Framework:	Collaborative Delivery Framework
Supplier:	BAM Nuttall Ltd
Company Number:	00305189
Geographical Area:	
Contract Name:	Skinningrove FAS FBC
Project Number:	ENV0002570C
Contract Type:	Engineering Construction Contract
Option:	Option C
Contract Number:	P-35042
Stage:	Other

[redacted]

ENGINEERING AND CONSTRUCTION CONTRACT under the Collaborative Delivery Framework
CONTRACT DATA

Project Name — Skinningrove FAS FBC

Project Number — ENV0002570C

This contract is made on 18 November 2024
between the *Client* and the *Contractor*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 10th day of April 2019 and Framework Agreement Extension dated and signed 1st April 2023 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 23 inclusive of the Framework schedules are relied upon within this contract.

- The following documents are incorporated into this contract by reference
  Skinningrove FAS ECC Scope Rev 6
  Skinningrove FAS OBC Pre-construction Information Pack Rev 2

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

X9: Transfer of rights

X10: Information modelling

X11: Termination by the *Client*

X15: *Contractor's* design

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

Early supplier engagement during detailed design

The *Client* is

Address for communications

[redacted]

Address for electronic communications

The *Project Manager* is

Address for communications

Address for electronic communications

The *Supervisor* is

Address for communications

Address for electronic communications

The Scope is in
Skinningrove FAS ECC Scope Rev 6

The Site Information is in
Skinningrove FAS OBC Pre-construction Information Pack Rev 2

The *boundaries of the site* are
Skinningrove FAS OBC Pre-construction Information Pack Rev 2

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
Not used

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

3 Time

The *starting date* is 02 December 2024

The *access dates* are

part of the Site	date
FastDraft	02 December 2024
Asite	02 December 2024

The *Contractor* submits revised programmes at intervals no longer than 4 weeks

The *Completion Date* for the whole of the *works* is 14 December 2026

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

4 Quality management

The period after the Contract Date within which the *Contractor* is to submit a quality plan is 4 weeks

The period between Completion of the whole of the *works* and the *defects date* is 52 weeks

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

5 Payment

The *currency of the contract* is the £ sterling

The *assessment interval* is Monthly

The *Client* set total of the Prices is *£70,243.00*

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 Loftus

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

and these measurements:

1.
2.
3.
4.
5.

The *weather measurements* are supplied by The MET Office
The *weather data* are the records of past weather measurement for each calendar month
which were recorded at Loftus
and which are available from The 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. Carbon Methodology - Adherence to and compliance with the Carbon Methodology dated 08 June 2023
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*.

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 *Contracto*r.
Delete 'The' At start of clause 63.1 and replace with:
"For the compensation event described in 60.1(19) the Prices are not changed. For other compensation events the..."

Z 4 The Schedule of Cost Components

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

Z 6 Payment for

Delete existing clause 11.2 (31) and replace with:
"11.2 (31) The Price for Work Done to Date is the total Defined Cost which the *Project Manager* forecasts will have been paid by the *Contractor* before the next assessment date plus the Fee. In all instances and circumstances the Price for Work Done to Date shall not exceed the forecast for the same as provided under clause 20.4."

Z7 *Contractor's* share

After cl54.2 and before cl54.3, insert the following additional clause:
54.2A If, prior to Completion of the whole of the works, the Price for Work Done to Date exceeds 111% of the total of the Prices, the amount in excess of 111% of the total of the Prices is retained from the Contractor.

Z10 Payments to subcontractors, sub consultants

Subcontractors
The *Contractor* will use the NEC4 contract on all subcontracts for works unless another alternative and appropriate form is proposed and agreed in accordance with clause 26.3.
Payment to subcontractors will be 28 days from the assessment date.
If the *Contractor* does not achieve payments within these timescales then the Client reserves the right to delay payments to the Contractor in respect of subcontracted work, services or goods.
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)

Z11.1 The *Contractor* warrants all design complies with the contract whether undertaken by the *Contractor* or by sub-contractors.
Z11.2 All contracts for design employed by the *Contractor* must include:
• Y(UK)3 The Contracts Rights of Third Parties) Act 1999
• A requirement for the *Contractor's* sub-contractor to hold Professional indemnity insurance to the same level as the cover specified for the *Contractor* in this Call-off contract
• A clause to give the *Client* (the Environment Agency) the right to enforce the provisions of the Contracts (Right of Third Parties) Act 1999,
• A clause to ensure that neither the *Contractor* nor their sub-contractor can alter the provisions of their sub-contract without the consent of the *Client*
• A clause to ensure that the *Client's* rights against the sub-contractor under this agreement shall be subject to the same conditions, limitations and exclusions as apply to the *Contractor's* rights against the design consultant under this agreement
• A clause to state that except as provided in clause Z11.1, the 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 the clause does not affect any right or remedy of any 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.

Z21 Requirement for Invoice

Add the following sentence to the end of clause 51.1:
The Party to which payment is due submits an invoice to the other Party for the amount to be paid within one week of the *Project Manager's* certificate.
Delete existing clause 51.2:
51.2 Each certified payment is made by the later of
• one week after the paying Party receives an invoice from the other Party and
• three weeks after the assessment date, or, if a different period is stated in the Contract Data, within the period stated.
If a certified payment is late, or if a payment is late because the *Project Manager* has not issued a certificate which should be issued, interest is paid on the late payment. Interest is assessed from the date by which the late payment should have been made until the date when the late payment is made, and is included in the first assessment after the late payment is made

Z22 Resolving Disputes

Delete W2.1

Z23 Risks and insurance

Replace clause 84.1 with the following
Insurance certificates are to be submitted to the Client on an annual basis.

Z30 Material Price Volatility (superseded by Z31)

The *Client* recognises the ongoing pricing uncertainty in relation to materials for the period from 1 July 2021 to 30 June 2023 the *Client* will mitigate this additional cost through this clause. Payment is made per assessment based upon a general average material proportion within assessments, calculated at 40%.

Z30.1 Defined terms

a) The Latest Index (L) is the latest index as issued by the *Client*. The L, which is at the discretion of the *Client*, is based upon the issued consumer price index ((CPI) based upon the 12-month rate) before the date of assessment of an amount due.
b) The Price Volatility Provision (PVP) at each date of assessment of an amount due is the total of the Material Factor as defined below multiplied by L for the index linked to it.
c) Material Factor (MF) 40% is used, based on a general average material proportion across our programme. The volatility provision is only associated with material element. No volatility provision is applicable to any other component of costs.

Z30.2 Price Volatility Provision

Through a Compensation Event the *Client* shall pay the PVP. PVP is calculated as:
Assessment x MF x L = PVP

If an index is changed after it has been used in calculating a PVP, the calculation is not changed and remains based upon the rate issued by the *Client*. The PVP calculated at the last assessment before 30 June 2023 is used for calculating the price increase after that date.

Z30.3 Price Increase

Each time the amount due is assessed, an amount for price increase is added to the total of the Prices which is the change in the Price for Work Done to Date for the materials component only (and the corresponding proportion) since the last assessment of the amount due multiplied PVP for the date of the current assessment.

Z30.4 Compensation Events

The *Contractor* shall submit a compensation event for the PVP on a monthly basis (where applicable) capturing Defined Cost only for the PWDD increase in month. Forecasted costs should only be considered for the June 2023 period compensation event.

Assessment Date	Defined Cost?	Forecasted Cost?
31 July 2021	In period costs only	No
31 August 2021	In period costs only	No
30 September 2021	In period costs only	No
31 October 2021	In period costs only	No
30 November 2021	In period costs only	No
31 December 2021	In period costs only	No
31 January 2022	In period costs only	No
28 February 2022	In period costs only	No
31 March 2022	In period costs only	No
30 April 2022	In period costs only	No
31 May 2022	In period costs only	No
30 June 2022	In period costs only	No
31 July 2022	In period costs only	No
31 August 2022	In period costs only	No
30 September 2022	In period costs only	No
31 October 2022	In period costs only	No
30 November 2022	In period costs only	No
31 December 2022	In period costs only	No
31 January 2023	In period costs only	No
28 February 2023	In period costs only	No
31 March 2023	In period costs only	No
30 April 2023	In period costs only	No
31 May 2023	In period costs only	No
30 June 2023	In period costs only	Forecasted costs for remainder of contract

The Defined Cost for compensation events is assessed using
- the Defined Cost at *base date* levels for amounts calculated from rates stated in the Contract Data for People and Equipment and
- the Defined Cost current at the date the compensation event was notified, adjusted to the *base date* by 1+PVP for the last assessment of the amount due before that date, for other amounts.

