Engineering and Construction Short Contract

Contract Data Forms

June 2017
(with amendments January 2019)

nec4 Engineering and Construction

Short Contract

A contract between

The Environment Agency
Horizon House
Deanery Road
Bristol
BS1 5AH

and

Land & Water Services Ltd

for

Thames Lock Collar Straps and Anchor Blocks-Winch Points
Contract No: C19844

Contract Forms

Contract Data

The *Contractor's* Offer and *Client's* Acceptance

Price List

Scope

Site Information

Notes about the contract are printed in boxes like this one. They are not part of the contract.

Contract Data

The *Client's* Contract Data

The *Client* is

Name	Environment Agency
Address for communications	Horizon House Deanery Road Bristol BS1 5AH
Address for electronic communications	https://defra-family.force.com/s/Welcome
The *works* are	**Collar straps** • At all 48 locks on the River Thames, survey all existing collar straps, produce drawings and fabricate spares for storage by the *Client.* • At Sunbury Hydraulic Lock, replace one existing collar strap.
The *site* are	See Appendix 1 - Supplementary Information_TLCSABWP
The *starting date* is	20th November 2023
The *completion date* is	13th June 2024
The *delay damages* are	244.89 per day
The *period for reply* is	2 weeks
The *defects date* is	104 weeks after Completion
The *defect correction period* is	2 weeks Except that the defects correction period for health and safety matters is **24 hours**
The *assessment day* is the	the last working day of each month
The *retention* is	nil %

The United Kingdom Housing Grants, Construction and Regeneration Act (1996) **does** apply

The *Adjudicator* is

Name	In the event that a first dispute is referred to adjudication, the referring Party at the same time applies to the Institution of Civil Engineers to appoint an *Adjudicator*. The application to the Institution includes a copy of this definition of the *Adjudicator*. The referring Party pays the administrative charge made by the Institution. The person appointed is also *Adjudicator* for later disputes

Contract Data

The *Client's* Contract Data

The interest rate on late payment is 0.5 % per complete week of delay.

Insert a rate only if a rate less than 0.5% per week of delay has been agreed.

The *Client* provides this insurance	None

For any one event, the liability of the *Contractor* to the *Client* for loss of or damage to the *Client's* property is limited to £100,000	
The *Client* provides this insurance	None

Insurance Table

Event	**Cover**	**Cover provided until**
Loss of or damage to the *works*	The replacement cost	The *Client's* certificate of Completion has been issued
Loss of or damage to Equipment, Plant and Materials	The replacement cost	The defects Certificate has been issued
The *Contractor's* liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor's* Providing the Works	Minimum £5,000,000 in respect of every claim without limit to the number of claims	
Liability for death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	
Failure of the *Contractor* to use the skill and care normally used by professionals providing works similar to the works	Minimum £2,000,000 in respect of every claim without limit to the number of claims	6 years following Completion of the whole of the works or earlier termination

The *Adjudicator nominating body* is	The Institution of Civil Engineers
The *tribunal* is	litigation in the courts
The *conditions of contract* are the NEC4 Engineering and Construction Short Contract June 2017 and the following additional conditions	

The *conditions of contract* are the NEC4 Engineering and Construction Short Contract June 2017 (with amendments in 2023) and the following additional conditions	
Z1.0	**Sub-contracting**
Z1.1	The *Contractor* submits the name of each proposed subcontractor to the *Client* for acceptance. A reason for not accepting the subcontractor is that their appointment will not allow the *Contractor* to Provide the Works. The *Contractor* does not appoint a proposed subcontractor until the *Client* has accepted them.
Z1.2	Payment to subcontractors and suppliers will be no more than 30 days from receipt of invoice.
Z2.0	**Environment Agency as a regulatory authority**
Z2.1	The Environment Agency's position as a regulatory authority and as *Client* under the contract is separate and distinct. Actions taken in one capacity are deemed not to be taken in the other.
Z2.2	Where statutory consents must be obtained from the Environment Agency in its capacity as a regulatory authority, the *Contractor* is responsible for obtaining these and paying fees (unless stated otherwise in the Scope). The *Client's* acceptance of a tender and the *Client's* instruction or variation of the works does not constitute statutory approval or consent.
Z2.3	An action by the Environment Agency as regulatory authority is not in its capacity as *Client* and is not a compensation event.
Z3.0	**Confidentiality & Publicity**
Z3.1	The *Contractor* may publicise the works only with the *Client's* written agreement.
Z4.0	**Correctness of Site Information**
Z4.1	Site Information about the ground, subsoil, ducts, cables, pipes and structures is provided in good faith by the *Client* but is not warranted correct. The *Contractor* checks the correctness of any such Site Information they rely on for the purpose of Providing the Works.
Z5.0	**The Contracts (Rights of Third Parties) Act 1999**
Z5.1	For the purposes of the Contracts (Rights of Third Parties) Act 1999, nothing in this contract confers or purports to confer on a third party any benefit or any right to enforce a term of this contract.
Z6.0	**Design**
Z6.1	Where design is undertaken, it is the obligation of the *Contractor* to ensure the use of skill and care normally used by professionals providing similar design services.
Z6.2	The *Contractor* designs the parts of the works which the Scope states they are to design.
Z6.3	The *Contractor* submits the particulars of their design as the Scope requires to the *Client* for acceptance. A reason for not accepting the *Contractor's* design is that it does not comply with either the Scope or the applicable law. The *Contractor* does not proceed with the relevant work until the *Client* has accepted this design.
Z6.4	The *Contractor* may submit their design for acceptance in parts if the design of each part can be assessed fully.
Z7.0	**Change to Compensation Events**
Z7.1	Delete the text of Clause 60.1(11) and replace by:

	The *works* are affected by any one of the following events • War, civil war, rebellion revolution, insurrection, military or usurped power • Strikes, riots and civil commotion not confined to the employees of the *Contractor* and sub-contractors • Ionising radiation or radioactive contamination from nuclear fuel or nuclear waste resulting from the combustion of nuclear fuel • Radioactive, toxic, explosive or other hazardous properties of an explosive nuclear device • Natural disaster • Fire and explosion • Impact by aircraft or other device or thing dropped from them
Z7.2	Clause 60.1 (8) second bullet point is amended to: "are not weather conditions or floods and"
Z7.3	Clause 60.1 (9) is amended to: "The Contractor is prevented by weather or floods from carrying out all work on the site for periods of time, each at least one full working day, which are in total more than one seventh of the total number of days between the *starting date* and the Completion Date. In assessing this event, only the working days which exceed the limit and on which work is prevented by no other cause are taken into account."
Z8.0	**Framework Agreement**
Z8.1	The *Contractor* shall ensure at all times during this contract it complies with all the obligations and conditions of the Framework Agreement made with the *Client*.
Z9.0	**Termination**
Z9.1	Delete the text of Clause 92.3 and replace with: If the *Contractor* terminates for Reason 1 or 6, the amount due on termination also includes 5% of any excess of a forecast of the amount due at Completion had there been no termination over the amount due on termination assessed as for normal payments.
Z10.0	**Data Protection**
Z10.1	The requirements of the Data Protection Schedule shall be incorporated into this contract
Z11.0	**Liabilities and Insurance**
Z11.1	Civil data protection claims and regulatory fines for breaches of Data Protection Legislation are excluded from any limit of liability stated.
Z12.0	**Packaging**
Z12.1	For contracts containing packages of projects the *Client's* Contract Data, Scope and Site Information particular to an individual project is contained within Appendix 1 - Supplementary Information_TLCSABWP
Z110	**Inflation** At the Contract Date the Client set total of the Prices does not include a sum to cover inflation. The total of the Prices [at the Contract Date] shall be adjusted by a fixed number of Price Adjustments. The number of Price Adjustments shall be equal to:

	The number of months between the Completion Date included at the Contract Date and the Contract Date. The proportion of Price Adjustment shall be equal to: The Client set total of the Prices at the Contract Date / The number of Price Adjustments Each time the amount due is assessed, the Price Adjustment shall be: The proportion of Price Adjustment x [80% x CPI 1 – month rate] The CPI 1 – month rate shall be the value determined by the Office of National Statistics for the applicable month of the amount due assessment Provided always that the fixed number of Price Adjustments has NOT been exceeded. The Price Adjustment adjusts the [Client set] total of the Prices. If a compensation event under this contract omits original Scope covered by the total of the Prices at the Contract Date the Price Adjustments made under this clause shall be corrected accordingly.

Contract Data

The *Contractor's* Contract Data

The *Contractor* is

Name	Land & Water Services Ltd
Address for communications	Weston Yard, Albury, Guildford, Surrey, GU5 9AF
Address for electronic communications	[redacted]

The *fee percentage* is As framework %

The *people rates* are

category of person	unit	Rate

The *published list of Equipment* is As framework

The *percentage for adjustment for Equipment* is As framework % (state plus or minus)

The *Contractor's* Offer and *Client's* Acceptance

The *Contractor* offers to Provide the Works in accordance with these *conditions of contract* for an amount to be determined in accordance with these *conditions of contract*.

