



<b>Framework:</b>	<b>Collaborative Delivery Framework</b>
<b>Supplier:</b>	<b>BAM Nuttall Ltd</b>
<b>Company Number:</b>	<b>00305189</b>
<b>Geographical Area:</b>	
<b>Project Name:</b>	<b>Lot 2 Fish Passage ESE and Investigation</b>
<b>Project Number:</b>	<b>ENV0003740C</b>
<b>Contract Type:</b>	<b>Engineering Construction Contract</b>
<b>Option:</b>	<b>Option C</b>
<b>Contract Number:</b>	<b>project_32913</b>

Revision	Status	Originator	Reviewer	Date
0.1	Superseded			13/04/2021
0.2	Superseded			20/04/2021
0.3	Superseded			
0.4	Superseded			26/04/2021
0.5	Superseded			29/04/2021
0.6	Superseded			07/05/2021
0.7	Superseded			19/05/2021
0.8	Superseded			23/06/2021
1.0	Final			28/06/2021



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

**Project Name** Lot 2 Fish Passage ESE and Investigation

**Project Number** ENV0003740C

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

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 10th 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  
Lot 2 Fish Passage ESE and Investigation v0.6

### 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

X7: Delay damages

X10: Information modelling

X11: Termination by the *Client*

X18 Limitation of Liability

X20: Key Performance Indicators

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

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

Z: *Additional conditions of contract*

The works are

Provide advice on buildability, construction phasing, temporary works, input into optioneering, produce high level cost estimates for 3 concept design options for each of the sites and investigative surveys of gauging weirs.

The *Client* is Environment Agency

Address for communications

Address for electronic communications

The *Project Manager* is

Address for communications

Address for electronic communications

The *Supervisor* is

TBC

Address for communications



Address for electronic communications

The Scope is in  
Lot 2 Fish Passage ESE and Investigation v0.6

The Site Information is in  
Lot 2 Fish Passage ESE and Investigation v0.6

The boundaries of the site are  
Lot 2 Fish Passage ESE and Investigation v0.6

The partner contract is  
Not Applicable

The language of the contract is English

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

The period for reply is 2 weeks

The following matters will be included in the Early Warning Register

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

## 2 The Contractor's main responsibilities

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

The Contractor prepares forecasts of the total Defined Cost for the whole of the works at intervals no longer than	4 weeks
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## 3 Time

The starting date is	23 August 2021
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The access dates are	
part of the Site	date
Rede Bridge	23 August 2021
Bedburn	23 August 2021

The Contractor submits revised programmes at intervals no longer than	4 weeks
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The Completion Date for the whole of the works is	26 November 2021
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The Client is not willing to take over the works before the Completion Date

The period after the Contract Date within which the Contractor is to submit a first programme for acceptance is	4 weeks
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## 4 Quality management

The period after the Contract Date within which the Contractor is to submit a quality plan is	4 weeks
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The period between Completion of the whole of the works and the defects date is	52 weeks
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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 £15,492.00

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

The Contractor's share percentages and the share ranges are

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

## 6 Compensation events

The place where weather is to be recorded is The Durham Met Office

The weather measurements to be recorded 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 The Durham Met Office  
 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 England guidance, as may vary from time to time, between 1st July 2021 and 31st August 2021
2. 'not used'
3. 'not used'
4. 'not used'
5. 'not used'

## 8 Liabilities and insurance

These are additional Client's liabilities

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

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

£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

'to be confirmed'

Address for communications

'to be confirmed'

Address for electronic communications

'to be confirmed'

The *Adjudicator nominating body* is

The Institution of Civil Engineers

## Z Clauses

### Z1 Correctness of Site Information and other documents

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

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

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

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

### Z3 Prevention: No change to prices

Delete first sentence of clause 62.2 and replace with:

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

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

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

### Z 4 The Schedule of Cost Components

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

### Z 6 Payment for Work Done to Date

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 and suppliers**

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) Act 1999**

The design consultant employed by the *Contractor* is required to fulfill 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 (Rights 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