Z31 ECC – Price Adjustment for Inflation

The *Client* recognises the ongoing pricing uncertainty with regards to inflation. The *Client* will mitigate this uncertainty through this clause.

Z31.1 Defined terms:

a) The index is Office for National Statistics (ONS) CPI (UK, 2015=100).
b) The Base Date Index (B) is the latest available index published by ONS prior to the Contract Date.
c) The Latest Index (L) is the latest available index published by ONS before the date of assessment of an amount due.
d) The Price Adjustment Factor (PAF) at each date of assessment of an amount due is 0.9((L-B)/B).

Z31.2 Application rules.

The provisions of this clause [Z31] shall apply provided that:

a) The Price for Work Done to Date is less than or equal to the total of the Prices
and
b) Inflation remains positive i.e. L is greater than B.

Z31.3 Price Adjustment Factor.

If an index is changed after it has been used in calculating a PAF, the calculation is not changed. The PAF calculated at the last assessment date before the Completion Date for the whole of the *works* is used for calculating an amount for price adjustment after that date.

Z31.4 Price adjustment Options A and B.
NOT USED

Z31.5 Price adjustment Options C and D.

Each time the amount due is assessed, an amount for price adjustment is added to the total of the Prices which is the change in the Price for Work Done to Date since the last assessment of the amount due multiplied by (PAF/(1+PAF)).

Z31.6 Compensation events.
NOT USED

Z111 ECC - Fee adjustment for non compliance with Scope

Delete existing 11.2 (10) and replace with the following clause

The Fee is the amount calculated by applying the *fee percentage* to the Defined Cost excluding the cost of Sub-contractors that have not complied with procurement by best value processes as defined in the Scope. 80% of the *fee percentage* is applied to the amount of the Defined Cost for Sub-contractors that have not complied with procurement by best value processes as defined in the Scope.

Z120 ECC – Carbon reduction

Ref. (Clause No.)	Clause words
11.2 Definitions	Add as Clause 11.2(36) (36) The Performance Table states the targets the *Contractor* is to achieve in Providing the Works and sets out the adjustment to payment if a measured performance is higher, the same or lower than its target. The Performance Table is the *performance table* unless later changed in accordance with the contract.
15.1 Early Warnings	In Clause 15.1 add as a new bullet between the second and third bullet: "• result in a target in the Performance Table not being met,"
Performance Measurements	
57	Add as Clause 57:

57.1	'From the *starting date* until the Completion Date, the *Contractor* reports to the *Project Manager* its performance against the targets in the Performance Table. Reports are provided at the intervals stated in the Performance Table.
57.2	If the *Contractor's* performance against a target in the Performance Table is not achieving or is forecast not to achieve the performance target stated, it submits to the *Project Manager* for acceptance its proposals for improving performance. A reason for not accepting the proposals is that they will not provide the improvement in performance needed to achieve the target in the Performance Table.
57.3	At the dates stated in the Performance Table, • if the relevant performance does not meet the target stated in the Performance Table, the *Contractor* pays the amount stated in the Performance Table, • if the relevant performance exceeds or meets the target stated in the Performance Table, the *Contractor* is paid the amount stated in the Performance Table.
57.4	Information in the Performance Table is not Scope.
X18	X18.5 add as a new bullet after the fourth bullet: • low performance damages if the Performance Table applies

The *performance table* is	ECC-carbon-performance-table.xlsx
the Performance Table for this contract type [form, Partner, Stage] as set out in the Carbon Methodology dated 08 June 2023	

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

£84.06 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 X15: The *Contractor's* design

The *period for retention* following Completion of the whole of the *works* or earlier termination is 6 years

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 professionals designing works similar to the *works* is, in respect of each claim

£5,000,000.00

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

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

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*
No terms under this contract	No beneficiaries under this contract

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

[redacted]

Address for communications

Address for electronic communications

The *fee percentage* is

Option C

9.90%

The *working areas* are

The offices and premises of the Contractor and the Site

The *key persons* are

Name (1)
Job
Responsibilitie
Qualifications
Experience

[redacted]

The *key persons* are

Name (2)
Job
Responsibilitie
Qualifications
Experience

The *key persons* are

Name (3)
Job
Responsibilitie
Qualifications
Experience

The *key persons* are

Name (4)
Job
Responsibilities
Qualifications
Experience

The following matters will be included in the Early Warning Register

2 The Contractor's main responsibilities

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

not applicable

3 Time

The programme identified in the Contract Data is

not applicable

5 Payment

The *activity schedule* is
not applicable

Resolving and avoiding disputes

The *Senior Representatives* of the *Contractor* are

Name (1)
Address for

Address for

Name (2) ger)
Address for

Address for

X10: Information Modelling

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

Contract Execution

Client **execution**

Signed Underhand by **[PRINT NAME]** for and on behalf of the Environment Agency

[redacted]

Signature Date Role

Contractor **execution**

Signed Underhand by **[PRINT NAME]** for and on behalf of BAM Nuttall Ltd

[redacted]

Signature Date Role

Environment Agency

NEC4 ECC engineering and construction contract

SCOPE

Template Change Log

Revision date	Summary of changes	Version number
14 March 2023	Changes made during CDF extension	7
Oct 23	• Style change to align with ECC Main scope template & NEC 4 • template change log added • S207 new • S803,4,5 & 6 new or amended re carbon terminology reporting for ESE changes since carbon methodology V3.1 and ACCD Pilot • S 1002 removed re carbon terminology and ESE changes in CMV3.1	8
9 Nov 23	• BIM references on table updated	8.1

Project / contract information

Project name	Skinningrove Flood Alleviation Scheme (FAS)
Project SOP reference	ENV0002570C
Contract reference	
Date	11 November 2024
Version number	Rev 6
Author	[redacted]

Revision history

Revision date	Summary of changes	Version number
24/06/2024	First issue	1
05/07/2024	S207 Carbon items in S401 Carbon items in S804 S1001	2

12/07/2024	S700 Bullet 4. Sentence on defects removed to avoid conflict with Contract tool.	3
12/07/2024	Issue date of MTR v13 changed to June 2024. Removal of MMO/Network Rail from General Constraints. Confirmed S206 'not used'. S2003 updated.	4
04/09/2024	Changed '3 design options' to 'design options' in Deliverable 7 (in table 1).	5
11/11/2024	S300-not used S604 – refers to Appendix 1 for clarity.	6

Documents included in Scope by reference.

This Scope should be read in conjunction with the documents detailed in the table below current at the Contract Date.

In the event of conflict, this Scope shall prevail.

The service is to be compliant with the following: DOCUMENT	Document Title	Version No	Issue date
LIT 13258	Minimum Technical Requirements – Standard	V13	June 2024
LIT 65150	Minimum Technical Requirements – Environment and Sustainability	V2	March 2023
LIT 17641	Exchange Information Requirements	V3	December 2022
LIT 16559	SHEW CoP	V5	January 2023
LIT 12507	(SHE) handbook for managing capital projects	V7	March 2023
	Project Information Delivery Plan	Appendix 1	This document
LIT 14284	Carbon Operating Instruction	V6	June 2023

Contents

S 100 Description of the *works*

S 101 General Description of the *works*

The village of Skinningrove is located on the northeast coast of England. A location plan is provided in Figure 1. Skinningrove Beck flows through the village into the North Sea. The catchment is steep and heavily wooded. The beck can respond rapidly to heavy rainfall and can carry significant quantities of woody debris. The village primarily contains residential properties and has a population of around 2,000 people.

Fluvial flooding is the main source of flood risk to the village which is exacerbated by the risk of blockages around structures in the watercourse. There are several recorded events of flooding to the village. Severe flooding occurred in July and November 2000 when 178 properties were flooded. Following these events, a flood defence scheme was constructed including flood walls, a log catcher and manually operated flood gates and demountable parapets at Stone Row Bridge in the centre of the village. Environment Agency field teams operate these defences at Stone Row Bridge during high flows to protect the village from flooding. Doing so in a timely manner can be challenging due to the rapid response and unpredictable nature of the beck and remote location of the village from the nearest depot in Darlington. In September 2013, residents were placed at considerable risk when they had to close the flood gates themselves when a slow-moving thunderstorm formed in the catchment with little warning. The resulting rate of rise of the beck left field teams unable to reach the village in time to operate the defences.

Blockage is a significant problem in the catchment and can greatly reduce the Standard of Protection (SoP) offered by the defences in the village. The log catcher, installed upstream of the village in 2002, plays a crucial role in mitigating blockage-related flood risk by preventing large quantities of woody debris from reaching the village.