The offered total of the Prices is	**£133,745.99**

Signed on behalf of the *Contractor*

Name	[redacted]
Position	Commercial Director
Signature	[redacted]
Date	13.11.23

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

Signed on behalf of the *Client*

Name	[redacted]
Position	Project Executive
Signature	[redacted]
Date	15/11/2023

Price List

Entries in the first four columns in this Price List are made either by the *Client* or the tenderer.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tenderer enters the amount in the Price column only; the Unit, Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for the item of work which is the rate for the work multiplied by the quantity completed, the tenderer enters the rate which is then multiplied by the expected quantity to produce the Price, which is also entered.

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	RATE	PRICE
	Collar straps				
1	Carry out a detailed survey and measurement of the existing collar strap arrangement and condition at all 48 non-tidal locks on river Thames (45 sites). including provision of site specific RAMS for *Client* review	No	48		[redacted]
2	Production of collar strap condition assessment report and detailed drawings of each collar strap arrangement at each lock (in AutoCAD and pdf. format) for addition to existing Health and Safety Files owned by the *Client*	No	48		[redacted]
~~3~~	Manufacture, labelling, provision of suitable protection, production of a schedule, and transportation to storage location of collar strap sets for each lock. Consisting of 48 head lock collar straps (1 for each lock) and 48 tail lock collar straps (1 for each lock). Plus 2 additional lock collar straps for Abingdon Lock assuming survey confirms all 4 collar straps differ.	No	98		[redacted]
4	Production of an Operational and Maintenance manual providing information about each collar strap at each lock	No	1		[redacted]
5	Sunbury Hydraulic Lock: Prioritisation of survey with additional requirements for design, fabrication and installation of collar strap to the right head gate to replace existing, including provision of documents in accordance with CDM 2015 and the SHEW Code of Practice for the installation	Sum			[redacted]
	Anchor blocks-Winch points				
~~6~~	~~Preliminaries and supervision including provision of welfare facilities for all sites~~	~~Sum~~			
~~7~~	~~Preparation of a detailed one Construction Phase Plan (CPP) to~~	~~Sum~~			

	cover all works in accordance with the SHEW Code of Practice and any other information critical to be produced and accepted by the *Client* before commencement on of construction, including a Site Waste Management Plan and maintenance and adherence to the Environmental Action Plan (EAP).				
8	Preparation of site specific CDM documents as required by the SHEW COP including RAMS, Traffic Management Plans, Hazard Maps	No	14	-	
9	All licenses, permits and approvals necessary to provide the Works (*Contractor* to detail)	Sum			
10	Detailed design as necessary to provide the Works detailed in the Scope	Sum		-	
11	Surveys and testing, including SI and GPR survey and assessment of ground conditions of areas of intrusive works at all sites	no	14	-	
12	Precondition photographic surveys of working areas at all sites	No	14		
13	All surplus wastes generated by the works to be disposed of off site in accordance with the current Waste Management Regulations.	Sum	-	-	
14	Provision of 'as built' drawings and information (including on materials used and maintenance) to the Principal Designer for addition to existing Health and Safety Files held by the Client	Sum	-	-	
15	Completion of relevant forms to provide cost and carbon information to the Environment Agency. Completion of the Environment Agency's Carbon Optimisation Report to inform the design stage, and Final Carbon Report for the 'as built' project to be provided within a month of construction completion.	Sum	-	-	
16	Fabrication of winch points for load test category 30kN	No	20	-	
17	Fabrication of winch points for load test category 45kN	No	20	-	
18	Fabrication of winch points for load test category 56kN	No	6	-	
19	Cleeve Lock Installation of anchor blocks and winch points, including housing chambers	No	1	-	
20	Marlow Lock Installation of anchor blocks and winch points, including housing chambers. Including removal of existing bollardsx2 and paving repair at head gate end	No	4	-	
21	Boulters Lock Installation of anchor blocks and winch points, including housing chambers	No	4		
22	Romney Lock Installation of anchor blocks and winch points, including housing	No	2		

	~~chambers~~				
~~23~~	~~Bell Weir Lock~~ ~~Installation of anchor blocks and winch points, including housing chambers~~	~~No~~	~~3~~	-	
~~24~~	~~Sunbury Old Lock~~ ~~Installation of anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~		
~~25~~	~~Buscot Lock~~ ~~Installation of anchor blocks and winch points, including housing chambers~~	~~No~~	~~2~~		
~~26~~	~~Teddington Skiff Lock~~ ~~Installation of anchor blocks and winch points, including housing chambers~~	~~no~~	~~2~~	-	
~~27~~	~~Abingdon Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~1~~		
~~28~~	~~Cleeve Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~		
~~29~~	~~Mapledurham Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~	-	
~~30~~	~~Caversham Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~		
~~31~~	~~Sonning Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~		
~~32~~	~~Hurley Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~	-	
~~33~~	~~Arrange and provide tests and certification of pull weights of all installed winch points~~	~~No~~	~~46~~		
~~34~~	~~Provision of concrete cube tests data at 7 and 28 days for new winch point anchoring blocks.~~	~~No~~	~~46~~		
~~35~~	~~Whitchurch Lock~~ ~~Replacement of existing anchor blocks and winch points, including housing chambers~~	~~No~~	~~4~~		
	Pagabo Management Fee (2% of Contract Price)	Sum	1		[redacted]

