



Framework: Collaborative Delivery Framework  
Supplier: BAM Nuttall Ltd  
Company Number: 00305189

Geographical Area: North East  
Project Name: Ormesby Beck Phase 1  
Project Number: [REDACTED]

Contract Type: Engineering Construction Contract  
Option: Option C

Contract Number: [REDACTED]

Stage: Construction

Revision	Status	Originator	Reviewer	Date
0	Draft	[REDACTED]	[REDACTED]	28/04/2022
0.1	Draft	[REDACTED]	[REDACTED]	04/05/2022
0.3	Superseded	[REDACTED]		13/07/2022
0.4	Final - [REDACTED]	[REDACTED]		22/07/2022

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

Project Name Ormesby Beck Phase 1

Project Number

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  
Ormesby Beck Restoration NEC4 ECC Scope v3 - 07072022

### 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*

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

The works comprise the removal of elements of the North Ormesby Tidal Barrage (EA asset ID: 341527) and the Navigation Trash Screen (EA asset ID: 388196) on the Ormesby Beck, and ancillary works to make the sites safe.

The *Client* is

Environment Agency

Address for communications

Tyneside House  
Skinnerburn Road  
Newcastle Business Park  
Newcastle upon Tyne  
NE4 7AR

Address for electronic communications [REDACTED]

The *Project Manager* is [REDACTED]

Address for communications [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Address for electronic communications [REDACTED]

The *Supervisor* is tbc

Address for communications

Address for electronic communications [tbc](#)

The *Scope* is in  
Ormesby Beck Restoration NEC4 ECC Scope v3 - 07072022

The *Site Information* is in  
Ormesby Beck Restoration Site Information v1 - 20072022

The *boundaries of the site* are  
[REDACTED]-00-00-DR-C-1100-S3-P03-Site\_Location\_Plan

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

<i>condition</i> to be met	<i>key date</i>
'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 08 August 2022

The *access dates* are  
part of the Site date  
Boro taxis yard 22nd August 2022

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

The *Completion Date* for the whole of the *works* is 05 December 2022

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 issue, environmental damage is 24 Hours  
• 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 £501,443.56

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 Middlesbrough Met Office Location Data (Lat 54.5741 Long -1.2334)

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:

- cumulative rainfall (mm)
- number of days with rainfall more than 5mm
- number of days with minimum air temperature less than 0 degrees celsius
- number of days with snow lying at 09:00 hours GMT
- 

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 Office Location Data (Lat 54.57 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. The Working Areas are flooded and the river level is greater than 2.8m measured at a temporary gauge to be installed by the Contractor. Photographic evidence of the water level with date and time stamp to be provided by the Contractor.
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

nil

Resolving and avoiding disputes

The *tribunal* is litigation in the courts

The *Senior Representatives* of the *Client* are

[REDACTED]

Address for communications

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Address for electronic communications

[REDACTED]

Name

[REDACTED]

Address for communications

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Address for electronic communications

[REDACTED]

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 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

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 *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 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.

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.

Z19 Linked contracts

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

Z21 Requirement for Invoice

Add the following sentence to the end of clause 51.1:

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

Delete existing clause 51.2:

51.2 Each certified payment is made by the later of

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

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

Z22 Resolving Disputes

Delete W2.1

Z23 Risks and insurance

Replace clause 84.1 with the following

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

Z30 Material Price Volatility

The *Client* recognises the ongoing pricing uncertainty in relation to materials for the period from 1 July 2021 to 30 June 2022 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:  
 $\text{Assessment} \times \text{MF} \times \text{L} = \text{PVP}$

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 2022 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 2022 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	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.

# Contract Execution

**Client execution** [Redacted]  
Signed as a Underhand by [PRINT NAME]

for and on behalf of the Environment Agency

[Redacted Signature]  
[Redacted Date]

Signature

Date

[Redacted Role]

Role

## Contractor execution

Signed as a Underhand by [PRINT NAME]

for and on behalf of BAM Nuttall Ltd

[Redacted Signature]  
[Redacted Date]

Signature

Date



[Redacted Role]

Role



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 £148.77 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.

[Redacted]

[Redacted]

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	<i>beneficiary</i>
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

St James House  
Knoll Road  
Camberley  
Surrey  
GU15 3XW

Address for electronic communications

The fee percentage is

Option C

The working areas are

BAM and Subcontractor site offices and premises and working areas shown in boundaries of the Site drawing within the Scope

The key persons are

Name (1)

Job

Responsibilities

Qualifications

Experience

The key persons are

Name (2)

Job

Responsibilities

Qualifications

Experience

The key persons are

Name (3)

Job

Responsibilities

Qualifications

Experience

The key persons are

Name (4)

Job

Responsibilities

Qualifications

Experience

The following matters will be included in the Early Warning Register

2 The Contractor's main responsibilities

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

3 Time

The programme identified in the Contract Data is

5 Payment

The *activity schedule* is

Resolving and avoiding disputes

The *Senior Representatives* of the *Contractor* are

Name (1) [REDACTED]  
Address for communications  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Address for electronic communications  
[REDACTED]

Name (2) [REDACTED]  
Address for communications  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Address for electronic communications  
[REDACTED]

X10: Information Modelling

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

Y(UK)1: Project Bank Account

The *project bank* is  
not used

*named suppliers* are

# Environment Agency

## NEC4 engineering and construction contract (ECC)

### Scope

#### Project / contract information

Project name	Ormesby Beck Restoration Scheme
Project reference	[REDACTED]
Contract reference	[REDACTED]
Date	07/07/2022
Version number	D2.P0
Author	[REDACTED]

#### Revision history

Revision date	Summary of changes	Version number
08/04/2022		[REDACTED]-XX-XX-SO-C-0001-S3-P01----NEC4_ECC_Scope_Document
05/05/2022	DgC Review	[REDACTED]-XX-XX-SO-C-0001-S3-P01----NEC4_ECC_Scope_Document
06/05/2022	Post DgC review changes	[REDACTED]-XX-XX-SO-C-0001-S3-P02----NEC4_ECC_Scope_Document
13/06/2022	Post EA review changes	[REDACTED]-XX-XX-SO-C-0001-D2-P01----NEC4_ECC_Scope_Document
07/07/2022	Post BAM review	[REDACTED]-XX-XX-SO-C-0001-D2-P01----NEC4_ECC_Scope_Document V3

This Scope should be read in conjunction with the version of the Minimum Technical Requirements referred to in table below, the *Client's* work specification included at S1701 provides details on the integration of the Minimum Technical Requirements into the Scope and any project specific changes. The *works* are to be compliant with the following version of the Minimum Technical Requirements:

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

Document	Document Title	Version No	Issue date
412_13_SD01	Minimum Technical Requirements LIT 13258	V12	December 2021

## Contents List

<b>S 100</b>	<b>Description of the <i>works</i></b>
<b>S 200</b>	<b>General constraints on how the <i>Contractor</i> provides the <i>works</i></b>
<b>S 300</b>	<b><i>Contractor's</i> design</b>
<b>S 400</b>	<b>Completion</b>
<b>S 500</b>	<b>Programme</b>
<b>S 600</b>	<b>Quality management</b>
<b>S 700</b>	<b>Tests and inspections</b>
<b>S 800</b>	<b>Management of the <i>works</i></b>
<b>S 900</b>	<b>Working with the <i>Client</i> and Others</b>
<b>S 1000</b>	<b>Services and other things to be provided</b>
<b>S 1100</b>	<b>Health and safety</b>
<b>S 1200</b>	<b>Subcontracting</b>
<b>S 1300</b>	<b>Title</b>
<b>S 1400</b>	<b>Acceptance or procurement procedure (Options C and E)</b>
<b>S 1500</b>	<b>Accounts and records (Options C and E)</b>
<b>S 1600</b>	<b>Parent Company Guarantee (Option X4)</b>
<b>S 1700</b>	<b><i>Client's</i> work specifications and drawings</b>
<b>Appendix 1 BIM Protocol – Information Production and Delivery Table</b>	

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

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

The North Ormesby Tidal Barrage (NZ5135920461) was constructed in the 1995 by Middlesbrough Borough Council, which included the diversion and culverting of Middle Beck. The barrage is currently maintained by the Environment Agency, but it is difficult to access for maintenance and debris removal. In 2010 the Navigation Screen (NZ5111420434) was constructed upstream of the barrage, which is easier to access but debris build has remained an issue on both structures.

The works comprise the removal of elements of the North Ormesby Tidal Barrage (EA asset ID: 341527) and the Navigation Trash Screen (EA asset ID: 388196) on the Ormesby Beck, and ancillary works to make the sites safe. Post project completion the Environment Agency will cease any maintenance interventions at the removed assets and there will be a formal handover to Middlesbrough Council.

In summary high level description of works as follows

Tidal Barrage removal high level description of works

- Establish secure compound with welfare facilities at the northern extent of Boro Taxis land.
- Set up traffic / pedestrian management / segregation arrangements within the Boro Taxis land.
- Removal of the existing fence to the top of the right bank at the barrage and replacement with lockable gate.
- Install Silt Screens in the channel downstream of the Tidal Barrage with disturbance to the silt being minimised so far as reasonably practicable.
- The access/egress to the Tidal Barrage would be from the proposed compound area set up within the Borough Taxis land.
- A temporary staircase would be required to facilitate safe access down the slope of the right bank of Ormesby Beck.
- The crane set up for construction / lifting operations would be on the right bank top of Ormesby Beck just to the east of the existing building.
- Enabling works prior to installation of temporary works. For example but not limited to: remove debris build up and silt deposits to concrete aprons.
- Temporary works as required to deliver the Scope
- Fish rescue operations as and when required, assumed two number occasions. This will involve co-ordination as S903
- The removal of existing piers / in-channel components at the Tidal Barrage by diamond coring and sawing techniques
- Removal of concrete steps and fencing to the left bank of the barrage
- Replace existing dilapidated fencing / wooden posts adjacent to tidal barrage

Navigation Screen removal high level description of works

- The lifting operations for the removal of the screen components at this location would be from the Navigation Inn car park.
- Install temporary fencing within Navigation Inn and to the left bank of Ormesby Beck and allow for management / segregation of users of the footpath.
- Temporary works as required to deliver the Scope
- Removal of screen and ancillaries
- Unbolt and / or Cut/Burn panel and connections whilst each segment is secured by chains
- Lift out in sections using telehandler via Navigation Inn car park
- Remove existing concrete plinth and replace with stone pitching system to tie in with the adjacent stone pitching to the access ramp, thus removing fall from height risk



- Undertake works to the gabions wall adjacent to the ramp i.e. replace 3-off defective gabions at the top of the bank

The *Contractor* is responsible for the design of the Temporary Works / Equipment (Equipment is defined at NEC4 ECC Clause 11.2 (9)) required for the safe removal of the two assets in this tidal environment.

The drawings describing the *works* include;

- The Location and Access plan (1100) shows the location of the sites, red line site boundary, indicative access points and site compound. The England Coastal Path is also shown on this drawing
- The Hazards and Constraints Site Plan (1303) shows an overview of the Hazards and Constraints and the associated Safety, Health, Environmental, and Welfare Information (SHEW) Boxes are presented.
- The Hazards and Constraints Plan (1303) shows zoom in views of the Navigation Screen and Tidal Barrage locations and more detail on the SHEW box items / hazards and risks coming out of the Design Risk Assessment process.
- The Site Clearance and Demolition plan (1101) show an overview of the site area and zoom in views of the Navigation Screen and Tidal Barrage locations. This drawing shows the scope of works in relation as to what is to be removed.
- The General Arrangement drawing (1300) provides information on the permanent works to be implemented at the Navigation Screen and the Tidal Barrage in conjunction with the site demolition and site clearance.
- The Details drawing provides more details with respect to the permanent works to be carried out and specification notes are provided for the salient works.

Within this document Section 201 General Constraints, the Pollution, Ecological and Environmental impacts are covered. The *Contractor* shall abide by the provisions of the Environmental Action Plan (EAP) and abide by the provisions of the Marine Management Organisation (MMO) Licence, Habitat Regulations Assessment (HRA) and Site of Special Scientific Interest (SSSI) assent. Furthermore, the Hazards and Constraints drawings shows the environmental related SHEW boxes.

## S 102 Purpose of the works

The Tees Estuary is one of the most heavily modified and developed estuaries in the UK, with less than 10% of the original intertidal habitats remaining. There are tidal control structures on all of the major tributaries of the estuary that prevent natural estuary processes and fish migration. The few remaining natural areas of the estuary are dominated by flood defences, industrial quaysides and tidal barriers. These features all prevent natural expansion or contraction of the estuary.

Tees Tidelands is an estuary wide programme to open up the tributaries to tidal influence, to enable fish passage, re-establish parts of the natural estuary and permit inland migration of the estuary. The programme is aligned with statutory environmental objectives of the Water Framework Directive and the Northumbria River Basin Plan to attain good ecological potential in the Tees estuary.

The objectives of this contract for the Ormesby Beck project are to;

- Safely remove the North Ormesby Tidal structure and Navigation Screen to a high standard of health, safety, and welfare
- Reduce the maintenance requirements for EA field team in the area, therefore reducing the risk associated with working in or near water
- Minimise environmental damage during the works and protect existing features
- Minimise disruption to others, including pedestrians and vehicular traffic
- Promote sustainable use of resources

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

### S 201 General constraints

#### Use of the Site

- With the exception of security staff, people shall not remain on the Site overnight without the written agreement of the *Client*.
- The *Contractor* does not enter or use the Site for any purpose not connected with the *works*.
- The *Contractor* shall ensure that the necessary permissions from Network Rail are obtained in connection with any works affecting their operational land. This would be for example if the crane radius were to extend over the Network Rail Fence.
- The *Contractor* shall provide appropriate measures (including fencing and / or banksman) to prevent public access to the Site and working area

#### Access to the Site

- The *Contractor* shall notify the *Client* 14 days in advance of their intention to first enter or occupy each Working Area within the Site.
- The *Contractor* shall maintain close liaison with the *Client* with ensuring all necessary landowner agreements and issued notices are in place prior to entry onto Site and secure Working Areas
- To enable the Client to prepare each Notice of Entry, the Contractor will provide;
  - Marked up plan of the Working Area required
  - Duration of the works and entry requirements
  - Access arrangement
  - Site safety requirements
- The *Contractor* is to identify and complete any condition surveys prior to taking entry.
- The *Contractor* shall keep occupiers informed of the effect of the works on their land through a weekly updated. A record of these updates will be kept and provided to the *Client*.
- The *Contractor* shall maintain safe access and egress routes for pedestrians and vehicles requiring access to areas affected by the works.
- Where access cannot be maintained, a closure or diversion route shall be agreed with the *Client* and landowner. The *Contractor* will be responsible for obtaining any paying for all temporary closures and permanent diversion of footpaths or highways impacted by the works.
- The proposed access routes are to be confirmed by the *Contractor* and designated in the Construction Phase Plan. The *Contractor* is to obtain any additional approvals from relevant

landowners, third parties or local council and incorporate any specific requirements as necessary.

#### Deliveries

- The *Contractor* will liaise with the *Client* and the landowner when deciding on suitable times for vehicles accessing the site. The *Contractor* will liaise with the landowner when moving others vehicles for access should this be required.
- The Contractor will comply with the Minimum Technical Requirements.

#### Noise and vibrations

- The Contractor shall liaise with the Local Authority and comply with their requirements for noise control
- The Contractor shall take all reasonable precautions to minimise the noise arising from their plant, vehicles and method of construction, and shall adopt the relevant recommendations of BS 5228: 2009.

#### Working hours

- Normal working hours will be from 06:00 to 20:00 Monday to Friday. Where practicable, operations which may cause noise and or vibration disturbance should be scheduled for daylight working.
- It is the responsibility of the *Contractor* to liaise with the landowner/occupier to ensure the timings for access to the site is possible during this period.
- No work shall be executed outside these times or on weekends and public holidays without prior written acceptance of the *Client* and a minimum notice period of two weeks is required.

#### Parking

- The *Contractor* will provide adequate parking for Site based personnel and visitors within the site compound. No parking is allowed outside of the area unless the *Contractor* enters into a specific agreement with the landowner.
- The *Contractor* shall ensure that a traffic plan is produced and included in the Construction Phase Plan. It is expected that this will include as a minimum;
  - Parking areas within and off-site
  - Access to site
  - Vehicular traffic routes
  - Pedestrian walkways
  - Proposed closure of the England Coast Path route
  - Consideration of parking arrangement in the design of the compound

#### Use of cranes

- Where the use of cranes is required at the Tidal Barrage the *Contractor* shall prepare site specific temporary works designs and RAMS in connection with the lifting operations to ensure adequate stability of the lifting equipment. In planning the lifting operations the *Contractor* shall refer to the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER). Approved Code of Practice and guidance December 2014 (with amendments 2018). Loading and unloading activities should only be carried out by authorised personnel in compliance with LOLER requirements
- There shall be no travel of the crane jib over the Network Rail fence line.
- The crane zone is above Northumbrian Water underground sewers and the existing underground sewers will be subject to pre and post-condition CCTV survey reviewed by asset owner Northumbrian Water prior to installation of any crane mats or similar temporary works.

- The *Contractor* must also consider the safety of lifting operations and stability thereof using excavators and telehandlers at the Barrage and the Navigation Screen.

#### Restrictions on the use of hazardous materials

- The Contractor will minimise and control the use of deleterious and hazardous material.
- Explosives are not to be used on Site.
- Refer to the Minimum Technical Requirements.

