ref	Report Name	Where used
	Project Cost Tool	Costs
	Sustainability Measures Form	Reporting
	Timber Policy Documents	Construction
	300_10 SHE handbook for managing capital projects	Construction
	300_10_SD27 SHE Code of Practice	Construction
	Carbon Tool	Construction
	BIM Protocol	Construction

S 1704 General specification (additional and amended clauses)

The following details amendments to the specification as detailed above (section S 1701):

2.56 (Amended) Grass seed shall be submitted for the *Project Manager* for approval.

3.9 (Amended) Reinstatement of unpaved land will be in accordance with any requirements laid out by the Severn Ham SSSI Assent.

Appendix 1 BIM Protocol – Information Production and Delivery Table

All *Client* issued information referenced within the Information Delivery Plan remains within the Site Information unless it is referenced elsewhere within the Scope. The Information Delivery Plan is located within the projects Adoddle workspace.

Appendix 2 BIM Protocol – Employer’s Information Requirements (EIR)

The latest version of the Environment Agency's EIR can be found at this link:

<https://adoddleak.asite.com/adoddlepublic/dpd/LRn4zfGo7KG5srfoqq>

Appendix 3 Detailed Design Drawings

The design drawings are available on the Bravo platform. The *Client's* Project Manager provides the relevant access permissions.

Detailed design drawings include:

- Stanchard Pit eel pass
- Abbey Mill eel pass