



**Framework:** Marine & Coastal  
**Supplier:** Framework  
**Company Number:**  
**Geographical Area:** National  
**Project Name:** Saltfleet to Gibraltar Point Strategy - Beach  
**Project Number:** Management ENV0002657C  
**Contract Type:** Engineering Construction Contract  
**Option:** Option C  
**Contract Number:** 30084

Revision	Status	Originator	Reviewer	Date

Rev 1.6.8a

**ENGINEERING AND CONSTRUCTION CONTRACT under Marine and Coastal Framework  
 CONTRACT DATA PART ONE**

**Project Name** Saltfleet to Gibraltar Point Strategy - Beach Management

**Project Number** ENV0002657C

This contract is made on 4 January 2021 between the *Client* and the

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 10th day of June 2019 between the *Client* and the *Contractor* in relation to the Marine and Coastal Framework. The following Clauses and Schedules of the Agreement are incorporated into this contract by reference
- Schedules 1- 22 inclusive of the Framework schedules are relied upon within this contract.
- The following documents are incorporated into this contract by reference  
 Scope SGPS Beach Management V0-4 140920

**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.



- X2: Changes in the law
- X5: Sectional Completion
- X9: Transfer of rights
- X10: Information modelling
- X11: Termination by the *Client*
- X16: Retention
- X18: Limitation of liability
- X20: Key Performance Indicators
- Y(UK)1: Project Bank Account
- Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996 Applies
- Y(UK)3: The Contracts (Rights of Third Parties) Act 1999
- Z: *Additional conditions of contract*

The works are  
*Beach nourishment and other works that are required to sustain the standard of protection along the Lincolnshire coastline.*

The *Client* is

Name Environment Agency

Address for communications



Address for electronic communications  
The *Project Manager* is

Address for communications

Address for electronic communications

The *Supervisor* is TBC

Address for communications

Address for electronic communications

The Scope is in  
Scope SGPS Beach Management V0-4 140920

The Site Information is in  
Anderby Creek Outfall V3.0

The *boundaries of the site* are  
ENV0001081C-CH2-ZZ-L00-DR-C-1800 Rev P02

The *partner contract* is

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 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  
*key date*

**2 The Contractor's main responsibilities**

The *key dates and conditions* to be met are

*conditions* to be met

'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

'none set'

4 weeks

**3 Time**

The *starting date* is 04 January 2021

The *access dates* are  
 part of the Site date  
 Site Compound 04 January 2021 01  
 Beach access for Total Beach Survey February for each year.  
 Beach access for mobilisation 01 April for each year.  
 Beach locations for undertaking the works (2021, 2022, 202 Post Easter weekend for each year.

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

The *completion date* for the whole of the *works* is 31 March 2025

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

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

**4 Quality management**

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

The period between Completion of the whole of the *works* and the *defects date* is 0 weeks for beach nourishment works, or 52 weeks for other works.

The *defect correction period* is 2 weeks except that  
 • The *defect correction period* for a safety issue for the public is 24 Hours  
 • The *defect correction period* for is

**5 Payment**

The *currency of the contract* is £ sterling

The *assessment interval* is Monthly

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 %	50% %
greater than 120 %	100 %

The exchange rates applicable to the change in the amount due, arising from payment of Defined Cost made by the Contractor in a currency other than the currency of the Contract since the last payment certificate, are those published in the "FT Guide to World Currencies" published in the "The Financial Times" on the day before the assessment date.

**6 Compensation events**

The *place where weather is to be recorded* is Not required

The *weather measurements* to be recorded for each calendar month are  
 • the cumulative rainfall (mm)  
 • the number of days with rainfall more than 5mm  
 • the number of days with minimum air temperature less than 0 degrees Celsius  
 • the number of days with snow lying at Not Required hours GMT

and these measurements:  
 1.  
 2.  
 3.  
 4.  
 5.

The *weather measurements* are supplied by Not Required

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at Not Required and which are available from Not Required

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

Jan	Not Required	Jul	Not Required
Feb	Not Required	Aug	Not Required
Mar	Not Required	Sept	Not Required
Apr	Not Required	Oct	Not Required
May	Not Required	Nov	Not Required
June	Not Required	Dec	Not Required

These are additional compensation events  
 1. Managing and mitigating the impact of Covid 19 and working in accordance with the Health and Safety Executive guidance.  
 2. The change in the Crown Royalty fee for extraction of material.  
 3. Termination of the extraction licence unless due to the Contractor's or the Client's actions.  
 4. 'not used'  
 5. 'not used'

Contractor's owned risks  
 Standard Risk - The following will NOT be compensation events:  
 1. Marine accidents, collisions, etc.  
 2. The beach and /or site left unsafe for public use.  
 3. Archaeological offshore finds.  
 4. Incendiary and explosive devices found offshore and those brought onshore as a result of activities offshore.  
 5. Loss or termination of the extraction licence due to the Contractor's or his Subcontractors' or suppliers' actions.

Classification: Internal

- 6. Inability to provide the quantity and/or quality of nourishment material.
- 7. Interference with winning, transporting and placing of nourishment material due to the Contractor's or his Subcontractors' or suppliers' actions.
- 8. Non-compliance with FEPA/CPA licence conditions.
- 9. Environmental impacts onshore and offshore.
- 10. Change in market price of nourishment material (excluding a change in royalty rates).
- 11. Fluctuations in Fuel Prices.
- 12. Fluctuations in Steel Prices.
- 13. Adverse weather and/or sea conditions.
- 14. Change in dredger or using more than one dredger to undertake the works.

**8 Liabilities and insurance**

These are additional *Client's* liabilities

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

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

£15,000,000

The minimum amount of cover for insurance against death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with the contract for any one event is *not less than the amount required by law*

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

**Resolving and avoiding disputes**

The *tribunal* is

The *Senior Representatives* of the *Client* are Name (1)

Address for communications

Address for electronic communications

Name (2)

Address for communications

Address for electronic communications

The *Adjudicator* is

Address for communications

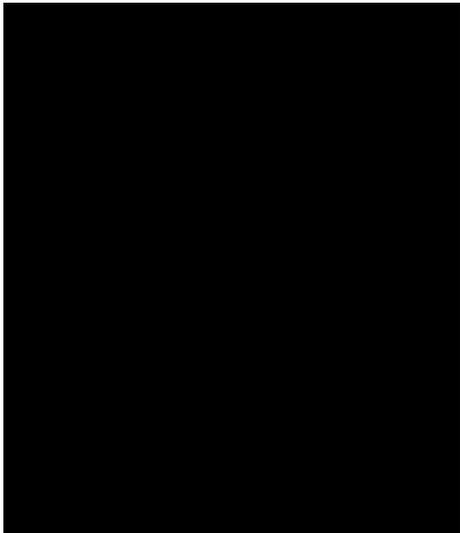
Address for electronic communications

The *Adjudicator nominating body* is

'  
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e  
d  
'

The Institution of Civil Engineers

litigation in the courts



### **Z1 Correctness of Site Information and other documents**

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

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

### **Z 2A: Risk transfer: Physical conditions within the Site**

Clause 60.1 (12) is deleted from this contract

### **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**

Delete the Schedule of Cost Components and Short Schedule of Cost Components replace with the Schedule of Cost Components as detailed in the Framework Schedule 9.

### **Z 6 Payment for Work Done to Date**

Delete existing clause 11.2 (31) and replace with:

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

### **Z7 Aggregated Contractor's share**

Delete existing clauses 54 and 93.3:

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

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

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

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

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

93.3 If there is a termination, the *Project Manager* assesses the *Contractor's* share after certifying termination. The assessment uses as the Aggregated Price for Work

Done to Date the sum of

- the total of the Defined Cost which the *Contractor* has paid and of which it is committed to pay for work done before termination and
- the total of the Defined Cost which the *Consultant* has paid and of which it is committed to pay in the *partner contract* before the date the termination certificate is issued under this contract. The assessment uses as the Aggregated Total of the Prices the sum of
  - the total of
    - the lump sum price for each activity which has been completed and
    - a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed and
  - the total of
    - the lump sum price for each activity which has been completed and
    - a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed in the *partner contract* before the date the termination certificate is issued under this contract.

Add:

11.2(37 ) The Aggregated Total of the Prices is sum of

- the total of the Prices and
- the total of the Prices in the *partner contract*

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

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

### **Z10 Payments to subcontractors, sub consultants and suppliers**

Subcontractors

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

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

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

### **Z11Y(UK) 3 The Contracts (Rights of Third Parties) Act 1999**

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

Transfer of rights clause Z11

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

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

Z11.1.1 the Parties may not rescind or vary any provision(s) of this agreement, including this clause, at any time without the consent of the third party; and Z11.1.2 each third Party's rights against Party A under this agreement shall be subject to the same conditions, limitations and exclusions as apply to Party B's rights against Party A under this agreement.

Z11.2 Except as provided in clause Z1.1, this agreement does not create any right enforceable by any person who is not a Party to it (Other Party) under the Contracts (Rights of Third Parties) Act 1999, but this clause does not affect any right or remedy of a other Party which exists or is available apart from that Act.

### **Z16 Disallowed Costs**

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

- was incurred due to a breach of safety requirements, or due additional work to comply with safety requirements.

Classification: Internal

- 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.
- The removal of Equipment or Plant and Materials sunk in connection with, or accumulated as a result of, Providing the Works and the removal of any other equipment or materials sunk as a direct consequence of the Contractor's actions;
- Increased costs for the dredger, over and above the rates stated in Pricing Workbook and/or framework Schedules, due to the dredger's substitution for commercial or similar reasons within the Contractor's control;
- Costs associated with the correcting of non-compliant material placed on beaches. If tests of the material in-situ show that the placed material does not conform to the Grading Envelope, the Project Manager will determine the appropriate cause of action from the following options.
- The Contractor mixes the out-of-specification material with conforming material to achieve a net grading that does comply and removes remaining non-compliant material from the Site.
  - The non-compliant material is permitted to remain on the frontage, but becomes a Disallowed Cost (i.e. the Contractor is not paid for that load and is not required to remove the material).
  - The Contractor removes all of the non-compliant material from the Site at their cost and replaces it with conforming material stated in the Scope.

### **Z18 Payment of pain/gainshare**

Delete existing clause 54.3 and replace with:

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

Delete existing clause 54.4 and replace with:

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

Insert the following new clause 54.5:

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

### **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 and insert the following:

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.

### **Z24 Acceptance of nourishment works**

Delete existing clause 35.1 and replace with:

"The *Client* takes over a part of the nourished beach when the Supervisor issues an acceptance certificate. Any change in the accepted beach profile due to natural causes following the issue of the acceptance certificate is not a Defect."

### **Z25 Weather risk**

Clause 60.1 (13) is deleted.

### **Z26 Breakdown of dredgers and other marine equipment**

Breakdowns of dredgers and other marine equipment are not compensation events.

Breakdowns of dredgers and other marine equipment are included in Defined Cost as follows:

- First 24 hours at Idle Rate.
- Second 24 hours at half of Idle Rate.
- After 48 hours there is no charge for the dredger or other marine equipment.
- After 48 hours fixed site establishment costs and the *Contractor's* *Project Manager's* time costs only are included.
- If the dredger or other marine equipment immediately leaves the site for repair following the breakdown, then there is no charge for the offsite period.

### **Z27 Fisheries Liaison Officer**

The responsibility for the employment and management of the Fisheries Liaison Officer (FLO) shall lie with the Contractor. Agreement to third party compensation payments can only be made by the Environment Agency's Estates Department.

### **Z28 Fee**

No Fee is to be added to the following items:

- Crown Estate Fee
- Material Licence Holder Fee
- Approval costs (e.g. fees for Planning Applications and FEPA licences)
- Taxes (including Aggregate Taxes)

### **Z29 Payment of annual pain and gain shares**

The pain and gain share will be determined and paid on an annual basis following the sectional completion date and assessment of the final account for each section. The payment will be in line with the process as set out in the Deed of Agreement.

### **Z30 Change in Quantity of Material**

The *Client* is not bound to undertake any or all of the sections and may cancel one or more of these sections of the *works*.

The *Contractor* is to keep the *Project Manager* informed of the forecast of any potential Defined Costs associated with the cancellation of any or all of these sections of Works. In the event of the using this clause, payment will only be able to be recovered on the basis of the Defined Cost which has been incurred and those cancellation costs which have been notified by the *Contractor* in their accepted forecast.

The *Client* will advise the *Contractor* of whether a section is to be removed at the Price Setting Meeting of calendar year of that particular campaign.

If the quantity of beach material fall below 200,000m<sup>3</sup> or above 500,000m<sup>3</sup> for a campaign, the *Project Manager* will reassess the rate for that years target.

### **Z31 Changes to fuel prices and exchange rate**

A change in Price due to change in fuel price and exchange rates will be those printed in the Financial Times on the day before the assessment date.

### **Z32: Environment Agency as regulatory authority:**

The Environment Agency's position as a regulatory authority and as Client under the contract are separate and distinct. Actions taken in one capacity are deemed not to be taken in the other.