## **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

## **222 Resolving Disputes**

Delete W2.1

## **223 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 X7: Delay damages****X7 only**

Delay damages for Completion of the whole of the *works* are £66.61 per day

**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

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

6 years

**OPTION X18: Limitation of liability**

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

£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

£5,000,000

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

£5,000,000.00

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

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

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

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

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

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

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

term beneficiary

Any None









## 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 BAM Nuttall Ltd

Address for communications



Address for electronic communications



The fee percentage is

Option C



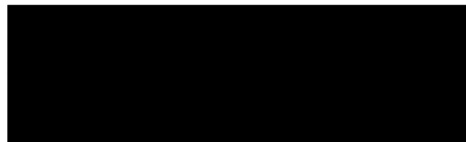
The working areas are

BAM Nuttall site offices and premises, and the residence of en-



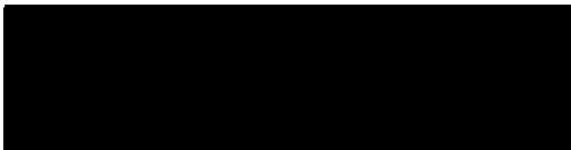
The key persons are

Name (1)  
Job  
Responsibilities  
Qualifications  
Experience



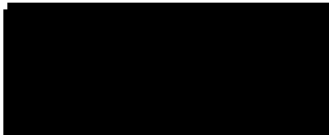
The key persons are

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

BAM Programme is dependent on Client & Design (by Others)  
Programme

### 2 The Contractor's main responsibilities



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

Not applicable

**3 Time**

The programme identified in the Contract Data is

**5 Payment**

The *activity schedule* is  
n/a

**Resolving and avoiding disputes**

The *Senior Representatives* of the *Contractor* are

Name (1) [REDACTED]

Address for communications

[REDACTED]

Address for electronic communications

[REDACTED]

Name (2) [REDACTED]

Address for communications

[REDACTED]

Address for electronic communications

[REDACTED]

**X10: Information Modelling**

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



Contract Execution

Client execution

Signed under hand by

for and on behalf of the Environment Agency

[Redacted Signature]

Signature

[Redacted Role]

Role

Contractor execution

Consultant execution

Signed under hand by

for and on behalf of

BAM Nuttall Ltd

[Redacted Signature]

Signature

[Redacted Role]

Role







# Environment Agency

## NEC4 engineering and construction contract (ECC)

### Works Information

#### Project / contract information

Project name	Lot 2 Fish Passage ESE and Investigation
Project 1B1S reference	ENV0003740C
Contract reference	project_32169
Date	28/06/2021
Version number	0.6
Author	Environment Agency

#### Revision history

Revision date	Summary of changes	Version number
16/03/2021	First Draft	0
13/04/2021	Second Draft	0.1
15/04/2021	OAPM Review	0.2
20/04/2021	DgC Review of v0.2	0.3
27/04/2021	Description of work updated	0.4
16/06/2021	Amended to use the LIT 13267 template - Early Supplier Engagement.	0.5
28/06/2021	Amended following CSM review	0.6

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* is to be compliant with the following version of the Minimum Technical Requirements:

Document	Document Title	Version No	Issue date
LIT13528	Minimum Technical Requirements	02	18/03/2020

customer service line  
03708 506 506

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

incident hotline  
0800 80 70 60

floodline  
0845 988 1188

The Environment Agency (EA) will act as the *Client* and the Engineering and Construction Contract Project Manager (ECC PM) in this Scope and manage the contract through their project management team. The *Contractor* is BAM Nuttall Ltd (BAM) and the Consultant is APEM for the purpose of this Scope and the applicable NEC4 ECC Option C contract.

Name	CDM Role	NEC4 contract role
Environment Agency	Client	<i>Client</i>
APEM	Designer	Consultant
BAM Nuttall Ltd	Principal Contractor	<i>Contractor</i>
Sub-contractor(s)	Contractor	Sub-contractor

**For the avoidance of any doubt, in this document the Environment Agency is referred to as *Client*, APEM as *Consultant*, BAM Nuttall Ltd as *Contractor* and the Sub-contractor(s) as sub-contractor.**

## Contents List

<b>WI 100</b>	<b>Description of the <i>works</i></b>
<b>WI 200</b>	<b>General constraints on how the <i>Contractor</i> provides the <i>works</i></b>
<b>WI 300</b>	<b><i>Contractor's</i> design</b>
<b>WI 400</b>	<b>Completion</b>
<b>WI 500</b>	<b>Programme</b>
<b>WI 600</b>	<b>Quality management</b>
<b>WI 700</b>	<b>Tests and inspections</b>
<b>WI 800</b>	<b>Management of the <i>works</i></b>
<b>WI 900</b>	<b>Working with the <i>Client</i> and Others</b>
<b>WI 1000</b>	<b>Services and other things to be provided</b>
<b>WI 1100</b>	<b>Health and safety</b>
<b>WI 1200</b>	<b>Subcontracting</b>
<b>WI 1300</b>	<b>Title</b>
<b>WI 1400</b>	<b>Acceptance or procurement procedure (Options C and E)</b>
<b>WI 1500</b>	<b>Accounts and records (Options C and E)</b>
<b>WI 1600</b>	<b>Not used</b>
<b>WI 1700</b>	<b><i>Client's</i> work specifications and drawings</b>