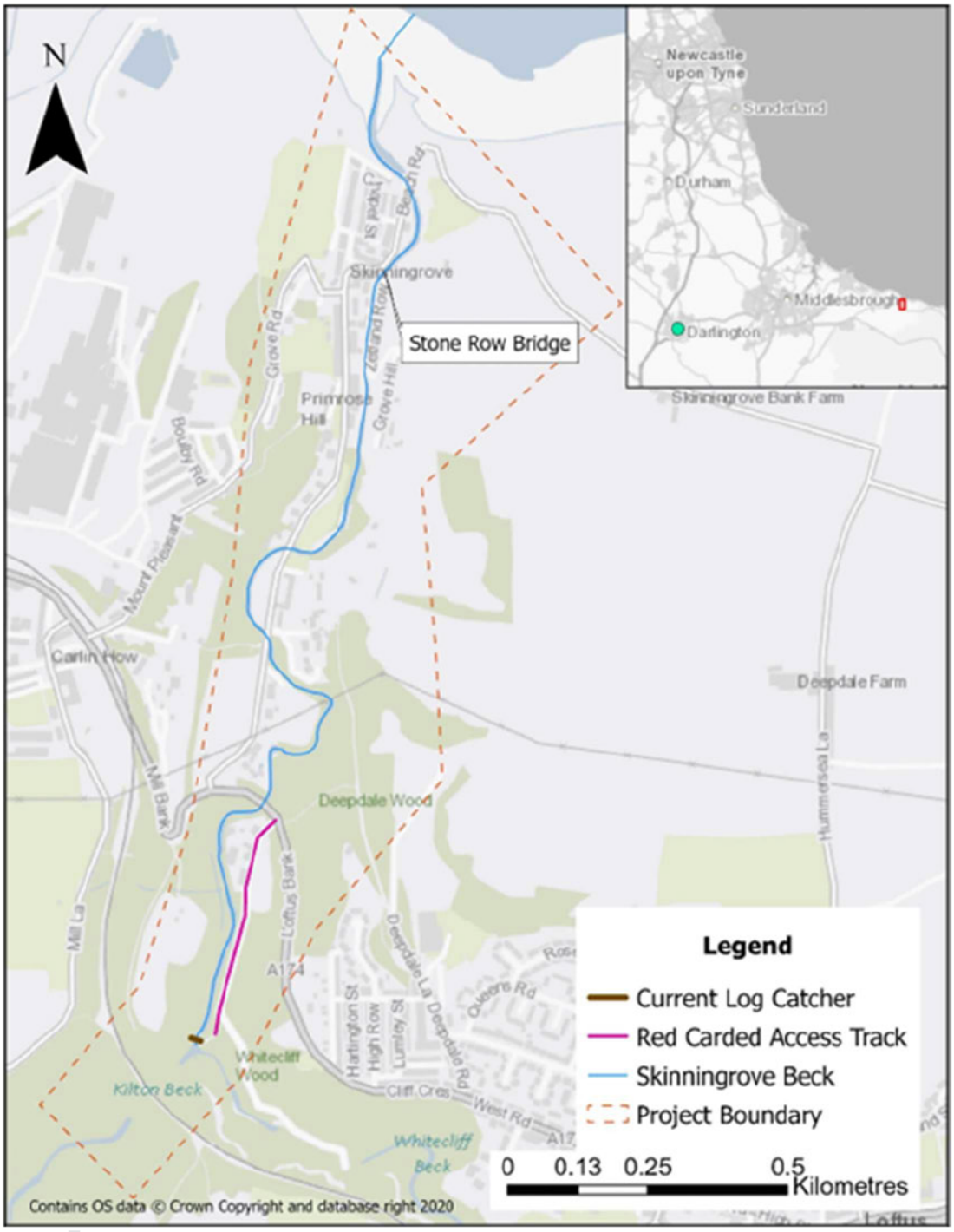


Figure 1 Skinningrove Location Map

Current arrangements

The existing flood gates and demountable parapets at Stone Row Bridge are manually operated by Environment Agency field operatives based at the nearest depot in Darlington. The flashy and unpredictable nature of the beck makes the timely manual operation of these defences a challenge – especially given the remote location of the village. To reduce the risk of non-operation of these defences, and to provide residents with peace of mind, the field

team spends long periods of time on standby in the village when poor weather is possible. Figure 2 shows the assets at Stone Row Bridge.

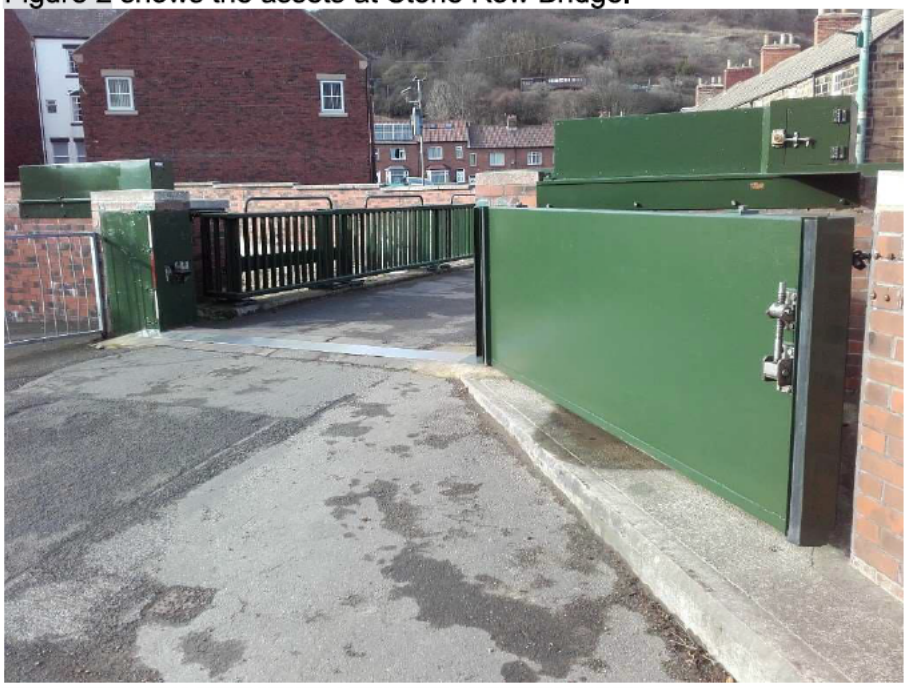


Figure 2 Stone Row Bridge flood gates and demountable parapets

The log catcher upstream of the village reduces the risk of large debris travelling downstream and flooding occurring as a result of blockage of the watercourse. Vehicular access to the existing log catcher has been red carded due to concerns over the stability of the access track which is showing signs of geotechnical movement. This is an issue when it comes to clearing woody debris from the structure which would ordinarily be done by machine. The need to manually cut up and remove the woody debris is not only time consuming but the manual handling of material also poses a H&S risk for operatives. There is a history of landslides in this valley and there is a longer-term concern that a landslide in this area would cut off any reasonable access to the log catcher. Figure 3 shows the log catcher structure under normal and loaded conditions.

Figure 3 Log catcher clear (left) and fully loaded (right) after high flows.

S 102 Purpose of the works / Outcome required

.1 The purpose of the work is to assist in the development of the FBC for Skinningrove FAS.

.2 The Contractor's deliverables for progressing the Outline Business Case to the Full Business Case are summarised in Table 1.

.3 Early supplier engagement will contribute to Lot 1 and Lot 2 Delivery partner collaboration and agreement on the Verified Capital Carbon Forecast which the *Client* will verifies, at gateway 3, resulting in the ECC Carbon Target to be used to measure Carbon Performance in subsequent ECC contracts for this project.

.4 Driving down Capital Carbon Forecast for emissions at project level is a key driver and strategic outcome for this ESE.

Table 1: CDF ESE Summary of *Contractor* Deliverables

No.	Deliverables
1	Basic Staffing Schedule for ESE & Construction Phase
2	Production of high level construction programme. Details to include: • High level construction durations • Identification of long lead items • Ecological constraints, such as periods in the year we may not be to work • Permitting durations / requirements
3	Project specific Noise & Vibration Requirements
4	Identification of 3rd Party Considerations. Such as: • Landowners • Notice of Entry • Any permitting required • Planning consents required • Highway consents • Interface with utilities • Structural surveys • Ecological surveys
5	Draft Temporary Works Schedule
6	Input into optioneering
7	Production of a high level Methodology & Buildability Report for each of the design options
8	High level costs estimate based on 3 concept design options
9	Review Scope for OBC to FBC
10	Review draft Site Information
11	Input into Project Carbon Tool
12	Attendance of Risk Workshops
13	Attendance of Monthly Meetings
14	Attendance to one site visits
15	Production of monthly project updates

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

S 201 General Constraints

.1 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. Input and ascertaining of the FRAP and SI to be instructed as Compensation Events if required.