Where statutory consents must be obtained from the Environment Agency in its capacity as a regulatory authority, the Contractor is responsible for obtaining these and paying fees. The Environment Agency's acceptance of a Contract and the Project Manager's instructing or varying work does not constitute statutory approval or consent.

An action by the Environment Agency as regulatory authority is not in its capacity as Client and is not a compensation event.

### **Z33: Defined Costs:**

Add clause 52.5

If the Contractor subcontracts any part of the works to an Associated Company, the Defined Cost of the work subcontracted is assessed in accordance with the Schedule of Cost Components as if the works had not been subcontracted unless otherwise agreed by the Project Manager.

## Secondary Options

### OPTION X2: Changes in the law

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

### OPTION X5: Sectional Completion

The *completion date* for each *section* of the *works* is

<i>section</i>	<i>description</i>	<i>completion date</i>
1	2021 Campaign	01 August 2021
2	2022 Campaign	01 August 2022
3	2023 Campaign	01 August 2023

### 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

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

£10,000,000.00

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

12 year(s)

### OPTION X16: Retention

The *retention free* amount is £0.90  
The *retention percentage* is 50.00%

The *Contractor* may not give the *Client* a retention bond

### OPTION X18: Limitation of liability

The *Contractor's* liability to the *Client* for indirect or consequential loss is limited to £5,000,000.00

For any one event, the *Contractor's* liability to the *Client* for loss or damage to the *Client's* property is limited to £5,000,000.00

The *Contractor's* liability for Defects due to its design which are not listed on the Defects Certificate is limited to £5,000,000.00

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 £10,000,000.00

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

**Y(UK)1:Project Bank Account**

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

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

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

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

term *beneficiary*

term *beneficiary*

The provisions of Y(UK)1

**Part Two - Data provided by the Contractor**

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

**1 General**

Rev 1.6.8a

The Contractor is  
Name

Address for communications

Address for electronic communications

The fee percentage is

The working areas are

The key persons are

Name (1)  
Job  
Responsibilities  
Qualifications  
Experience

Name (2)  
Job  
Responsibilities  
Qualifications  
Experience

Name (3)  
Job  
Responsibilities  
Qualifications  
Experience

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**

**5 Payment**

The programme identified in the Contract Data is  
Please refer to Quality Section Appendix 1

The activity schedule is  
Please refer to Quality Section Appendix 2

The tendered total of the Prices is



Classification: Internal

**Resolving and avoiding disputes**

The Senior Representatives of the Contractor are



The information execution plan identified in the Contract Data is  
to be prepared collaboratively after contract award.

**X10: Information Modelling**

The project bank is

**Y(UK)1: Project Bank Account**

insert details

named suppliers are

insert details

insert details

The rates for special Equipment are

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## SGPS Beach Management 2021 to 2024

### Price Workbook - Instructions for use

#### Supplier instructions

The *Client's* workbook includes the following:

Instructions  
Basic Data  
SCC sheet  
Supervision  
Pricing Data  
Fuel and exchange rate  
Activity Schedule

#### 1 **Basic Data sheet**

1a Complete 'basic data' tab first. Sheet is colour coded as below to aid completion:

	Key
EA Populated data	
Contractor populated data (for information only)	
Contractor populated data (drives pricing model)	
Formula Driven	

- 1b This "Price Workbook" will be used for Target setting for every year's campaign.  
1c Future changes by the *Contractor* will only be made through the Escalation Tab.  
1b Environment Agency will revised the Beach Volume and Location (Beach Stretch).

#### 2 **SCC sheet**

- 2a On completing the 'SCC' tab, the data entered will populate both the 'Pricing Data' and 'Activity Schedule' tabs.  
2b Populate quantities and / or for non-subcontracted and subcontracted work in the applicable columns. This is linked to the MCF different Fee percentage.  
2c Only populate the SCC items if wanting to use the rate for recovery of your "Defined Costs".

#### 3 **Supervision sheet**

- 3a Complete the 'Supervision' tab. Data entered here will also populate both the 'Defined costs' and 'Activity Schedule' tabs.  
3b Use agreed current MCF Rates for the baseline for all Staff.

Priced Workbook has allowed for variation to MCF Agreed Rate to include for the following:

- 1) Increased hours due tidal working ((Operational Time) linked to programme delivery and rate )).  
2) Columns to cover pre and post operational time - this covers meetings, surveys etc. and final accounting and producing BIM data and H&S requirements.  
3) Percentage of Staff time linked to project during Operational time. Fulltime recovery on project equals 100%.  
3c 4) Accommodation costs for Staff, are to follow the standard requirements for the Environment Agency and to be included within the Pricing Data, otherwise deemed included within Target Price.  
5) Please note that working hours will be reviewed as where they pose an potential wellbeing concern or Health and Safety Risk (Capped at 60 hours - Any hours for an individual person over and above this cap will be deemed as disallowed costs).

#### 4 **Pricing Data sheet**

- 4a Review and ensure values have been correctly added to the 'Pricing Data' sheet, if data entered within the SCC tab, otherwise please enter values into this tab (ONLY if not using SCC tab):  
4b Item 1 : Supervision (1)  
This will have been automatically populated using rates entered on the 'supervision' tab and quantities from the operational duration calculated on the 'basic data' tab  
4c Item 2 : SCC items (2.1, 2.2, 2.3, 2.4 & 2.5)

Rates will need to be populated where required (see salmon colour cell shading)

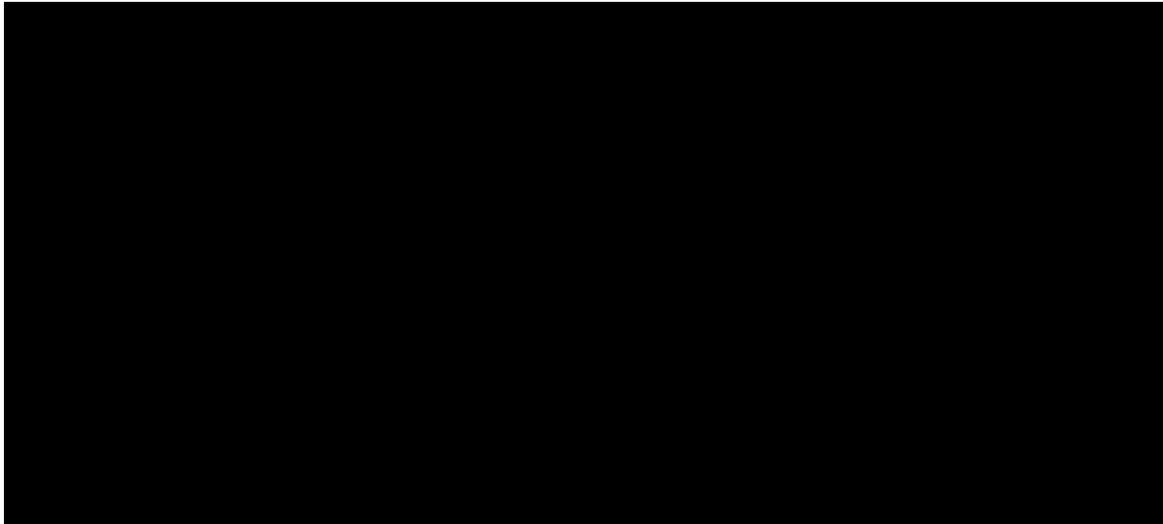
4d Item 3 : Risk (3)

Insert contractor risk allowances, descriptions and values

The risk budget is made up of the *Contractor's* owned risks any other risks that are not identified in the contract as *Client's* Risks.

The tendered total of Prices includes the risk budget agreed between the *Client* and the *Contractor* and is recorded below.

The *Contractor* should provide supporting information on how they have determined this risk budget. An example of the format of the supporting information is provided at the end of the document.



4e Item 4 : Other items (4)

Insert any items which form part of the tender price which are not included for elsewhere.

4f Item 5 : Supervision (5)

This will have been automatically populated using royalties and management fee quantities and rates entered on the SCC sheet.

5 **Activity Schedule sheet**

5a The Activity Schedule sheet will be pre-populated with based on the data entered on all previous sheets.

5b The Grand Total value at the bottom of the sheet confirms the tender price.

6 **Escalation sheet**

6a No action required at the time of tender but this sheet provides details of the mechanisms that will be applied to adjust the target price for fuel escalation and exchange rate movements throughout the contract.

6b **Contract Stage:**

Costs within Pricing Mechanism do not reflect Brexit Impacts (as not known at time of Tender).

The Escalation formula was revised as a result of the Contractor offering "Green Fuel" alternatives. The baselining of the unit rates is now within a table as various vessels will run of a variety of different fuels and it has been agreed that although the team's ambition is to run as environmental as possible (i.e. reduce Carbon Emmisions), this will not be at an inflated cost. (i.e. the questions we need to ask is "Would that addition cost be better spent eslewhere in protection the planet?) *Types of Fuels baselined are:*

Marine Gas Oil - MGO

Bio-Fuel 100

Liquid Natural Gas - LNG

6c **Addition is the impacts to The Crown Estate Royalty Rate**

Changes to the rate outside the control of the Contractor will be reviewed at the time of agreeing the Target of each campaign.

EA Populated data Cannot be amended by the supplier in the model  
 Contractor populated data (for information only) Supplier to populate but for information only  
 Contractor populated data (drives pricing model) Supplier to populate and drives the cost model  
 Formula Driven Will calculate automatically


**Contractor data**

**EA data**

Total beach stretchm Measured between profiles Total volume  on beachm³ Tendered volume

**Contractor data**

Sinkerlinem For information   
 Floating pipelinem For information   
 Shoreline

Nourishment stretch per sinkerline locationm Inform at Tender -   
 Expected losses on beach% Adjustment % for volume on beach

Capacity (hopper)  m³  
 Dredger name  Dredger Name will be entered when confirmed.

Working tides per  
 Hopper output m³/daym³/day Working tides per week x capacity / 7

Weatherhrs Used to calculate operational duration (dredger idle)   
 Standby TSHD per sinker movehrs Used to calculate operational  
 Otherhrs Used to calculate operational duration (dredger idle)

Non subcontract fee %  
 Subcontract fee %



MCF fee percentage (Supplier specific)  
 MCF fee percentage

**Outputs (derived from data entry in EA and contractor values)**

Total number of sinkerline relocations Scope   
 dredged volume in hopper  m³ Total beach stretch ÷ nourishment stretch per sinkerline location Beach volume plus expected losses on beach %

Operational Duration (Dredger working)  
 Weeks   
 Days  weeks  
 Hours  days  
 hrs

Operational Duration (Dredger idle)  
 Weeks   
 Days  weeks  
 Hours  days  
 hrs

Operational Duration (Dredger working & idle total)  
 Weeks  weeks  
 Days  days  
 Hours  hrs

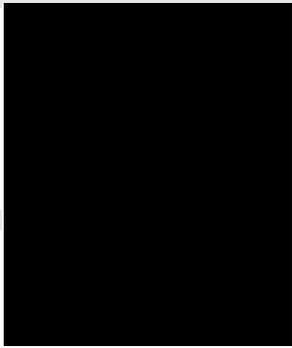
Volume (area 1)Formula  
 Volume (area 2)Leave blank if not required  
 Volume (area 3)Leave blank if not required  
 Volume totalFormula

Licenced Area No.	m <sup>3</sup>	% by area
481	400,000	100%
	400,000	100%

**Tender base values (Used for tender submission)**



1 GBP =  
 1 USD =  
 Total tender price  
 GBP element  
 EUR element (in GBP)  
 GBP element %  
 EUR element %



The two percentage need to equate to 100%

**Fuel**

MGO  
 Bio Fuel (100)  
 LNG

Base Rates to be agreed  
 Base Rates to be agreed  
 Base Rates to be agreed



5.1	Management Fee - Area 2 (per m3 in hopper)		
5.2	Royalty - Area 2 (per m3 in hopper)		
5.1	Management Fee - Area 3 (per m3 in hopper)		
5.2	Royalty - Area 3 (per m3 in hopper)		
<b>INTERIM TOTAL NON-FEE RELATED ITEMS</b>			