The total of the Prices **£133,745.99**

The method and rules used to compile the Price List are

Civil Engineering Standard Method of Measurement 4th edition (CESMM4)

Scope

The Scope should be a complete and precise statement of the *Client's* requirements. If it is incomplete or imprecise there is a risk that the *Contractor* will interpret it differently from the *Client's* intention.

Information provided by the *Contractor* should be listed in the Scope only if the *Client* is satisfied that it is required, is part of a complete statement of the *Client's* requirements and is consistent with the other parts of the Scope.

1 Description of the *works*

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

Project summary

Collar straps are a critical part of Thames Navigation lock gate operation, wrapping around the lock gate heel post to connect the gate with the anchor block. They are subject to repeated operational loads, and this recurring load may subject the strap to fatigue.

~~**Winch points** are a vital part of the overall lock infrastructure and are required for holding back a lock gate vertical while work is undertaken to either the anchor plate and/or collar strap. They are required to cope with pulling force relating to the gate to be held.~~

The sites and work required

Collar Straps

The Survey

The *Contractor* shall carry out a detailed survey of the collar strap arrangement at all 48 non-tidal locks on river Thames (45 sites). The *Contractor* should ensure that the survey information gained is sufficient to enable the manufacture of collar straps for each lock. The survey should include strap location (in chamber or lock side) all dimensions (collar strap and associated fixings), photographs, notes on the condition and positioning / arrangement of the anchor plates, bolts, wedges, pins, and the collar straps themselves.

Any openings within the collar strap should be detailed (i.e., pin, wedges. bolts holes, slots, etc.) and an assessment of the steel grade be made. A fatigue assessment regards longevity of the steel and forces applied, including the impact of the openings detailed, should be provided. This should be based on the fitted/installed scenario and apply to the existing collar straps and those when newly fitted.

Corroded fixing elements of existing collar straps should be highlighted to the *Client* with recommendations. Any severe corrosion should be notified to the *Client* with immediate effect. The survey should include forecasts on remaining lifespan of all collar straps.

The *Contractor* shall check whether both the left and right bank arrangements (tail and head) are identical. Should this not be the case, additional survey information should be included regarding the different strap arrangements.

The survey information gained should be provided in a form that would enable a third party to manufacture additional replacement collar straps and associated equipment in the future i.e., fabrication drawings (AutoCAD and pdf files) and specification. These should, where possible, allow full manufacture offsite, including any openings, e.g. wedge holes, to minimise future onsite works.

Prior to fabrication, the drawings informed by the survey will be reviewed by the *Client* at local and national level. 15 days should be set in the programme to allow this review. Fabrication will only take place after acceptance by the *Client.*

Fabrication and storage

The *Contractor* shall fabricate two collar straps and associated fixings for each lock based on the findings of the survey: one for the head lock gates and one for the tail gates at each lock. If the left and right bank collar straps are not identical at any lock this should be notified to the *Client* as per the survey Scope. Need for additional straps with fixings will be instructed as a Compensation Event.
For each collar strap, a set of wedges / pins (depending on the fixing arrangement) and bolts is also to be provided. The collar strap and fixings should be an identical replica to the existing. The steel grade of the collar straps should be to a standard to provide a design life of 15 years. The fabricated parts should be provided in a form to minimize need for onsite works, e.g. wedge holes. The *Contractor* should inform the *Client* where this is not advisable.

Each collar strap with its associated accessory set should be clearly labelled indicating the lock name, head or tail location, and left or right bank (when viewed looking downstream), should the dimensions of the left and right bank collar straps differ. The date of fabrication and the steel grade used should also be clearly labelled.
The collar strap set should be suitably protected to prevent damage or degradation over the design life of the gate and the set stored in a suitable manner (details of storage to be provided to the *Client* for approval) and should also be marked, clearly showing the lock and location of the set.
Once secured as a set, the collar straps sets should be carefully transported to their designated storage facility:

- All strap sets from locks located between and including St Johns Lock to Sonning Lock are to be stored at the Environment Agency's Osney Depot.
- All strap sets from locks located between and including Shiplake lock to Teddington lock are to be stored at the Environment Agency's Sunbury yard.

A schedule detailing all the collar strap sets is to be provided to the *Client* including the detailed storage location i.e., within the allocated depot once agreed with the *Client*.