#### Storage of fuel and chemicals

- Refer to the Minimum Technical Requirements.
- See Section 4.31 of SHEW Cop Pollution Prevention for further *Client* requirements

#### Pollution, ecological and environmental impacts.

- Section 4.31 SHEWCOP Pollution Prevention and 4.32 SHEWCOP Biosecurity and Invasive and Non-native species provide for minimum requirements to be complied with.
- INNS have been identified on site as detailed on the Hazards and Constraints designs drawings, including Giant Hogweed.
- A Preliminary Environmental Information Report (PEIR) has been prepared and is included with the Pre-Construction Information / Site Information. The PEIR is intended to:
  - Summarise the environmental baseline at the sites;
  - Provide a summary of the environmental assessment which has taken place to date;
  - Identify key environmental issues and mitigation measures to be actioned within an Environmental Action Plan; and
- An Environmental Action Plan has been prepared and is included with the Pre-Construction Information. The EAP is issued to the *Contractor* for adherence to during the construction works. It summarises the actions required to be implemented and sets out specific objectives and targets defining the way in which environmental risks need to be addressed.
- The *Contractor* shall be responsible for implementing those actions allocated to the *Contractor* in the EAP and in this connection the *Contractor* is required to develop and implement a Construction Environmental Management Plan (CEMP). The CEMP will detail procedures and guidelines to be followed by the *Contractor* to ensure generic site environmental aspects are managed adequately.
- The Contractor is to submit their Risk Assessments and Method Statements to the Client and liaise with the Clients Fisheries, Biodiversity and Geomorphological team.
- The *Contractor* is responsible for advising the *Client* on any changes to method statements or the planned construction work as these may result in changes to the EAP or additional consultation with statutory consultees.
- The key actions and responsibilities relating to licences and consent for the *Contractor*, during the Contract, from the EAP are summarised below. Note: the full requirements of the EAP shall be taken into account by the *Contractor*.

EAP Ref	Action	Responsibility
DC2	Abide by temporary footpath diversion application. Ensure appropriate signage is installed at the point of diversion for the public footpath.	<i>Contractor</i>
DC3	Comply with MMO licence.	<i>Contractor</i>
DC4	Abide by HRA. Abide by SSSI assent.	<i>Contractor</i>
DC9	Works to be undertaken between 15th June and 31st October. Works to be undertaken allowing the channel to	<i>Contractor</i>

	flow at all times where the sections of inner walls and flap valves are removed.	
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The EAP is a live document and the version current at Contract Award will be conformed into the Contract.

#### Archaeological requirements

- In the event that anything that may be of archaeological interest is uncovered, all work will cease within the vicinity of the find and the Client will be notified.

#### Interfaces between the works and existing things.

- Not used

#### Occupied premises and users.

- Refer to Minimum Technical Requirements

#### Client specified policies and procedures

- Refer to Pre-Construction Information

#### Constraints imposed to meet the requirements of Others (example funders).

- Not used

#### Tide Information and Watercourse Information

- The site is tidally affected. Topographical survey levels (shown as mAOD) are presented in metres above Ordnance Datum Newlyn and the levels can be converted to the Tees Port Tide Table chart datum by adding 2.85 metres and vice versa convert from Chart Datum to AOD by subtracting 2.85m
- From the Tidal data River Tees

Water level (mAOD)	Highest recorded High Water	HAT	MHWS	MHWN
	4.3	3.25	2.7	1.45

Note: HAT is Highest Astronomical Tide; MWHS is Mean High Water Springs and MHWN is Mean High Water Neaps

- The *Contractor* shall plan its works around the tidal ranges from the *starting date* until Completion. The Tees Port Tide Tables are available at <https://www.pdports.co.uk/wp-content/uploads/2021/12/V2-PD-Ports-Tide-Tables-2022.pdf>
- Fluvial events run with 2-year tidal boundary with the barrage in place provides modelled water levels as follows:

Water level (mAOD)	2 Year fluvial	10 Year fluvial	50 Year fluvial	100 Year fluvial
At Tidal Barrage downstream (TBar_57d)	3.58	3.58	3.58	3.58
At Tidal Barrage upstream (ORM01_90i)	2.91	3.54	3.76	3.80
At Navigation Screen (ORM01_290i)	2.91	3.54	3.76	3.81

The level of the top of the tidal barrier is 3.25m A.O.D. and it can be seen it would be fluvially overtopped during a 1 in 10 year event, combined with the 2 year tidal boundary. Modelling of a fluvial situation following partial removal / removal of the barrage has not been undertaken because the dominant flood risk is from high tides.

#### Sustainability targets

- The *Client* has an Environmental Management System (EMS) that is certified to ISO14001:2015 standards. As part of this, the *Client* takes a full lifecycle approach to the identification and management of the significant environmental risks and opportunities in procurement activities. The *Client* requires suppliers to embrace and adopt the same approach and reduce the environmental and social impact of this framework over its full lifecycle in addition to fully realising any benefits or opportunities that may exist.
- The *Contractor* must ensure that any impacts identified are reduced to benefit the environment and society, and that they are not passed on to another lifecycle stage. This includes considering and reducing those impacts that lie outside of the supplier's direct operation and impact on both the *Client* as a customer and on the *Contractor's* supply chain.

#### Timber and tropical hardwood requirements

- Refer to the Minimum Technical Requirements

### **S 202 Confidentiality**

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

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

### **S 203 Security and protection on the site**

The requirements for site security and protection of the public are detailed in section 2.4 Site Security of the Pre-Construction Information document and Client's Works Specification Clause 1.9 covers Temporary Site Fencing and Gates.

Section 4.3 of SHEWCOP is relevant and must be complied with.

The *Contractor* will ensure that the site shall be secured during operational hours and out of hours to ensure no access by members of the public. All plant and equipment shall either be locked away or immobilised out of hours to prevent unauthorised operation.

The *Contractor* must make sure the works do not affect the security of Others.

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

The *Contractor* will ensure that all personnel are provided with the *Client's* site induction as well as a site-specific induction. The *Contractor* will ensure that all personnel will sign in and out of an attendance register.

All *Contractor* and Subcontractor personnel should be in possession of a current and appropriate level CSCS card.

Section 4.4 of SHEWCOP regarding Site Inductions is relevant and must be complied with.

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

All consultation and liaison with statutory undertakers are the responsibility of the *Contractor*.

The *Contractor* shall confirm the location of all the services identified in the Site Information. It is the *Contractors* responsibility to report any changes to the *Client*. Services identified by the *Contractor* that are not identified in the Site Information, and have an impact on the Works, will result in a Compensation Event.

The *Contractor* will keep an updated combined services drawing that is updated with confirmed service locations and unchartered services that are found during the works. These will be made available to the *Client*.

#### **S 206      Protection of the works**

Not used.

#### **S 207      Cleanliness of the roads**

Existing public highways, including footpaths, used by vehicles of the *Contractor* and suppliers will be kept clean and clear by the *Contractor*.

#### **S 208      Traffic Management**

The *Contractor* shall prepare a Traffic Management Plan (TMP). Section 2.6.10 Parking of the PCI document and Section 4.26 SHEWCOP Traffic Management Plan (TMP) sets out minimum requirements. As a minimum the TMP shall consider

- Access to site with consideration of HGV deliveries / equipment movements / removal of concrete, steelwork and silt / debris from the bed at the Tidal Barrage
- Vehicular traffic routes around/through the site, including those required for the emergency services
- Pedestrian routes and public rights of way and diversionary routes required upon footpath closure
- Parking areas
- Storage areas

Where necessary the *Contractor* agrees traffic management measures to be implemented with the local Highway Authority and complies with their recommendations on access routes, site access points, signage, highway cleaning and making good any damage to the highway.

Access and egress arrangements for emergency services to be considered and detailed in the TMP.

#### **S 209      Condition survey**

A precondition survey of the NWG sewer has already been carried out by the Contractor as part of a separate contract.

The *Contractor* undertakes similar 'Post-completion' condition surveys when the work is complete and on dates agreed with the *Client*. Copies of the 'Post-completion condition surveys are distributed in the same format no later than two weeks after Completion. The *Contractor* shall agree the extent of the CCTV with the relevant service provider.

The photographs from the survey will show defects such as cracks, structural damage and any other visual faults. Defects shall be measured and recorded to provide a schedule of defects for use if necessary

The survey record should be stored in the BIM archive.

#### **S 2010      Consideration of Others**

Refer to Minimum Technical Requirements

#### **S 2011      Control of site personnel**

Not used

#### **S 2012      Site cleanliness**

Refer to Client's Work Specification Clause No 1.5 Tidiness of Site

#### **S 2013      Waste materials**

Section 2.18 SHEWCOP Waste, details the requirement for a Site Waste Management Plan (SWMP).

Refer to Client's Minimum Technical Requirements for further Management of Waste requirements

#### **S 2014      Deleterious and hazardous materials**

No hazardous material is expected to be stored on site other than standard construction material that is normally stored within secure containers on site and fuels stored in appropriate storage tanks

The *Contractor* advises the *Client* in writing of any substances that it proposes to bring on the Site that fall within the 'Control of Substances Hazardous to Health' Regulations, or otherwise require special precautions to be taken. Such advice is to include copies of all relevant COSHH assessment sheets

If applicable, any Hazardous material to be disposed of in accordance with relevant regulations. The requirements of 4.13 SHEWCOP Control of Substances Hazardous to Health, (COSHH) shall also be followed.



## **S 300 Contractor's design**

### **S 301 Design responsibility**

The *Contractor's* design responsibility is limited to the design of the Equipment required to safely deliver the project. The following sections relate to Equipment / Temporary works to be designed by the *Contractor*.

NEC4 ECC Clause 11.2(9) states Equipment is items provided and used by the *Contractor* to Provide the Works and which the Scope does not require the *Contractor* to include in the works (a.k.a temporary works).

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

The *Contractor* is required to submit details of the Equipment design for the temporary working arrangements for the removal of the Tidal Barrage and lifting operations from within the proposed compound area.

The design submission procedures proposed for the Equipment is to be included in the Construction Phase Plan. SHEWCOP Section 4.24 Temporary Works provides further guidance on Temporary Works and *Client's* requirements.

The *Contractor* shall submit the details of the Equipment proposed at least 4 weeks in advance of the programmed works to allow time for consultation and approvals with Others, including the *Client's* CDM advisor.

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

Northumbrian Water shall be consulted regarding the design of protection measures in the crane zone.

The Equipment / cofferdam proposed in the tidal conditions requires that an independent organisation not involved in the design and not consulted by the designer is required.

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

- Not used

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

In preparing the design of Equipment the *Contractor* shall ensure Co-ordination with the Principal Designer.

A Temporary Works Co-ordinator (TWC) shall be appointed to co-ordinate the TW design, as outlined in SHEWCOP Section 4.24.

**S 306      Requirements of Others**

The Contractor is responsible for obtaining and satisfying any necessary local authority requirements and shall have their approval prior to submission of designs.

**S 307      Copyright/licence**

Not used.

**S 308      Access to information following Completion**

Not used

**S 309      Site investigations**

Not used.

## **S 400      Completion**

### **S 401      Completion definition**

All the work is required to be done by the Completion Date.

The following are absolute requirement for Completion to be certified:

- Provide all information to the Principal Designer to allow the Principal Designer to compile the Health and Safety File
- As Built drawings in electronic version (pdf) and also compatible with AutoCAD
- Population of the *Client's* latest version of the Project Cost Tool, or its successor
- Transfer to the *Client* databases of BIM data
- Delivery of the Final Carbon Report

### **S 402      Sectional Completion definition**

Not used

### **S 403      Training**

Not used

### **S 404      Final Clean**

On Completion of the works, the *Contractor* returns the roads and any other affected existing works to a condition not inferior to that at the commencement of the works using the pre-condition survey for comparison purposes. All debris, unused materials, Equipment, and temporary works are to be cleared and dismantled from the site.

### **S 405      Security**

Not used.

### **S 406      Correcting Defects**

During the Defects period the *Contractor* will be required to liaise with the *Client* to arrange when work is to be undertaken.

The *Contractor* will be required to prepare Risk Assessments and Method Statements when correcting defects and also liaise with Others as may be required including statutory undertakers.

Non-critical Defects and Critical Defects shall be corrected in the timescales specified in Contract Data Pt1.

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

Prior to any works being offered for 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 in advance of the planned *Completion* and is to be arranged by the Contractor.

Representatives of Middlesbrough Council are key Stakeholders in the pre-completion arrangements and the *Client* will provide necessary contact details.

**S 408      Take over**

The *Client* does not require to use the works or parts of the works prior to Completion.

## **S 500 Programme**

### **S 501 Programme requirements**

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

The programme shall cover the activities to be undertaken by the Contractor and other members of the project team including all design consultants. This shall include all major project milestones.

The Contractor will develop the programme to incorporate these elements

- Appropriate review and consultation periods
- All highway and footpath closures notice periods
- All service diversions if required
- Site access dates

Refer to Client's Work Specification Clause 1.25.3 regarding programme requirements.

### **S 502 Programme arrangement**

The programme is to be produced in an electronic format in current Microsoft Project (\*.mpp) and \*.pdf formats.

The *Contractor* shall submit their programme for acceptance to the *Client*. It shall clearly identify those activities forming the critical path.

A baseline programme shall be provided by the *Contractor* and will be updated monthly for progress meetings with actual and forecast progress against the baseline in line with Clause 32.

### **S 503 Methodology statement**

Not used

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

The *Client* has no planned work along Ormesby Beck or relating to the assets to be removed.

### **S 505 Information required**

Not used.

### **S 506 Revised programme**

Refer to Clause 32 for details on the revised programme.

## **S 600     Quality management**

### **S 601     Samples**

Refer to Client's Work Specification Clause 2.164 regarding Material Certification

### **S 602     Quality Statement**

The *Contractor* shall submit a Quality Statement clearly setting out quality commitments for the Contracting organisation.

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

Unless agreed otherwise with the *Client*, the *Contractor* shall operate a Quality Management System complying with BS EN ISO 9001. The *Contractor* shall describe the Quality Management System that it intends to operate for the implementation for this scheme in a site specific Quality Plan.

The *Contractor* shall comply with all quality procedures associated with delivering the works. The *Contractor* shall also provide the following information specific to the works:

- Quality procedure for dealing with non-conformance
- Quality procedure for dealing with defects

Unless agreed otherwise with the *Client*, the *Contractor* shall ensure an Environmental Management System (EMS) is in place for this contract. This EMS is to comply with the spirit of ISO 14001 although accreditation is not mandatory.

The *Contractor* will be required to submit its complete general quality plan (*Contractor's* Quality Plan) to the Project Manager for acceptance within two weeks of the starting date, or at least two weeks before any permanent work commences, whichever is the sooner.

Detailed quality plans for each key item of work as agreed with the Project Manager, must be submitted to the Project Manager for acceptance at least one week before that work is due to commence.

### **S 604     BIM requirements**

The BIM Information Manager is the *Client* Project Manager. The *Contractor* will follow the latest version of the Environment Agency's Employers Information Requirements.

## **S 700      Tests and inspections**

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

- Not used

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

Refer to CESWI 7<sup>th</sup> Edition and the Minimum Technical Requirements.

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

Where the concrete is being removed at the Tidal Barrage and being made good with concrete repair system this shall not be covered up without notice being given to the *Client* by the *Contractor*, to enable the *Client* to make such arrangements as it deems necessary for inspection and checking.

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

The *Contractor* is to formally submit an Inspection Request Form providing 48 hours notice to witness a test or inspection as required. If unavailable, the *Contractor* will provide suitable photographic/video evidence to the *Client*.

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

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

The *Client*, Project Manager, Supervisor and *Contractor* are identified in the Contract Data.

The Principal Designer for the Pre-Construction Phase extending into the Construction Phase is JBA Consulting.

### **S 802      Communications**

Progress Meetings:

- The *Contractor* shall attend monthly progress meetings that are chaired by the Client and held virtually, unless communicated otherwise.
- For the meeting, the Contractor will produce a progress report in advance.
- The *Contractor* will also provide weekly photographic update reports, to be issued to the Client, to provide an update on progress.

Public Relations & Stakeholder Engagement:

- SHEWCOP Section 4.3 Project/Public Interface shall be followed

Contract Administration Forms:

- The *Contractor*, Project Manager and Supervisor shall use an NEC management software platform for the administration of the contract e.g. FastDraft or suitable equivalent. The *Client* shall set up this system and any training in relation thereto as soon as practicable after contract award.



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

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

The *Contractor* to obtain relevant consents and permits in respect of the temporary closure of the England Coast Path which runs along the left bank of Ormesby Beck. At all other times the footpath is to remain open and the *Contractor* shall be responsible for the safe segregation of footpath users and procedures when construction vehicles are passing, including use of banksmen / traffic marshals.

SHEWCOP Section 4.25 Site Plant and Equipment outlines that People and plant interface is of prime concern to the *Client* and construction teams must ensure adequate segregation between plant/vehicles and pedestrians. Appropriate arrangements must be in place to prevent persons being put at risk from operated plant. All task specific risk assessments must detail the safety control measures for keeping people safe when there is a legitimate need to work near plant. Whenever practicable pedestrian access to site must be by an alternative means other than via plant or vehicle access points. Pedestrian walkways, with appropriate barrier protection, should be established wherever reasonably practicable, (especially in the site office and compound areas).

### **S 902      Co-operation**

The *Contractor* co-operates with the affected stakeholders, as well as users of the areas around the site to enable efficient execution of the works with minimal disturbance to the local community. The *Contractor* should seek to engage with the community and respond promptly to complaints (relating to on and off-site activities), put things right and seek feedback.

### **S 903      Co-ordination**

When work is in progress, the *Contractor* will ensure there are effective arrangements for managing safety, health or environmental emergency incidents. Emergency practice drills for fire, evacuation, water rescue, harness recovery will be required within two weeks from commencement of work on site or other period as agreed in the Construction Phase Plan.

The *Contractor* shall liaise with and co-ordinate with the Environment Agency regarding access into the Ormesby Beck and co-ordinate regarding fish rescue activities.

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

There are no known *works* to be carried out by the authorities and utilities providers. This does not relieve the *Contractor* of the responsibility for liaising with the authorities as described in the Scope and Pre-construction information.