.2 Potential buried services in the location of intrusive ground investigation. Services plans can be supplied to assist in the planning of these works, but the *Contractor* must satisfy themselves as to their validity. Any GPR or trial holes involved with this will be instructed as a compensation event if required.

.3 Potential constraints regarding the methodology of the construction phase include working in the channel with machinery. *Contractor* to liaise with the *Clients* FBG team.

.4 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 *Contractor* and *Client* as required.

.5 Any access constraints posed by intrusive vegetation. To be managed via liaison between *Contractor* and *Client* as required. Any surveys relating to and further removal of invasive species and or vegetation is excluded from this scope and will be instructed as a compensation event if required.

S 202 Confidentiality

.1 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.

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

S 203 Security and protection on the site

.1 Publicly open location. Existing fencing to be maintained by the *Contractor*.

S 204 Security and identification of people

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

S 205 Protection of existing structures and services

.1 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. Any GPR or trial holing required is excluded from this scope and will be instructed as a compensation event if required.

.2 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.

.3 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.

S 206 Protection of the *works*

Not used.

S 207 Carbon

S 207 (1) Carbon terminology

For clarity the below terms are defined and should be used in communications about carbon.

Carbon Terminology. For clarity the below terms are definitions for required deliverables and related data and should be used in communications about carbon.

Carbon Assessment

Carbon assessments are a deliverable of the service and defined in LIT14284 and comprise:

a) Carbon calculations set out in either a ERIC Carbon Modelling Tool (CMT) or Carbon Calculator (CC) file versions. ERIC CMT/CC versions for business case project stages result in overall emission figures for the project including a whole-life carbon forecast, a capital carbon forecast and a capital carbon budget. ERIC CC versions for construction result in overall figures for the project including capital carbon actuals (for construction outturn or to date) for comparison with the forecast and budget figures of earlier versions.
b) Carbon calculations set out in a Carbon Impact Tool (defined in the FCRM Appraisal Guidance) for the appraisal of business case options. The Carbon Impact Tool will provide carbon benefit figures in tCO2e and monetised Net Present Value that are required in the Business Case carbon tables and in the Partnership Funding Calculator (Economic Summary OM1a)
c) Carbon Appendix that captures the results of calculations from ERIC and the Carbon Impact Tool and provides a summary of progress made in maximising carbon reduction opportunities on the project to date as well as confidence levels for further reductions by project completion.
d) A verification process of the carbon assessment carried out by an EA appointed Carbon Specialist and requiring updates to the carbon calculations and Carbon Appendix as required. Verified versions of carbon assessment deliverables and their results are required to support carbon tables in the business case.

Terminology for carbon assessments:

ERIC	is a PAS 2080 Compliant assessment tool that the Client requires Contractors to use
Carbon Calculator	part of ERIC application seen abbreviated to CC
Carbon Modelling tool	part of ERIC application seen abbreviated to CMT
EA carbon specialist	the specialist employed by EA to verify carbon assessments

1. Verified An output of the verification process of a carbon assessment supporting either a business case or construction completion that has been conducted by an EA carbon specialist.
2. Business Case Carbon Appendix Spreadsheet to capture information required by EA for carbon assessments. This document should be updated and verified to support business cases. It should be updated and verified at the end of construction and for agreed changes during construction.

Whole-life Carbon	GHG (greenhouse gas) emissions and removals calculated for a carbon assessment associated with the creation and end-of-life treatment of an asset, network or system, and including with its maintenance and refurbishment
Capital Carbon	GHG (greenhouse gas) emissions calculated for a carbon assessment associated with the construction or refurbishment of an asset, network or system.
Capital Carbon Actuals	capital carbon emitted during construction activities - for a defined period of time eg) capital carbon actuals to date eg) capital carbon

actuals at contact completion eg) capital carbon actuals at project completion or eg) capital carbon actuals April 2022 to March 2023 At construction completion, an 'as built' version of ERIC calculations will capture outturn actuals against an asset breakdown and provide a total to compare with previous ERIC version 'forecasts'.

Capital Carbon Budget a decarbonisation benchmark of capital carbon emissions for a project based on the current project scope and based on expected levels of decarbonisation of the asset types set out in a carbon assessment. It is calculated in every version of an ERIC (CC and CMT) calculation and is based on generic asset types and associated rates of decarbonisation over future years.

Capital Carbon Forecast an estimate of capital carbon emissions from a project based on the current project scope calculated using a PAS 2080 compliant carbon assessment tool. It is calculated in every version of an ERIC (CC and CMT) calculation and used to optimise for lowest carbon through the use of emission rates provided by the EA or provided by manufacturers of products (e.g. low carbon) that are outside of the EA rates (manufacturer rates will be verified by the EA).

Important! "Carbon Forecast" and "target" means different things in different systems and situations. Therefore, it is important in all Contract Communications to be clear which Carbon Forecast or which target is meant. Using the terminology listed here in S 215 (1) will help.

Carbon Reporting

a) Reporting on capital carbon forecasts and budgets via FastDraft is a monthly requirement of a service for business case project stages. The reported data will be project carbon figures from the latest ERIC calculations that consultants maintain as 'work in progress' versions to support their appraisal and design deliverables.

b) Reporting on capital carbon actuals to date and a latest capital carbon forecast for construction completion via FastDraft is a monthly requirement of a service for construction stage. The reported data will be based on evidence of embodied carbon in products supplied and construction services carried out up to the reported date and aligned to reported expenditure at the same time. See ref S216

Additional terminology for carbon reporting:

Consultant Carbon Forecast Form Carbon forecast form in FastDraft to be completed monthly as per contract Scope requirement - reporting is for Project (not contract).

FastDraft Carbon Forecast menu option in FastDraft can't be changed but add FastDraft to name in communications to distinguish from capital carbon forecast

Draft Denotes any FastDraft reported data from carbon assessments that are 'work in progress' versions maintained by the contractor and will not therefore be required to be verified by the EA.

Back Up Sheet This is the colloquial name given to a "worksheet of actual carbon and cost data" as more detailed evidence of emissions and expenditure in a reporting period. Use LIT 61271 (Lot 1 PSC) or worksheet name in Scope and Communications

Carbon Performance Measure for contracts

The capital carbon performance measure for contracts is based on the verified results of a carbon assessment related to either business case submissions for PSC contracts or completion of construction for ECC contracts. The measure sets a performance target and bands above/below this target for rates of pay out or pay back in relation to the capital carbon forecast and budget for PSC contracts and for the capital carbon actuals and capital carbon forecast for ECC contracts.

Additional terminology for carbon performance measure:

Carbon Performance	is measured at completion of the contract from the results of the carbon assessment that has been produced as a deliverable of the contracted service and been verified and approved by the EA
Carbon Performance Tables	where carbon performance is related to the incentivisation payout / payback bands and contract type. Applied at the time the contract signed.
ECC Carbon Target	is set at a fixed % above the Capital Carbon Forecast (tCO2e) that has been verified either at GW3, or subsequently through an approved change control. It is a fixed number not a range.
Project Carbon Payback Threshold	This is the threshold at which payback to Client is paid as stated in the contract Carbon Performance tables.

1. The Contractor must aim as a strategic objective to minimise carbon.
2. The Client carbon assessment tools for calculating Capital Carbon Forecasts is ERIC Carbon Modelling Tool (CMT) or ERIC Carbon Calculator (CC).
3. The Client carbon assessment tool for calculating Capital Carbon Budget is ERIC CBUD sheet.
4. set out opportunities for further reductions in carbon before the Project completion.
10. The Verified Capital Carbon Budget and Capital Carbon will be required in the gateway (SOC/OBC/FBC) Business Case Carbon Appendix and are required for the Carbon Performance Table and measures set out in this contract.

S 207 (2) Carbon responsibilities of all Parties

1. Aim to minimise carbon emissions by:

(1) State minimised carbon as one of the strategic objectives of the contract under S 101

(2) Looking at how to reduce Capital Carbon Actuals (compared to the Capital Carbon Forecast) and how to reduce Whole Life Carbon of the asset

(3) Work collaboratively, including with sub contractors, on lower carbon products and services that meet the project scope and deliverables

(4) Exploit opportunities for further reductions Carbon during construction.

(5) The ECC Carbon Target, the metric against which decarbonisation is measured and assessed against Playout / Payback bands set out in the ECC Carbon Performance Table, must be Verified before any progression from ESE into Construction occurs.