1.23	Other (Please detail)		
1.24	Other (Please detail)		



Contractor populated data (drives pricing model) Formula Driven


SGPS Beach Management 2021 to 2024

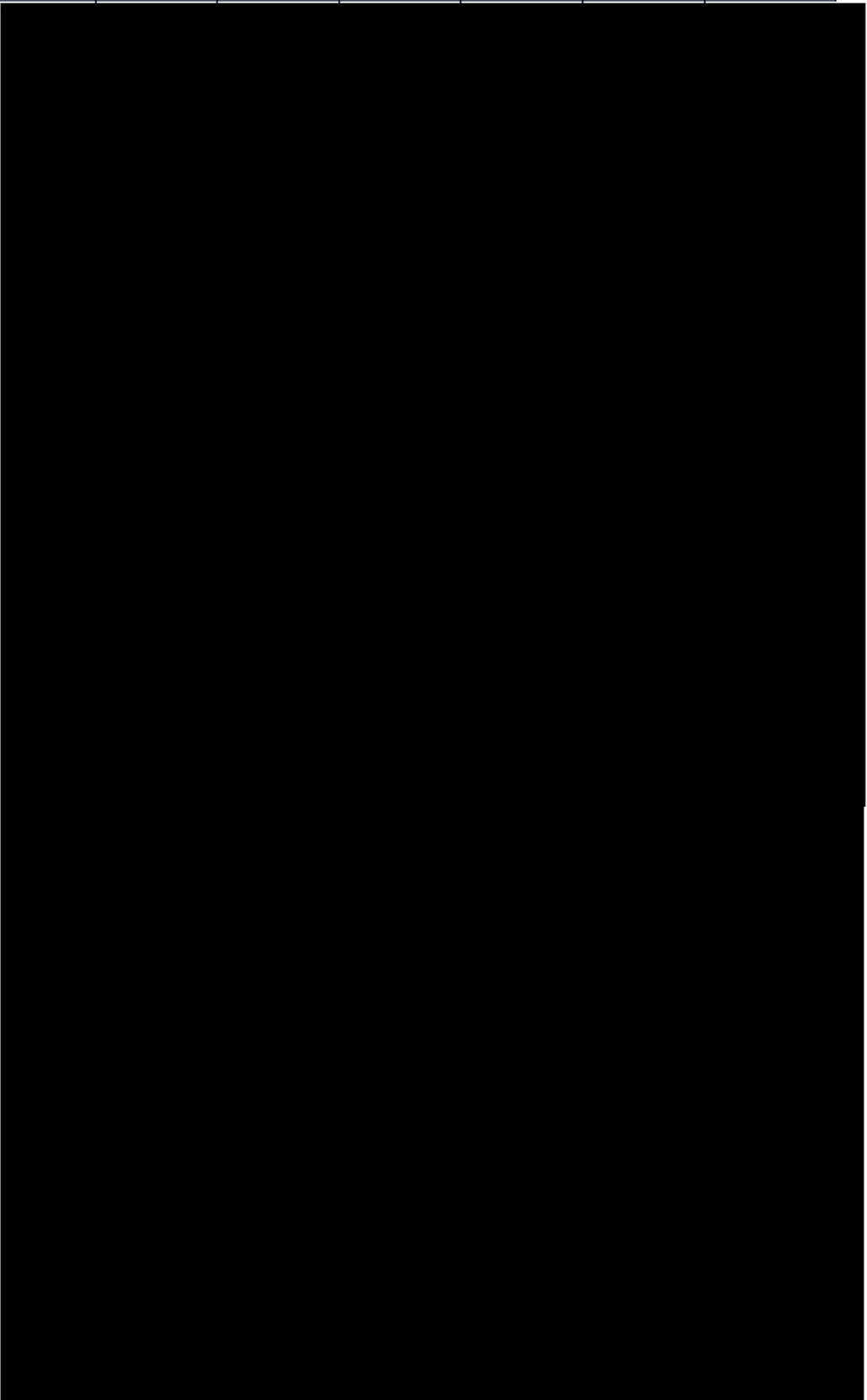
Defined costs

This sheet is used for calculating Defined Cost

Key

EA Populated data  
Contractor populated data (for information only)

Item No.	Description 1	Description 2	Quantity - SC	Quantity - Non SC	Unit	Rate - SC (GBP)	Rate - Non SC (GBP)	Total - SC (GBP)	Total - Non SC (GBP)
<b>1</b>	<b>Supervision (Priced using MCF people rates)</b>								
	Supervision (Carried through from Supervision tab)								
<b>2.1</b>	<b>Mobilisation (SCC Items)</b>								
	Mobilisation	TSHD							
	Mobilisation	Multicat							
	Mobilisation	Launch							
	Mobilisation	Reclamation							
	Mobilisation	Floating Line							
	Mobilisation	Sinkerline							
	Mobilisation	Shore Line							
	Vessel Reservation fee	Secure Vessels							
<b>2.2</b>	<b>Demobilisation (SCC items)</b>								
	Demobilisation	TSHD							
	Demobilisation	Multicat							
	Demobilisation	Launch							
	Demobilisation	Reclamation							
	Demobilisation	Floating Line							
	Demobilisation	Sinkerline							
	Demobilisation	Shore Line							
<b>2.3</b>	<b>Preparation/Site Establishment (SCC items) Staff &amp; Survey</b>								
	Preparation	Preparation							
	<b>Reclamation</b>	Preparation							
	Reclamation crew								
	Excavator								
	Wheelloader								
	Bulldozer								
	Workshop								
	Bulldozer	Fuel							
	Workshop	Sampling and Testing							
	Other	Fisheries Liaison							
	Multicat	Preparation							
	Launch	Preparation							
	<b>Employer's Accommodation</b>								
	Erection Cost								
	Servicing Employer's Office								
	<b>Contractor's Accommodation</b>								
	Erection Cost								
	Servicing Contractor's Office								
	Servicing Canteen								

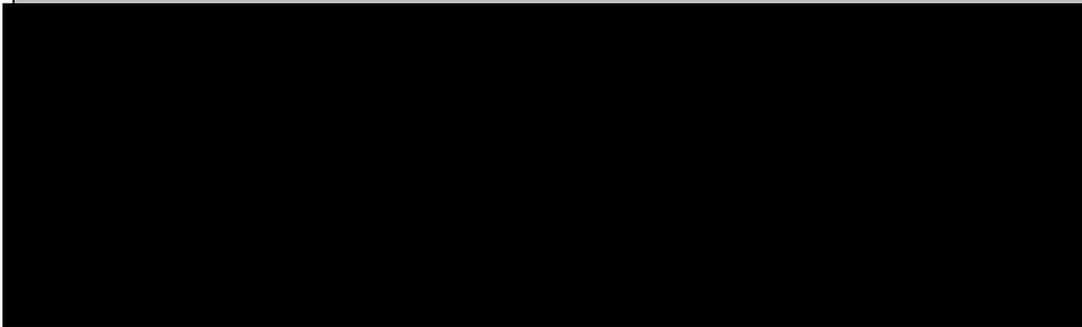


	Servicing Toilet
	Other
	<b>Attendant Operatives</b>
	Security Guard
	Labourer
	<b>Attendant Equipment</b>
	Land Rover
	Other
	Ancillary Items
	<b>Temporary Works</b>
	Site Demarcation
	Herras fencing
	<b>Employer's Accommodation</b>
	Dismantle cost
	<b>Contractor's Accommodation</b>
	Dismantle cost
<b>2.4</b>	<b>Pipelines (SCC items)</b> Floating Line
	Sinker line
	Shore Line
	Floating Line
	Sinker line
	Shore Line
	Sinker Line
<b>2.5</b>	<b>Operations (SCC items)</b>
	TSHD
	TSHD
	TSHD
	TSHD
	<b>Reclamation set (pumping operations)</b>
	360 Excavator
	Wheeled Loader
	Bulldozer
	Workshop
	Other (please specify)
	Beach material supply (area 1)
	Beach material supply (area 2)
	Beach material supply (area 3)
	Fuel for dredger (MGO)
<b>3</b>	<b>Risk (Section 10.3)</b>
	Weather affecting TSHD and sinker movement ope
	Correcting non-compliant beach materia
	Operational delays
	Fuel and Forex Fluctuations (after Target Cost agre
	Delays due to damaged sinker line

4 Other items	
	Mobilisation of Marine Equipment (excluding TSHD)
	Mobilisation of Reclamation Equipment
	Mobilisation of Miscellaneous Equipment
	Demobilisation of Marine Equipment (excluding TSHD)
	Demobilisation of Reclamation Equipment
	Demobilisation of Miscellaneous Equipment
<b>SUBTOTAL</b>	
Subcontract fee	
Non subcontract fee	
Subtotals including fees	
<b>INTERIM TOTAL</b>	
Correction for escalation on fuel	
Correction for exchange rate escalation	
<b>TOTAL FEE RELATED ITEMS AFTER ESCALATION</b>	
<b>NON-FEE RELATED ITEMS (charged at cost)</b>	
Item No.	Description 1
5 Royalties & Management Fees	
5.1	Management Fee - Area 1 (per m3 in hopper)
5.2	Royalty - Area 1 (per m3 in hopper)
5.1	Management Fee - Area 2 (per m3 in hopper)
5.2	Royalty - Area 2 (per m3 in hopper)
5.1	Management Fee - Area 3 (per m3 in hopper)
5.2	Royalty - Area 3 (per m3 in hopper)
<b>INTERIM TOTAL NON-FEE RELATED ITEMS</b>	
<b>GRAND TOTAL</b>	
fee related items	
pain-gain mechanism correction non-fee related items	
	<b>Grand total</b>

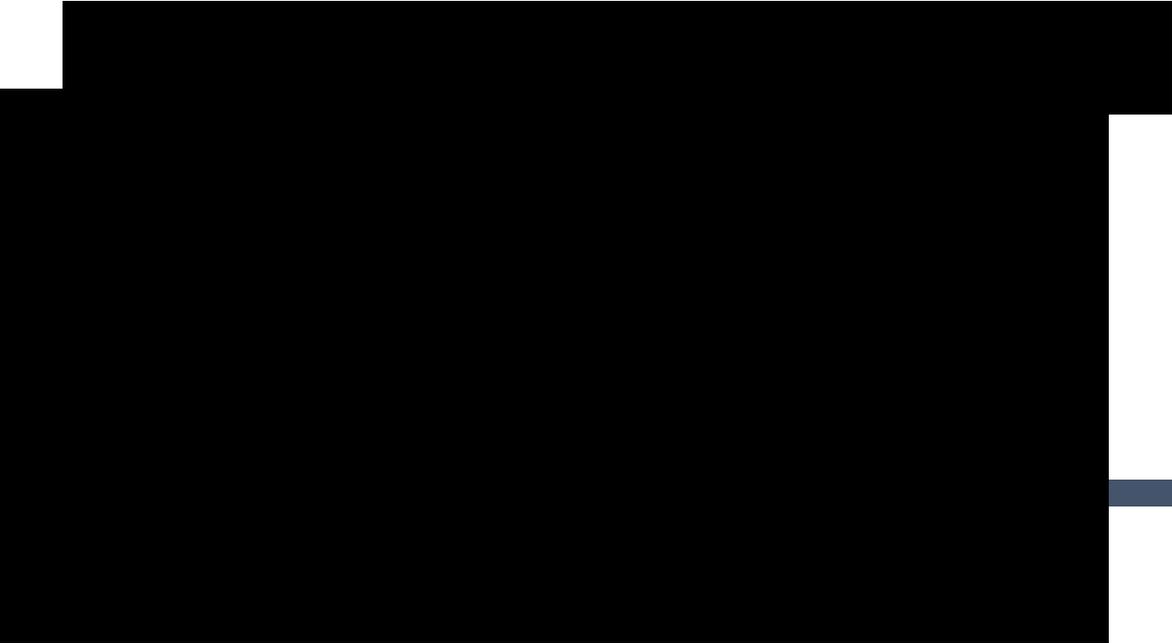
## SGPS Beach Management 2021 to 2024

### Escalation Mechanism



#### Definitions:

V_A1	corrected price based on fuel and inflation		
V_B	base value of the works (Tender)		
	the value of the work executed in the adjustment period, on or off site		
			<b>Used (y/n)</b>
fuel - mgo		current price level MGO (Bunkerworld)n	
FUEL - MGO		base price level MGO (Tender value - invariable)	
fuel - Bio Fuel 100		current price level Bio Fuel 100 (Bunkerworld)y	
FUEL - Bio Fuel 100		base price level Bio Fuel 100 (Bunkerworld)	
fuel - LNG		current price level MGO (Bunkerworld)n	
FUEL - LNG		base price level MGO (Tender value - invariable)	



#### Variations with The Crown Estate Royalty Rate

##### Background and Mechanism

This is the change in the Crown Estate Royalty Rate which is outside of the control of the Contractor.

This rate is set yearly by the Crown Estate with the owner of the material borrow area.

Current rate at time for Target production  
Base rate at time of tender



## 2. Application

### Internet References

Fuel - S&P Global Platts (<https://www.spglobal.com/platts/en/commodities/shipping>) for MGO and all other fuels used with the vessels (in USD/Mt)  
Forex - European Central Bank  
([https://www.ecb.europa.eu/stats/policy\\_and\\_exchange\\_rates/euro\\_reference\\_exchange\\_rates/html/index.en.html](https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html))

### Application of escalation

Price escalation, should be applied at two distinctive times:

1. At the start of each campaign (February), when the scope has been defined and the target price is set.

V\_B (base value of the works) is calculated using the original rates in the Pricing Data. Base indices are those at time of tender (corresponding to those applied at tender submission - as listed above). Current indices are those at the time of assessing the escalation every (March).

2. At the end of the works: base values are the same as above. Current values are those valid over the Adjustment Period.

### Additional Definitions

Adjustment Period                      The period in which the works to be adjusted was carried out.