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

The *Contractor* is expected to:

- Use local employment and local training initiatives where appropriate and practicable;
- Look for opportunities to enhance community benefits
- Encourage a diverse supply base that includes local Small and Medium Enterprises, social enterprises and the Voluntary in the Community Sector.
- Develop and integrate modern apprenticeship opportunities and encourage the consideration of diversity and equality in our decisions. Demonstrate compliance with the Equality Act 2010

through the work delivered. Projects and community engagement should be inclusive and accessible for all. The Environment Agency “Access for All Design Guidance” is available to support this approach.

- Adopt a policy of equal opportunities to encourage a diverse workforce;
- Offer training and development to all staff, including the *Client* to meet individual, project and company needs.

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

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

The *Contractor* is to provide a hot desk for the ECC Supervisor and provide unhindered access for the *Client* to use of the *Contractor's* welfare facilities.

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

Not used

## **S 1100 Health and safety**

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

Additional health and safety requirements for the project, includes the following.

- *Client's* safety requirements generally as detailed in the Pre-Construction Information document and to be developed in the *Contractors* Construction Phase plan and for the duration of the works
- Compliance with SHEWCOP

### **S 1102 Method statements**

The risk assessments and method statements will meet the dual requirements of the CDM Regulations and the requirements of the provisions of the Contract.

The *Contractor* must ensure that risk assessments and method statements are approved within its own organisation before any submission to the *Client*

The *Contractor* must ensure that risk assessments and method statements are prepared, approved and submitted to the *Client*. For activities that represent a significant risk and more complex work, the timing and sequence of construction to be detailed including the use and design of Equipment/temporary works, materials, proposed by the *Contractor*. As a minimum this will include the following key components.

- Access and egress arrangement to the Tidal Barrage and protection of all services including the Northumbrian Water combined sewer, Northern Power Grid cables and overhead telecommunication cables
- Fish rescue operations
- Equipment to be deployed / temporary works in dealing with flows down Ormesby Beck and tidal cofferdam arrangements

- Diamond drilling, coring and diamond wire saw cutting operations
- Removal of concrete from the Tidal Barrage Structure
- Access and Egress and Removal of the Navigation Screen and lifting arrangements and removal of steelwork

The *Contractor* must allow for a period of reply. As a general principle a period of at least two weeks should be allowed between the issue of the risk assessments and method statements and the proposed start date of the activity on site. This period may be varied by agreement of the Project Manager.

### **S 1103      Legal requirements**

The *Client* duties under the CDM Regulations shall be undertaken by the *Client*.

The Principal *Contractor* duties under the CDM Regulations shall be undertaken by the *Contractor*.

The Principal Designer for the Pre-Construction Phase undertaken by JBA Consulting

The Principal Designer for the Pre-Construction Phase extending into the Construction Phase shall be undertaken by JBA Consulting.

### **S 1104      Inspections**

The *Client* may inspect the *Contractor's* compliance with the *Client's* and/or *Contractor's* safety, health and environment requirements and procedures. The inspection may be unannounced.

The Principal Designer will undertake regular checks on the *Contractor's* Health and Safety procedures. Including record of Site Inductions, tool box talks and certifications of PPE. The *Contractor* shall make available within two working days all relevant requested information pertaining this contract for inspection.

## **S 1200      Subcontracting**

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

The *Contractor* shall provide two other competitive tender process when using Subcontractors or suppliers. This excludes the cofferdam and wire saw cutting subcontractors due to the specialist advice required.

### **S 1202      Acceptance procedures**

No additional restrictions or requirements to clause.

## **S 1300 Title**

### **S 1301 Marking**

As above

### **S 1302 Materials from Excavation and demolition**

The *Contractor* has title to materials from excavation and demolition and the Tidal flap valves, steelwork, handrails and debris screens from the Navigation Screen and the Tidal Barrage. Please Note: Should the *Client* find a re-use option for these materials post contract award this will be a change of Scope and the *Contractor* would be responsible for arranging transport / delivery / off-loading of the materials to agreed Environment Agency depot.

The *Contractor* shall maximise opportunities for the re-use and recycling of the above demolition materials.

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

### **S1401 Subcontracting**

The *Contractor* shall provide two other competitive tender process when using Subcontractors or suppliers

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

### **S 1501 Additional Records**

Clause 52.2 List the additional records to be kept by the *Contractor*. This may include but not be limited the following:

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

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

**S 1500    Parent Company Guarantee (Option X4)**

Not used

## S 1600 *Client's work specifications and drawings*

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

The specification for the project is contained in the *Client's Works Specification* document - [REDACTED]-XX-XX-SP-C-0001-D2-P01----Clients\_work\_specification.

### S 1702 *Drawings*

The drawings relating to the Scope are listed below. Note the Site Information is listed in the Pre-Construction Information.

Ref	Drawing Number	
Site_Location_Plan	[REDACTED]-00-00- DR-C-1100	D2-P01
Site_Clearance_&_Demolition	[REDACTED]-00-00- DR-C-1101	D2-P01
General_Arrangement	[REDACTED]-00-00- DR-C-1300	D2-P01
Details	[REDACTED]-00-00- DR-C-1301	D2-P01
Hazards_&_Constraints	[REDACTED]-00-00- DR-C-1302	D2-P01
Hazards_&_Constraints_Site_Plan	[REDACTED]-00-00- DR-C-1303	D2-P01

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

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

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

The table in the Pre-construction information at Appendix 1 lists other standard Environment Agency documents relevant to the Contract.

## Appendix 1 BIM Protocol – Information Production and Delivery Table

The *Contractor* is to conform with the latest version of the Environment Agency's Employers Information Requirements. This includes the use of Asite as the *Clients* Common Data Environment.

The *Client* will issue the Information Delivery Plan (IDP) to the *Contractor*.

The *Contractor* will utilise the *Clients* CDE and upload final project documentation to the workspace. This includes documents relating to the production of the Health and Safety File

# CLIENT'S WORK SPECIFICATION

JBA Project Code 2021s0937  
Project Title Ormesby Beck Restoration  
Subject Specification  
Client Environment Agency  
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## Document control

P01	D2	Latest MTR noted		[REDACTED]	[REDACTED]	[REDACTED]
P01	S3	Shared for review and comment	08/04/2022	[REDACTED]	[REDACTED]	[REDACTED]
<b>Revision</b>	<b>Status</b>	<b>Description</b>	<b>Date</b>	<b>Originated</b>	<b>Checked</b>	<b>Approved</b>

## Preamble

The NEC4 ECC contract is to be used in the procurement and implementation of the Ormesby Beck Restoration project.

The NEC4 ECC consists of two key elements namely i) Scope and ii) Site Information. The Scope includes drawings, specification and constraints and in summary sets out the future to be created. The Site Information is present day and historical information relating to the site.

MTR LIT 13258 is applicable and this MTR is supplementary and amends the specification clauses of the Civil Engineering Specification for the Water Industry, 7<sup>th</sup> Edition (CESWI7, 2011).

Within the NEC4 ECC Scope the Clients works specification and drawings are also listed.

### MTR and NEC Scope Document

To avoid duplication of information, and avoid any anomalies / inconsistencies of information, where relevant the Scope document directly cross references to the relevant specification clause / MTR specification clause.

Where required the Scope document adds to or replaces information in the MTR. In this case and in the event of conflict, the Scope document shall prevail.

### MTR and Clients works Specification

This Client's works specification document contains a table showing which clauses from CEWSI7 are applicable and which clauses from the MTR LIT 13258 are applicable.

Where clauses from the MTR are deemed as being used or required this is stated in the table. Unless stated as being not used or amended by clauses in this document, the Minimum Technical Requirements LIT 13258 v12 Dec 2021 shall apply.

For clarity this Client's work specification also tabulates which sections of the specification / MTR fall into the NEC4 Scope document.

In so far as any clause in this specification may conflict or be inconsistent with any provision of the MTR, this specification shall prevail.

The numbering of the clauses in this specification follows the numbering system of CESWI7.

Where the specification or any incorporated documents refer to the "Project Manager," "Client" or "Engineer", this is interpreted as meaning the "Project Manager" and/ or the "Supervisor" as the context demands.

Note: The Environment Agency has Minimum Technical Requirements for use on Projects. The detailed design is procured through the Agency's Eco-Services Framework (EcoSF) version 3 (EcoSF3). The EcoSF framework



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doesn't explicitly reference these documents, unless referenced in the Project Form. However, the contract delivery stage (under the contractor) does require compliance.



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<b>1</b>	<b>GENERAL</b>				
1.1	Definitions	1 – 6, Pre-ambles			
1.2	Accommodation for the contract		1 – 4, 5 – 23	S1001	
1.3	Billposting and advertising	1 2			
1.4	British Standards and other documents	1 – 2			
1.5	Tidiness of site	1 – 4, 5 – 6			
1.6	Entry onto the site	1 – 5			
1.7	Survey of highways, properties and lands	2 – 4, 1			
1.8	Levels and reference points	1, 2 – 3			
1.9	Temporary site fencing and gates	1 – 4, 5 – 9		S203	
1.10	Interference with land interests	1 – 3			
1.11	Interference with any access to property, apparatus or service	1 – 4			
1.12	Procedure for complaints and claims	1 – 3, 4 – 6			
1.13	Protection against damage	1 – 3			
1.14	Use of herbicides and pesticides/ protection of agricultural land	1 – 2			
1.15	Works affecting watercourses	1 – 5			
1.16	Water supply hygiene		1 – 4		
1.17	Apparatus of Statutory Undertakers, Highway or Roads Authority and others	1 – 4, 5 – 8			
1.18	Traffic requirements	1 – 11		S208	
1.19	Emergency arrangements	1 – 2, 3 – 13		S903	
1.20	Hazardous substances	1 – 3			
1.21	Environment and sustainability	1 – 3			
1.22	Customer care	1			
1.23	Asset records	1			
1.24	Training	1			

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1.25	Periodic Returns	1 - 3			
1.26	Noise Control and Working Hours	1 - 10		S 802	
1.27	Sign boards	1 - 5			
1.28	Maintenance of Existing Flood Defences	1			
1.29	Health and Safety, and Environment at Work	1		S1100	
1.30	Temporary works	1 - 2		S300	
1.31	Existing Structures and Environment	1 - 2			
1.32	Street furniture	1			
1.33	Residential caravans	1			
1.34	Record Photographs	1 - 4		S209	
1.35	Amenities	1			
1.36	Dust, Sand and Mud on Highways	1 - 2			
1.37	Maintenance of Public and Private Rights of Way	1		S208, S901	
1.38	Possession of the Site	1			
1.39	Restriction of Use of the Site	1			
1.40	Management of Waste	1 - 2		S2013	
1.41	Disposal of Domestic Waste	1 - 3			4
1.42	Supply of Water	1 - 3			4
1.43	Temporary Storage	1 - 2			
1.44	Work in Adverse Weather	1			
1.45	Site supervision of Ground Investigation works		1		
1.46	Supply Chain transparency - Minimising risk through responsible sourcing:	1 - 2			
1.47	Low carbon site plant	1 - 3			
<b>2</b>	<b>MATERIALS</b>				
2.1	Materials in contact with potable water		1 - 2		
2.2	Acrylonitrile-butadiene-styrene (ABS) pipes and fittings		1		
2.3	Admixtures for concrete or grout		1, 2		
2.4	Aggregates for concrete		1 - 10		

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2.5	Aggregates for high strength concrete wearing screeds		1		
2.6	Aggregates for mortar		1		
2.7	Asphalt concrete		1 - 3		
2.8	Biological percolating filter media		1 - 5		
2.9	Bitumen road emulsions		1		
2.10	Bituminous coatings		1		
2.11	Bituminous jointing strip		1		
2.12	Boards for panelling		1		
2.13	Bond breaking compound for dowel bars		1		
2.14	Bricks and blocks		1 - 7, 8 - 10		
2.15	Cast stone		1 - 2, 3 - 5		
2.16	Cement		1 - 3, 4		
2.17	Cement grouts		1 - 3		
2.18	Clay puddle		1 - 2		
2.19	Compressible filler and packing for pipelines		1 - 3		
2.20	Concrete – general		1 - 5		
2.21	Concrete containing PFA or GGBS		1 - 2		
2.22	Concrete – ready-mixed		1 - 3		
2.23	Concrete – porous no-fines		1 - 2		
2.24	Concrete – air-entrained		1		
2.25	Concrete – chloride content		1 - 2		
2.26	Concrete pipes and fittings		1 - 3, 4 - 7		
2.27	Connectors for timber		1		
2.28	Coping units		1		
2.29	Copper pipes and fittings		1 - 2		
2.30	Cover blocks and spacers for reinforcement		1 - 3		
2.31	Damp-proof courses		1		
2.32	Doors, frames and linings		1 - 3		
2.33	Dowel bars		1		
2.34	Draw cord		1		
2.35	Dressed natural stone kerbs, channels, quadrants and setts		1 - 2		

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2.36	Ductile iron, cast iron and steel pipes, flanges and fittings		1 - 9		
2.37	Electrodes, filler rod and wires for welding		1 - 5		
2.38	Expanded metal angle beads		1		
2.39	Fertiliser		1		
2.40	Field gates		1 - 2, 2 - 5		
2.41	Fixing accessories for building purposes		1		
2.42	Fixings for metalwork		1 - 3		
2.43	Flashings		1		
2.44	Flexible couplings		1		
2.45	Floor tiles		1		
2.46	Foamed concrete		1		
2.47	Foam swabs		1		
2.48	Gabions and rockfill mattresses		1 - 2, 3 - 10		[REDACTED] 0-DR-C-1301
2.49	Gaskets for flanged and push-fit joints		1 - 4		
2.50	General filling materials		1 - 3		[REDACTED] 00-00-DR-C-1301
2.51	Glass for glazing		1		
2.52	Glass reinforced plastics (GRP) pipes and fittings		1, (2.53)2 - 9		
2.53	Glass reinforced plastics products		1 - 3		
2.54	Glazing materials		1 - 2		
2.55	Granular sub-base material		1 - 8, 9 - 12		
2.56	Grass seed		1 - 4		[REDACTED] 00-00-DR-C-1301
2.57	Grummetts		1		
2.58	Gullies and gully cover slabs		1 - 3		
2.59	Gully covers, gratings and frames		1		
2.60	Handrails and balusters	1 - 5, 2 - 4			
2.61	Hydrants		1 - 6		
2.62	Imported topsoil	1 - 2			

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2.63	Imported turf		1		
2.64	Industrial flooring, walkways and stair treads		1 - 4, 5 - 18		
2.65	Joinery timber		1 - 2		
2.66	Joint filler board		1 - 5, 7		
2.67	Joint sealing compounds and sealants		1 - 6		
2.68	Joint seals and lubricants		1 - 3		
2.69	Joist hangers		1		
2.70	Ladders		1 - 5		
2.71	Lead		1 - 2		
2.72	Lime for mortar		1		
2.73	Lintels		1		
2.74	Manhole covers and frames		1 - 3		
2.75	Manhole steps		1, 2		
2.76	Marker tape and marker posts		1 - 6		
2.77	Mastic asphalt		1		
2.78	Mechanical couplings for pipelines and fittings		1 - 5, 6 - 10		
2.79	Metal lathing		1		
2.80	Metal ties		1, 2 - 4		
2.81	Mineral aggregates for flat roofs		1		
2.82	Mortar		1 - 4, 5 - 8		
2.83	Nails		1		
2.84	Natural stone		1, 1 - 2		[REDACTED] 00-00-DR-C- 1301
2.85	Non-man access chambers		1		
2.86	Nuts, screws, washers and bolts		1 - 6, 7 - 15		
2.87	Packings for tunnels		1		
2.88	Paints and painting materials for buildings		1 - 8		
2.89	Permanent fencing		1, 2 - 8		
2.90	Pipe surround materials		1 - 2, 3 - 9		
2.91	Pipes for ducts		1 - 4		
2.92	Pipes for land drainage and temporary drains		1		

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2.93	Plaster		1 – 2		
2.94	Plastic chambers and rings		1		
2.95	Plastic sheeting		1 – 2		
2.96	Plywood		1 – 3		
2.97	Polyethylene pipes and fittings		1 – 5		
2.98	Precast concrete slabs and cover frame seating rings		1		
2.99	Precast concrete flags and paving blocks		1 – 2		
2.100	Precast concrete kerbs, channels, edgings and quadrants		1, 2 – 3		
2.101	Precast concrete manholes and soakaways		1 – 3, 4		
2.102	Precast concrete box culverts		1, 2		
2.103	Precast concrete segments for tunnels and shafts		1 – 11		
2.104	Precast concrete setting blocks for pipes		1		
2.105	Precast concrete tanks		1 – 3		
2.106	Prestressed concrete pipes and fittings		1 – 2, 3 – 4		
2.107	Prestressed precast concrete floors		1		
2.108	Profiled steel sheeting		1		
2.109	Propylene co-polymer pressure pipes		1		
2.110	PTFE tape		1		
2.111	Pulverised-fuel ash		1 – 3, 4		
2.112	Rainwater pipes and gutters		1		
2.113	Rolled asphalt		1, 2 – 4		
2.114	Roof coverings		1		
2.115	Safety chains in sewers		1 – 4, 5		
2.116	Sample Taps		1-3		
2.117	Sands		1 – 4		
2.118	Sewer Linings		1		
2.119	Soil, waste and ventilating pipes		1 – 2		
2.120	Steel reinforcement		1 – 3, 4 – 10		