Sunbury Hydraulic Lock

The *Contractor* shall design, fabricate and install one collar strap to replace the existing on the right head gate at Sunbury Hydraulic Lock.
Assumption should be the right head gate differs from requirements for the left head gate. All requirements and constraints relating to the other collar straps still apply:

- The design should encompass all necessary fixings and arrangement to enable suitable operation of the lock. Any aspects of the collar strap arrangement not replaced should have their condition recorded as per the survey requirements.
- A spare collar strap set is to be fabricated transported for storage.
- Details to be included in the O&M manual.

The *Contractor* is to prioritise the survey, design, fabrication and installation at this lock. The survey is also to include assessment of anchor plate housing.

The *Client* may instruct the *Contractor* to replace other straps at sites following the survey and report of condition and the remaining life expected. Any replacements will not affect the requirements for the number of spares to be stored, so require an additional strap to be fabricated.
This will be treated as a Compensation Event.

Operational and Maintenance (O&M) Manual

An O&M manual clearly describing the method of removal and refitting of each type of collar strap is to be provided, with drawings, parts lists and material specifications. The strap group type (e.g., strap and wedges or bolted sleeves) for each lock is to be clearly identified within the document. The manual should also detail general maintenance recommendations (e.g.,

greasing and adjusting shims etc.) and any future essential maintenance checks. Any health and safety risks associated with the operation or maintenance of a particular strap type or lock location should also be highlighted.

~~Anchor blocks-Winch Points~~

~~The *Contractor* shall design and build 22 new steel winch points and kentledge anchor blocks, including construction of chambers with removable covers in which each winch point will be housed (**for Boulters and Bell Weir Locks, this will be the delivery of design options, GI surveys and GI survey reports only**). These are to be fitted at 8 locks on the Thames where there is no existing winch point or anchor block. The locations and details are:~~

- ~~**Cleeve Lock – Right Bank Head gate only (Bankside is based on looking downstream)**~~
  ~~This has two sets of steel gates (head and tail). One winch point for the head gate on the right bank is missing on site. One new winch point is to be designed and installed by the *Contractor* to withstand a load test of 30kN.~~

- ~~**Marlow Lock – All 4 gates**~~
  ~~This has two sets of steel gates (head and tail). The upstream (head) gate has two bollards (one on the right hand side of the existing bank and one on the left hand side of the existing bank) which have been used as a winch points. The tail gate does not have any winch points. Bollards for head gate did not pass the load test with 30kN load value. The *Contractor* shall remove both existing bollards. The existing paving is to be repaired in places where existing bollards are removed. Paving is to match the existing. Four new winch points I.e., one on each side of the head and tail gates are to be designed and installed by the *Contractor* to withstand a load test of 45kN.~~

- ~~**Boulters Lock – All 4 gates**~~
  ~~This has two sets of timber gates (head and tail). No winch points are present on site. A design appraisal and optioneering with recommendations for all four new winch points is to be designed and installed completed by the *Contractor*. Two for the downstream gate (one on the right and one on the left hand sides), and two for the tail gate (one on the right and one on the left hand sides). The new winch points should withstand a load test of 56kN.~~

- ~~**Romney Lock – Both head gates**~~
  ~~This has two sets of steel gates (head and tail). Only two winch points for the tail gate (one on the right bank and one on the left bank) are present on site. Two new winch points either side of the head gates are to be designed and installed by the *Contractor* to withstand a load test of 56kN.~~

- ~~**Bell Weir Lock – Both head gates and Left Bank tail gate**~~
  ~~This has two sets of steel gates (head and tail). There are two missing winch points for the head gate (one on the right bank and one on the left bank) and one missing winch point for tail gate on the left bank. A design appraisal and optioneering with recommendations for three new winch points is to be completed designed and installed either side of the head gates by the *Contractor* to withstand a load test of 45kN.~~

- ~~**Sunbury Old Lock – All 4 gates**~~
  ~~This has two sets of timber gates (head and tail), operated manually. There are no winch points on site. Four new winch points i.e., one either side of the head and one either side for the tail gate should be designed and installed by the *Contractor* to withstand a load test of 45kN.~~

- ~~**Buscot Lock – Left Bank only – Head and Tail gates**~~
  ~~This has two sets of timber gates (head and tail). Only two anchor points on the right bank are present on the site (one for the head and one for the tail gates). Two new winch points on left bank – one for the head gate and one for the tail gate are to be designed and by the *Contractor* to withstand a load test of 30kN.~~

- **Teddington Skiff Lock – Both head and tail gates (n.b. only 2 gates at the site)**
  This is a small lock, one of three at Teddington (currently out of service). It only has two gates (one head, one tail). No winch points have been found on site. Two new winch points are to be designed and installed by the *Contractor* to withstand a load test of 30kN.