**SGPS Beach Management 2021 to 2024**  
**Section 10.1 - Activity Schedule**

**This Schedule is used for setting the Target Cost**

**FEE RELATED ITEMS**

		Source
1	Supervision (Priced using MCF people rates)	Supervision tab
2.1	Mobilisation (SCC Items)	Pricing Data tab
2.2	Demobilisation (SCC items)	Pricing Data tab
2.3	Preparation/Site Establishment (SCC items)	Pricing Data tab
2.4	Pipelines (SCC items)	Pricing Data tab
2.5	Operations (SCC items)	Pricing Data tab
3	Risk (Section 10.3)	Pricing Data tab
4	Other items	Pricing Data tab

**Subtotal**

**Adjustments (Fuel, inflation, exchange rates)**

Fee related items subtotal	
Adjustment for escalation on fuel	100.00%
Adjustment for escalation on exchange rate	100.00%

**Adjusted total (excluding fee)**

Add fee

**Sub total (fee related items)**

**Compensation Events**

1	CE 1
2	CE 2
3	CE 3

**Subtotal (Compensation Events)**

**NON-FEE RELATED ITEMS (charged at cost)**

5	Royalties & Management Fees
5.1	Management Fee - Area 1 (per m3 in hopper)
5.2	Royalty - Area 1 (per m3 in hopper)
5.1	Management Fee - Area 2 (per m3 in hopper)
5.2	Royalty - Area 2 (per m3 in hopper)
5.1	Management Fee - Area 3 (per m3 in hopper)
5.2	Royalty - Area 3 (per m3 in hopper)

**Subtotal (Non fee related items)**

**Target value**

fee related items non-fee related items	(including escalation)
<b>Target Price</b>	(at cost)

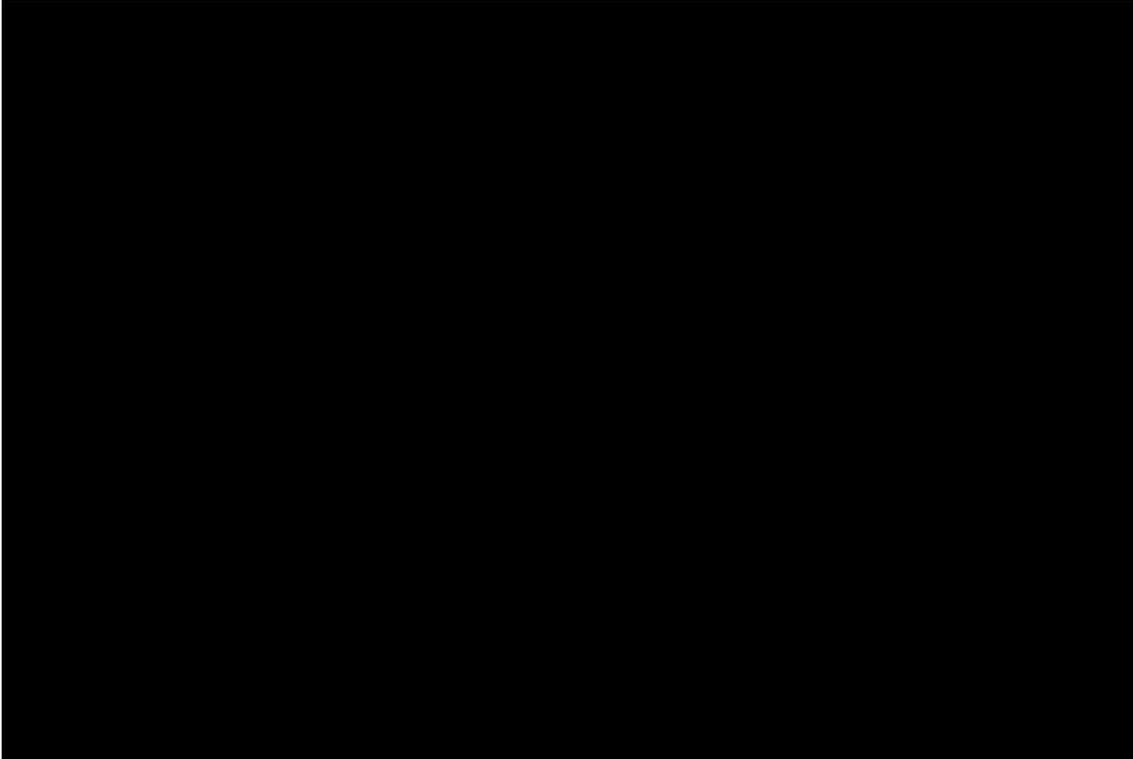


## SGPS Beach Management 2021 to 2024

### Price Workbook - Instructions for use

#### Supplier instructions

The *Client's* workbook includes the following:



#### 3 Supervision sheet

3a Complete the 'Supervision' tab. Data entered here will also populate both the 'Defined costs' and 'Activity Schedule' tabs.

3b Use agreed current MCF Rates for the baseline for all Staff.

Priced Workbook has allowed for variation to MCF Agreed Rate to include for the following:

1) Increased hours due tidal working ((Operational Time) linked to programme delivery and rate ).

2) Columns to cover pre and post operational time - this covers meetings, surveys etc. and final accounting and producing BIM data and H&S requirements.

3) Percentage of Staff time linked to project during Operational time. Fulltime recovery on project equals 100%.

3c 4) Accommodation costs for Staff, are to follow the standard requirements for the Environment Agency and to be included within the Pricing Data, otherwise deemed included within Target Price.  
5) Please note that working hours will be reviewed as where they pose an potential wellbeing concern or Health and Safety Risk (Capped at 60 hours - Any hours for an individual person over and above this cap will be deemed as disallowed costs).

#### 4 Pricing Data sheet

4a Review and ensure values have been correctly added to the 'Pricing Data' sheet, if data entered within the SCC tab, otherwise please enter values into this tab (ONLY if not using SCC tab):

4b Item 1 : Supervision (1)

This will have been automatically populated using rates entered on the 'supervision' tab and quantities from the operational duration calculated on the 'basic data' tab

4c Item 2 : SCC items (2.1, 2.2, 2.3, 2.4 & 2.5)

Rates will need to be populated where required (see salmon colour cell shading)

4d Item 3 : Risk (3)

Insert contractor risk allowances, descriptions and values

The risk budget is made up of the *Contractor's* owned risks any other risks that are not identified in the contract as *Client's* Risks.

The tendered total of Prices includes the risk budget agreed between the *Client* and the *Contractor* and is recorded below.

The *Contractor* should provide supporting information on how they have determined this risk budget. An example of the format of the supporting information is provided at the end of the document.

These notes are not part of the risk budget or the contract.

**Contractor's owned risks**

Standard Risk - The following will NOT be compensation events:

1. Marine accidents, collisions, etc.
2. The beach and /or site left unsafe for public use.
3. Archaeological offshore finds.
4. Incendiary and explosive devices found offshore and those brought onshore as a result of activities offshore.
5. Loss or termination of the extraction licence due to the Contractor's or his Subcontractors' or suppliers' actions.
6. Inability to provide the quantity and/or quality of nourishment material.
7. Interference with winning, transporting and placing of nourishment material due to the Contractor's or his Subcontractors' or suppliers' actions.
8. Non-compliance with FEPA/CPA licence conditions.
9. Environmental impacts onshore and offshore.
10. Change in market price of nourishment material (excluding a change in royalty rates).
11. Fluctuations in Fuel Prices.
12. Fluctuations in Steel Prices.
13. Adverse weather and/or sea conditions.
14. Change in dredger or using more than one dredger to undertake the works.

4e Item 4 : Other items (4)

Insert any items which form part of the tender price which are not included for elsewhere.

4f Item 5 : Supervision (5)

This will have been automatically populated using royalties and management fee quantities and rates entered on the SCC sheet.

5 **Activity Schedule sheet**

5a The Activity Schedule sheet will be pre-populated with based on the data entered on all previous sheets.

5b The Grand Total value at the bottom of the sheet confirms the tender price.

6 **Escalation sheet**

6a No action required at the time of tender but this sheet provides details of the mechanisms that will be applied to adjust the target price for fuel escalation and exchange rate movements throughout the contract.

6b **Contract Stage:**

Costs within Pricing Mechanism do not reflect Brexit Impacts (as not known at time of Tender).

The Escalation formula was revised as a result of the Contractor offering "Green Fuel" alternatives. The baselining of the unit rates is now within a table as various vessels will run of a variety of different fuels and it has been agreed that although the team's ambition is to run as environmental as possible (i.e. reduce Carbon Emmisions), this will not be at an inflated cost. (i.e. the questions we need to ask is "Would that addition cost be better spent eslewhere in protection the planet?) *Types of Fuels baselined are:*

Marine Gas Oil - MGO

Bio-Fuel 100

Liquid Natural Gas - LNG

6c **Addition is the impacts to The Crown Estate Royalty Rate**

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EA Populated data Cannot be amended by the supplier in the model  
 Contractor populated data (for information only) Supplier to populate  
 Contractor populated data (drives pricing model) Supplier to populate  
 Formula Driven Will calculate automatically

for information only  
 drives the cost model

**Contractor data**

**EA data**

Total beach stretchm Measured between profiles Total volume

beachm<sup>3</sup> Tendered volume

**Contractor data**

Sinkerlinem For information  
 Floating pipelinem For information  
 Shoreline

Nourishment stretch per sinkerline locationm Inform at Tender -  
 Expected losses on beach% Adjustment % for volume on beach

Capacity (hopper)  
 Dredger name

Dredger Name will be entered when confirmed.

Working tides per  
 Hopper output m<sup>3</sup>/daym<sup>3</sup>/day Working tides per week x capacity

Weatherhrs Used to calculate operational duration (dredger i  
 Standby TSHD per sinker movehrs Used to calculate operatio  
 Otherhrs Used to calculate operational duration (dredger i

Non subcontract fee %  
 Subcontract fee %

MCF fee percentage (Supplier specific)  
 MCF fee percentage

**Outputs (derived from data entry in EA and contractor values i**

Total number of sinkerline relocations Scope  
 dredged volume in hopper

Total beach stretch ÷ nourishment stretch per sinkerline location Beach  
 volume plus expected losses on beach %

Operational Duration (Dredger working)

Weeks  
 Days  
 Hours

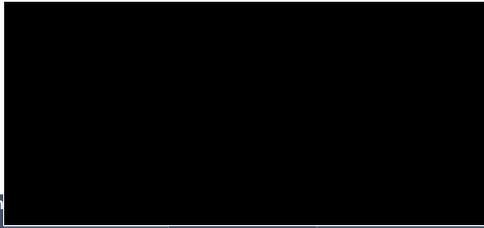
Operational Duration (Dredger idle)

Weeks  
 Days  
 Hours

Operational Duration (Dredger working & idle total)

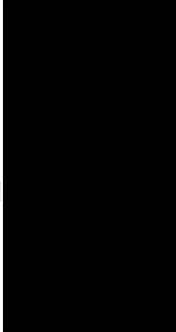
Weeks  
 Days  
 Hours

Volume (area 1)Formula  
Volume (area 2)Leave blank if not required  
Volume (area 3)Leave blank if not required  
Volume totalFormula



Tender base values (Used for tender subm

1 GBP =  
1 USD =  
Total tender price  
GBP element  
EUR element (in GBP)  
GBP element %  
EUR element %



UR  
BP

The two percentage need to equate to 100%

Fuel

MGO  
Bio Fuel (100)  
LNG

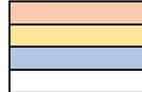
SD/Mt  
SD/Mt  
SD/Mt

Base Rates to be agreed  
Base Rates to be agreed  
Base Rates to be agreed



5.1	Management Fee - Area 2 (per m3 in hopper)		
5.2	Royalty - Area 2 (per m3 in hopper)		
5.1	Management Fee - Area 3 (per m3 in hopper)		
5.2	Royalty - Area 3 (per m3 in hopper)		
<b>INTERIM TOTAL NON-FEE RELATED ITEMS</b>			