S 207 (3) Carbon Responsibilities of the *Client*

1. Will Establish the ECC Carbon Target with the [**select *Contractor* and or Lot 1 delivery partner**] as an outcome of this ESE contract before construction begins.

2. It is at the *Client'* discretion to decide if Scope change is significant and merits a re-assessment of the ECC Carbon Target.

3. Change in this Scope from ESE to Construction work as part of a planned procurement strategy is considered by the *Client* to be significant change which would merit re-assessment of the ECC carbon target.

S 207 (4) Carbon responsibilities of the ECC PM / Contract manager

1. Will add carbon requirements set out in LIT 13260 to this Scope if any change to Scope occurs which changes the nature of work under this Contract from ESE to Construction as planned in procurement strategy.
2. will work with EA Carbon Specialist to ensure Business Case Carbon Appendix Verification occurs at the appropriate times.

S 207 (5) Carbon responsibilities of the *Contractor*

1. the Contractor should ensure they are aware of current Capital Carbon Forecast made by the Lot 1 *Consultants*
2. Cooperate in updating the Business Case Carbon Appendix and capital Carbon Forecast when requested to by the *Client* or ECC PM for
   - **(1)** calculation of ECC Carbon Target
   - **(2)** if additional information is needed during the Verification process
   - **(3)** at project Gateways
   - **(4)** and Contract Completion.
3. Save Business Case Carbon Appendix and Capital Carbon Forecasts in ASite
5. Submit monthly the FastDraft Carbon Forecast (*Contractor* Carbon Forecast Form). Reporting
   - **(1)** ~~ECC Carbon Target~~ (not known at this stage)
   - **(2)** Capital Carbon Forecast (should be reported)
   - **(3)** Capital Carbon Actuals to date (anticipated to be close to zero as no main construction at this stage)

S 300 Contractor's design

Not used

S 400 Completion

S 401 Completion definition

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

(1)	Verification of	the Capital Carbon Forecast supported by the *Client*'s ERIC tool and saved in ASite
(2)	Updated Carbon Appendix	Delivery of the Final Carbon Appendix, this is to be saved into ASite.
(3)	BIM Data	Transferred to the *Client* databases of BIM data

.2 **Clause 11.2 (2) w**ork to be done by the Completion date

(1) All works identified in Table 1: CDF ESE Summary of *Contractor* Deliverables.

S 402 Correcting Defects

.1 Following Completion of the works, the *Contractor* will liaise with the Project Manager, and *Client* to agree access to the Site to correct any Defects.

S 403 Pre-Completion arrangements

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

S 404 Take Over

Not used

S 500 Programme

S 501 Programme requirements

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

S 502 Programme arrangement

.1 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 2016 (*.mpp) and *.pdf formats.

S 503 Methodology statement

.1 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.

S 504 Work of the *Client* and Others

Not used

S 505 Information required

Not used

S 506 Revised programme

.1 Each programme submitted will include dates for the below outputs allowing for time for any information to be issued by the *Client*.

No.	Deliverables	Output by Contractor
1	Basic staffing schedule for ESE & construction phase	Schedule
2	Production of construction programme. Details to include: High level construction durations Identification of long lead items Ecological constraints, such as periods in the year we may not be to work Permitting durations / requirements	MS Project Programme
3	Project specific Noise & Vibration Requirements	Assessment
4	Identification of 3rd Party considerations. Such as: Landowners Notice of Entry Any Permitting required Planning consents required Highway consents	Schedule

	Interface with utilities Structural surveys Ecological surveys	
5	Draft Temporary Works Schedule	Schedule
6	Input into optioneering	Ongoing consultation
7	Production of a high level Methodology & Buildability Report for each of the 3 design options	Report
8	High level costs estimate based on 3 concept design options	Budget
9	Review Scope for OBC to FBC	Comments Sheet
10	Review draft Site Information	Comments Sheet
11	Input into Project Carbon Tool	Ongoing consultation
12	Attendance of Risk Workshops	Ongoing consultation
13	Attendance of Monthly Meetings	Ongoing consultation
14	Attendance of site visits	Ongoing consultation
15	Production of monthly project updates	Report/Programme/Cost Forecast

S 600 Quality assurance

S 601 Samples

Not used.

S 602 Quality Statement

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

S 603 Quality Management System

.1 The Contractor shall operate a Quality Management System complying with BS EN ISO 9001.

S 604 BIM Requirements

.1 The BIM Information Manager is the *Client* Project Manager.

.2 The Contractor shall comply with the *Client's* BIM requirements. See Appendix 1 for further information.

S 700 Test and inspections

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

.2 Upon instruction by the *Project Manager* the *Contractor* will suggest any necessary investigative works, such as Topographical (Topo) Survey, Ground Investigations (GI) and Structural Surveys (SS), to allow for budget quotations and programming.

.3 The *Contractor* will ensure the reinstatement work is carried out with reasonable skill and care. 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.

.4 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.

S 800 Management of the *works*

S 801 Project Teams – others

Name	CDM Role	NEC4 contract role
Environment Agency	Client	*Client*
Environment Agency	None	*Project Manager*
TBC	None	*Supervisor*
Arup	Designer	Others
TBC	Principal Designer	None
BAM Nuttall Ltd	Principal Contractor	*Contractor*
Sub-contractor(s)	Contractor	Sub-contractor
TBC	CDM Advisor	None

.1 Further to the *Client, Project Manager, Supervisor*, Principal Designer and *Contractor* roles identified previously, the following Environment Agency people are expected to form part of the team:

- EA PCM Project Manager
- EA PCM Project Executive
- P&SO Senior User and Senior User Representative
- Asset Performance Senior User and Senior User Representative
- Environmental Programme Team Senior User
- NEAS Representative
- FBG Representatives
- Cost Manager
- Information Manager
- Carbon and Cost Estimator

S 802 Communications

.1 Meetings shall be undertaken face to face or using Microsoft Teams. 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 *Project Manager*.

.2 In managing the works the *Contractor* shall:

- Attend monthly progress meetings arranged by the *Client* to record and issue minutes. Attend Monthly Project Board meetings and provide input on the progress and programme, risks, issues and exceptions.
- Identify project efficiencies and provide information and evidence for efficiency briefing notes in line with the *Client's* CERT process.
- Produce monthly financial updates giving forecast and actual expenditure.
- Deliver weekly informal programme updates as required (via email/telephone).
- Co-operate with the *Client* in their 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* 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.

.3 The *Contractor* shall allow for attendance of key personnel from the *Contractor's* staff and key Subcontractor's and supplier's staff at meetings and workshops to be chaired and minuted by the *Client* or their delegate, which shall include the following:

- Design review workshops
- Carbon, efficiencies and value engineering workshops
- Risk workshops
- Commercial meetings
- Planning and programming workshops

.4 The *Contractor, Project Manager* and *Supervisor* shall use the *Client's* standard contract administration forms which shall be produced and submitted using the *Client's* collaborative working tool, FastDraft.

S 803 Monthly Reporting

1. For the duration of the contract progress is to be reported monthly via

(1) LIT 13283 - Monthly work progress summary - construction stage

(2) LIT 12295 – Monthly highlight report

2. Contribute monthly updates to the project risk register.

3. Provide input to project efficiency CERT Form.

4. Attend project board meetings as required.

5. Ensure quarterly input into framework performance assessment / environmental Performance Measures.

6. Maintain and show how accurate and up to date information on the whole-life cost and carbon of options is driving optimum solutions at all stages of design development.

7. Capture lessons learnt relevant to scheme delivery for the *Client*.

S 804 Monthly Forecast Reporting

1. For the duration of the contract FastDraft Carbon Forecast (Contractor Carbon Forecast Form) is to be submitted monthly. Reporting is at a Contract level on

~~(1) ECC Carbon Target (not known at ESE stage)~~

(1) Capital Carbon Forecast

(2) Capital Carbon Actuals to date

The Consultant/Contractor is required to provide FastDraft Carbon Forecast for both carbon and cost on the 10th day of each month (or other date agreed at the project start up meeting) in accordance with FHU

Framework Heads Up 244 Commercial Clarification 54

Framework Heads Up 256 Commercial Clarification 57 S 805 Application for Payment / Invoice

.1 The *Contractor* is required to provide evidence of costs in the following format:

LIT 61272 Worksheet Actual Carbon and Cost data CDF Lot 2

.2 Submission of an application for payment without an appropriately completed LIT 61272 not be recognised or treated as a compliant submission.

S 806 Aligned Cost and Carbon Data Pilot Reporting

1. Where the Contract is:

(1) included in the Pilot the *Contractor* needs to complete the required sheets of the version being used at that time up to April 2024.