### **Appendix A - BIM Protocol**

### **Appendix B – Provisional site boundary**

- Rede Bridge gauging weir
- Bedburn gauging weir

### **Appendix C – Potential survey requirements**

- Rede Bridge gauging weir
- Bedburn gauging weir

## 1. Description of the works

### WI 101 Description of the works

The Environment Agency (EA) are undertaking a programme of fish passage projects within North East England. The existing gauging weirs used to inform flood forecasting are a physical barrier within the watercourse and impede fish passage upstream. This contract for Early Supplier Engagement (ESE) is for two sites:

- Rede Bridge gauging weir, national grid reference: NY 86835 83225
- Bedburn gauging weir, national grid reference: NZ 11799 32189

The Consultant (APEM) have been commissioned to identify the options for improving fish passage, the preferred option and to produce the Outline Business Case (OBC).

The *Contractor* (BAM) shall provide advice on buildability, construction phasing/durations, temporary works, input into the optioneering, identify 3<sup>rd</sup> party considerations, and produce high level cost estimates for 3 options for each of the sites.

The investigative survey work will be instructed to the *Contractor* as scope change by means of a Compensation Event.

The Consultant will scope any necessary investigative works, such as Topographical (Topo) Survey, Ground Investigations (GI) and Structural Surveys (SS). Appendix C lists the potential survey requirements.

### WI 102 Purpose of the Works

The purpose of the work is to assist in the development of the OBC for the two fish pass projects at Rede Bridge gauging weir and Bedburn gauging weir.

The *Contractor's* deliverables for progressing the Strategic Outline Case (SOC) to OBC are summarised in Table 1, in the SOC-OBC column. The deliverables in the OBC-FBC (Full Business Case) column have been provided for information only and are not part of this contract.

**Table 1: CDF ESE Summary of Contractor Deliverables**

No.	Deliverables	SOC - OBC	OBC - FBC
1	Basic Staffing Schedule for ESE & Construction Phase	X	
2	Detailed Staffing Schedule for ESE & Construction Phase		X
3	Production of High-Level construction programme. Details to include: <ul style="list-style-type: none"><li>• High Level construction durations</li><li>• Identification of long lead items</li><li>• Ecological Constraints, such as periods in the year we may not be to work</li><li>• Permitting durations / requirements</li></ul>	X	
4	Production of Detailed construction programme		X
5	Project specific Noise & Vibration requirements	X	X
6	Identification of 3rd Party considerations. Such as: <ul style="list-style-type: none"><li>• Landowners</li><li>• Notice of Entry</li><li>• Any Permitting required</li><li>• Planning Consents Required</li></ul>	X	X

No.	Deliverables	SOC - OBC	OBC - FBC
	<ul style="list-style-type: none"> <li>• Highway Consents</li> <li>• Interface with Utilities</li> <li>• Structural Surveys</li> <li>• Ecological Surveys</li> </ul>		
7	Draft Temporary Works Schedule	X	
8	Production of Temporary Works Schedule		X
9	Input into optioneering	X	X
10	Production of Buildability Report		X
11	Production of Methodology Report		X
12	Production of a High Level Methodology & Buildability Report for each of the 3 options	X	
13	High Level Cost Estimates based on 3 options (for each site)	X	
14	Cost Estimate for a single solution based on the detailed design (for each site)		X
15	Review Scope for OBC to FBC	X	
16	Review ECC Scope		X
17	Review Draft Site Information	X	X
18	Input into Project Carbon Tool	X	X
19	Attendance of Risk Workshops	X	X
20	Attendance of Monthly Meetings	X	X
21	Attendance of site visits	X	X
22	Production of monthly project updates	X	X

## 2. General constraints on how the *Contractor* provides the works

### WI 201      General constraints

Both sites are National River Flow Archive (NRFA) daily and peak flows sites and feed into flood forecasting system. The gauging stations are also used in the Catchment Abstraction Management Strategy (CAMS) and Water Resource (WR) management. The gauging station functionality must be maintained at all time.