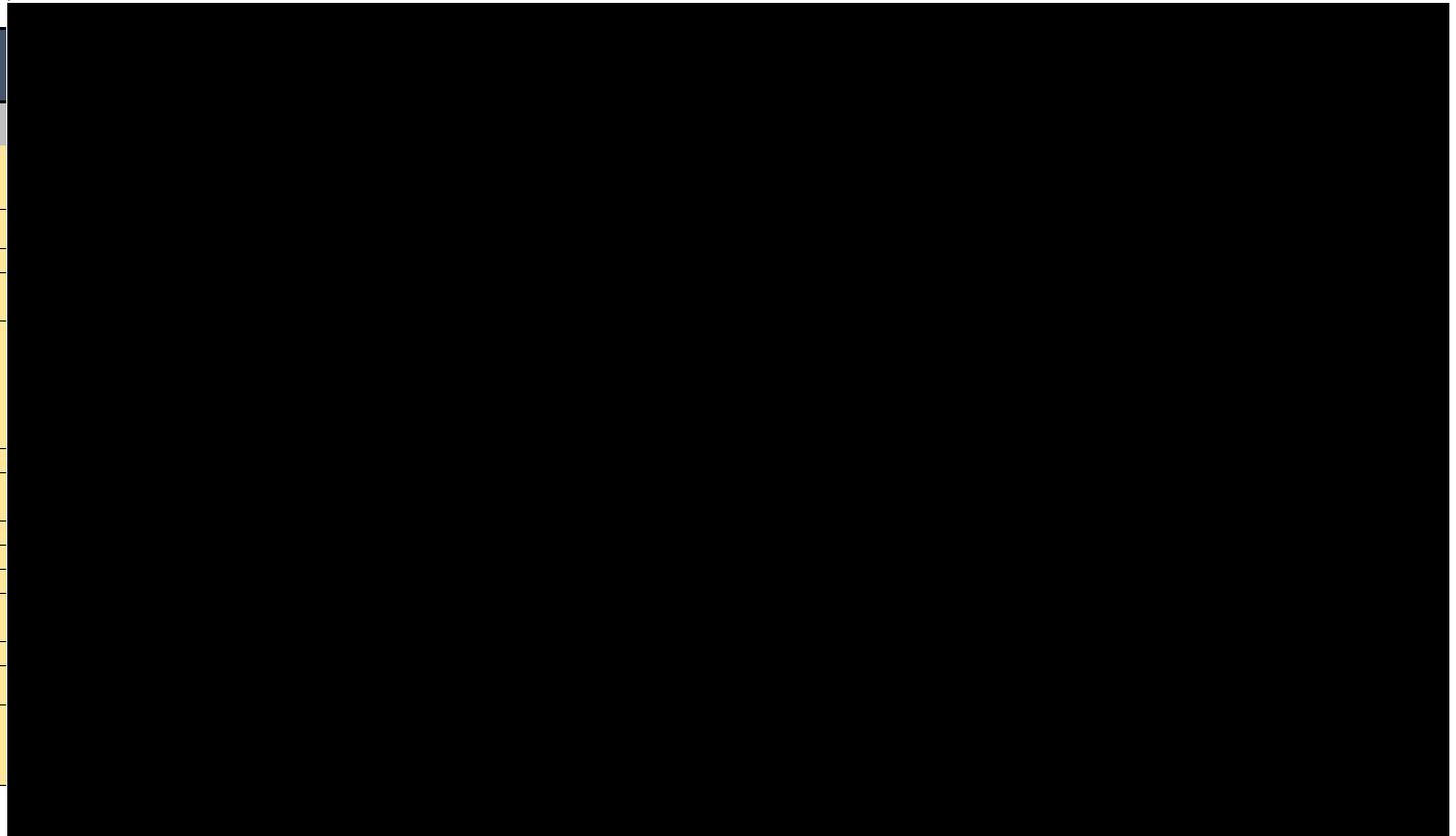
SGPS Beach Management 2021 to 2024

Supervision

Key

- EA Populated data
- Contractor populated data (for information only)
- Contractor populated data (drives pricing model)
- Formula Driven

Item No.	Role
<b>1</b>	
1.01	Contracts Manager
1.02	Project Manager
1.03	Site Agent / Foreman
1.04	Commerical Lead
1.05	Health, Safety and Wellbeing Representative
1.06	Environmental Representative
1.07	Quality Representative
1.08	BIM Lead
1.09	Programmer Lead
1.10	Project Engineer
1.11	Works Manager
1.12	Superintendent
1.13	Superintendent
1.14	Superintendent
1.15	BIM Coordinator
1.16	Surveyor
1.17	Surveyor
1.18	Works Manager
1.19	Surveyor
1.20	Other (Please detail)
1.21	Other (Please detail)
1.22	Other (Please detail)



1.23	Other (Please detail)	
1.24	Other (Please detail)	



Contractor populated data (drives pricing model) Formula Driven


SGPS Beach Management 2021 to 2024

Defined costs

This sheet is used for calculating Defined Cost

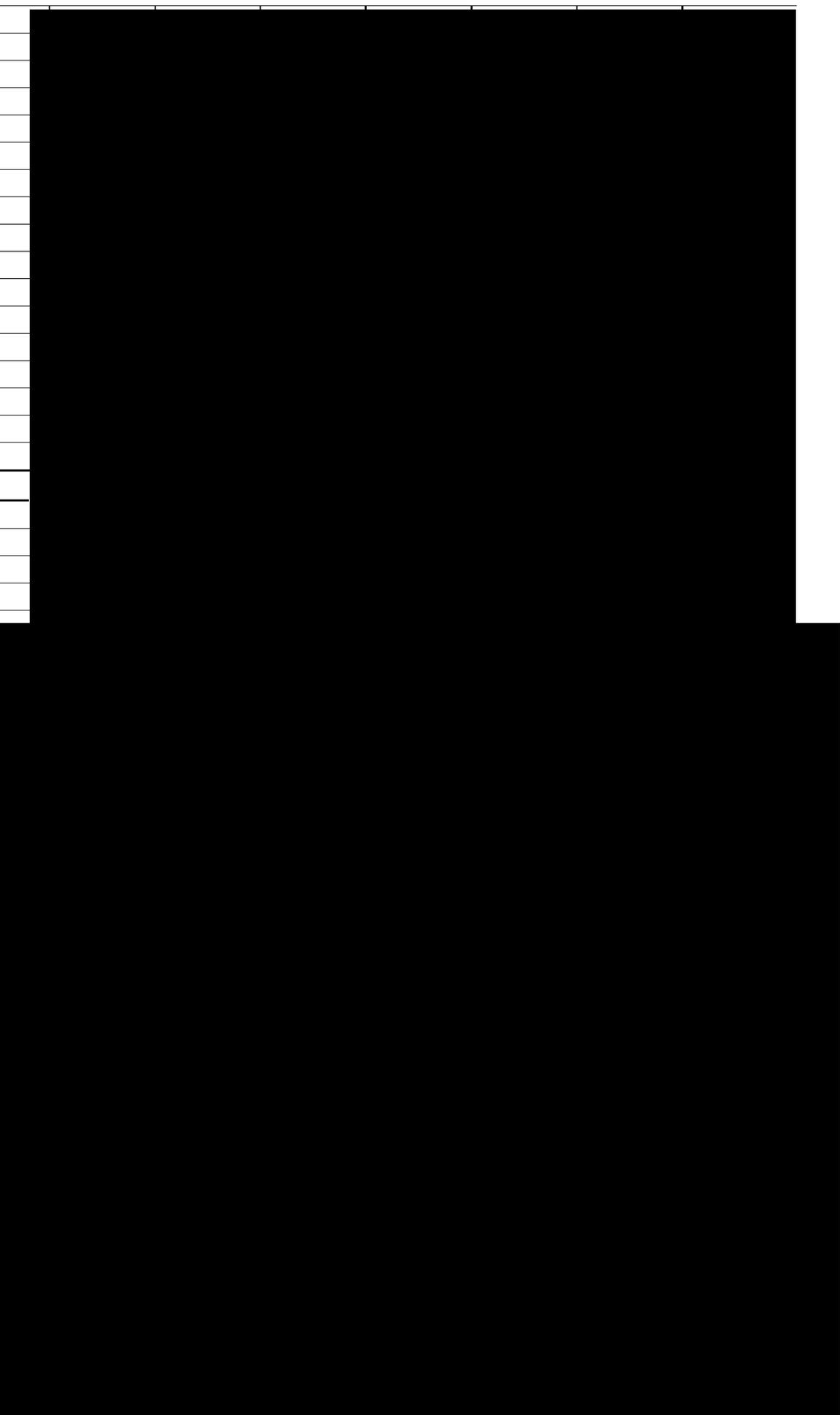
Key

EA Populated data  
Contractor populated data (for information only)

Item No.	Description 1	Description 2	Quantity - SC	Quantity - Non SC	Unit	Rate - SC (GBP)	Rate - Non SC (GBP)	Total - SC (GBP)	Total - Non SC (GBP)
<b>1</b>	<b>Supervision (Priced using MCF people rates)</b>								
	Supervision (Carried through from Supervision tab)								
<b>2.1</b>	<b>Mobilisation (SCC Items)</b>								
	Mobilisation	TSHD							
	Mobilisation	Multicat							
	Mobilisation	Launch							
	Mobilisation	Reclamation							
	Mobilisation	Floating Line							
	Mobilisation	Sinkerline							
	Mobilisation	Shore Line							
	Vessel Reservation fee	Secure Vessels							
<b>2.2</b>	<b>Demobilisation (SCC items)</b>								
	Demobilisation	TSHD							
	Demobilisation	Multicat							
	Demobilisation	Launch							
	Demobilisation	Reclamation							
	Demobilisation	Floating Line							
	Demobilisation	Sinkerline							
	Demobilisation	Shore Line							
<b>2.3</b>	<b>Preparation/Site Establishment (SCC items)</b>								
	Staff & Survey	Preparation							
	<b>Reclamation</b>	Preparation							
	Reclamation crew								
	Excavator								
	Wheelloader								
	Bulldozer								
	Workshop								
	Bulldozer	Fuel							
	Workshop	Sampling and Testing							
	Other	Fisheries Liaison							
	Multicat								
	Launch								
	<b>Employer's Accommodation</b>								
	Erection Cost								
	Servicing Employer's Office								
	<b>Contractor's Accommodation</b>								
	Erection Cost								
	Servicing Contractor's Office								
	Servicing Canteen								



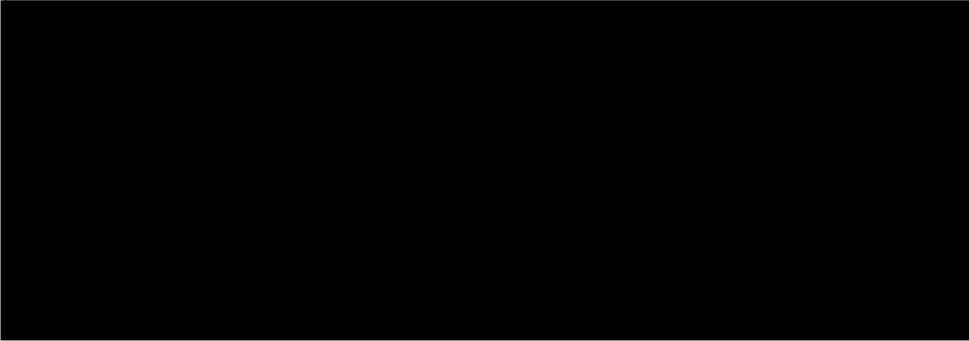
	Servicing Toilet	
	Other	
	<b>Attendant Operatives</b>	
	Security Guard	
	Labourer	
	<b>Attendant Equipment</b>	
	Land Rover	
	Other	
	Ancillary Items	
	<b>Temporary Works</b>	
	Site Demarcation	
	Herras fencing	
	<b>Employer's Accommodation</b>	
	Dismantle cost	
	<b>Contractor's Accommodation</b>	
	Dismantle cost	
<b>2.4</b>	<b>Pipelines (SCC items)</b> Floating Line	
		Hire
	Sinker line	Hire
	Shore Line	Hire
	Floating Line	wear and tear
	Sinker line	wear and tear
	Shore Line	wear and tear
	Sinker Line	Relocate Sinker Line
<b>2.5</b>	<b>Operations (SCC items)</b>	
	TSHD	Operational rate
	TSHD	Weather
	TSHD	Standby TSHD per sinker
	TSHD	Other
	<b>Reclamation set (pumping operations)</b>	
	360 Excavator	
	Wheeled Loader	
	Bulldozer	
	Workshop	
	Other (please specify)	
	Beach material supply (area 1)	1
	Beach material supply (area 2)	
	Beach material supply (area 3)	
	Fuel for dredger (MGO)	
<b>3</b>	<b>Risk (Section 10.3)</b>	
	Weather affecting TSHD and sinker movement operations	
	Correcting non-compliant beach material	
	Operational delays	
	Fuel and Forex Fluctuations (after Target Cost agreed)	
	Delays due to damaged sinker line	
	Additional risks associated with accelerated delivery	



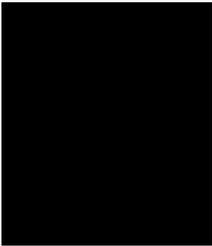
4 Other items	
	Mobilisation of Marine Equipment (excluding TSHD)
	Mobilisation of Reclamation Equipment
	Mobilisation of Miscellaneous Equipment
	Demobilisation of Marine Equipment (excluding TSHD)
	Demobilisation of Reclamation Equipment
	Demobilisation of Miscellaneous Equipment
<b>SUBTOTAL</b>	
Subcontract fee	
Non subcontract fee	
Subtotals including fees <b>INTERIM TOTAL</b> Correction for escalation on fuel Correction for exchange rate escalation <b>TOTAL FEE RELATED ITEMS AFTER ESCALATION</b>	
<b>NON-FEE RELATED ITEMS (charged at cost)</b>	
Item No.	Description 1
5 Royalties & Management Fees	
5.1	Management Fee - Area 1 (per m3 in hopper)
5.2	Royalty - Area 1 (per m3 in hopper)
5.1	Management Fee - Area 2 (per m3 in hopper)
5.2	Royalty - Area 2 (per m3 in hopper)
5.1	Management Fee - Area 3 (per m3 in hopper)
5.2	Royalty - Area 3 (per m3 in hopper)
<b>INTERIM TOTAL NON-FEE RELATED ITEMS</b>	
<b>GRAND TOTAL</b>	
	fee related items (including
	pain-gain mechanism correction non-fee
	related items (at cost)
	<b>Grand total</b>