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2.121	Steel sheet piles		1 – 3, 4 – 10		
2.122	Stiles, bridle gates and kissing gates		1 – 4		
2.123	Structural steel		1		
2.124	Surface boxes and guards		1 – 10, 11		
2.125	Synthetic resin adhesives		1		
2.126	Timber and preservation of timber		1 – 3, 4 – 10		
2.127	Trees and shrubs	1	1 – 6		[REDACTED] 00-00-DR-C-1301
2.128	Tying wire		1		
2.129	Unplasticised PVC pipes and fittings		1 – 7		
2.130	Valves and penstocks		1 – 4, 1		
2.131	Vitreous enamel tanks		1 – 8		
2.132	Vitrified clay pipes and pipeline fittings		1 – 2, 2		
2.133	Wall tiles		1		
2.134	Water		1, 2		
2.135	Water fittings and appliances		1		
2.136	Waterstops		1 – 3		
2.137	Wet-mix macadam		1 – 4		
2.138	Windows		1		
2.139	Window sills		1 – 2		
2.140	Wood flooring		1		
2.141	Wood trim		1		
2.142	Wrought aluminium and aluminium alloy		1		
2.150	Marking and packing of pipes and fittings		1 – 5		
2.151	Wrapping material		1		
2.152	Grilles, screens and other miscellaneous metalwork		1 – 2		
2.153	Cover tiles and route markers		1 – 7		
2.154	Waterproofing Membranes and Sundries		1		
2.155	Fusion-bonded epoxy coating		1 – 5		



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2.156	Capping material		1		
2.157	Road-marking paint		1-4		
2.158	Dissimilar metals		1-3		
2.159	Pipework identification		1-7		
2.160	Concrete bagwork		1		
2.161	Geotextiles		1-16		
2.162	Rip rap (core stone)		1-6		
2.163	General testing, inspection and commissioning of plant		1-19		
2.164	Material certification		1		
2.165	Backfill material	1-4			
2.166	Trash screens		1-4		
2.167	Signage	1			
2.168	Storage handling and use of materials	1-13		S201 Storage of fuel and chemicals	
2.169	Site furniture		1		
2.170	Gravel / hoggin / resin bound material		1		
2.171	River bank / wetland edge/ ecological materials		1		
2.172	Brick / block paving material		1		
2.173	Slab / sett / cobble paving		1		
2.174	Paving material		1		
2.175	Fill material		1		[REDACTED] 00-00-DR-C 1301
2.176	Glass Defences		1-2		
3	<b>EXCAVATION, BACKFILLING AND RESTORATION</b>				
3.1	Excavation	1-6, 9	7-8, 10-18		
3.2	Relaying turf		1-2		
3.3	Topsoil for re-use		1-4, 5-8		
3.4	Dealing with water	1-4, 5-9			
3.5	Temporary drains		1-3		
3.6	Backfilling	1-5			
3.7	Reinstatement of maintainable highways	1-4, 5-6			

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3.8	Reinstatement of non-maintainable highways	1			
3.9	Reinstatement of unpaved land	6-7	1-5,		
3.10	Trees	1-4, 5			
3.11	Reinstatement in highways and roads using foamed concrete		1-3		
3.12	Land Drains	1-5, 6-9			
3.13	Filling Above ground	1-2,	3		[REDACTED] 00-00-DR-C-1301
3.14	Blasting	5	1-4,		
3.15	Piling		1, 2-3		
3.16	Demolition	1			
3.18	Grass Bank Protection		1		
3.19	Stone Pitching		1-2		[REDACTED] 00-00-DR-C-1301
3.20	Support to Excavations and Excavation Near Structures	1-5			
3.21	Construction of Gabions and Mattresses	1-6			[REDACTED] 00-00-DR-C-1301
3.22	Reinstatement to Private Lands	1-3			
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4.1	Supply of information		1, 2-9		
4.2	Initial testing		1-2		
4.3	Identity testing		1-2		
4.4	Porous no-fines concrete		1		
4.5	Transporting, placing and compacting		1-5, 6-17		
4.6	Concreting in cold weather		1-2		
4.7	Concrete temperature		1-2		
4.8	Curing		1-3, 4-6		
4.9	Records of concreting		1-2, 3		
4.10	Construction of formwork		1-6, 7-11		
4.11	Cleaning and treatment of forms		1-2, 3		
4.12	Striking of formwork		1, 2, 3-5		

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4.13	Sloping formwork		1		
4.14	Cutting and bending of reinforcement		1 - 2		
4.15	Fixing of reinforcement		1 - 3		
4.16	Surface condition of reinforcement		1		
4.17	Laps and joints		1		
4.18	Welding of reinforcement		1		
4.19	Built-in items		1 - 2		
4.20	Construction joints		1 - 7		
4.21	Surface finishes produced without formwork		1 - 5, 6 - 8		
4.22	Surface finishes produced with formwork		1 - 6, 6 - 7		
4.23	Wearing Screeds		1 - 3		
4.24	Tie bolts for formwork		1 - 5, 6		
4.25	Tolerance for concrete surfaces		1		
4.26	Grout quality control testing		1 - 7		
4.27	Fibre reinforced concrete (FRC)		1 - 2		
4.28	Concrete repairs	1			[REDACTED] 00-00-DR-C-1301
<b>5</b>	<b>CONSTRUCTION OF PIPELINES AND ANCILLIARY WORKS</b>				
5.1	Pipelaying Generally		1 - 8, 9 - 19		
5.2	Pipe Bedding		1 - 4, 5 - 6		
5.3	Concrete protection to pipes		1 - 4, 5		
5.4	Pipe surround		1 - 3		
5.5	Pipelaying in headings		1 - 4		
5.6	Thrust blocks		1 - 8		
5.7	Pipe jointing generally		1 - 6, 7 - 10		
5.8	Welded joints in polyethylene pipes		1 - 3		
5.9	Flanged joints		1		
5.10	Ogee joints		1		
5.11	Welded joints in steel pipes		1 - 6		
5.12	Cement mortar joints		1		

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5.13	Run lead joints		1		
5.14	Protection of ferrous pipes, joints and fittings		1 – 4		
5.15	Cutting pipes		1 – 5, 6 – 7		
5.16	Precast concrete manholes		1 – 4		
5.17	Brickwork manholes and chambers		1		
5.18	Inverts and benching		1 – 2, 3		
5.19	Pipes and joints adjacent to structures		1 – 3, 4 – 7		
5.20	Watertightness of manholes		1		
5.21	Setting manhole covers and frames		1 – 3, 4		
5.22	Connections to existing sewers		1 – 3		
5.23	Sewers and manholes to be abandoned		1 – 2		
5.24	Junctions and laterals on sewers		1 – 3		
5.25	Marker indicator posts		1 – 4		
5.26	Tolerances for pipelines		1		
5.27	Cable ducts		1 – 3		
5.28	Installation of valves		1 – 7		
5.29	Washouts		1 – 3		
5.30	Alternative pipe installation techniques		1 – 3		
5.31	Connections to existing water supply pressure pipelines		1		
5.32	Temporary water supply mains		1 – 3		
5.33	Water mains to be abandoned		1 – 4		
5.34	Precast Concrete Segmental Manholes		1 – 2		
5.35	Holes in Chambers		1		
5.36	Steel Pipes and Fittings		1 – 3		
5.37	Pipe Ramming		1 – 2		
5.38	Ground Movement Monitoring Under Rail Track		1 – 7		

# CLIENT'S WORK SPECIFICATION

JBA Project Code 2021s0937  
 Project Title Ormesby Beck Restoration  
 Subject Specification  
 Client Environment Agency  
 BIM Reference [REDACTED]-XX-XX-SP-C-0001-D2-  
 P01----Clients\_work\_specification

**JBA**  
consulting

No.	Clause Title	CESWI and MTR Clauses CESWI7 [REDACTED] LIT 13258 [REDACTED]	CESWI and MTR Clauses not used CESWI7 [REDACTED] LIT 13258 [REDACTED]	Link to Scope Document Clause Example	Supplementary Clauses in this Specification and / or drawing Example
<b>6</b>	<b>BUILDING WORKS</b>				
6.1	Brickwork and blockwork generally		1 - 6, 7 - 15		
6.2	Brickwork and blockwork, jointing and pointing		1 - 2, 3		
6.3	Cavity walls		1 - 2		
6.4	Damp-proof courses		1		
6.5	Corbelling		1		
6.6	Bonding to concrete		1		
6.7	Underpinning		1		
6.8	Centering and lagging		1		
6.9	Bricklaying and blocklaying in cold weather		1 - 2		
6.10	Preparation for plastering		1 - 3		
6.11	Fixing of plasterboard		1 - 2		
6.12	Plastering		1 - 5		
6.13	Plastering in cold weather		1		
6.14	Concrete floor finishes		1 - 4		
6.15	Floor tiling		1		
6.16	Terrazzo floor finishes		1		
6.17	External rendering		1		
6.18	Wall tiling		1		
6.19	Carpentry and joinery		1 - 3		
6.20	Structural steelwork		1 - 10		
6.21	Roofs		1 - 2		
6.22	Timber floors		1 - 2		
6.23	Door frames		1 - 2		
6.24	Windows		1		
6.25	Glazing		1		
6.26	Painting		1		
6.27	Slating and tiling		1		
6.28	Lightweight concrete roofs screeds		1		
6.29	Asphalt roofing		1		
6.30	Bitumen felt roofing		1		
6.31	Plumbing		1		

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6.32	Opening in walls, floors and ceilings		1		
6.33	Tolerances for building works		1		
6.34	Electrical installations		1		
6.35	Profiled steel cladding		1 – 4		
6.36	Precast concrete floors		1 – 6		
6.37	Composite floors		1 - 2		
<b>7</b>	<b>TESTING AND DISINFECTION</b>				
7.1	Cleansing and swabbing of pipelines		1 – 3		
7.2	Precautions prior to testing pipelines		1 – 3, 4 – 5		
7.3	Testing method programme and notification		1 – 2		
7.4	Testing non-pressure pipelines		1 – 3, 4 – 6		
7.5	Water test for non-pressure pipeline		1 – 3, 4 – 5		
7.6	Air test for non-pressure pipelines		1		
7.7	CCTV inspection of pipelines		1, 2		
7.8	Infiltration		1 – 3		
7.9	Testing of ductile iron, PVC, GRP and steel pressure pipelines		1 – 5		
7.10	Testing of polyethylene pressure pipelines		1 – 2		
7.11	Disinfection of water mains		1 – 4		
7.12	Cleansing of structures		1		
7.13	Testing of concrete roofs		1 – 4		
7.14	Testing of concrete structures designed to retain an aqueous liquid		1 – 5		
7.15	Disinfection of structures for potable water		1 – 4		
7.16	Water for testing, swabbing and disinfection		1		
7.17	Disposal of water from cleansings, testing or disinfection		1 – 3		

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7.18	Testing of non-concrete structures for retaining aqueous liquids		1 - 3		
<b>8</b>	<b>ROADWORKS</b>				
8.1	Road formations		1 - 4		
8.2	Sub-base construction		1		
8.3	Wet-mix macadam construction		1 - 2		
8.4	Lean concrete construction		1 - 4		
8.5	Laying coated macadam		1 - 2		
8.6	Laying hot rolled asphalt		1 - 2		
8.7	Waterproof underlay for concrete carriageways		1		
8.8	Reinforcement of concrete carriageways		1 - 3		
8.9	Laying concrete carriageways		1 - 3		
8.10	Laying kerbs and channels		1 - 3		
8.11	Foundations for footways		1 - 2		
8.12	Laying concrete paving flags		1 - 3		
8.13	Laying paving blocks		1		
8.14	Tolerances for finished carriageway surfaces		1 - 3		
8.15	Fixing of gullies		1 - 2		
8.16	Lining and signage		1		
8.17	Concrete footways		1		
8.18	Cold Weather Working For Roadworks		(8.17)1 - 5		
<b>9</b>	<b>SEWER RENOVATION</b>				
9.1	Isolation of flows		1, 2 - 4		
9.2	Preparatory survey		1 - 5, 6 - 8		
9.3	Preparation of sewers		1 - 7, 8 - 9		
9.4	Jointing generally		1		
9.5	Connections		1 - 3		
9.6	Chambers		1 - 3		
9.7	Release of curing water		1 - 2		
9.8	Annulus grouting generally		1 - 6		
9.9	Inspection after grouting		1		

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9.10	Lining through flow control devices		1		
9.11	Inspection after renovation		1 – 3		
9.12	Lining template		1 – 2		
9.13	Lining design		1		
9.14	Tolerances for preformed linings		1 – 2		
9.15	Cutting an protection of linings		1 – 4		
9.16	Man-entry preformed GRP and GRC units		1 – 2		
9.17	Cured-inplace-lining systems		1 – 2		
9.18	Rendering and local repairs		1, 2		
9.19	Patch repairs		1 – 8		
9.20	Styrene fumes		1		
9.21	Spray lining		1		
9.22	Laterals		1 – 4		
9.23	Cleaning of Surfaces		1 – 3		
<b>10</b>	<b>WATER MAINS RENOVATION</b>				
10.1	Preparatory survey		1		
10.2	Preparation of water mains		1		
10.3	In-situ linings		1 – 4		
10.4	Sliplining and replacement moling		1 – 2		
10.5	Connections		1		
10.6	Lining through valves		1 – 2		
10.7	Inspection after in-situ re-lining		1 - 2		
10.8	Bringing rehabilitated water mains into service		1		
<b>11</b>	<b>TUNNELLING AND SHAFT SINKING WORKS</b>				
11.1	Headings, tunnels and shafts		1 - 4		
11.2	Shafts		1 – 5		
11.3	Openings in shafts and tunnels		1 – 2		
11.4	Segmental shaft and tunnel linings		1		



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No.	Clause Title	CESWI and MTR Clauses CESWI7 [REDACTED] LIT 13258 [REDACTED]	CESWI and MTR Clauses not used CESWI7 [REDACTED] LIT 13258 [REDACTED]	Link to Scope Document Clause Example	Supplementary Clauses in this Specification and / or drawing Example
11.5	Unbolted concrete tunnel segment				
11.6	Bolted concrete segmental linings		1 – 3		
11.7	Grouting of segments		1 – 5		
11.8	Caulking		1 – 2		
11.9	Pointing of joints		1		
11.10	Secondary linings to segments		1 – 2		
11.11	Watertightness of shafts and tunnels		1		
11.12	Control of groundwater		1		
11.13	Pipe jacking		1 – 13		
11.14	Microtunnelling		1 – 2		
11.15	Ventilation of tunnels and shafts		1		
11.16	Work in compressed air		1 – 3		
11.17	Recording of information		1		
11.18	Tolerances for shafts, tunnels and pipe jacks		1 – 3		
12	<b>ADDITIONAL SUPPLEMENTARY CLAUSES RELATING TO LANDSCAPE AND ENVIRONMENTAL DESIGN</b>				
12.1	Resource Efficiency/Carbon Management	1 – 2		S201 Sustainability targets, S401	
12.2	General		1 – 2		[REDACTED] 00-00-DR-C-1301

## Supplementary clauses

### 1.41 Disposal of Domestic Waste

4. The Contractor may use portable toilet facilities and / or temporary Cess Pit subject to acceptance of the Project Manager.

# CLIENT'S WORK SPECIFICATION

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Client Environment Agency  
BIM Reference [REDACTED]-XX-XX-SP-C-0001-D2-  
P01----Clients\_work\_specification