Both sites have remote rural locations.

- Rede Bridge gauging weir is accessible using a 4x4 vehicle or by foot.
- Bedburn Beck is currently only accessible by foot.

Potential access constraints/restrictions to be managed by liaison/consultation with any necessary landowners and adjacent land users in cooperation with the *Client*.

The terrain adjacent to the gauging weirs are steep and heavily wooded.

Environment Agency permits may be required for certain site investigation activities, particularly where in channel works are specified. Close liaison with the *Client's* Area Partnership and Strategic Overview (P&SO) and Fisheries, Biodiversity and Geomorphology (FBG) Teams required.

Potential buried services in the location of intrusive ground investigation. Services plans will be supplied to assist in the planning of these works, but the *Contractor* must satisfy themselves as to their validity.

Potential heritage or archaeological constraints. To be managed via liaison between *Contractor*, Consultant and *Client* as required.

Potential constraints to working times may exist for certain site locations. To be managed by liaison/consultation with any necessary landowners and adjacent land users in co-operation with the *Client*.

Flood events which occur during or in advance of inspections may temporarily prevent access. Appropriate flood warning systems to be utilised where possible. To be managed by liaison between Consultant, *Contractor* and *Client* as required.

Any access constraints posed by intrusive vegetation. To be managed via liaison between Consultant, *Contractor* and *Client* as required.

### WI 202      Confidentiality

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

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

All data supplied to the Consultant and *Contractor* as part of this study remains the Intellectual Property (IP) of the *Client*.

### WI 203      Security and protection on the site

Remote rural location. Existing fencing to be maintained.

#### **WI 204      Security and identification of people**

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

#### **WI 205      Protection of existing structures and services**

The *Client* will carry out service searches for services and provide the Consultant and *Contractor* with the information.

The *Contractor* must review the service plans and based on the level of risk, carry out any additional checks prior to commencement of any intrusive works.

If buried services are known or suspected to be in the vicinity of the intrusive works, these must be physically exposed to identify their location using safe methods. These works must be managed by the *Contractor* safely and effectively.

Where deemed necessary the *Contractor* shall liaise with relevant utility companies to identify the location of their services, in this instance this may also include the *Client* due to the instrumentation needed on the structures being assessed.

The *Contractor* must share all service information with their sub-contractor.

#### **WI 206      Protection of the works**

The *Client* will provide the Consultant and *Contractor* with information relating to invasive and protected species that have been recorded historically at each site. The Consultant and *Contractor* must refer to this information and act accordingly. 'Check – Clean – Dry' bio-security measures must be implemented and adhered to prevent the spread of invasive species. If in doubt the Consultant and/or *Contractor* must ask the *Client* for further information.

Prior to carrying out any intrusive works, the *Client* will consult their Fisheries, Biodiversity and Geomorphology (FBG) team and identify any environmental concerns at the site. The *Client* will communicate any concerns, constraints and necessary actions to the Consultant and *Contractor* prior to any intrusive investigation work being carried out.

The *Contractor* protects the works, Material, Plant & Equipment liable to theft or damage by vandalism, the weather, flood or by the method used for carrying out the works.

### **3. *Contractor's* design**

The *Contractor* shall provide advice on buildability, construction phasing/durations, temporary works, input into the optioneering, identify 3<sup>rd</sup> party considerations, and produce high level cost estimates for 3 options for each of the sites.

The deliverables are summarised in Table 1 (WI 102).

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## 4. Completion

### WI 401 Completion definition

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

- High level construction programme for each site
- Draft temporary works scheme for each site
- High level methodology and buildability report for each site
- High level cost estimates for 3 options for each site
- Input into the carbon modelling tool for 3 options for each site
- Attendance at site visit(s).

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

### WI 402 Correcting Defects

N/A

### WI 403 Pre-Completion arrangements

N/A

### WI 404 Take over

N/A

## 5. Programme

### WI 501 Programme requirements

The *Contractor's* programme must comply with the NEC4 ECC Option C contract and its clause 31 and shall include descriptions of any specific requirements such as but not limited to:

- Start date
- Key dates: key dates to be agreed at start up meeting
- Completion date
- Order and timing of the work

### WI 502 Programme arrangement

The *Contractor* shall submit the first programme within two weeks of the contract start date.