The *Contractor* shall design and build 24 new steel winch points and kentledge anchor blocks, including construction of chambers with removable covers in which each winch point will be housed (**for Mapledurham and Hurley Locks, this will be the delivery of design options, GI surveys and GI survey reports only**). These are to be fitted where existing winch points and kentledge anchor blocks are installed, but the existing anchor blocks are of insufficient size to cope with load test requirements at 7 locks on the Thames. The locations and details are:

- **Abingdon Lock – Right Bank Tail Gate only**
  One new winch point is to be designed and installed by the *Contractor* to withstand a load test of 45kN

- **Cleeve Lock – 3 gates: Left Bank Head and Both Tail Gates All 4 gates**
  Three Four new winch points I.e., one on each side of the head and tail gates are to be designed and installed either side of the head gates by the *Contractor* to withstand a load test of 30kN.

- **Whitchurch Lock – All 4 gates**
  Four new winch points I.e., one on each side of the head and tail gates are to be designed and installed by the *Contractor* to withstand a load test of 30kN.

- **Mapledurham Lock – All 4 gates**
  A design appraisal and optioneering with recommendations for four new winch points I.e., one on each side of the head and tail gates are to be designed and installed by the is to be completed by *Contractor* to withstand a load test of 45kN.

- **Caversham Lock – All 4 gates**
  Four new winch points I.e., one on each side of the head and tail gates are to be designed and installed by the *Contractor* to withstand a load test of 30kN.

- **Sonning Lock – All 4 gates**
  Four new winch points I.e., one on each side of the head and tail gates are to be designed and installed by the *Contractor* to withstand a load test of 30kN.

- **Hurley Lock – All 4 gates**
  A design appraisal and optioneering with recommendations for four new winch points I.e., one on each side of the head and tail gates are to be designed and installed is to be completed by the *Contractor* to withstand a load test of 45kN.

Summary
Total number of locks: 14 (Cleeve is on both lists)
Total number of winch points: 46
Number of winch points per load test category:

- 30KN: 20
- 45KN: 20
- 56KN: 6

Any additional points or sites added to this by the *Client* will be a Compensation Event.

Requirements specific for the anchor blocks for winch points are:

- The *Contractor* shall assess the sites and existing ground conditions, including undertaking GPR surveys, to inform design. Designs are to reference:
  - Suitability of ground conditions and solutions if unsuitable
  - Appropriate position of the winch point for operative requirements

- ~~The housing chamber dimensions are to avoid any rubbing on the housing, and the cover is to be secure and easily removable.~~

- ~~All materials and the winch point ring size are to be selected by the *Contractor* as appropriate to fulfil requirements.~~

- ~~Appropriate British Standards should be identified and used for all aspects of the works and materials used.~~

- ~~The *Contractor* shall provide concrete cube tests data at 7 and 28 days for winch point kentledge anchoring blocks.~~

- ~~Following installation, the *Contractor* shall carry out load tests to all new winch points by a MEICA approved supplier and provide assurance certificates in accordance with the load test values. The supplier responsible for the inspection is to be confirmed by the *Contractor*. Winch Points should have labels fitted in line with the *Client*'s LOLER register – the *Client* will provide this data upon contract award.~~

- ~~The *Contractor* shall design solutions for resurfacing the works areas in keeping with the existing surface. This is to provide a 10-year design life to cope with vehicular or pedestrian traffic as befits the lock, the location of the winch point, and traffic.~~

- ~~The *Contractor* shall inform the *Client,* with not less than 40 working days' notice, where and when lock closures and/or interruptions to navigation are required. The *Client* be responsible for arranging the required closures and public notifications.~~

- ~~The *Contractor* shall inform the *Client,* with not less than 70 working days' notice, where diversions or closures to public paths are required. The *Client* will be responsible for arranging the required closures or diversions. The *Contractor* will be responsible for closure and diversion signage as part of the site signage planning.~~

- ~~The *Contractor* shall inform the *Client,* with not less than 40 working days' notice, the method by which plant and equipment are to be transported to each site.~~

- ~~The *Contractor* shall inform the *Client,* with not less than 40 working days' notice of proposed compound arrangements at each site, if required. The *Client* will not be liable for any failure to secure access.~~

Contractor requirements relating to all relevant works are:

- The *Contractor* shall fulfil the Principal Contractor (PC) role and discharge the duties in accordance with the requirements of the:

  - The Construction (Design and Management) Regulations 2015 (CDM), with particular reference to regulations 12, 13, 14, 15 and part 4.