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consulting

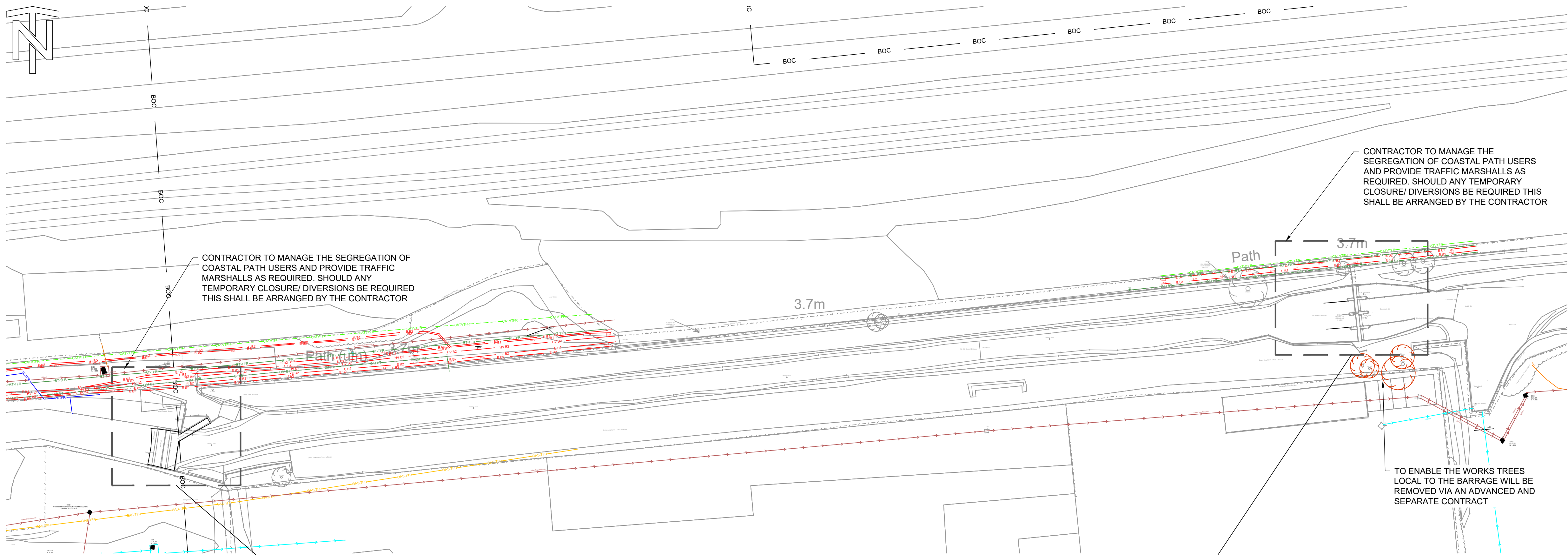
## 1.42 Supply of Water

4. The Contractor may use water bowser or similar method of supply subject to acceptance of the Project Manager.



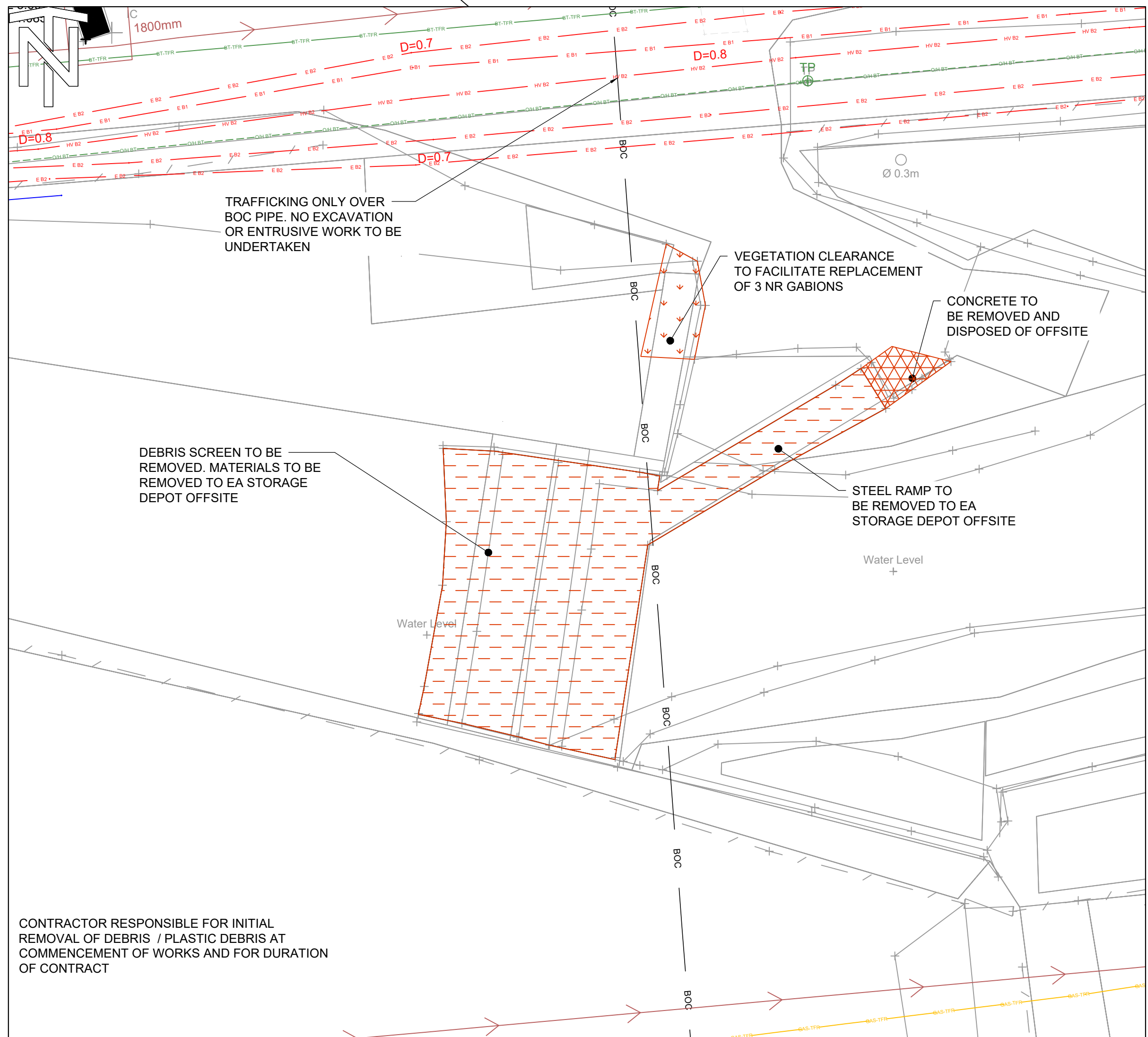






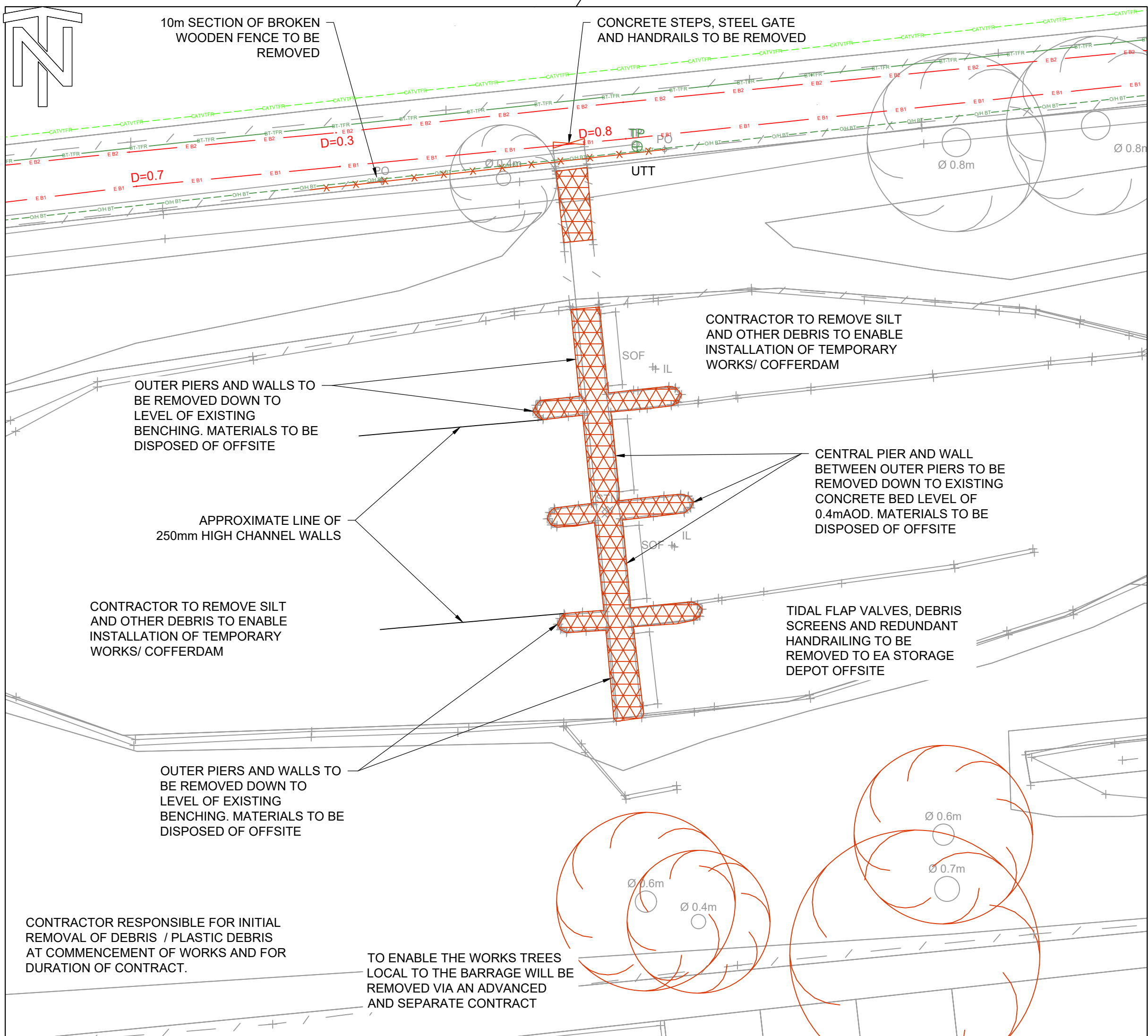
SITE CLEARANCE - LOCATION PLAN

1:500



NAVIGATION SCREEN REMOVAL

1:100



TIDAL BARRAGE REMOVAL

1:100

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN (mAOD) UNLESS NOTED OTHERWISE.
3. ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
4. DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
5. REFER TO DRAWING 1302 HAZARDS AND CONSTRAINTS DRAWING AND DRAWING 1100 SITE LOCATION PLAN FOR SAFETY, HEALTH, ENVIRONMENTAL, AND WELFARE INFORMATION / SHE BOXES

LEGEND

- AREA OF DEMOLITION
- AREA OF CONSTRUCTED MATERIAL CLEARANCE
- VEGETATION CLEARANCE

SERVICES LEGEND

- ELECTRIC
- GAS
- WATER
- BRITISH TELECOM
- BRITISH TELECOM TFR
- FOUL WATER DRAINAGE ROUTE
- SURFACE WATER DRAINAGE ROUTE
- COMBINED SERVICE DRAINAGE ROUTE
- FIELD DRAIN
- ELECTRIC - TAKEN FROM RECORDS
- ASSUMED ELECTRIC
- BT OVERHEAD
- WATER - TAKEN FROM RECORDS
- ASSUMED GAS
- GAS - TAKEN FROM RECORDS
- BOC

UTILITY SERVICES INVESTIGATION GAUGE

- TYPE C: DESK STUDY WITH SITE RECONNAISSANCE
- TYPE B: DESK STUDY AND DETECTION SURVEY 11/02/2022
- TYPE A: DESK STUDY, DETECTION SURVEY & TRIAL HOLES

THE POSITION OF ANY EXISTING PUBLIC OR PRIVATE SEWERS, UTILITY SERVICES, PLANT OR APPARATUS SHOWN ON THIS DRAWING HAS BEEN OBTAINED FROM STATUTORY RECORDS. THE INFORMATION SHOWN IS BELIEVED TO BE CORRECT BUT NO WARRANTY TO THIS IS EXPRESSED OR IMPLIED. OTHER SUCH PLANT OR APPARATUS MAY ALSO BE PRESENT BUT NOT SHOWN. INVESTIGATIONS MUST UNDERTAKEN ON SITE CONFIRMING LOCATIONS BEFORE BREAKING GROUND.

25 20 15 10 5 0 10 20 30  
SCALE 1:500 (m)

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SCALE 1:100 (m)

Rev.	Description	Date	Author	Designer	Checker	Approver
Document Control						

Project Title

Ormesby Beck Restoration

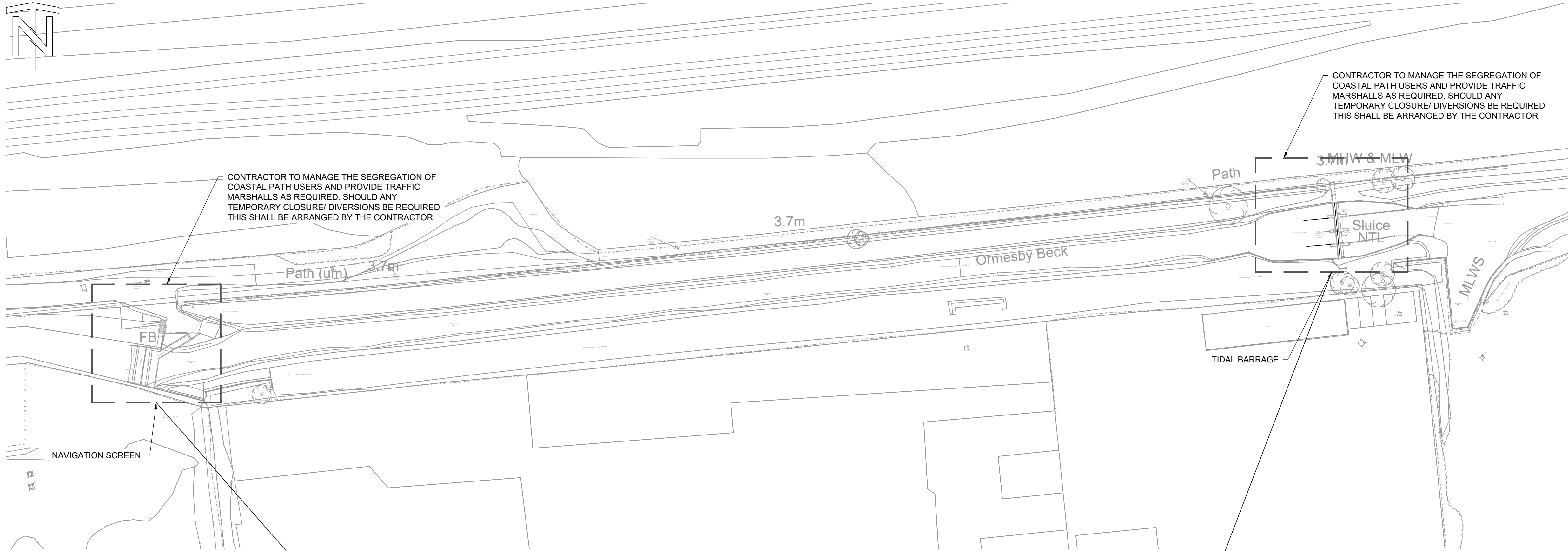
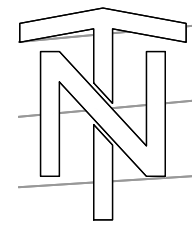
Drawing Title

Ormesby Beck  
Site Clearance Plan

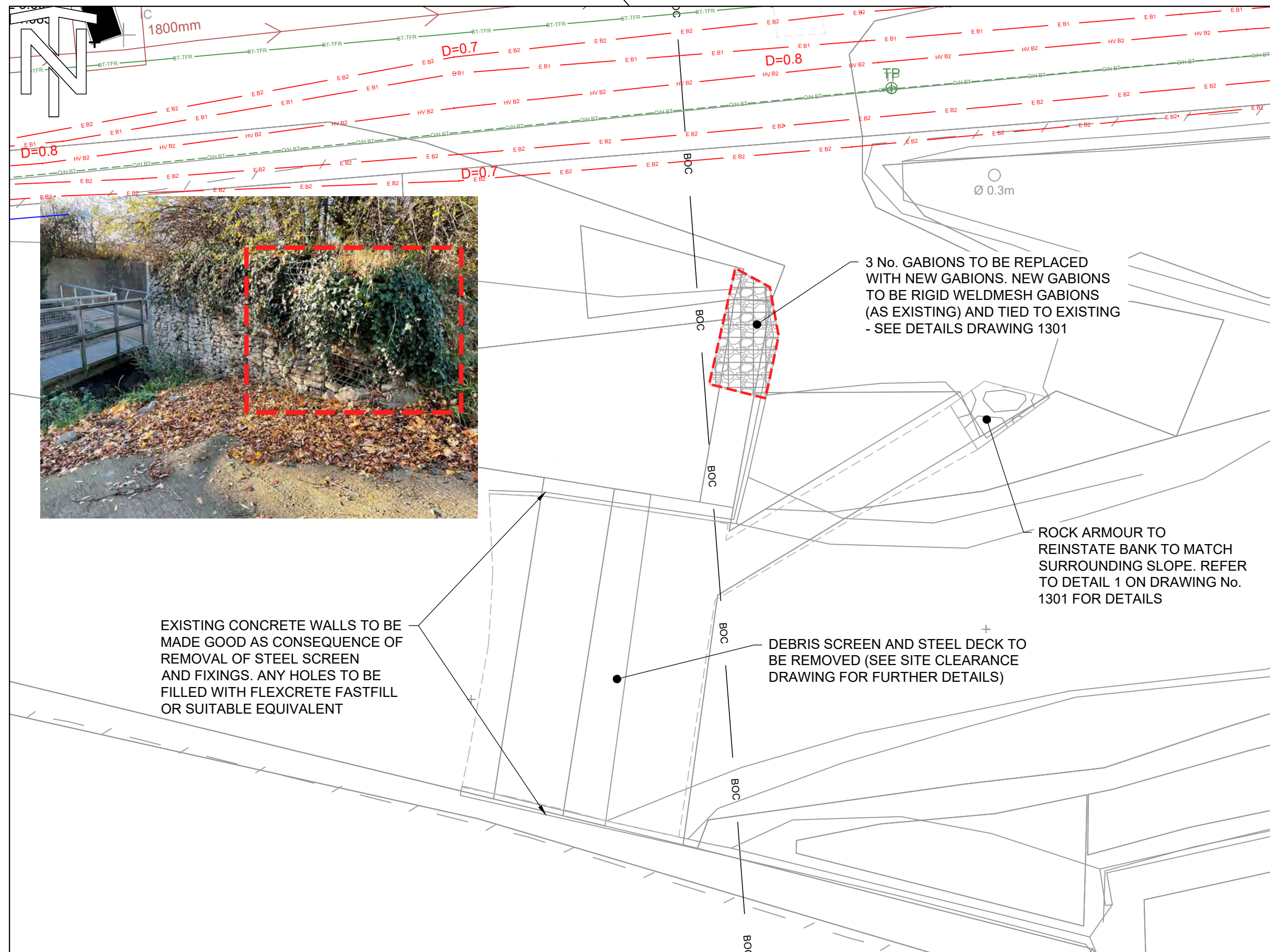
Environment  
Agency

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Parent Model					
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Security Classification				Scale	
OFFICIAL				As shown @A1	
Author		Designer		Checker	
DA		JN		GP	
Suitability				Approver	
FOR COSTING				DL	
Status				Revision	
D2				P01	
Information Container					
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A1 Sheet Size					