As required by Clause 31 the programme shall be submitted in the form of a Resource Analysed Critical Path Network linked bar chart showing start and finish dates for each activity. It shall clearly identify those activities forming the critical path. The programme is to be produced in an electronic format in Microsoft Project 2007 (\*.mpp) and \*.pdf formats.

The programme shall be updated monthly with actual and forecast progress against the baseline in line with requirements of Clause 32.

### WI 503 Methodology statement

Occupational health, safety and welfare are of paramount importance to the *Client*. The *Contractor* must view health, safety and welfare as an integral part of carrying out the works and not as stand-alone considerations. The works shall be undertaken in a manner that achieves high standards of health, safety and welfare.

### WI 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.

### WI 505 Information required

Scope change for investigative survey work will require the *Contractor* to provide a fee proposal and programme for acceptance by the *Client*.

### WI 506 Revised programme

Any specific requirements for the submission of revised programmes, shall include an explanation of changes.

## **6. Quality management**

### **WI 601     Samples**

N/A.

### **WI 602     Quality Statement**

As detailed in the CDF framework agreement, contract data and the Environments Agency's Minimum Technical Requirements.

### **WI 603     Quality management system**

The *Contractor* shall operate a Quality Management System complying with BS EN ISO 9002.

### **WI 604     BIM requirements**

The BIM Information Manager is the *Client* Project Manager. The *Contractor* shall comply with the *Client's* BIM requirements (Appendix A).

## 7. Tests and inspections

Refer to the Environment Agency's Minimum Technical Requirements (MTR) documents.

The investigative survey work will be instructed to the *Contractor* as scope change.

The Consultant will scope any necessary investigative works, such as Topographical (Topo) Survey, Ground Investigations (GI) and Structural Surveys (SS), to allow for budget quotations and programming.

The *Contractor* will ensure the reinstatement work is carried out to a high standard which is equal to or better than that prior to the works being carried out. Following completion of works the *Client* will carry out a quality check and approve and sign off the work.

For intrusive surveys the *Contractor* shall gather photographic evidence of the survey site before works commences and on completion of the reinstatement.

Structures with a finish other than plain concrete or vegetation, e.g. brick or stone walls, must be assessed on a case by case basis and a method of intrusive work and subsequent reinstatement work must be agreed with the *Client* prior to carrying out the work. On completion of the reinstatement, if any defects are noted they must be rectified within 2 weeks of notification.

## 8. Management of the works

WI 801      Project team – Others

Name	CDM Role	NEC4 contract role
Environment Agency	Client	<i>Client</i>
APEM	Designer	Consultant
BAM Nuttall Ltd	Principal Contractor	<i>Contractor</i>
Sub-contractor(s)	Contractor	Sub-contractor

In managing the works the *Contractor* shall:

- Identify project efficiencies and provide information and evidence for efficiency briefing notes.
- Attend monthly progress meetings arranged by the *Client* via video call. *Client* to record and issue minutes.
- Produce monthly financial updates giving forecast and actual expenditure.
- Ensure all expenditure is allocated to specific site assessments and itemised so on the monthly application for payment. Deliver weekly informal programme updates as required (via email/telephone).
- Co-operate with the *Client* in the role of the BIM Information Manager.
- Provide technical support to the *Client* in its public relations and liaisons with landowners, landowners' agents, parish councils, local authorities, members of parliament and stakeholders identified during the contract period.
- The *Contractor* and Consultant are to make full use of the *Client's* web-based project collaboration tool (Asite). Whenever practical project and contract communications and records are to be distributed and stored using this project collaboration tool.

## **WI 802      Communications**

The *Contractor* is to notify the ECC PM at least 7 days before conducting any site visit, to allow time to facilitate/arrange access.

The *Contractor* is to notify the ECC PM at least 14 days before conducting any survey work on site, to allow the *Client* time to serve Notice of Entry to the landowner/tenant.

The *Contractor* is to notify the ECC PM at the earliest opportunity if any vegetation or structures are obstructing the view of the asset so measures can be taken to rectify this.

The *Client* has a number of advisory departments that include but are not limited to Area Flood and Coastal Risk Management (FCRM) Teams, Fisheries Biodiversity and Geomorphology (FBG), Hydrometry and Telemetry. Instructions will only be deemed enacted from them when they are confirmed by an instruction from the *Client*.

Meetings shall be undertaken using Microsoft Teams.

## **9. Working with the *Client* and Others**

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

N/A.

**WI 902      Co-operation**

N/A

**WI 903      Co-ordination**

N/A.