  And

  - The *Client*'s Safety Health and Wellbeing Code of Practice (SHEW COP). See Appendix 9

  Requirements are to include (and a not be restricted to):

  - Preparation of a detailed Construction Phase Plan (CPP) and any other critical information is to be produced and accepted by the *Client* before commencement. This should encompass each site/lock that will be worked on. Note: A suitably developed Construction Phase Plan must be issued

for approval not less than 10 days prior to planned mobilisation. Pre-construction Information (PCI) is provided by the *Client*.

- ~~The *Contractor* shall produce a Site Waste Management Plan (SWMP) to cover all sites. Re-use or recycling of materials should be carried out wherever possible. However, the *Contractor* is to allow for the cost associated with waste not suitable for reuse within the permanent works. This must be disposed of off site in accordance with the Site Waste Management Plan (SWMP) and the current Waste Management Regulations.~~
- Any waste generated on site should be disposed of off site in accordance with waste management regulations. Re-use or recycling of materials should be carried out wherever possible.
- Site specific Traffic Management Plans should consider any interruptions/diversions to public rights of way, and these should be avoided where possible. These should apply to transport by land and river where applicable.
- Site specific Hazard Maps are to be produced by the *Contractor* as per section 3.3.3 of the SHEW COP. These should be in a format that can be reused by the *Client*.
- Provision of appropriate welfare facilities where necessary.
- Updating and adherence to the Environmental Action Plan (EAP).

- There should be no trip hazards in the area of work following installation.

- The *Contractor* shall accept any risk surrounding likely damage caused by their method of working for the works.

- Existing overhead structures and cables which could be affected during the works should be protected (or stored, if not possible) by the *Contractor*.

- The *Contractor* shall carry out detailed design and submit design drawings, for all elements of the proposed works, to the *Client* for acceptance, allowing for amendments in line with the Scope, with at least 15 working days allowed in the programme for review. The *Contractor* is to provide detail on any assumptions made.

- The *Contractor* shall provide a Carbon Calculator and associated reports at ~~both~~ the design ~~and construction~~ stage~~s~~.

- The *Contractor* shall independently obtain and include all costs associated with any environmental permits, licences, consents, and approvals required to deliver the works.

- The *Contractor*, as Operator, will in accordance with clause Z2.2 be required to sign and pay for Flood Risk Activity Permits (FRAP) for any sites deemed necessary by the *Client*, who will undertake consultation prior to Contract Award. The *Contractor* will need to prepare and submit FRAP applications within a week of Contract Award to enable works to start on site in line with the timescales set out in this Contract.

- Access must be maintained at all times to the lock, lock house, other buildings, operational plant, telemetry equipment and areas on the lock/weir side not affected by the works.

- ~~Preparation of 'as built' drawings and~~ Provision of information to the Principal Designer to compile the Health and Safety File ~~(including information on materials used and maintenance)~~. These will be added to existing Health and Safety Files provided by the *Client*. This will be independent of the O&M manual to be provided with the Collar Straps deliverables.

Information Management Requirements

Document formats
All documents are to be delivered in Digital open-source format
The following are to be issued in templates specified and/or agreed to by the *Client*:

- Health and Safety file
- Operation and Maintenance file
- LOLER certification
- Contract communications

Document delivery process
Following contract award, the *Client* will provide an Information Delivery Plan (IDP) for naming of documents to be provided by the *Contractor* as per information and document requirements in the scope.
File naming will be according to BIM metadata standards as provided by the *Client*.
The *Client* will provide details on access to relevant *Client*-managed systems.

All project documents listed on the IDP should be provided by the *Contractor* to the *Client* as follows:

- Documents submitted for review to be issued by email attachment or direct to a *Client*-managed Sharepoint site. Which method will be confirmed by the *Client*.
- Final accepted versions are to be uploaded to Asite (the *Client*'s asset information management system). N.b. Asite upload will not apply to formal contract communication prior to completion.

2 Drawings

DRAWING NUMBER	REVISION	TITLE
1	0	Appendix 1 Supplementary Info – Figure 5 and Appendix 6 River Thames Collar Strap Inspection Report – Figure 2.1 (the same collar strap drawing in each document)
2	0	Appendix 5 Moseley Lock collar strap drawing
~~3~~	~~0~~	~~Appendix 10 Anchor Block Winch Point Technical Note (Figures 1, 2,3)~~
~~4~~	~~0~~	~~Appendix 11 Penton Hook Anchor Block-Winch Point Design (drawings also in Appendix 1 Supplementary Info (Figs 44-47)~~

3 Specifications

List the specifications which apply to the contract.

TITLE	DATE OR REVISION	TICK IF PUBLICLY AVAILABLE
~~The civil engineering works are to be constructed to the 'Civil Engineering Specification for the Water Industry, Seventh Edition', published by the Water Industry Research Ltd in 2011.~~	~~7th Edition~~	~~Yes~~

4 Constraints on how the Contractor Provides the Works

State any constraints on the sequence and timing of work and on the methods and conduct of work including the requirements for any work by the *Client*.