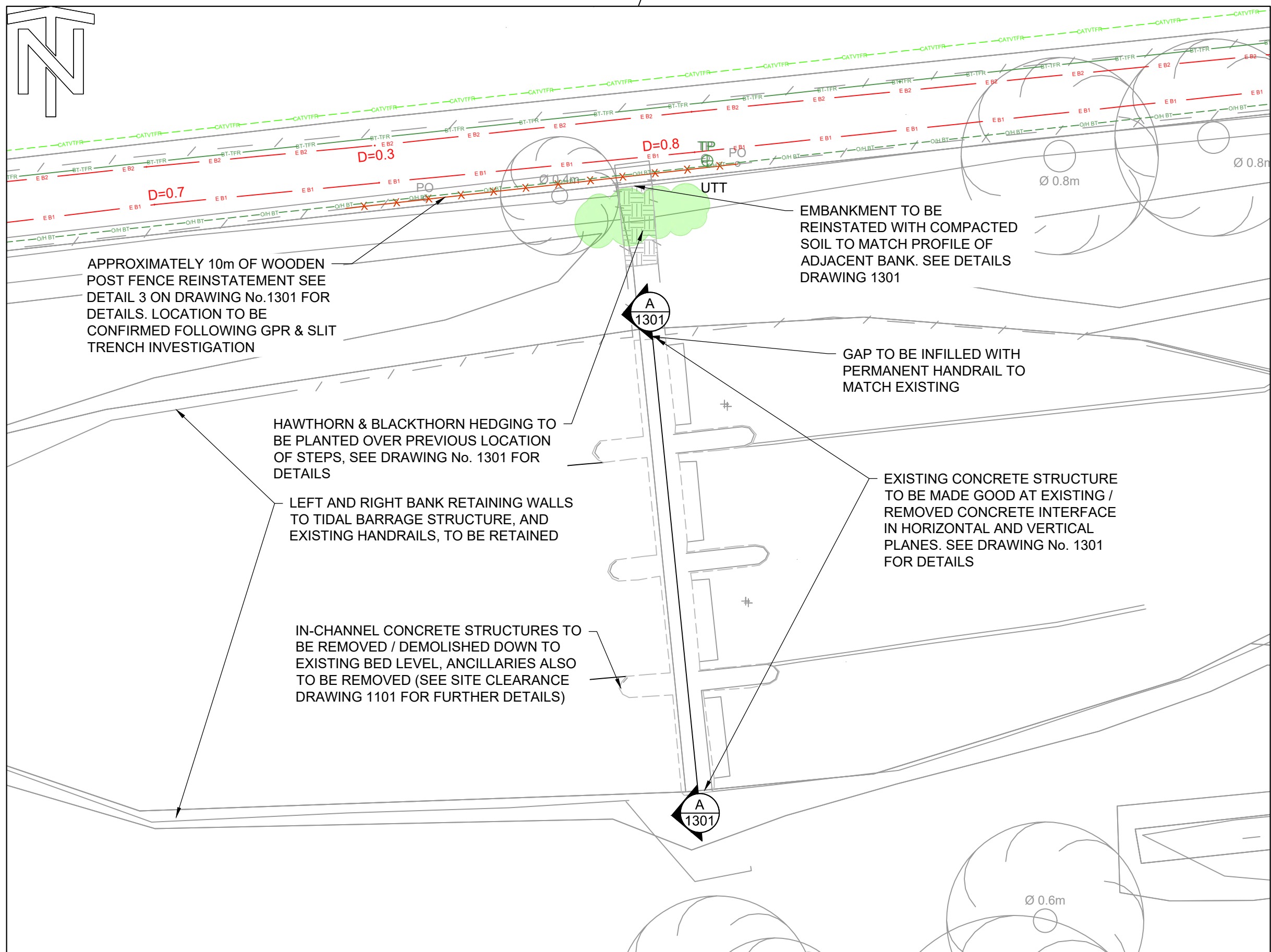




LOCATION PLAN  
1:500



NAVIGATION SCREEN - REINSTATEMENT DETAILS  
1:100

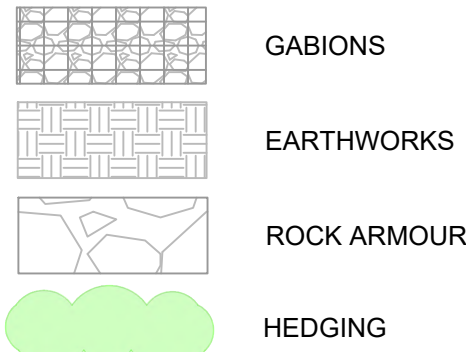


TIDAL BARRAGE - REINSTATEMENT DETAILS  
1:100

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LEGEND



SERVICES LEGEND

- E ELECTRIC
- GAS GAS
- W WATER
- BT BRITISH TELECOM
- BT TFR BRITISH TELECOM TFR
- FWDR FOUL WATER DRAINAGE ROUTE
- SWDR SURFACE WATER DRAINAGE ROUTE
- CSDR COMBINED SERVICE DRAINAGE ROUTE
- Field Drain FIELD DRAIN
- E-TFR ELECTRIC - TAKEN FROM RECORDS
- E-AR ASSUMED ELECTRIC
- O/H BT BT OVERHEAD
- W-TFR WATER - TAKEN FROM RECORDS
- GAS-AR ASSUMED GAS
- GAS-TFR GAS - TAKEN FROM RECORDS
- BOC BOC

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25 20 15 10 5 0 10 20 30  
SCALE 1:500 (m)

5 4 3 2 1 0 2 4 6  
SCALE 1:100 (m)

Rev.	Description	Date	Author	Designer	Checker	Approver
Document Control						

Project Title

Ormesby Beck Restoration

Drawing Title

Ormesby Beck  
General Arrangement



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Parent Model  
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Security Classification  
OFFICIAL

Scale  
As shown @A1

Author  
DA

Designer  
JN

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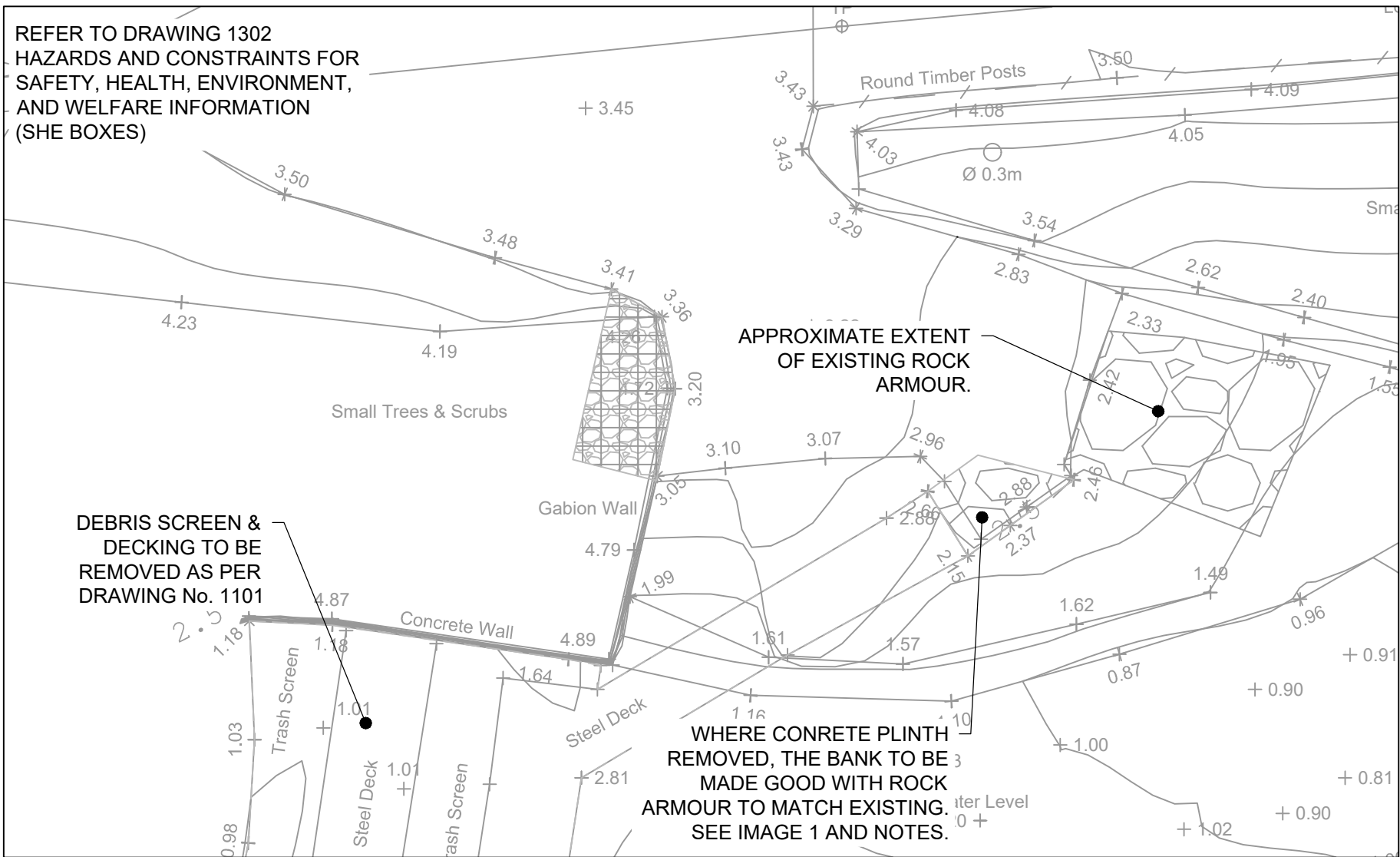
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Revision  
P01

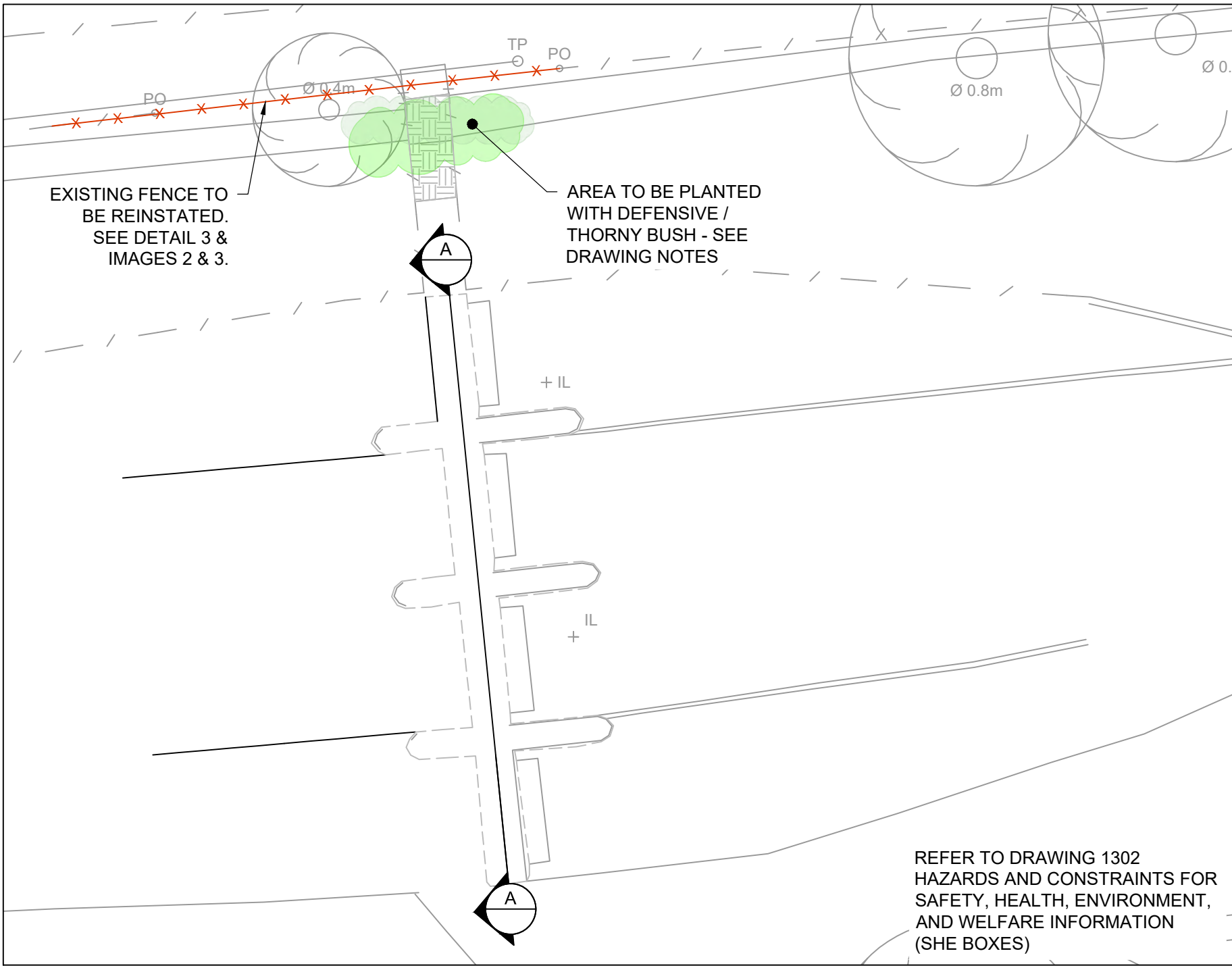
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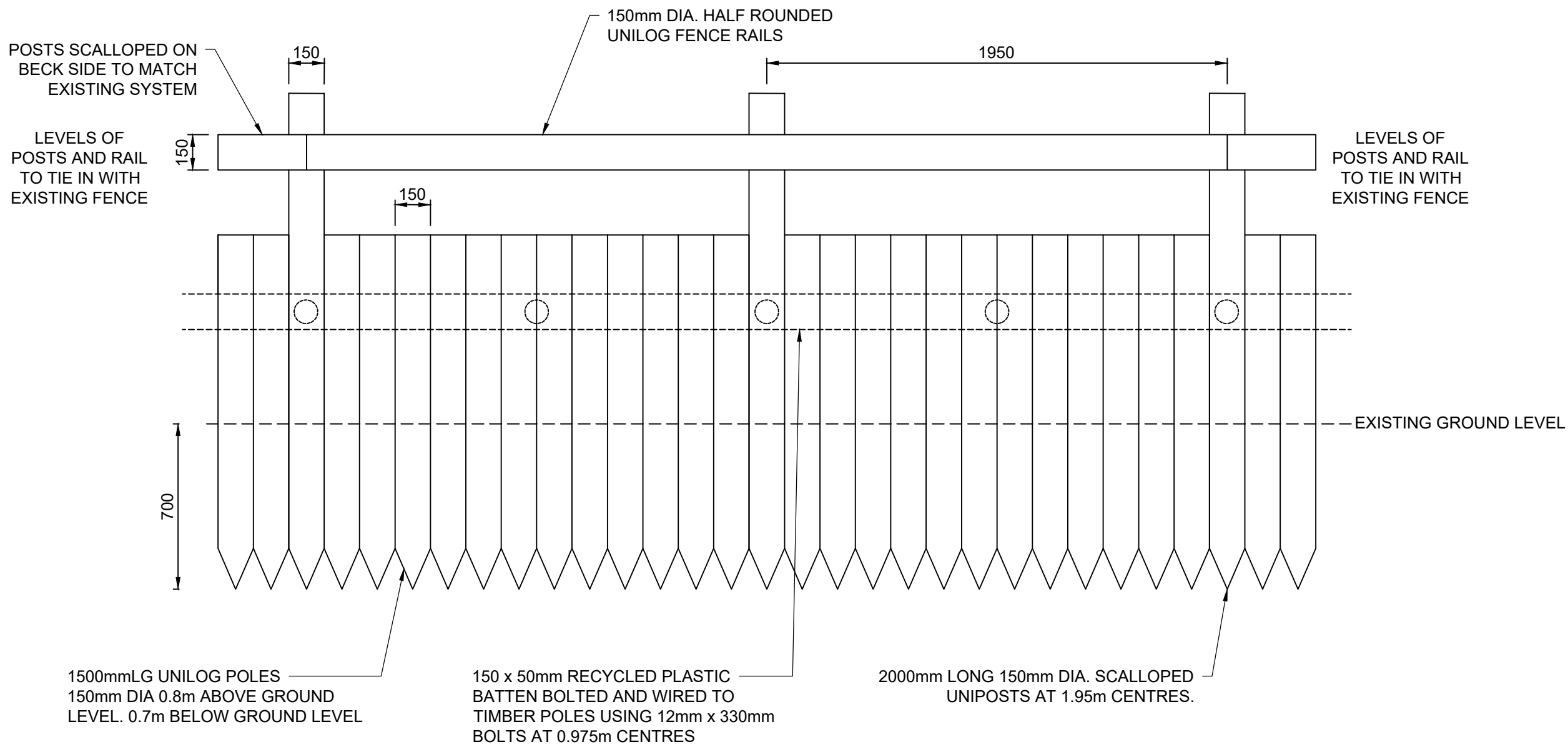




DETAIL 1 - PLAN VIEW  
1:100



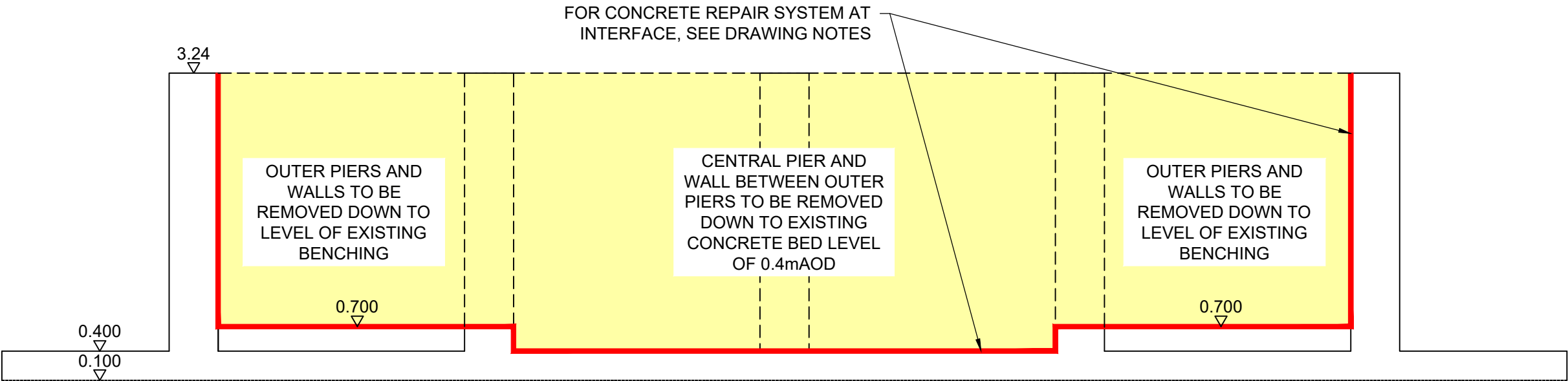
DETAIL 2 - PLAN VIEW  
1:100



DETAIL 3 - WOODEN POST FENCE  
1:20



IMAGE 1 - EXISTING ROCK ARMOUR TO RAMP



SECTION A-A: TIDAL BARRAGE  
1:20



IMAGE 2

NOTE: WHEN CONCRETE STEPS REMOVED THE WOODEN FENCE POST SYSTEM TO TIE IN WITH EXISTING FENCE AND BE BACKFILLED TO MATCH UPSTREAM AND DOWNSTREAM BANK LEVELS