**WI 904      Authorities and utilities providers**

There are no works to be carried out by the authorities and utilities providers.

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

N/A.

## 10. Services and other things to be provided

The *Contractor* shall provide advice on buildability, construction phasing/durations, temporary works, input into the optioneering, identify 3<sup>rd</sup> party considerations, and produce high level cost estimates for 3 options for each of the sites.

The deliverables are summarised in Table 1 (WI 102).

## 11. Health and safety

Health and safety are the number one priority of the *Client*. The Consultant and *Contractor* will promote and adopt safe working methods and shall strive to deliver solutions that provide optimum safety to all. CDM Regulations (2015) will be adhered to at all times.

It is anticipated that the works on site will not be subject to formal notification to the HSE, however, work carried out will be treated as if it was notifiable.

The Consultant shall undertake the role of Designer and Principal Designer under the Construction Design and Management Regulations (2015) and will adhere to the Environment Agency SHEW code of practise.

The *Contractor* and Principal Designer will engage on all matters of Health and Safety and ensure all the necessary health and safety documentation is produced.

The Consultant and *Contractor* shall contribute to the satisfactory completion of the Principal Designer's Safety, Health and Environmental (SHE) Stop Go Checklist.

The *Client* will provide the *Contractor* with Pre Construction Information (PCI) where intrusive investigation works are required. The PCI will be approved by the Principal Designer.

The *Contractor* will produce a Project Execution Plan (PEP) for all intrusive works. The PEP will be approved by the Principal Designer.

## 12. Subcontracting

If the *Contractor* subcontracts work, it is responsible for providing the works as if it had not been subcontracted. The contract applies as if a Subcontractor's employees and equipment were the *Contractor's*.

## 13. Title

N/A

## 14. Accounts and records (Options C and E)

### WI 1501 Additional Records

Clause 52.2 (Options C) List the additional records to be kept by the *Contractor*. This includes but is not limited to the following:

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

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

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

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

The 3 options to be appraised shall be provided by the Consultant after the investigative survey work has been completed.

### **WI 1702 Drawings**

Existing gauging weir construction drawings:

- Drawing: River Rede – Rede Bridge Gauging Station, WR/210/23/1/6/2, dated:19 January 1971
- Drawing: River Rede – Rede Bridge Gauging Station, Detail of Weir, 210/23/1/6/6C, dated: March 1967
- Drawing: River Rede – Rede Bridge Gauging Station, Detail of Weir, WR/210/23/1/6/3, dated: 20 January 1971
- Drawing: River Rede – Rede Bridge Gauging Station, Location Plan, Longitudinal Section, WR/210/23/1/6/5, dated: 5 February 1971
- Drawing: River Rede – Rede Bridge Gauging Station, Layout of Record House and Cableway, 210/23/1/6/5, dated: 13 March 1967
- Drawing: Drawing: Wear and Tees River Board, Bedburn Beck, Proposed Gauging Station, Survey Taken April 1959, 1427/CW/22y/3, dated: 13 April 1959
- Drawing: Wear and Tees River Board, Sections on Bedburn Beck, Proposed Gauging Station, 1455/CW/22y/9, dated 27 May (no year)
- Drawing: Wear and Tees River Board, Proposed Gauging Station on Bedburn Beck, General Arrangement, 1456/CW/22y/10, dated: 01 June 1959
- Drawing: Wear and Tees River Board, Bedburn Beck Gauging Station, Details After Completion, 1580/CW/22y/12, dated: 13 October 1959

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

The Contractor should carry out their work using the following guidance.

Report Name
Project Cost Tool
Carbon Planning Tool.
300_10_SD27 SHE Code of Practice
Environment Agency's Minimum Technical Requirements – Operational instruction LIT 13528



## **Appendix A – BIM Protocol**

The Common Data Environment (CDE) on Asite is currently in development.