(2) ALL contracts the *Contractor* needs to complete the required sheets of the version being used at that time from April 2024.

S 0900 Working with the *Client* and Others

Not used.

S 901 Sharing the working areas with the *Client* and Others

Not used.

S 902 Co-Operation

.1 The *Contractor* co-operates with affected residents and businesses as necessary to enable efficient execution of the works with minimal disturbance to the local community. *Client* to coordinate between residents, businesses, and the *Contractor*.

S 903 Co-Ordination

Not used.

S 904 Authorities and utility providers

.1 The *Contractor* shall be responsible for arranging and managing all of the appropriate Highway Authority consents and closures that may be required including footpaths and public rights of way.

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

.1 We will try to identify opportunities to support diverse workforces on our projects across our organisations.

S 1000 Services and other things to be provided

S 1001 Ground Investigation

.1 The *Contractor* is required to review findings from previous studies and appraisal to identify any gaps in existing data.

.2 The *Contractor* is required to use gaps identified above to inform scope of supplementary investigations needed to allow proper progression of appraisal, design and construction methodology (as relevant to the Scope) and reduce risk of unforeseen ground conditions during construction.

.3 The *Contractor* is required to communicate with the Consultant and undertake further ground investigations as specified by the Consultant to allow proper progression of appraisal and design.

.4 The *Contractor* is required to clearly communicate the specifications for ground investigations as identified above to the site investigation sub-contractor (if they are not undertaking these investigations themselves).

.5 The *Contractor* is required to clearly communicate the relevant results of ground investigations back to the Consultant

S 1002 Carbon minimisation

.1 Early supplier engagement will contribute and agree to how to minimise carbon throughout the construction stage working with their suppliers on lower carbon products and services that meet the project Scope and deliverables. Early supplier engagement will contribute and agree to monthly reporting of emission actuals against forecast (see application for payment section).

.2 Early supplier engagement will contribute and agree to delivery of outturn actual emissions that meet the verified forecast for emissions at project completion and provide the evidence for this set out in the 'as built' carbon appendix and supporting carbon assessment and carbon budget (i.e. ERIC) for verification by an EA appointed Carbon Specialist via Asite. The verification process requires project team engagement with the verifier and may result in actions to:

(1) update the carbon appendix and supporting carbon assessment and budget (i.e. ERIC).

(2) A set out the reasons for outturn actuals emissions being above/below the verified forecast.

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

S 1100 Health and safety

.1 Health and safety are the number one priority of the *Client*. The *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.

.2 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.

.3 The Principal Designer under the Construction Design and Management Regulations (2015) will adhere to the Environment Agency SHEW code of practice January 2023.

.4 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.

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

.6 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.

.7 The *Contractor* will produce a Project Execution Plan (PEP) for all intrusive works.

S1200 Subcontracting

S 1201 Procurement of subcontractors

.1 Subcontractors need to be selected using best value processes.

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

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

S 1300 Title

Not used.

S1400 Accounts and records (Options C and E)

Not used.

S 1401 Additional Records

.1 The Client wants additional records to be kept:

- 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

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

S 2000 *Client's* work specifications and drawings

S 2001 *Client's* work specification

.1 The *Contractor* is to carry out the works in accordance with the Environment Agency's Minimum Technical Requirements – Operational instruction LIT 13528

S 2002 Drawings

.1 No outline designs for the preferred option are currently available which could be provided by the *Client*. However, the *Contractor* will liaise as directed with Others as detailed design drawings are progressed.

S 2003 Standards the *Contractor* will comply with

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

Ref	Report Name	Where used
~~[add]~~	~~Project Cost Tool~~	~~Costs~~
LIT 14605 LIT14604	Carbon Planning Tools (including the Carbon Modelling Tool and Carbon Stop/Go form)	Carbon calculation and reporting
~~[add]~~	~~300_10 SHE handbook for managing capital projects~~	~~[add]~~
LIT 16559	300_10_SD27 SHE Code of Practice	Health and Safety
~~[add]~~	~~SHEW COP January 2023 Version 6.0~~	~~[add]~~

Appendix 1 Information Delivery Plan (IDP)

The *Consultant* shall adhere to the Environment Agency's Exchange Information Requirements (EIR) framework level minimum technical requirements.

All *Client* issued information referenced within the Information Delivery Plan (IDP) requires verifying by the *Consultant* unless it is referenced elsewhere within the Scope.

The *Consultant* shall register for an ASite Account and request access to the project workspace to view the IDP and update to create the MIDP.

Guidance on the IDP can be found here

Create the IDP on ASite and embed a PDF version as Appendix 1.

https://www.asite.com/login-home

Pre-construction Information Pack

Project Name	*Skinningrove FAS OBC*
Asset Description / Information	*Flood Defence and Log Catcher*
Aims Asset ID / Name	*TBC*
Asset Type / System Number	*TBC*
Grid Ref / W3W	*NZ 71354 19869 ignore.armrest.consults*
New Asset to be Created?	*Yes*
Change to Defence Level?	*No*

This document is the master-controlled copy of the Pre-construction Information document, and forms part of the Pre-construction Information Pack.

This Pre-Construction Information document has been compiled in collaboration with Client, Designer, Principal Contractor, and Principal Designer in compliance with the duties laid out in Regulations 4 and 11 of the Construction (Design and Management) Regulations 2015 (CDM 2015) to identify the necessary requirements to safely and efficiently execute the works contained within the project description and associated project scopes submitted in tender documentation.

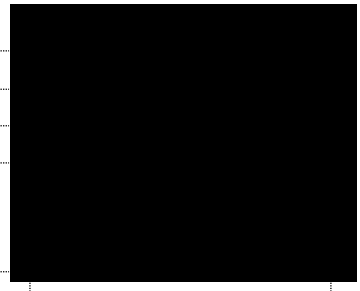
It identifies site information and/or constraints/conditions which may create safety hazards that designers and contractors should consider when designing or planning construction work.

This document also identifies risks and hazards which might be considered as significant or unusual, along with recommendations for further action to reduce or eliminate these.

Safe systems of work dealing with the risks highlighted within this document should be clearly confirmed in the Construction Phase Plan, prepared by the Principal Contractor.

This information should be supplemented and amended as part of the Project development, specifically where design is undertaken. All duty holders must comply with the current legislation and best practice, the client's guidance, codes of practice and other supporting contractual documentation.

AMENDMENT RECORD (Amendment '0' being the original)



Version	Date	Amendment
0	28th Nov 23	Draft
1	25th March 2024	Updated with outline design info
2	19th September 2024	Further updated prior to FBC with information gathered during pre-detailed design phase

INTERNAL CONSULTATION

Internal Consultation	Consultation Period	Date Received	Contact Name
NEAS/FB&G			
PSRA Area Lead			
PSO			
Estates			
Others As Relevant			

PCI document is deemed sufficiently developed for submittal to wider project team as part of the PCI pack.

CDM Client Approved	Signature	Date
Name:		

PCI document is deemed sufficiently developed for construction phase.

CDM Client Approved for Design	Signature	Date
Name: Colin Morisson		

Contents

1.0 Introduction

This document and supporting files are live and must be maintained throughout the pre-construction phase. Guidance documentation is available to the client on how to fill in this form and to the project team on information that is required for the Health & Safety File. The client is to fill in asset information that is easily at their disposal and provided supporting documentation such as asset Health & Safety File, PSRA etc. Anything that is not relevant or to be confirmed mark up as such, with the relevant duty holder title for action.

2.0 Project Details

2.1 Project Justification

There are two issues with the existing arrangements for managing flood risk in the village of Skinningrove on the northeast coast of England:

- The existing defences include a set of manually operated flood gates and demountable parapets at Stone Row Bridge in the centre of the village. The timely operation of these defences is challenging for the field team due to the flashy and unpredictable nature of Skinningrove Beck and the remote location of the village from the nearest depot in Darlington. This operational risk is an ongoing concern.
- The catchment is steep and heavily-wooded, and the Beck can carry large quantities of woody debris during high flows which, if unmanaged, pose a blockage risk in the village particularly at the Stone Row Bridge location which has a low soffit level and is prone to blockage. We operate a log catcher approximately 1.5km upstream of the village to alleviate the risk posed by woody debris, however, the risk posed by debris blocking the Stone Row Bridge is still significant. There are significant concerns over the stability of the track used to access the log catcher asset and the field team have red carded access with vehicles or plant. Our current inability to clear this asset effectively poses an increased flood risk to the village.