NOTE: OVERHEAD AND UNDERGROUND SERVICES IN THIS VICINITY

DRAWING NOTES CONTINUED

GABIONS

- RIGID WELDMESH GABIONS SHALL BE WELDED AT EVERY INTERSECTION AND GALVANISED AFTER MESH MANUFACTURE.
- WIRE TO COMPLY WITH BS 1052. MINIMUM WIRE DIAMETER 4mm. MINIMUM MESH SPACING 60mm, MAXIMUM MESH SPACING 100mm.
- GALVANIZING OF RIGID WELDMESH GABIONS TO COMPLY WITH BS729: MINIMUM COATING WEIGHT OF 810G/SQ.M FOR WIRES OF 5.0mm
- LACING WIRE AND HELICALS SHALL BE PRODUCED FROM WIRE OF A LEAST 2.5mm DIAMETER AND ZINC COATED TO BS443.
- FILL MATERIAL SHALL BE DURABLE ROCK OF MINIMUM DENSITY 2400KG/CU.M. THE GRADING OF THE MATERIAL SHALL BE SUCH THAT THE MINIMUM PARTICLE SIZE SHALL EXCEED THE MAXIMUM SIZE OF THE GABION MESH OPENING, AND A MAXIMUM PARTICLE SIZE OF 200mm.
- CONFIRMATION OF BBA CERTIFICATION SHALL BE PROVIDED BY THE CONTRACTOR FOR ALL PROPOSED GABIONS AND ROCKFILL MATTRESSES.
- THE UNITS SHALL BE ASSEMBLED AND FILLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

BANK REINSTATEMENT

- SELECTED FILL SHALL CONSIST OF UNIFORM, READILY COMPACTIBLE MATERIAL. FILL SHALL BE FREE FROM VEGETABLE MATTER, BUILDING RUBBISH AND FROZEN MATERIALS. IT SHALL EXCLUDE CLAY OF LIQUID LIMIT OF GREATER THAN 80 AND / OR PLASTIC LIMIT GREATER THAN 55, AND MATERIALS OF EXCESSIVELY HIGH MOISTURE CONTENT. CLAY LUMPS AND STONES RETAINED ON 75mm AND 37.5mm SIEVES RESPECTIVELY SHALL NOT BE USED. THE FILL SHALL BE COMPACTED / TAMPED IN LAYERS NOT EXCEEDING 150mm TO PROVIDE A WELL COMPACTED INFILL.
- TOPSOIL FOR REINSTATEMENT SHALL BE IMPORTED TOPSOIL TO BS3883, MINIMUM DEPTH 150mm
- SEED MIXTURE APPROPRIATE FOR RIVER BANK SHALL BE AS BELOW, OR SUITABLE EQUIVALENT
  - 25% PROSEED - CERTIFIED AMENITY RYEGRASS
  - 30% DIPPER - CERTIFIED STRONG FESCUE
  - 20% RIDU - CERTIFIED SHEEPS/HARD FESCUE
  - 15% HIGHNOTE - CERTIFIED CHEWING FESCUE
  - 10% EVORA - CERTIFIED MEADOWGRASS

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DRAWING NOTES

- TIMBER FENCE / RETAINING SYSTEM
- UNILog TIMBERS TO BE UNILog PRO AS SUPPLIED BY M&M TIMBER LTD, OR SUITABLE EQUIVALENT
- TIMBERS TO BE PRESSURE TREATED IN ACCORDANCE WITH BS8417 TO PROVIDE 30 YEARS SERVICE LIFE
- BOLTS AND FITTINGS TO BE GALVANISED TO EN ISO 1461
- PLASTIC BATTEN TO BE FROM KEDEL ULTRA AS SUPPLIED BY KEDEL LTD, OR SUITABLE EQUIVALENT.

ROCK ARMOUR SYSTEM

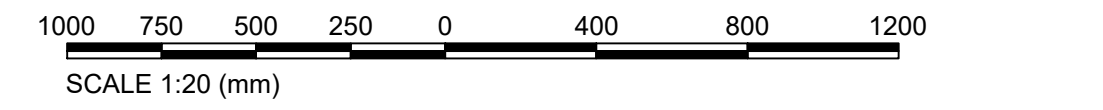
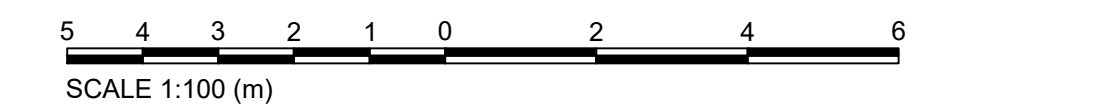
- THE SURFACING TO CONSIST OF 225 TO 300 THICK UNCOURSED RANDOM RUBBLE PITCHING EMBEDDED ON 100mm THICK GRADE FND2 CONCRETE AND POINTED IN CLASS M1 MORTAR
- THE STONE FOR PITCHING SHALL CONSIST OF HARD DURABLE MATERIAL. BUNTER SANDSTONES, KEUPER WATERSTONES AND CARBONIFEROUS SHALES AND MIUDSTONES ARE NOT TO BE USED

TREATMENT SYSTEM TO EXPOSED CONCRETE SUBSTRATE AND REINFORCEMENT BARS

- CLEAN AND PREPARE SUBSTRATE AS PER MANUFACTURERS RECOMMENDATIONS. HIGH PRESSURE WATER JETTING AT 3000PSI WITH A TURBO HEAD, OR SUITABLE EQUIVALENT, WITH REINFORCEMENT BEING CLEANED WITH A WIRE BRUSH
- TREAT EXPOSED REINFORCEMENT ENDS WITH STEEL REINFORCEMENT PROTECTOR 841.
- WHERE REQUIRED CONSOLIDATE ANY UNEVEN SURFACES OF THE SUBSTRATE WITH THE USE OF MONOLEVEL 844SP. THIS IS TO ACHIEVE A SMOOTH HORIZONTAL / VERTICAL SURFACE FOR EVEN APPLICATION OF THE SUBSEQUENT COATINGS
- IN THE EVENT THAT SUBSTRATE CONSOLIDATION ISN'T UNDERTAKEN, APPLY AN INITIAL 1mm PROTECTION COAT OF CEMPROTEC E942
- AFTER THE ABOVE OPERATIONS ARE COMPLETE THE PROTECTION IS PROVIDED BY TWO 1mm COATS OF CEMPROTEC E942
- FINAL OPERATION IS CURING WITH THE USE OF FLEXCRETE CURING MEMBRANE WB.
- NOTE THE ABOVE NOTED PRODUCTS ARE SUPPLIED BY FLEXCRETE LTD AND THE CONTRACTOR'S ATTENTION IS DRAWN TO THE PCI WITH RESPECT TO COSHH AND FOLLOWING THE MANUFACTURERS RECOMMENDATIONS
- NOTE SUITABLE EQUIVALENTS MAY BE PROPOSED BY THE CONTRACTOR.

PLANTING SPECIFICATION

- HEDGING TO BE PLANTED IN TWO STAGGERED ROWS AT A DENSITY OF NOT LESS THAN 5 PER METRE, WITH APPROXIMATELY 450mm BETWEEN PLANTS IN THE SAME ROW AND 300-400mm BETWEEN ROWS.
- PLANTING STOCK TO BE HAWTHORN (CRATAEGUS MONOGYNA) AND BLACKTHORN (PRUNUS SPINOSA) IN EQUAL QUANTITIES PLANTED IN GROUPS OF 4. PLANTS TO COMPLY WITH RELEVANT PROVISIONS OF BS3936-1.
- PLANTS TO BE 40-60cm BARE ROOT PLANTED IN MIN. 300mm DEPTH OF TOP SOIL.
- 100% RECYCLED PVC 600mm RABBIT GUARDS TO BE PROVIDED, WITH BAMBOO CANE SUPPORT.



Rev.	Description	Date	Author	Designer	Checker	Approver
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Document Control

Project Title

Ormesby Beck Restoration

Drawing Title

Ormesby Beck  
Details



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Parent Model  
ENV0002541C-JBA-00-00-DR-C-1301-Details.dwg

Security Classification  
OFFICIAL

Scale  
As shown @A1

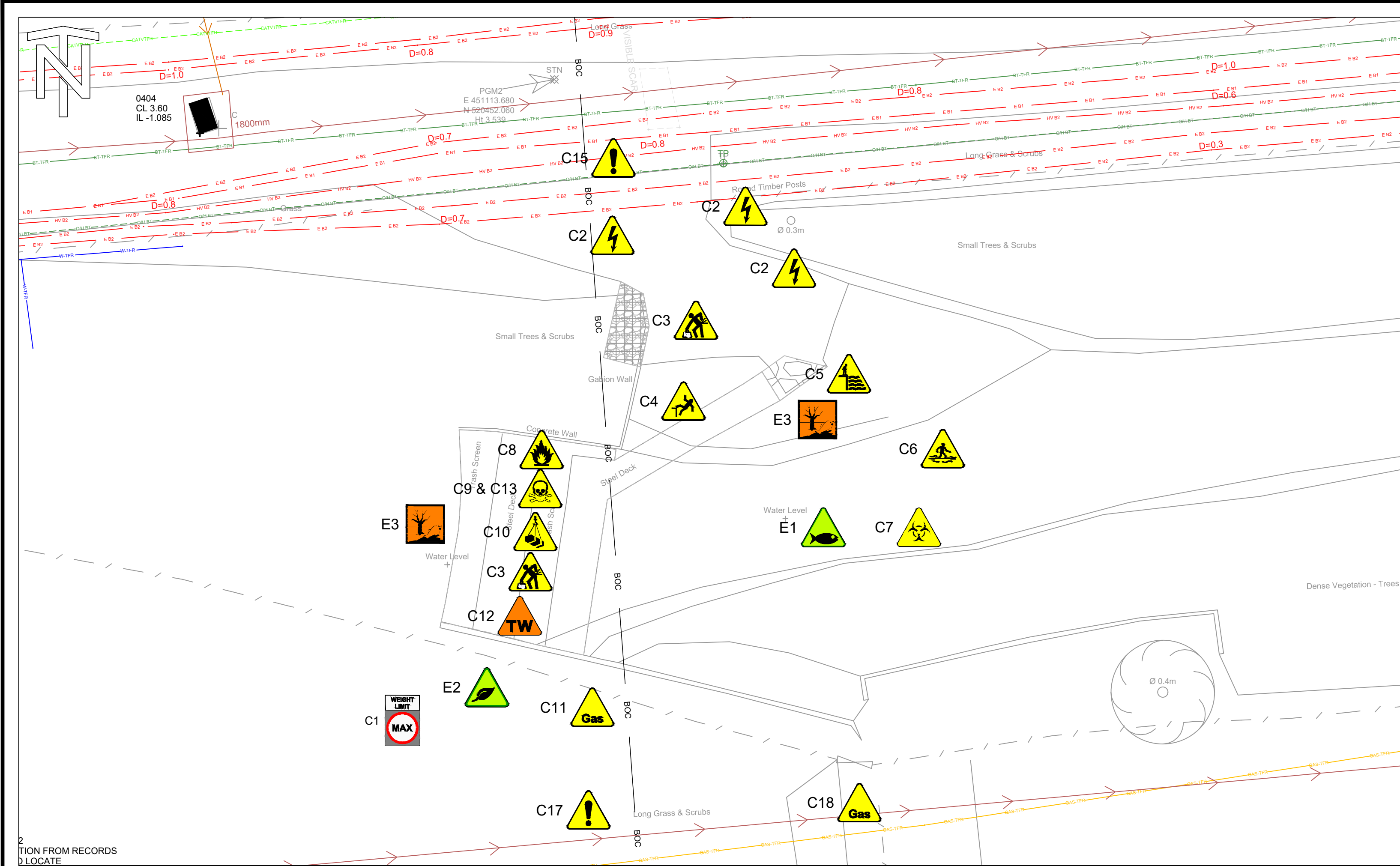
Author DA	Designer JN	Checker GP	Approver DL
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Suitability FOR COSTING	Status D2	Revision P01
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Information Container  
ENV0002541C-JBA-00-00-DR-C-1301

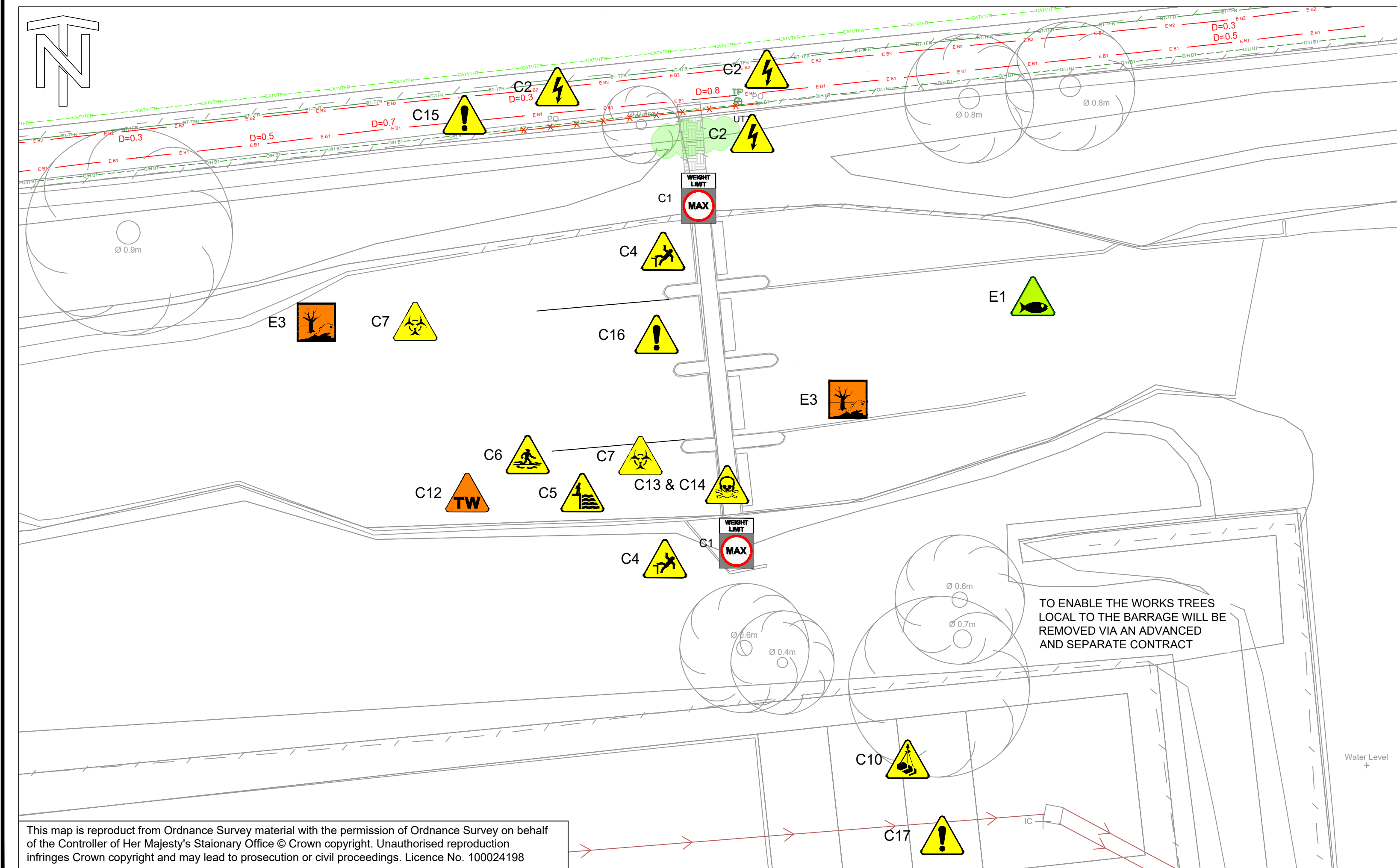
A1 Sheet Size





NAVIGATION SCREEN

1:125



TIDAL BARRAGE

1:125

## SAFETY, HEALTH, ENVIRONMENTAL, AND WELFARE INFORMATION

IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING SIGNIFICANT RISKS:

### CONSTRUCTION

C1		WEIGHT RESTRICTION: AVOID HEAVY EQUIPMENT TO REAR OF RETAINING WALLS AT THE TIDAL BARRAGE AND RIGHT BANK AT NAVIGATION SCREEN WITH 3 METRE EXCLUSION ZONE
C2		ELECTRICITY: BURIED HV AND LV CABLES TO BE LOCATED AS PER HSE GUIDANCE NOTES HSG47 "AVOIDING DANGER FROM UNDERGROUND SERVICES"
C3		MANUAL HANDLING: MANUAL HANDLING AVOIDANCE / LIFTING OF DIS-ASSEMBLED OBJECTS TO BE INCLUDED IN CONTRACTOR'S RAMS/CPP
C4		FALLS FROM HEIGHT: WHERE NECESSARY SUITABLE AND SUFFICIENT FALL PREVENTION MEASURES TO BE IMPLEMENTED
C5		ADJACENT TO WATERCOURSE: IN-CHANNEL AND INTERTIDAL WORKING WITH DEEP WATER
C6		SOFT GROUND: POTENTIAL FOR SOFT GROUND IN CHANNEL OF ORMESBY BECK
C7		BIOLOGICAL: RISK OF LEPTOSPIROS / WEILS DISEASE AND SHARPS / NEEDLES. SEWAGE DISCHARGE, CONCRETE SLURRY, RISK OF FUMES FROM DISTURBED SILT.
C8		FLAMMABLE MATERIALS: USE OF CUTTING TORCH AND GAS CYLINDERS - SEE ALSO C9 BELOW
C9		TOXIC: THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1999 (COSHH) REQUIRE A SUITABLE AND SUFFICIENT ASSESSMENT TO BE MADE OF THE RISKS TO HEALTH GENERATED BY OXY-FUEL GAS CUTTING
C10		LIFTING OPERATIONS: LIFTING OF EQUIPMENT AND REMOVAL OF DEMOLITION ARISINGS WILL REQUIRE FULL CONSIDERATION FOR INCLUSION IN CONTRACTORS RAMS/CPP
C11		GAS:REDUNDANT B.O.C CABLE NO EXCAVATIONS PERMITTED
C12		OTHER TEMPORARY WORKS:COMPLEX DESIGN AND COFFERDAM IN TIDAL CONDITIONS WILL REQUIRE FULL CONSIDERATION IN RAMS AND CPP
C13		TOXIC: CONCRETE REPAIRS TO BE UNDERTAKEN IN ISOLATION FROM FLOWS IN ORMESBY BECK AND THE CONTRACTOR SHALL MAKE A SUITABLE & SUFFICIENT ASSESSMENT OF THE RISKS WITH COGNISANCE OF THE MANUFACTURERS SAFETY DATA SHEETS
C14		TOXIC: CONCRETE REMOVAL AND MEASURES TO CONTROL GENERATION OF DUST AND NOISE TO BE DETAILED IN CPP / RAMS
C15		OVERHEAD CABLES: OVERHEAD TELECOM CABLE RUN FOR THE FULL EXTENT OF THE SITE, ALONG THE LEFT BANK OF ORMESBY BECK.
C16		HAZARDS ASSOCIATED WITH DEMOLITION AND CUTTING OF CONCRETE: NOISE, VIBRATION, SEQUENCING OF CUTS
C17		HAZARDS ASSOCIATED WITH USE OF CRANE IN CLOSE PROXIMITY TO NORTHUMBRIAN WATER SEWERS. LIFT PLAN AND MEASURES TO PROTECT SERVICES TO BE INCLUDED IN CPP/ RAMS.
C18		HAZARDS ASSOCIATED WITH USE OF CRANE IN CLOSE PROXIMITY TO GAS MAINS. LIFT PLAN AND MEASURES TO PROTECT SERVICES TO BE INCLUDED IN CPP/ RAMS.

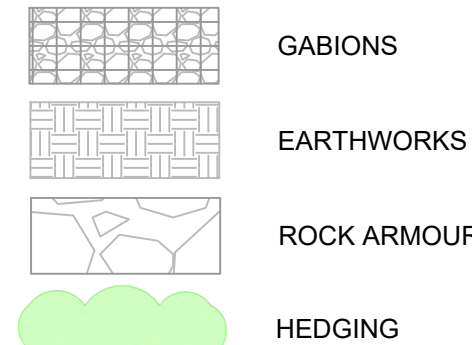
### ENVIRONMENT

E1		FISH: CONTRACTOR TO ADHERE TO ENVIRONMENTAL ACTION PLAN AND IMPLEMENT FISH RESCUES AS REQUIRED
E2		JAPANESE KNOTWEED/ GIANT HOGWEED/ HIMALAYAN BALSAM / SPREADING OF INNS: CONTRACTOR TO FOLLOW REQUIREMENTS OF SECTION 4.32 OF SHEWCOP REGARDING BIOSECURITY AND INVASIVE AND NON-NATIVE SPECIES
E3		RISK OF POLLUTION: CONTRACTOR TO FOLLOW REQUIREMENTS OF SECTION 4.31 OF SHEWCOP REGARDING POLLUTION PREVENTION. SALIENT WORKS AT TIDAL BARRAGE TO BE ISOLATED FROM FLOW WITHIN COFFERDAM.

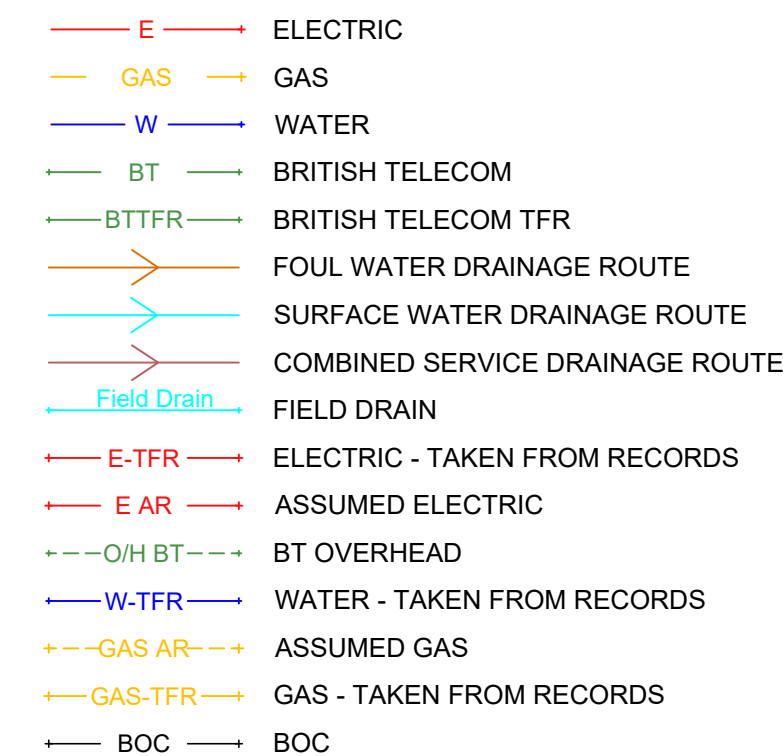
## GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN (mAOD) UNLESS NOTED OTHERWISE.
- ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
- DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- REFER TO DRAWING 1100 SITE LOCATION PLAN FOR SAFETY, HEALTH, ENVIRONMENTAL, AND WELFARE INFORMATION / SHE BOXES RELATING TO THE WIDER AREAS OF WORK NOT COVERED BY THIS DRAWING.

### LEGEND



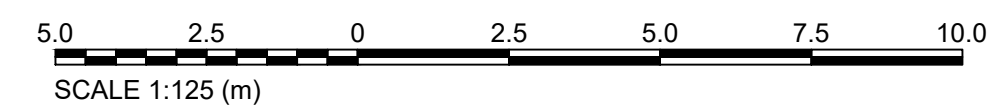
### SERVICES LEGEND



### UTILITY SERVICES INVESTIGATION GAUGE

	TYPE C: DESK STUDY WITH SITE RECONNAISSANCE
	TYPE B: DESK STUDY AND DETECTION SURVEY 11/02/2022
	TYPE A: DESK STUDY, DETECTION SURVEY & TRIAL HOLES

THE POSITION OF ANY EXISTING PUBLIC OR PRIVATE SEWERS, UTILITY SERVICES, PLANT OR APPARATUS SHOWN ON THIS DRAWING HAS BEEN OBTAINED FROM STATUTORY RECORDS. THE INFORMATION SHOWN IS BELIEVED TO BE CORRECT BUT NO WARRANTY TO THIS IS EXPRESSED OR IMPLIED. OTHER SUCH PLANT OR APPARATUS MAY ALSO BE PRESENT BUT NOT SHOWN. INVESTIGATIONS MUST UNDERTAKEN ON SITE CONFIRMING LOCATIONS BEFORE BREAKING GROUND.



Rev.	Description	Date	Author	Designer	Checker	Approver
Document Control						

Project Title

Ormesby Beck Restoration

Drawing Title

Ormesby Beck  
Hazards & Constraints

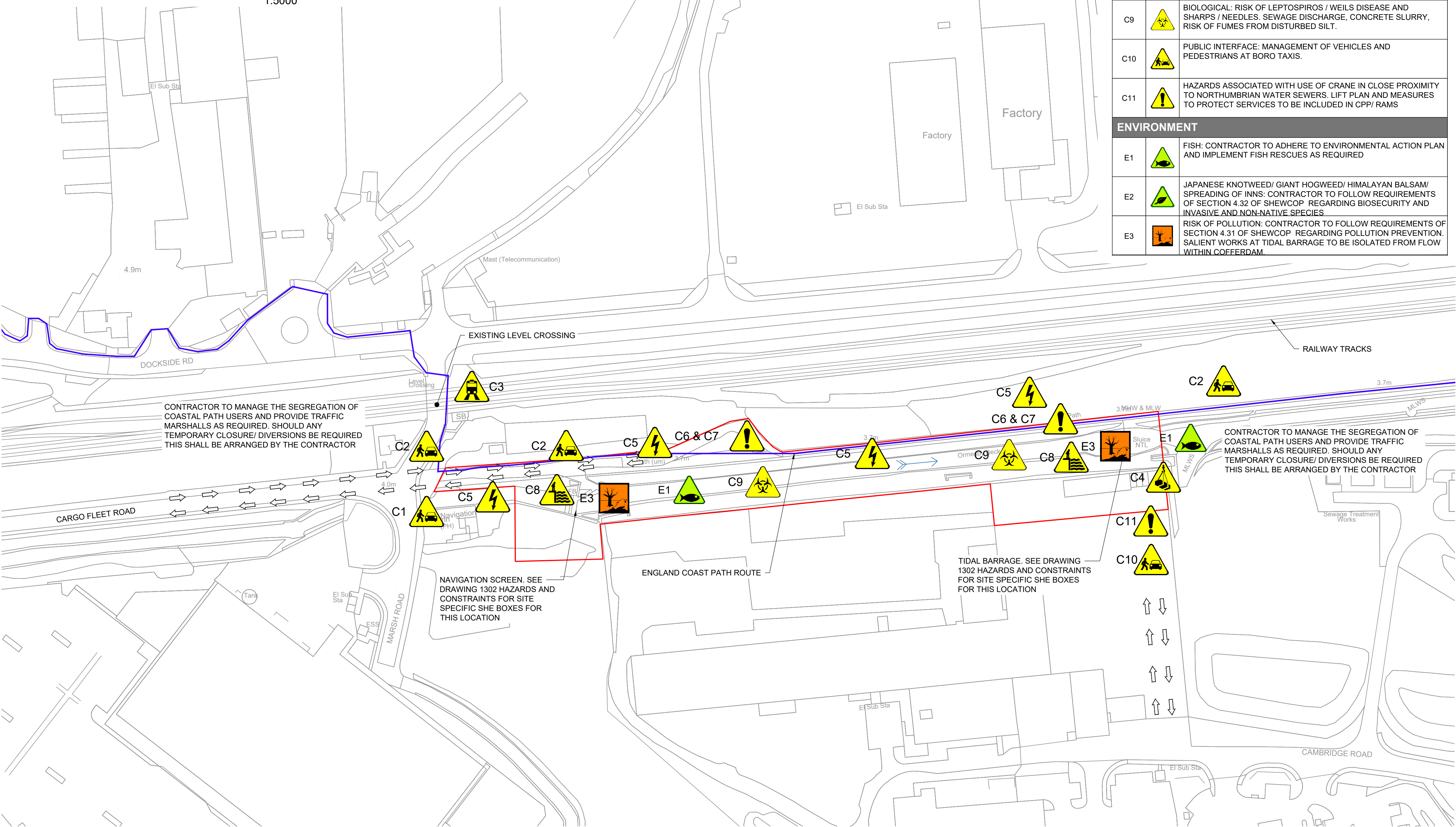


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Parent Model ENV0002541C-JBA-00-00-DR-C-1302_Hazards_& Constraints						
Security Classification OFFICIAL				Scale As shown @A1		
Author DA	Designer JN	Checker GP	Approver DL	Status D2	Revision P01	
Suitability FOR COSTING				Information Container ENV0002541C-JBA-00-00-DR-C-1302	A1 Sheet Size	





SITE LOCATION  
1:5000



SITE PLAN  
1:1000

### SAFETY, HEALTH, ENVIRONMENTAL, AND WELFARE INFORMATION

IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING SIGNIFICANT RISKS:

#### CONSTRUCTION

C1		PUBLIC INTERFACE: MANAGEMENT OF PEDESTRIANS AND POSSIBLE HIGH VOLUME OF PEOPLE ON MATCH DAYS AT MIDDLESBROUGH FC VISITING THE NAVIGATION INN.
C2		PUBLIC INTERFACE: CONTRACTOR TO MANAGE THE SEGREGATION OF COASTAL PATH USERS AND PROVIDE TRAFFIC MARSHALLS AS REQUIRED.
C3		RAILWAY LEVEL CROSSING: CONTRACTOR TO ACCESS SITE AS SHOWN BY ARROWS AND AVOID LEVEL CROSSING.
C4		CRANE NOT TO SWING OVER RAILWAY FENCE: LIFTING OF EQUIPMENT AND REMOVAL OF DEMOLITION ARISING WILL REQUIRE FULL CONSIDERATION FOR INCLUSION IN CONTRACTORS RAMS/CPP.
C5		ELECTRICITY: UNDERGROUND HV AND LV CABLE RUN FOR THE FULL EXTENT OF THE SITE, ALONG THE LEFT BANK AND BED OF ORMESBY BECK.
C6		SERVICES: OVERHEAD BT CABLES RUN ALONG THE LEFT BANK OF ORMESBY BECK THROUGH THE EXTENT OF THE SITE.
C7		SERVICES: 1800 COMBINED SEWER RUNS PARALLEL TO ORMESBY BECK WITHIN NETWORK RAIL LAND AND THROUGH THE SITE EXTENT. CONTRACTOR TO CONFIRM ANY PROTECTION MEASURES WITHIN NORTHUMBRIAN WATER.
C8		ADJACENT TO WATERCOURSE: IN-CHANNEL AND INTERTIDAL WORKING WITH DEEP WATER
C9		BIOLOGICAL: RISK OF LEPTOSPIROS / WEILS DISEASE AND SHARPS / NEEDLES. SEWAGE DISCHARGE, CONCRETE SLURRY, RISK OF FUMES FROM DISTURBED SILT.
C10		PUBLIC INTERFACE: MANAGEMENT OF VEHICLES AND PEDESTRIANS AT BORO TAXIS.
C11		HAZARDS ASSOCIATED WITH USE OF CRANE IN CLOSE PROXIMITY TO NORTHUMBRIAN WATER SEWERS. LIFT PLAN AND MEASURES TO PROTECT SERVICES TO BE INCLUDED IN CPP/ RAMS

#### ENVIRONMENT

E1		FISH: CONTRACTOR TO ADHERE TO ENVIRONMENTAL ACTION PLAN AND IMPLEMENT FISH RESCUES AS REQUIRED
E2		JAPANESE KNOTWEED/ GIANT HOGWEED/ HIMALAYAN BALSAM/ SPREADING OF INNS: CONTRACTOR TO FOLLOW REQUIREMENTS OF SECTION 4.32 OF SHEWCOP REGARDING BIOSECURITY AND INVASIVE AND NON-NATIVE SPECIES.
E3		RISK OF POLLUTION: CONTRACTOR TO FOLLOW REQUIREMENTS OF SECTION 4.31 OF SHEWCOP REGARDING POLLUTION PREVENTION. SALIENT WORKS AT TIDAL BARRAGE TO BE ISOLATED FROM FLOW WITHIN COFFERDAM.

### GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ALL LEVELS ARE IN METRES RELATIVE TO ORDINANCE DATUM NEWLYN (mAOD) UNLESS NOTED OTHERWISE.
- ALL COORDINATES ARE IN METRES RELATIVE TO ORDINANCE SURVEY NATIONAL GRID.
- DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- REFER TO DRAWING 1302 HAZARDS AND CONSTRAINTS WHICH FURTHER DETAILS THE SPECIFIC SAFETY, HEALTH, ENVIRONMENTAL, AND WELFARE INFORMATION / SHE BOXES RELATING TO THE WORKS AT THE TIDAL BARRAGE AND THE NAVIGATION SCREEN

LEGEND

RED LINE BOUNDARY

250 200 150 100 50 0 100 200 300  
SCALE 1:5000 (m)

50 40 30 20 10 0 20 40 60  
SCALE 1:1000 (m)

Rev.	Description	Date	Author	Designer	Checker	Approver
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Document Control

Project Title

Ormesby Beck Restoration

Drawing Title

Ormesby Beck  
Hazards & Constraints Site Plan



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Security Classification OFFICIAL		Scale As shown @A1	
Author DA	Designer JN	Checker GP	Approver DL
Suitability FOR COSTING		Status D2	Revision P01
Information Container ENV0002541C-JBA-00-00-DR-C-1303			



Ref	Type	Details
1	EA PCI Documents	Existing information, reports and drawings
2	Topographical Information	Dwg file and survey report carried out November 2021
3	Utilities Services Pack	Utility searches October 2021
4	Initial UXO Report	UXO report identifying moderate risk
5	Landmark / Envirocheck Reports	Pdf and excel documents
6	Preliminary Environmental Information Report	PEIR February 2022
7	GPR Survey	Survey from February 2022
8	Environmental Action Plan	
9	Tidal Barrage Structural Investigation	November 2021
10	Utilities / Northumbrian Water Sewer Investigations	Sewer investigation carried out by Contractor
11	Utilities / slit trenches information	Trial pit information provided by Contractor
		-