General Constraints

1. The *Contractor* shall not commence any work on the *site* until the *Client*, or their representative, has accepted the method statements and risk assessments related to this contract.
2. The *Contractor* is to prepare, for the *Client's* acceptance, the Construction Phase Plan (CPP) and updates to the Environmental Action Plan (EAP) prior to starting the *works*.
3. Any works requiring a lock closure are to start no earlier than 1st November 2023 and to be completed by 15th March 2024
4. Access to the Sites after the 31st March 2024 will be subject to *Client* agreement
5. The *Contractor* shall be permitted to work between 7.30am and 6.00pm on weekdays (Monday to Friday).

Scope

5 Requirements for the programme

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

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

The *Contractor* must submit a programme with the *Contractor's* Offer for acceptance.
Following contract award, a programme is to be submitted every month (in the form of a Gantt chart) for acceptance by the *Client*.
The *Contractor* must show on each programme submitted for acceptance the following:

a) Critical path
b) Period required for mobilisation/planning and post contract award
c) Contract *starting date*
d) Design activities
e) Each of the activities listed within the Price List/Scope
f) Anything required from the *Client*, including any periods for review/acceptance.
g) Any key third party interfaces: lead in periods for materials and sub-contractors; time required to obtain consents e.g. FRAP/waste permits.
~~h) Construction starting date~~
~~i) Construction finish date~~
~~j) Testing and certification of winch points~~
k) Planned completion date
l) Contract Completion Date
m) All time risk allowances

6 Services and other things provided by the *Client*

The *Client* shall not provide any services or "free issue" Plant and Materials and equipment.

Site Information

Give information about the *site* such as the ground conditions and any other information which is likely to affect the *Contractor's* work such as the position of adjacent structures.

Pre-Construction Information (PCI) documents and associated appendices will provide relevant information for each site and the specific area of work, including:

- That relating to areas within Environment Agency ownership that are excluded from *Contractor* access.
- Areas where the *Contractor* may be able to install a site compound and/or parking.
- Welfare facilities which may be available at each site.
- Service searches showing known utilities services at each site.
- Photographic records for each site.

All contents of the PCI are for guidance and are not to be interpreted as scope or instruction, nor should it be assumed *Client* facilities or land will be available for use.
Following Contract Award, direct contact details with lock teams will be provided to enable site works planning.

A number of lock sites do not have direct vehicular access with distances from parking up to 200m.
For pricing, assume 50% of sites fall into this category. This can be summarised as:

- 24 locks for the collar straps inspections.
- 7 locks for the winch points installations.

The *Client* will be responsible for issuing Lock closure notices and Harbour Master Notices and any other notifications and correspondence with river users and local residents. The *Contractor* should advise on need for lock closures and interruptions within the notice period stated in the scope.

The *Client* will be responsible for arranging path closures and diversions, including the Thames Path, with the relevant authority. The *Contractor* will be responsible for closure and diversion signage as part of the site signage planning. The *Contractor* should advise on need for path closures, diversions, lock closures and interruptions to navigation within the notice period stated in the scope.

Boulters Lock. This collar strap arrangement is different to the majority on the River Thames. Collar straps are located approximately 762mm down from the heel post. The anchor point is likely to be under an aluminium plate on the ground above which can be removed for inspection or repair. Access to measure the existing collar straps is required. *Contractor* is to agree date of survey with the *Client*.

There are variations between the lock sites for collar strap arrangements:

- Some have surface mounted anchor plates and some are trench mounted. A 50-50 split of surface and trench mounting should be assumed (24 locks in each category).
- Collar straps do not all follow a standard design (e.g. Sunbury Hydraulic Lock and Sunbury Old Lock differ). An assumption should be made that there are 3 categories of design with 16 locks in each.

River Level data
The *Contractor* is referred to the publicly available websites, which provides real time information relating to the flow and water levels at the sites referred to within this contract, together with longer term trends.
https://check-for-flooding.service.gov.uk/river-and-sea-levels?river-id=river-thames
or
www.gaugemap.co.uk

Appendix schedule

1. Supplementary information
2. EAP (Environmental Action Plan)
3. PCI (Pre-construction Information)
4. Site information
5. Moseley Lock collar strap drawing
6. River Thames Collar Strap Inspection Report
7. Historic site surveys
8. ~~Anchor Blocks Winch Points Site photos~~
9. SHEW COP
10. ~~Thames Locks Anchor Points Technical note~~
11. ~~Penton Hook Anchor block winch point design~~

Further site specific records are stored by the Client and available on request.