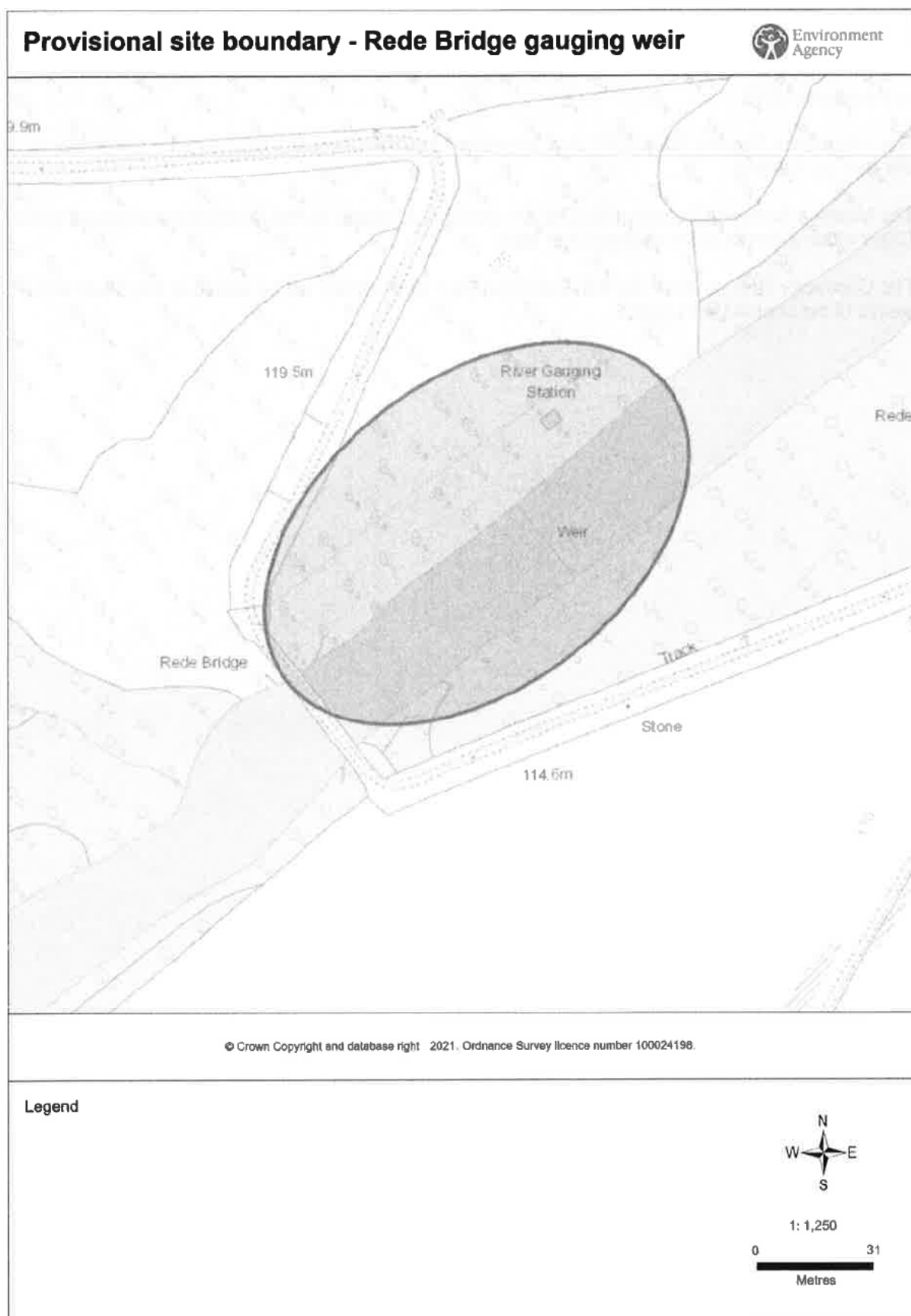
The Consultant and *Contractor* will need to register for an Asite account before being granted access to the project CDE.

The Information Delivery Plan (IDP) shall be prepared by the *Client* and issued to the *Contractor* at the start up meeting.

The Master Information Delivery Plan (MIDP) shall be developed by the *Contractor* and issued to the *Client* within 2 weeks of the contract start date.

The *Contractor* shall produce the BIM Execution Plan (BEP) which will be issued to the *Client* within 2 weeks of the contract start date.

## Appendix B – Provision site boundary

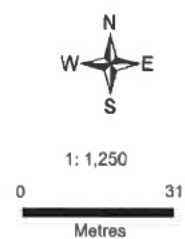


## Provisional site boundary: Bedburn Beck gauging weir



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### Legend



## Appendix C – Potential survey requirements

### Rede Bridge gauging weir

Potential survey requirements for Rede Bridge gauging weir						
Short List Option	Topo	D/S level gauge (*1)	Eco Surveys	Dive survey (*2)	Intrusive structural investigations	Ground investigation
Low Cost Baffles	Yes	Yes (x2?)	Yes - see ecology survey table	No	No	No
Pre-barrages	Yes	Yes (x2?)	Yes - see ecology survey table	Likely	Potentially beneficial	Potentially beneficial
Pumped eel pass	Yes	Yes (x2?)	Yes - see ecology survey table	No	No	No
Weir face eel tiles	Yes	Yes (x2?)	Yes - see ecology survey table	No	No	No

(\*1) EA hydrometry feedback required on whether the submerged anti-scour lip at the downstream end of the concrete stilling basin is ever exposed in very low flows and whether there is any head loss across this lip. If so, two downstream loggers may be required (one upstream and one downstream of the lip).