2.2 Asset Details

Is the site or structure red carded?	*Yes*
Is the site on the Hostile Sites database?	*No*
Is Confined Space Entry Required	*No*
Confined Space Entry Classification	*N/A*
Is The Use of Divers Required	*TBC*
Statutory Consents and Permissions	*TBC*

2.3 Project Description

An appraisal of the economic viability and technical feasibility of the short list options has been undertaken to determine a preferred option. The preferred option is to:

- replace the existing bridge at Stone Row with a new bridge at Zetland Row, around 150m upstream, with a soffit level above the permanent flood defence level to avoid the need for flood gates, and

- install a new log catcher upstream of A174 Kilton Mill Bridge

2.4 Key dates & F10 Notification

The current programme key milestone dates can be seen below:

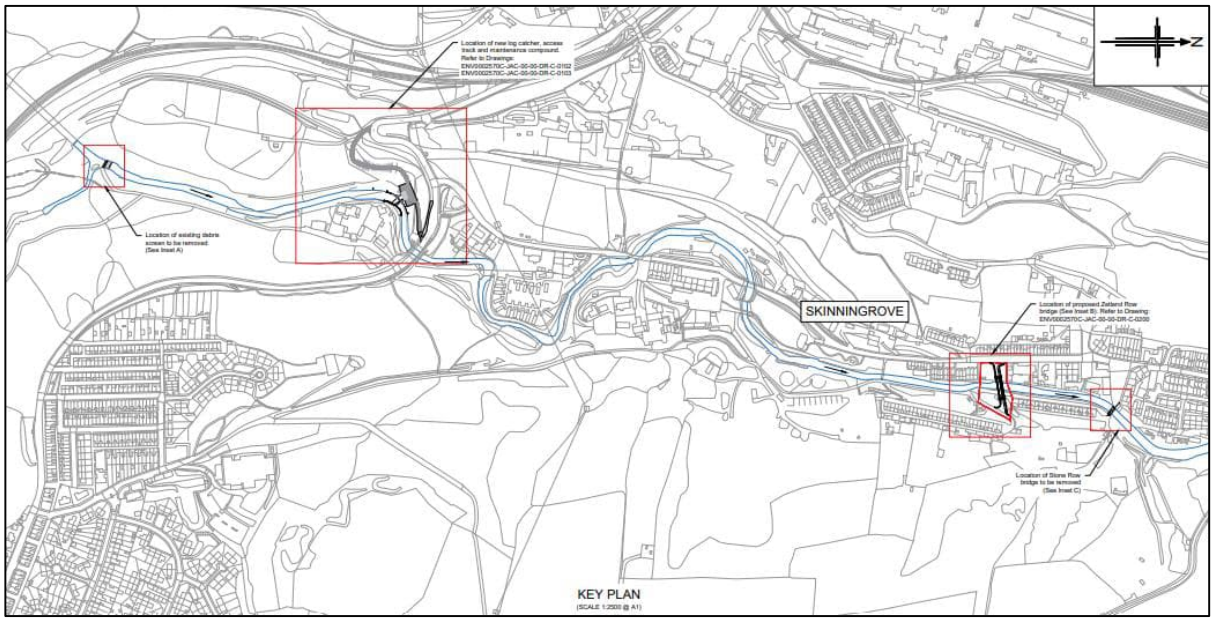
Construction phase duration (weeks)	TBC
Start date on site	TBC
F10 Submittal & Closeout Dates	TBC
F10 Reference	TBC

2.5 Site Location

Stone Row Bridge - NZ 71354 19869

Log Catcher - NZ 71010 18492

New Zetland Row Bridge - NZ713196



2.6 Principal Duty Holders

CDM Roles & Responsibilities

CDM Role	[redacted]	Phone Number
Client *		
Client - Project Manager		
Principal Designer		
Designer *		
Principal Contractor		
Contractor *		
Others As Relevant		

Scheme Contact Arrangements

Job Title	[redacted]	Phone Number
Senior User		
Field Team Leader		
Asset Performance Team Leader		
NEAS/FB&G Lead		
Environmental Clerk of Works		
Health Safety & Wellbeing Advisor		
PSRA Area Lead		
Landowners		
Others As Relevant		

2.7 Application of the Workplace (Health and Safety) Regulations 1992

The completed structure is not envisaged to be classified as a workplace in accordance with the definitions contained in Workplace Health Safety and Welfare Regulations 1992.

All project Designers for the structure(s) shall ensure that they take suitable account of the Workplace Health Safety and Welfare Regulations 1992 in their design particularly in relation to the health and safety for the future use and maintenance of the structure. It must be remembered that even though the structure may not be a workplace for normal use consideration must be given towards maintenance activities and the safe access and egress to and from the structure by and with adequate segregation of vehicular and pedestrian movements.

2.8 Existing Records and Plans

All information referred to in this report is either issued to the Designer as part of the preconstruction documentation, held within the supporting files identified.

Health and Safety Files exist for the Skinningrove flood defences for the works undertaken in 2016, copies have been made available and handed over to the design team.

3.0 Client's Arrangements and Requirements

3.1 Health, Safety and Environmental Goals

The health and safety principles for this project will be:

- To meet all statutory requirements.
- To have zero accidents on site during the construction period.
- To have no case of occupational ill health arising from working on the project.
- Use the general principles of prevention in identifying and implementing precautions which are necessary to control risks associated with the project, as required under the Construction (Design and Management) Regulations 2015.
- To ensure any residual risks are minimised and highlighted where appropriate.
- To ensure that no environmental damage occurs.
- To follow guidance for work involving hazardous materials.

3.2 Site Security

No additional measures over and above the requirements of the EA's SHEWCoP have been identified.

3.3 Welfare Facilities & First Aid

No additional welfare measures over and above the requirements of the EA's SHEWCoP have been identified.

3.4 Emergency Procedures

The nearest A&E hospital to site is the James Cook, University Hospital, Marton Road, Middlesbrough, TS4 3BW. Approximately 30 minutes and 17 miles from site

Redcar Primary Care Hospital West Dyke Road, Redcar, Cleveland, TS10 4NW
Approximately 23 minutes, 11 miles from site.

Owing to the nature of works, distance, and travel times the client suggests that the site install an Automated External Defibrillator (AED).

3.5 Fire Precautions

No additional measures over and above the requirements of the EA's SHEWCoP have been identified.

3.6 Permit to Work Systems

For any electrical work part 2 of the Environment Agency's code of practice for electrical safety applies (LIT 13133).

Briefly these codes of practice outline the responsibilities of the Environment Agency's Supra-Area Mechanical, Electrical, Instrumentation, Control and Automation (MEICA) team leaders. Also the responsibilities of those who work on or near Environment Agency electrical systems or equipment be they employees or contractors.

3.7 Site Transport Arrangements & Vehicle Movement Restrictions

There are no known road vehicle access restrictions. It is worth noting there are significant concerns over the stability of the track used to access the existing log catcher and the field team have red carded access with vehicles or plant, this and water access may need to be reviewed further due to

duty holder proposed methodologies. It is also worth noting that the A174 is hazardous to cross on foot at Kilton Mill Bridge.

Duty holders to note that flooding occurs within the location and surrounding areas.

3.8 Areas Designated as Confined Space

No areas designated as a confined space however, duty holders must identify any confined space resultant from their methodologies as per The National Classification system (NC) established by Water UK for confined space entries.

3.9 Site Demarcation & Signage Requirements

No specific site demarcation or signage has been identified by the Client.

4.0 Existing On-Site Risks & Environmental Restrictions.

Links to the project data are provided in the table below:

Project Data	Link
Data Review	01 - Data Review
Benefits Apportionment	02 - Benefits Apportionment
Topographic Survey	03 - Topographic Survey
Ground Investigation	04 - Ground Investigation
Services Search	05 - Services Search
Modelling	06 - Modelling
Appraisal	07 - Appraisal
Economics	08 - Economics
Outline Design	09 - Outline Design
Environmental	10 - Environmental
Business Case	11 - Business Case

4.1 Boundaries & Access

No specific boundaries or access issues have been identified at this stage of the project, this will be reviewed and updated at post design stage.

However note that current access track to Log Catcher site is “Red Carded” to vehicles.

4.2 Details of “no-go” or authorisation requirements

No specific authorisation issues have been identified at this stage of the project, this will be reviewed and updated as required at post design stage.

However note that current access track to Log Catcher site is “Red Carded” to vehicles.

4.3 Restrictions on Deliveries, Waste Collection and Storage

No specific restrictions have been identified at this stage, to be updated post design stage.

4.4 Client infrastructure & Services

Refer to the H&S Files for the existing asset.

4.5 Adjacent Land Use

Adjacent land use is predominantly residential and commercial, the Client is not aware of any construction work adjacent to the site.