## SGPS Beach Management 2021 to 2024

### Escalation Mechanism

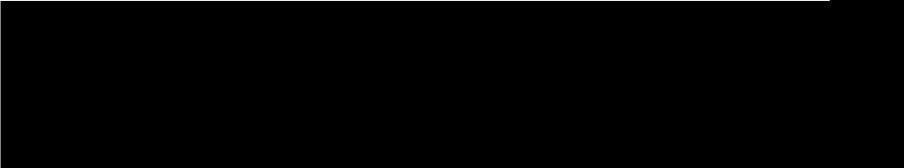


#### Definitions:



V\_A1 corrected price based on fuel and inflation  
V\_B base value of the works (Tender)  
the value of the work executed in the adjustment period, on or off site  
fuel - mgo current price level MGO (Bunkerworld) FUEL - MGO base price level MGO  
(Tender value - invariable) fuel - Bio Fuel 100 current price level Bio Fuel 100 (Bunkerworld)  
FUEL - Bio Fuel 100 base price level Bio Fuel 100 (Bunkerworld) fuel - LNG current price  
level MGO (Bunkerworld) FUEL - LNG base price level MGO (Tender value - invariable)

#### Fuel and inflation escalation factor

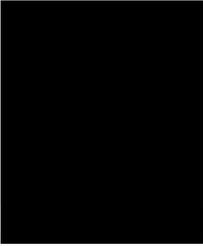


d to

V\_A2 Adjusted value of works  
V\_A1 Adjusted value for fuel and inflation escalation  
FX\_base base value exchange rate (invariable)EUR/G  
FX\_rate current exchange rate (OANDA)EUR/G  
GBPX GBP Element of tender price  
EURY EUR element of tender price (in GBP)

#### Exchange rate escalation factor

### FOR NON-FEE RELATED ITEMS



Royalties, management fees and aggregate levy: inflation on these items will be charged to the client at cost, based on the agreements with the licence holders, in full transparency.

### Variations with The Crown Estate Royalty Rate

#### Background and Mechanism

This is the change in the Crown Estate Royalty Rate which is outside of the control of the Contractor.

This rate is set yearly by the Crown Estate with the owner of the material borrow area.

Current rate at time for Target production  
Base rate at time of tender



The cell D67 is linked to Tab ECC8.2 cell H9

## 2. Application

### Internet References

Fuel - S&P Global Platts (<https://www.spglobal.com/platts/en/commodities/shipping>) for MGO and all other fuels used with the vessels (in USD/Mt)  
Forex - European Central Bank  
([https://www.ecb.europa.eu/stats/policy\\_and\\_exchange\\_rates/euro\\_reference\\_exchange\\_rates/html/index.en.html](https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html))

### Application of escalation

Price escalation, should be applied at two distinctive times:

1. At the start of each campaign (February), when the scope has been defined and the target price is set.

V\_B (base value of the works) is calculated using the original rates in the Pricing Data. Base indices are those at time of tender (corresponding to those applied at tender submission - as listed above). Current indices are those at the time of assessing the escalation every (March).

2. At the end of the works: base values are the same as above. Current values are those valid over the Adjustment Period.

### Additional Definitions

Adjustment Period                      The period in which the works to be adjusted was carried out.

**SGPS Beach Management 2021 to 2024**  
**Section 10.1 - Activity Schedule**

**This Schedule is used for setting the Target Cost**

**FEE RELATED ITEMS**

Source

Subcontract)

	1	Supervision (Priced using MCF people rates)		Supervision tab
	2.1	Mobilisation (SCC Items)		Pricing Data tab
	2.2	Demobilisation (SCC items)		Pricing Data tab
	2.3	Preparation/Site Establishment (SCC items)		Pricing Data tab
	2.4	Pipelines (SCC items)		Pricing Data tab
	2.5	Operations (SCC items)		Pricing Data
tab	0.00	2,460,629.61		

3 Risk (Section 10.3) Pricing Data tab 0.00 553,139.28

4 Other items Pricing Data tab 0.00 115,065.53

**Subtotal**

14

Adjustments (Fuel, inflation, exchange rates)

subtotal Fee related items £0.00

Adjustment for escalation on fuel

Adjustment for escalation on exchange rate

fee) A g

fee

items)

**Compensation Events**

1	CE 1	0.00	0.00
2	CE 2	0.00	0.00
3	CE 3	0.00	0.00

**Subtotal (Compensation Events)**

**NON-FEE RELATED ITEMS (charged at cost)**

<b>5</b>	<b>Royalties &amp; Management Fees</b>
5.1	Management Fee - Area 1 (per m3 in hopper)
5.2	Royalty - Area 1 (per m3 in hopper)
5.1	Management Fee - Area 2 (per m3 in hopper)

- 5.2 Royalty - Area 2 (per m3 in hopper)
- 5.1 Management Fee - Area 3 (per m3 in hopper)
- 5.2 Royalty - Area 3 (per m3 in hopper)

**Subtotal (Non fee related items)**

**Target value**

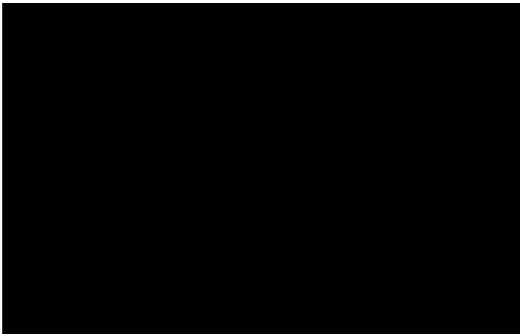
fee related items (including escalation)  
non-fee related items (at cost)

**Target Price**

SGPBM, Construction, Contract, Final - for signing 260221 Page 1 of 1

Classification: Internal.

## Contract Execution



for and on behalf of the Environment Agency

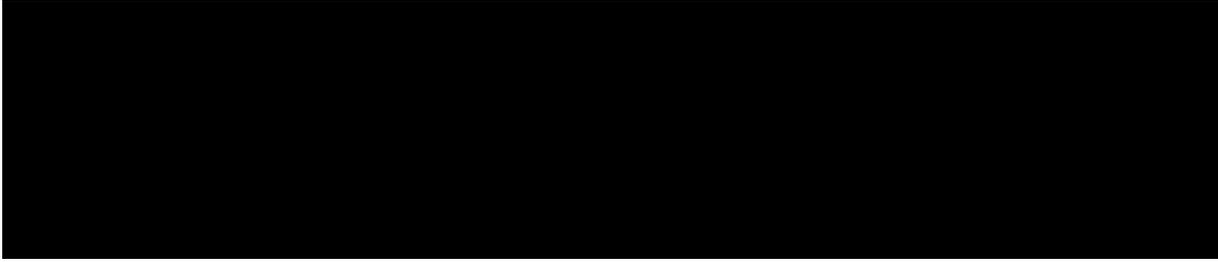


\_\_\_\_\_  
Signature

\_\_\_\_\_  
Role

**Contractor execution**

**Consultant execution**



# Environment Agency NEC4 engineering and construction contract (ECC) Scope

## Project / contract information

Project name	Saltfleet to Gibraltar Point (SGP) – Beach Management
Project SOP reference	ENV0002657C
Contract reference	30084
Date	February 2021
Version number	Contract Document
Authors	<u>Andrew E. Rouse</u>

## Revision history

Revision date	Summary of changes	Version number
	First issue	

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

Document	Document Title	Version No	Issue date
412_13_SD01	LIT_13258 Minimum Technical Requirements	2	18/03/2020
801_14	Environmental sustainability, design and management (Latest in draft form issued)	3	01/12/2015
801_14SD01	Cultural Heritage and Archaeology Standards	1	21/12/2015
801_14SD02	Landscape and Environmental Design	3	07/07/2017

## Contents List

### Definitions

- S 100 Description of the *works*
- S 200 General constraints on how the *Contractor* provides the *works*
- S 300 *Contractor's* design
- S 400 Completion
- S 500 Programme
- S 600 Quality management
- S 700 Tests and inspections
- S 800 Management of the *works*
- S 900 Working with the *Client* and Others
- S 1000 Services and other things to be provided
- S 1100 Health and safety
- S 1200 Subcontracting
- S 1300 Title
- S 1400 Acceptance or procurement procedure (Options C and E)
- S 1500 Accounts and records (Options C and E)
- S 1600 Parent Company Guarantee (Option X4)
- S 1700 *Client's* work specifications and drawings
- S 1800 Additional clauses relating to coastal works and beach nourishment projects

Appendix 1: BIM Protocol – Production and Delivery Table

Appendix 2: BIM Protocol – Employers Information requirements

Appendix 3: Profile Marker Reference sheets

Appendix 4: Minimum Technical Requirements

Appendix 5: MMO Letter and Licence

Appendix 6: Drawings

Appendix 7: IDP

Appendix 8: SHEW & Environmental standards

Appendix 9: Van Oord supporting data from Tender (information only)

## Definitions

Pre-starting condition surveys – Surveys (including a visual/photographic record) providing information of the existing state prior to any physical *works* being undertaken.

Area of Occupation - The area of beach closed off to the public to carry out the *works*.

Post-completion condition surveys - Surveys providing information at the end of the physical *works*.

Acceptance Certificate - Certificate issued to confirm acceptance by the *Project Manager* of the completion of a Nourishment Area as proposed by the *Contractor*.

Pricing Workbook – Section 10.1 Pricing Mechanism added into the Contract Data.

Note:

**BIM Naming Table:** BIM naming convention which will go into the BIM execution plan is as follows: -

Project	ENV0002657C	Saltfleet to Gibraltar Point – Beach Management (SGP-BM)
Author	EA	Environment Agency
Volume	CD	Coastal Defences
Location	ZZ	Multiple Locations – (Total Project)
Type	CD	Contract Document
Role	PE	Project Executive
Status	A4	Construction
Deliverable Ref	GO300	G0300 Contract Scope/Works Information
Stage	EA4	Construction
Level of Definition	LOD4	Construction
Year	2021	Year of Production
File Name	Document Name	Construction, Contract Scope

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

The *works* consist of beach nourishment to targeted areas of the Lincolnshire coastline between Mablethorpe and Skegness. The *works* are required for the 2021, 2022, 2023 & 2024 beach nourishment campaigns. The *works* are to be programmed to start March-April 2021 (following the Easter Weekend) and dredging operations are to be completed prior to the School Summer Holidays. Although the frontage is between Mablethorpe and Skegness, historically nourishment is not undertaken south of Ingoldmells. The total frontage length is 20km. The *works* are designed to enable the current standard of defence to be maintained at 0.5% annual exceedance probability (AEP) or a 1 in 200 year standard of protection. The *works* include:

- a total beach survey of the entire coastal frontage (Saltfleet to Gibraltar Point – 38km) will be undertaken in early February that will be used to confirm locations and quantities for the up and coming campaign,
- the production and maintenance of a coastal model,
- the detailed pre nourishment in-surveys of the entire coastal frontage Mablethorpe to Skegness, including the Nourishment Areas,
- the acquisition of suitable nourishment material from licensed offshore site(s),
- the placing the nourishment material on the beach at the targeted nourishment areas within the design profile,
- the profiling of the nourishment material to the specification including transition areas to non-nourished areas, and
- detailed post nourishment out-surveys.
- The *Contractor* may be requested within the life of this contract to undertake other services and construction activities (for example but not limited to: structural investigations, rock work, revetment works and/or concrete works) required for coastal defence along this stretch of coastline, generally known as “Additional Works”.

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

The drawings describing the *works* are listed in S1702. The actual areas targeted for nourishment will be confirmed in the February of each campaign year prior to the *works* following analysis of the winter beach profiles. Nourishment Target volumes are anticipated to comprise between 200,000m<sup>3</sup> and 500,000m<sup>3</sup>. Target Volume will be confirmed two weeks following receipt of the *Contractor's* total beach survey and the Target Price will be adjusted accordingly, the *Contractor* will have the right to review the Target Price in accordance with the pricing workbook

The *Contractor* shall provide the total beach survey by the 14<sup>th</sup> February each year.

As part of the Target Price adjustment a review of fuel and exchange rates will be undertaken by the *Contractor* in addition to clause Z31 of this contract and submitted for acceptance to the ECC *Project Manager*.

The Target volume will be determined from the accepted “In-survey” and will consist of the volume of beach material required to be placed to reach the design profile. Any beach material above the design profile already on the beach shall not be moved.