(\*2) Dive survey not specifically required for many fish pass options but would give the EA an improved understanding of the structure's overall condition and whether any interventions or repairs are required.

Ecology surveys for Rede Bridge gauging weir			
Species/ Habitat	Survey	Timing	Type
Invasive plant species	INNS survey	May-August	Design & consent
Otter	Presence/ absence survey	All year	Design & consent
Badger	Presence/ absence survey	All year	Design & consent
Bats	Ground level Tree Assessment and Preliminary Roost Assessment	All year (but preferably January – May)	Design & consent
White-clawed crayfish	Presence/ absence survey	July-October	Design & consent
Freshwater Pearl Mussel	Presence/ absence survey	All year, but preferably in the warmer months when water levels are low	Design & consent
Birds	Nesting bird check/ Ecological Clerk of Works	March – August	Construction phase inspection
Reptiles	Ecological Clerk of Works	All year	Construction phase inspection

Ecology surveys for Rede Bridge gauging weir			
Species/ Habitat	Survey	Timing	Type
Red squirrel	Ecological Clerk of Works	All year	Construction phase inspection
Hedgehog	Ecological Clerk of Works	All year	Construction phase inspection

## Bedburn gauging weir

Potential survey requirements for Bedburn gauging weir						
Short List Option	Topo (*5)	D/S level gauge	Eco Surveys	Dive survey (*3)	Intrusive structural investigations	Ground investigation
Larinier in central channel (*4)	Yes (including d/s bathymetry)	Yes	Yes – see ecology survey table	No	Potentially beneficial	Unlikely
Brush pass (plus works to submerge weir toe)	Yes (including d/s bathymetry)	Yes	Yes – see ecology survey table	No	Probably not	Unlikely
Vertical eel tile pass	Yes (including d/s bathymetry)	Yes	Yes – see ecology survey table	No	No	No

(\*3) Dive survey not specifically required for many fish pass options but would give the EA an improved understanding of the structure's overall condition and whether any interventions or repairs are required.

(\*4) Due to extremely constrained site access it is potentially unlikely/impractical that a larinier would be constructed with an engineered upstream lead-in channel (that would be several metres long) in accordance with hydrometric British Standards. Structural and/or ground investigations may become more relevant if an upstream lead-in channel were required.

(\*5) For Bedburn options requiring construction of new structures in the downstream bedrock 'gorge' a detailed understanding of the rock bathymetry will be required. Temporary diversion of the river (i.e. sandbagging the central low-flow weir, right-bank weir and left apron) may be beneficial to divert water around the left side of the weir to enable accurate and safe surveying.

Ecology surveys for Bedburn gauging weir			
Species/ Habitat	Survey	Timing	Type
Woodland habitat	NVC survey	April-August	Design & consent
Invasive plant species	INNS survey	May-August	Design & consent
Otter	Presence/ absence survey	All year	Design & consent
Badger	Presence/ absence survey	All year	Design & consent
Bats	Ground level Tree Assessment and Preliminary Roost Assessment	All year (but preferably January – May)	Design & consent

<b>Ecology surveys for Bedburn gauging weir</b>			
<b>Species/ Habitat</b>	<b>Survey</b>	<b>Timing</b>	<b>Type</b>
White-clawed crayfish	Presence/ absence survey	July-October	Design & consent
Freshwater Pearl Mussel	Presence/ absence survey	All year, but preferably in the warmer months when water levels are low	Design & consent
Birds	Nesting bird check/ Ecological Clerk of Works	March – August	Construction phase inspection
Reptiles	Ecological Clerk of Works	All year	Construction phase inspection
Red squirrel	Ecological Clerk of Works	All year	Construction phase inspection
Hazel Dormouse	Habitat Suitability Assessment	All year	Design & consent
Hedgehog	Ecological Clerk of Works	All year	Construction phase inspection