4.6 Nature of Watercourse

The catchment is steep and heavily-wooded, and the Beck can carry large quantities of woody debris during high flows. The Beck is flashy and can respond very rapidly to heavy rainfall. Time to peak here is as little as 48 minutes.

4.7 Location of Existing Live Services

Service information has been provided by the client to inform the design. It is the contractor's responsibility to maintain this information and undertake searches as per the requirements of PAS 128 as a minimum, and any other searches such as pipelines, telemetry etc. that may be required. Designs must contain the PAS128 traffic light utility services investigation gauge, as per EA's AutoCAD standards.

4.8 Existing Contaminated Land

The Client is not aware of any contaminated land within 500m of the site.

4.9 Existing Storage of Hazardous Materials

The Client is not aware of any hazardous materials stored on site.

4.10 Existing Structures

Refer to the H&S File for the asset.

4.11 Existing Ground Conditions, Underground Structures & Watercourses

The Client is aware that there is an underground mill race (supplying Kilton Mill) beneath the land on the left bank of the Beck upstream of Kilton Mill Bridge (proposed site for new log catcher).

The Client is aware that there is an underground culvert beneath Grove Hill and Zetland Row that discharges through the existing flood defences. This culvert flooded in July 2024 and further investigation is ongoing at the time of update (September 2024).

4.12 Asbestos

The Client is not aware of any Asbestos on site.

4.13 Lead

The Client is not aware of any Lead on site.

4.14 Environmental Restrictions

To be advised at a later stage of the project.

4.15 Unexploded Ordnance (UXO)

A UXO desktop search shows the area as low risk which indicates there is no greater probability of encountering UXO than anywhere else in the UK.

5.0 Significant Design and Construction Hazards.

THIS SECTION TO BE UPDATED BY THE DESIGNER PRIOR TO ISSUE TO THE PRINCIPAL CONTRACTOR

Information has ~~/ has not been~~ made available regarding significant design and construction hazards at the time of compiling this PCI document.

Further info to the below is to be found in:

Title / Filename	Description
ENV0002570C-JAC-ZZ-XX-AS-C-0001	Constructability Assessment
ENV0002570C-JAC-00-00-RA-HS-0001	Designer's Risk Assessment
ENV0002570C-JAC-ZZ-XX-DS-C-0001	Outline Design Buildability Statement
Skinningrove FAS drawings	As built information for Skinningrove flood gates
Skinningrove drawings 14.05.20	Construction Drawings for reinstatement of flood defences at Stone Row following scour hole. Construction Drawings for parapet modifications. Photographs of works
Skinningrove structural assessment 2009	Full detailed report and appendices of asset asset inspection undertaken by Jacobs as part of North East Area Asset Inspections. Covers Area from telemetry station to downstream of Stone Row Bridge.
Skinningrove structural assessment 2020	Full detailed report and appendices of asset asset inspection undertaken by ARUP as part of North East Area Asset Inspections. Covers Area from telemetry station to downstream of Stone Row Bridge.
Channel Survey	Full channel survey topographic survey of Skinningrove Beck ranging from 2001 to 2021.
1973 Stone Row Bridge Design	Scanned images of Design stage drawings for the replacement bridge at Stone Row from 1973 to 2001 parapet replacements.
Skinningrove EA Assets Map	Location of existing EA Assets (gauge, monitoring, siren, power supply etc.)

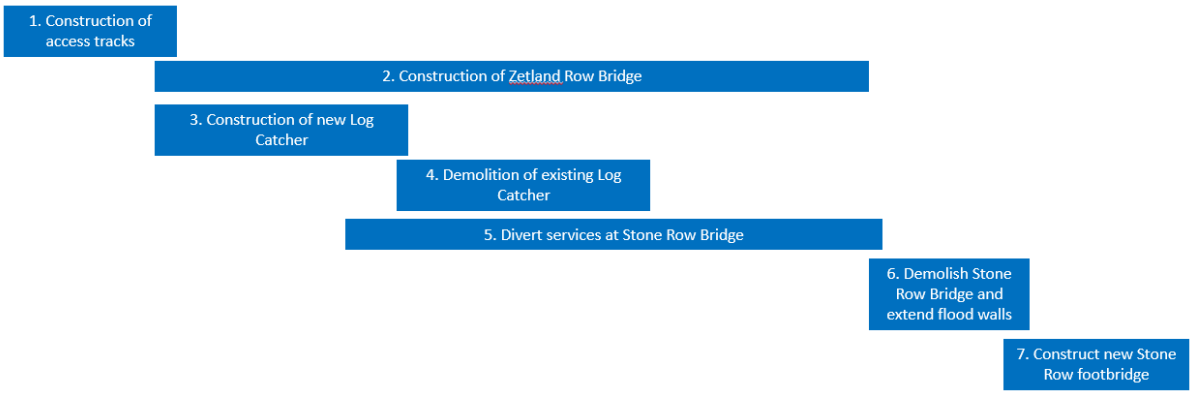
5.1 Significant Design Assumptions

TAKE FROM DRAWINGS AND BRIDGE TECH NOTE

- The information provided and presented in this drawing is for collaboration purposes only with Jacobs' client, Environment Agency. Information herein is developed using best available information contemporary to the outline stage of design. The Royal Institute of British Architects (RIBA) Plan of Work has been used to interpret the level of development required as being to RIBA Stage 2 – Concept Design and is subject to change in light of site-specific information. Designs have been prepared in line with the agreed scope and project brief prior to this design stage.

- Please note that site specific information, including topographic information and ground investigation, was not available at time of drawing production.
- Full extent of design is indicative only and is subject to change at the Detailed Design stage.
- Debris screen location, arrangement and extent shown indicatively only. Arrangement subject to change at detailed design stage. Pole spacing to be arranged in accordance with CIRIA C786 'Culvert, Screen and Outfall Manual'.
- Proposed foundation arrangement has been based on information available. Full foundation design is subject to change following ground investigations, which were not available at time of drawing production.

5.2 Suggested Work Methods, Sequences or Other Control Measures



(as provided by BAM)

5.3 Temporary Works

Piled or alternative foundations may be required in the main compound to accommodate crane and pump outriggers. The location of piles should be determined based on the typical location of outriggers on these vehicles.

Shuttering and scaffolding around bridge abutments/piers will be required including crash nets over water course.

The "Riverside Building" car park is to be utilised as a compound and working area for the duration of the works.

A second compound is to be located on the east bank footpath area. It is assumed that the site area will include the grass bank.

On completion of the access tracks to the new Logcatcher location, a secondary compound can be made there as needed to construct the new Logcatcher.

5.4 Materials Requiring Particular Precautions

Temporary stability of bridge beams during transportation and within site lay down area. Beams may be delivered individually or as a braced system depending on construction methodology and delivery route/site access conditions. Therefore there will need to be provisions made so that beams do not topple over or collapse until they are lifted into their final position and the concrete deck is poured.

5.5 Significant Risks Identified During Design

High residual risks identified are:

- Working in constrained village setting. People/Plant/and Vehicles in close proximity. Collisions between vehicles and or pedestrians
- Working adjacent to A174. Collisions between vehicles and or pedestrians
- Surcharging of loading adjacent to river. Especially in car park. Has potential to blow out walls adjacent to channel. Potential collapse.
- Removing new log catcher. Working in watercourse. Rapid onset of flooding and peak flows. Large debris in watercourse
- Removing new log catcher. Collapse of bank

5.6 Public Safety Risk Assessment

Top residual risks include:

- Departure from DMRB standards increasing road safety risk to users.
- Departure from Inclusive Mobility guidance for pedestrian access
- Collisions on bridge if single carriageway
- Collisions of larger vehicles into bridge due to low headroom (subject to design brought forward to FBC)

6.0 Health and Safety File.

The health and safety file is an important document required by the CDM regulations, whenever a project involves more than one contractor. Information for the health and safety file is collated from all CDM duty holders throughout the project lifecycle, and it's important everyone understands what should be included.

The Principal Designer will prepare a health and safety file during the pre-construction phase in agreement with the Client. This will be appropriately reviewed, updated, and revised to take account of the construction phase and any changes that have occurred. The health and safety file must be appropriate to the characteristics of the project and include a level of detail proportionate to the risks. It should only include relevant information, be in a convenient form and easily understandable.

It must not include contractual information, pre-construction information, information about the construction process unless it may affect future works, or information about the normal operation of the completed structure. The information contained in other documents should not be replicated in the health and safety file, instead, it should be cross-referenced when relevant, for example a Public Safety Risk Assessment.

It is proposed that the Principal Contractor incorporates suitable procedures within their construction programme to acquire such information for provision to the Principal Designer in a timely manner.