The *Contractor* will be able to recover costs for sand volumes placed on the beach within the agreed tolerances of the design profile. No Target change will be made for additional volume(s) placed over

and above the Target Volume needed to achieve the design profile. Volumes measured on the beach calculated as the difference between the accepted *Contractor's* pre-nourishment in-surveys and the design profile (Target Price) and accepted *Contractor's* post-nourishment out-surveys (Defined Cost) (refer to S 1805(5)). The *Contractor* will also keep records and issue to the *Project Manager* the dredger hopper volumes. All in-surveys and *Contractor* proposed nourishment volumes to be placed in each targeted Nourishment Area will be made available to the *Supervisor* for information and the *Project Manager* for acceptance.

The baseline is shown on drawings:

ENV0001081C-CH2-ZZ-00-DR-C-1901-A5-C02  
ENV0001081C-CH2-ZZ-00-DR-C-1902-A5-C02  
ENV0001081C-CH2-ZZ-00-DR-C-1903-A5-C02  
ENV0001081C-CH2-ZZ-00-DR-C-1904-A5-C02  
ENV0001081C-CH2-ZZ-00-DR-C-1905-A5-C02

This baseline will also be provided electronically to OS Grid co-ordinates. The *Contractor* will establish a baseline on *site* and confirm the position with the *Supervisor* before commencement of any construction *works*. The *Contractor* shall check the provision of any level reference points shown on the drawings for acceptance of the position and level by the *Supervisor* before use for setting out the *works*. The *Contractor* shall inform the *Project Manager* when all setting out reference points have been accepted.

All reporting must comply with the Environment Agency's requirements and standards as set out in the EIR.

Providing information for inputting and maintaining the production of the *Client's* Carbon Cost Tool throughout any construction *works*. Analysis to be reviewed and all actions should lead to a reduction to Carbon wherever possible. Provide information to the *Client* to allow them to update the Midlands Sustainability Plan (Midlands Annual Plan Sustainability Chapter Final 090420)

Providing stage programmes and providing the *Client* and others sufficient time to review draft documents. Stage programme must be reflected within the overall scheme programme and is likely to be approved following the monthly progress meeting. Any key change must be supported with an exception report fully recording reasons for change and impacts on quality and/or expenditure.

Meeting the *Client's* monthly project reporting timetable and supporting data entry into the *Client's* system.

The *Contractor* will either act as the Early Supplier Engagement (ESE) or need to provide information to the team progressing the works arising from the approved Saltfleet to Gibraltar Point Strategy. The requirements of this service will be defined with the *Contractor* prior to award of the Contract.

For tender purposes price for the following requirements:

Contracts Manager: 2 days / month from January 2021 to April 2025.

Project Manager: 5 days / month from January 2021 to April 2025.

Estimator: 2 days / month from January 2021 to April 2025.

**Constraints on how the *Contractor* provides the ESE services:**

The *Contractor* is not to delegate their ESE services, duties or powers without prior written agreement from the *Client*.

## S 102 Purpose of the works/ Outcome required

The Saltfleet to Gibraltar Point Coastal Strategy (Environment Agency, 2019) encompasses the beach frontage from Saltfleet to Gibraltar Point on the Lincolnshire coastline. The primary project objective is to reduce the risk to people and the developed and natural environment along the frontage from flooding (coastal, fluvial and surface water) by encouraging the provision of technically, environmentally and economically sound and sustainable flood management measures.

The Strategy's Ambition is to

“Delivering a transformational solution, in partnership with others, for coastal management and defences on the Lincolnshire coast whilst working with nature to sustain the existing standards, enhancing public confidence and reduce environmental impacts”

“Enhancing local resilience and reducing the vulnerability of the coastal communities, and the coastal economy, in Lincolnshire to climate change.”

The strategy objective for this contract is to hold the line, i.e. that the Lincolnshire Coast and hinterland continue to be defended by current management regime - beach nourishment and management of the hard defences.

### Outcome Required

- 1 Reduced risk of asset failure
- 2 Energy efficient run time
- 3 Strategic access to sites is still available at all times
- 4 Makes a positive contribution to the achievement of local and national Biodiversity Action Plan (BAP) targets;
- 5 Demonstrates the successful integration of environmental design and civil engineering;

Historically, natural sand dunes had formed the coastal defences along the majority of the Lincolnshire coastline, supplemented by concrete revetments and seawalls around residential areas. The main concerns regarding the Lincolnshire Coastal defences concerned the lowering of beaches over the central 20km long section of the frontage. Lower beach levels associated with high surge tide levels make the seawalls more susceptible to wave attack and resultant wave overtopping, which would lead to failure of the defences in an event of sufficient magnitude.

Flood protection provided by the current defence system equates to a 0.5% AEP. However, should there be a 'no active intervention' (do-nothing) scenario, beach erosion and overtopping of the defences will reduce the protection to a 2% AEP (1 in 50 year standard) along half of the frontage in less than 2 years. Potentially the beaches will have eroded completely after approximately 7-10 years, reducing the standard of defence along parts of the frontage to a 10% AEP (1 in 10 year standard). The failure of the defences due to the continued lowering of the beaches through erosion of the underlying clay layer and rising sea levels is expected within 25 years. Following breach of the defences the majority of assets in the flood plain with a current value of more than £4 billion would be written off.

The *Contractor* provides the *works* in a manner that contributes positively to the Environment Agency's primary objective. The *Contractor* and the *Client* are committed to working together in a co-operative manner to achieve mutual benefit. The parties will promote a culture and methods which support co-operation.

## **S200 General Constraints on how the *Contractor* provides the works**

### **S 201 General constraints**

#### **Use of the *site***

The boundaries of the *site* are the extent of the areas shown on the Drawings. The landward limit of the *works* area extends to the seaward face of the seawall if present (as dimensioned on the Drawings) or the seaward side of any sand dune.

Prior to the commencement of operations, the *Project Manager* supplies the *Contractor* with the known names and addresses of relevant landowners and occupiers.

The *Client* issues statutory Notices of Entry for all private land within the *site* at least 7 days before the possession dates. Additional Working Areas required by the *Contractor* outside of the *site* are to be provided by the *Contractor*. The *Contractor* shall ensure that all permits and permission are sought for these Additional Working Areas.

The *Contractor* notifies the *Project Manager* of any additional Working Areas that they have negotiated outside of the boundaries of the *site* before entering them.

The *Contractor* confines their construction operations to the Working Areas. In addition, the *Contractor's* day to day operations are confined to the Area of Occupation.

The *Contractor* shares all the *site* with Others, except the Area of Occupation.

The *Contractor* supplies, erects, maintains and removes at the end of the *works* the moveable warning signboards and the scheme signboard as shown in the drawings.

The *Contractor* proposes the location of the scheme sign board at the *site* office to the *Project Manager* and gains any necessary permissions, approvals and consents for its establishment at least one week prior to its planned installation date.

The *Contractor* does not erect any other signboards without the written consent of the Project Manager.

The public have a right of access to the beach with the exception of the Area of Occupation.

#### **Access to the *site***

The *Client* will issue a formal Notice of Entry with drawings of proposed access routes to Lincolnshire County Council and copies of these will be provided to the *Contractor*. Most of these access routes are used by the public and this varies from very little use to extremely high usage and it is essential that adequate arrangements are in place to recognise and plan for extremely high usage during all stages of operations. If the *Contractor* requires any additional temporary traffic restriction the process is detailed at <https://www.lincolnshire.gov.uk/traffic-management/apply-temporary-traffic-restriction> Lincolnshire County Council require a minimum of 13 weeks from submission of a valid application to determination.

The *Contractor* shall arrange for all approvals with Lincolnshire County Council Highways to close the access road(s) (for example the adopted highway to Huttoft Car Terrace from the Coast Road) for mobilisation and demobilisation periods.

Access to the *site* is shown on the drawings (refer to Appendix 6). During beach nourishment the *Contractor's* access to the beach will be limited to the vehicular access points as agreed with the *Client*. Vehicular access onto the flood defences and beach must be controlled and limited to the least number of vehicles needed to undertake the *works*. The *Contractor* shall limit the number of vehicles that need to be parked up upon the seawall. Arrangements must be made to park workforce vehicles in a safe place other than on the beach or seawall.

The *Contractor* shall provide for acceptance by the *Project Manager* a Construction Traffic Management Plan for all site deliveries. Details should include and not be limited to the following:

- that show that they will adopted the principles to encompass all aspects of safety, fuel efficiency, vehicle emissions and improved operations.
- describe the proposed supply route to and from the site, showing details of links to the strategic road network (A and B roads).
- how the *Contractor's* site, other *Contractors*, delivery companies and visitors be made aware of the route (to and from the site) and of on-site restrictions, prior to undertaking the journey.
- where vehicles can access the site and turn to exit in a forward direction.
- Should delivery vehicles not be able to access the site where will they wait to load/unload?
- Provide a breakdown of the number, type, size and weight of vehicles accessing the *site*.
- What are the arrangements to ensure that the loading/collection area is clear of vehicles and materials before the next lorry arrives?
- how will the *Contractor* protect pedestrians, beach users from the construction *works*, particularly vulnerable users?

The Construction Traffic Management Plan should be periodically monitored and reviewed.

No other access is used without the *Project Manager's* written acceptance. The *Contractor* does not enter or use the *site* for any purpose not connected with the *works*.

The following access constraints apply:

- The *Contractor* takes care to avoid disturbance and damage to the dunes and scrub.
- The *Contractor* uses existing access ramps where possible.
- The *Contractor* uses the existing splash deck/promenade where possible.

If temporary access ramp(s) from the top of the seawall are required, the *Contractor* notifies the *Project Manager* at least 72 hours in advance, provides details of the construction, maintenance and removal of the proposed temporary access ramps and confirms to the *Project Manager* that arrangements have been accepted.

If temporary access route(s) between the nearest vehicular access point and the Area of Occupation are required the *Contractor* notifies the *Project Manager* at least 72 hours in advance, provides details of the construction, maintenance and removal of his proposed temporary access route(s) and subsequently confirms to the *Project Manager* what arrangements have been accepted.

Pedestrian and vehicular access (e.g. for fishing boats) shall be provided over pipelines and around other temporary works located outside the Area of Occupation. Details of the *Contractor's* proposals are submitted to the *Project Manager* prior to work being undertaken.

Existing public access along the sea walls and crest of dunes are to be maintained at all times.

The *Contractor* secures the Area of Occupation so far as is reasonably practicable against access by the public before other work starts in the Area of Occupation. The *Contractor* regularly inspects and maintains all site fencing and gates and promptly repairs defects.

The *Contractor* shall keep the Area of Occupation to a length that allows them to undertake the *works* safely but must not be longer than 600m in length.

The *Contractor* should note that the public has the right to pursue water-sports within the *site* and the *Contractor* is responsible for clearly warning swimmers, small-boat sailors, etc. that they may be entering areas of risk when approaching the Area of Occupation.

Copies of formal entry notices, details of particular agreements with landowners and/or powers of entry will be made available to the *Contractor* at commencement. The *Contractor* notifies relevant owners and occupiers (including the Highway Authority) in writing, sending a copy to the *Project Manager*, 14 days in advance of their intention to start work.

The *Contractor* keeps records of the dates of their first entry onto and departure from all property and lands of each owner and occupier (including public highways, footpaths and thoroughfares) together with the dates of the erection and removal of all temporary fencing.

### **Site tidiness and branding**

The *Contractor* keeps the Area of Occupation, *site* offices, *site* yards and parking areas tidy and promptly removes rubbish, waste and surplus. Materials, Plant and Equipment are positioned, stored and stacked in a safe and orderly manner. The *site* outside the Area of Occupation, *site* offices and *site* yards is kept free of construction debris and suitable for use by the public. Materials contaminated by oil and spillages or otherwise polluted due to the *Contractor's* activities shall be immediately removed and disposed of according to the statutory regulations.

Overnight accommodation at the *site* offices and on the *site* is prohibited.

All Offices, lockups, store rooms, working areas, Plant and Equipment within the Area of Occupation or being used for the purposes of delivering the *Works*, shall be Environment Agency branded and carry at least one visible Environment Agency name badge (supplied by the *Contractor*) that can be seen from the Public Areas.

Environment Agency branding shall be of equal size, number and in visible locations as the branding of the *Contractor*. All plant and equipment shall include at least one Environment Agency sticker and or logo. Branding shall provide a clear message to the public that the *Client* and the *Contractor* are working in partnership to reduce the flood risk. Should the *Contractor* fail to meet this requirement, then they will be asked to remove all of their branding.

### **Noise and vibration**

Noise and vibration levels shall be limited to those noted under the Minimum Technical Requirements. Activity in the part of the Trusthorpe - Mablethorpe area, where residences are located close to the beach, is to be kept to the minimum practicable level to reduce noise during night time hours (10pm to 8am).

### **Working hours**

Working hours shall be as noted in the Minimum Technical Requirements, with the following exceptions:

- 24-hour working is permitted for nourishment activities, except in the part of the Trusthorpe - Mablethorpe area, see above Noise and Vibration.

### **Parking**

Equipment parking and servicing areas and wheel washing facilities (if required) are to be located in the Car Park for acceptance by the *Supervisor*.

The *Contractor* shall provide adjacent to the *Project Manager's* accommodation hardstanding for car parking sufficient for at least three cars, for the sole use of the *Project Manager*, *Supervisor* and their staff.

The *Contractor* shall maintain the electric charging points for the *Client* and their staff.

### **Use of explosives**

Explosives are not to be used on the *site*.

### **Storage of fuel and chemicals**

All materials shall be carefully and properly stored in accordance with the suppliers' or manufacturers' instructions and directions.

Any materials that are found to be damaged, or that have suffered deterioration for any reasons whatsoever, shall not be incorporated in the *works*, shall be removed from the *site* forthwith and shall be replaced with materials that comply with the Scope.

The *Contractor* shall not make use of public highways, thoroughfares or footpaths for depositing and storing Plant and Materials but shall make provision for the proper storage and protection of all Plant and Materials on the *site* at locations accepted by the *Project Manager*. All such provisions shall be removed at Completion and any disturbance made good.

The *Contractor* shall maintain a detailed record of all materials received on the *site* and in their stores or storage and working areas in the vicinity of the *site* and shall make such records available to the *Project Manager* and *Supervisor* at such times as the latter may require.

### **Pollution, ecological and environmental impacts**

The *Contractor* complies in full with the Environmental Action Plan (EAP). Where the EAP refers to associated documents (for example method statements, consents and plans) the *Contractor* complies also with the measures described within these documents. The EAP shall be monitored on *site* for compliance by the *Supervisor*.

MTR 801\_14, 801\_14\_SD01 and SD02 will remain relevant until the completion of 'X Version'. The *Contractor* shall be responsible for applying new and existing MTRs until otherwise advised by the *Client*.

- Sustainability and Carbon  
The *Contractor* shall demonstrate sustainability leadership through fully considering and contributing to achieving the *Client's* environment and sustainability aspirations. These are outlined in the Environment Agency's e: Mission 2030 Strategy incorporating the UN Sustainability Goals (document included Interactive\_emission); the government's 25 Year Environment Plan; and the Environment Act 1995, and are in line with the principles of sustainability as described by the United Nation's Sustainable Development Goals.

The *Contractor* shall take early action to reduce carbon emissions where the reduction opportunity is greatest by following the Carbon Reduction Hierarchy.

### **Archaeological requirements**

The *Client* will organise a briefing for the *Contractor's* staff to explain the archaeology of the site and necessary precautions and actions to be followed.

The *Contractor* deals with the following items of known value or of historical or other interest, as follows:

The *Contractor* shall immediately inform the *Project Manager* if any items thought to be of archaeological importance are discovered. The *Contractor* shall refer to the following documents, which are available from the *Client*, for archaeological information:

- Saltfleet to Gibraltar Point Strategy StAR Appendix N – Environmental Reports ENVIMAN002226-CH2-DZ-L00-TN-Z\_1014-S3-P01.00-D001-EA-LOD0-SGPS\_StAR\_Appendix\_N\_Environmental\_Reports

Refer also to the Environmental Action Plan.

The *Contractor* has title to the materials from excavation and demolition. All deleterious material, resulting from the works, are disposed of in accordance with the statutory requirements. Before disposing of any material the *Contractor* submits to the *Supervisor* details of the proposed disposal area and the type of haul plant to be used together with the route to be adopted. The haul route is kept clean at all times.

### **Interfaces between the works and existing premises and users**

#### **(i) Survey of highways, property and land**

Shortly before first entry of all campaigns, the *Contractor* undertakes 'Pre-starting condition surveys' of all highways, property and land as agreed with the *Project Manager* (including trees, boundaries, crops and any other features which may be affected by the *works*) within the Boundaries of the *site* and of the access route(s) and ramp(s) to the Nourishment Area(s) outside of the *site* boundary.

The Pre-starting condition surveys shall consist of digital photographs with an inventory. Copies of the survey shall be made and provided to the following:

- *Client* (electronic format)
- *Supervisor* (electronic format and hard copy)
- *Project Manager* (electronic format)
- Landowners whose land is used to access the *site* or whose land forms part of the *site* (hard copy)
- Occupiers whose land is used to access the *site* or whose land forms part of the *site* (hard copy)

The *Contractor* undertakes similar 'Post-completion condition surveys' when the work is complete and on dates agreed with the *Supervisor*. Copies of the 'Post-completion condition surveys' are distributed in the same format and to the same recipients as the Pre-starting condition surveys.

The *Contractor* undertakes the condition surveys in conjunction with the *Supervisor* and accompanied by any others invited (and notified in advance) by the *Contractor*, *Project Manager* or *Supervisor*.

The *Contractor* gives at least 5 working days' notice to the *Project Manager* and *Supervisor* prior to any condition survey.

#### **(ii) Site fencing**

The *Contractor* provides a set of keys for all *site* entrance locks to the *Project Manager* and *Supervisor* and allows the *Client's* Operations team emergency access at all times.

The *Contractor* provides access in temporary site fencing and gates as necessary for the use of the occupiers of adjacent land.

#### **(iii) Bill posting and advertising**

The *Contractor* does not undertake or allow bill posting or advertising of any kind without the written consent of the *Project Manager*. Planning consent, if required, is obtained by the *Contractor*.

#### **(iv) Third party land interests**

Subject to unavoidable disturbance caused by Providing the works, the *Contractor* does not unreasonably interfere with land rights which may be enjoyed on or near the *site* and causes the least possible interference with existing amenities whether natural or man-made.

#### **(v) Third party complaints and claims**

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

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

The *Contractor* deals promptly with any complaints, claims, damage or injury by or to owners or occupiers.

The *Contractor* shall immediately inform the *Client* if any complaint, claims, damage or injury to owners or occupiers made by those owners or occupiers under the Water Resources Act 1991 and pursuant to clause Z27 (Fisheries Liaison Officer) allows the *Client's* Estates Department to agree the claim. If the compensation claim is as a result of the *Contractor's* (or their Subcontractor or supplier) actions, the full cost of the claim shall be reimbursed to the *Client* by the *Contractor*.

The *Contractor* keeps the *Project Manager* informed as to the progress made towards settlement of claims.

**(vi) Interference with any access to property, apparatus or service**

Before interfering with any access to property, apparatus or service, the *Contractor* identifies its access requirements. The *Contractor* notifies the *Project Manager* and the relevant owners and occupiers in writing 14 days in advance of any such interference and confirms to the *Project Manager* if alternative arrangements have been agreed.

The *Contractor* takes into particular account the access and service requirements of those with special needs.

**(vii) Accommodation for the contract**

The *Contractor*, *Project Manager* and *Supervisor* share *site* accommodation, offices and facilities, which will be painted in accordance to the *Client's site* Branding Guide. The *Contractor* provides accommodation and services described in the Minimum Technical Requirements. The accommodation is to be sited to the acceptance of the *Project Manager*.

The accommodation is provided ready for use from 2 weeks prior to the start of the works, unless otherwise agreed with the *Project Manager*. The *Contractor* maintains agreements relating to the accommodation and services until the date instructed by the *Project Manager*. Accommodation and services are removed by the *Contractor* 2 weeks after completion of the works unless otherwise agreed with the *Project Manager*.

Note: The existing contract compound at Anderby Creek has been used as offices and compound premises under the previous contract. Any transfer agreement to use these premises will be compensated for under the contract. Team Van Oord currently have ownership of this Area until 31 December 2020 under their current Contract.

Should the current, site compound area be used, then the *Contractor* will be required to deal with all landowner discussions and approvals and maintain the area until 31 December 2024.

In relation to the solar panels at the current site compound, the units will be used to generate project income and offset costs of running the offices/sites during the operational phase. The *Contractor* shall be responsible for the solar panels maintenance and repair.

Outside the operational phase the units will be used to generate electricity that will sold to the national grid. All income during this time will benefit the *Client*.

**(viii) Contractor's compounds, storage areas and site roads**

The *Contractor* identifies suitable areas within the Working Area for use for offloading/ loading equipment and materials and as compounds, storage areas and *site* roads and proposes these for acceptance by the *Project Manager*.

Except as may be otherwise required by the contract, the *Contractor* designs, constructs, maintains and afterwards removes and reinstates any temporary works including temporary accommodation, services, compounds, storage areas, *site* roads and accesses required for the *works*. The *Contractor* submits details of their design and reinstatement proposals to the *Project Manager* for acceptance.

Planning consent for offices, cabins, other temporary accommodation, and signboards at the *site* offices or temporary works required by the *Contractor* or required for the *Project Manager* and *Supervisor* is, if necessary, obtained by the *Contractor*.

Reinstatement work includes the removal of all materials used in the construction of roads and restoring the area to at least its original degree of safety, stability, drainage and appearance unless specific approval otherwise is given by the *Project Manager*.

**Transport**

The *Contractor* provides for the sole use of the *Project Manager*, *Supervisor* and their staff one plain-coloured hybrid car capable of carrying 4 No. people and suitable for use on and around the *site*. A suitable charging point must be provided. If during the contract the car's mileage exceeds 80,000

miles or becomes more than 5 years old, the *Contractor* replaces it with another car meeting or exceeding this specification.

The *Contractor* licences, insures, services, runs (including fuel and lubricants), maintains, cleans and repairs the vehicle(s) and provides a replacement for any vehicle expected to be unavailable for a period of more than 24 hours.

The *Contractor* comprehensively insures the vehicles for driving at any time by any licensed driver, together with any authorised passengers and the carriage of goods and samples, named in advance by the *Project Manager*.

The vehicle(s) are returned to the *Contractor* 2 weeks after Completion of the *works*.

### Datums and reference points

#### Tide Information

Tide levels are those given by the Admiralty Tide Tables for Skegness. Tide levels at the site will vary. Tide levels according to Ordnance Datum (Newlyn) (mODN) and Chart Datum (mCD) are as follows:

MHWS	+3.15 mODN	+6.9 mCD
MHWN	+1.55 mODN	+5.3 mCD
MLWS	-1.25 mODN	+2.5 mCD
MLWS	-2.85 mODN	+0.9 mCD

The Saltfleet to Gibraltar Point frontage has been split into 3 Zones as per figure below.

**Zone A** is the stretch of coastline from Saltfleet to Theddlethorpe (Grid Ref: TF 45406 93904 to TF 49717 86980), taken as a frontage length of 8km.

<u>Location</u>	<u>X(Easting)</u>	<u>Y(Northing)</u>	<u>Nearest Post Code</u>
Saltfleet	345406	393904	LN11 7RJ
Theddlethorpe	549717	386980	LN12 1QQ

**Zone B** is the stretch of coastline from Theddlethorpe to Skegness (Grid Ref: TF 49717 86980 to TF 56602 61001), taken as a frontage length of 25km.

<u>Location</u>	<u>X(Easting)</u>	<u>Y(Northing)</u>	<u>Nearest Post Code</u>
Theddlethorpe	549717	386980	LN12 1QQ
Skegness	556602	361001	PE25 3AZ

**Zone C** is the stretch of coastline from Skegness to Gibraltar Point (Grid Ref: TF 56602 61001 to TF 55744 55009), taken as a frontage length of 5km.

<u>Location</u>	<u>X(Easting)</u>	<u>Y(Northing)</u>	<u>Nearest Post Code</u>
Skegness	556602	361001	PE25 3AZ
Gibraltar Point	555744	355009	PE24 4BA



The *works* datum is Ordnance Survey Datum (Newlyn). The primary reference points for setting out the *works* are provided by the *Client's* system of beach monitoring profiles. Details of profile markers within the site frontage are set out below (Jan 2014). More profiles are available should the *Contractor* need them to undertake the *Works*.

Marker Reference	Easting	Northing	Height (mODN)
P10 (L038) *	550931.680	385142.796	6.386
P12 (MB078)	551168.605	384692.295	7.016
P14 (L039) *	551378.588	384248.129	6.566
P18 (L040)	551815.840	383295.461	5.945
P20 (MB116)	551982.457	382831.036	6.208

P22 (L041) *	552152.585	382343.898	6.625
P24 (MB135)	552342.488	381904.520	5.563
P26 (L042) *	552514.105	381413.832	6.683
P28 (MB153)	552733.167	380970.307	6.587
P30 (L043) *	552998.528	380502.916	6.534
P32 (MB171)	553248.756	380130.958	7.354
P34 (L044) *	553559.144	379673.551	7.366
P36 (MB193)	553881.897	379120.744	7.347
P38 (L045) *	554182.139	378577.552	6.336
P40 (MB213)	554404.939	378161.160	6.852
P42 (L046) *	554615.826	377674.155	8.313
P44 (MB231)	554778.618	377295.310	7.439
P46 (L047)	554980.932	376750.478	8.911
P48 (MB249)	555112.164	376352.140	7.219
P50 (L048)	555321.565	375803.046	NaN (nearest 5.609)
P52 (MB270)	555532.390	375271.531	8.338
P54 (L049)	555736.860	374745.108	7.536
P56 (MB289)	555923.947	374288.726	7.468
P58 (L050)	556094.750	373748.400	NaN (nearest 7.353)
P59 (MB304) *	556164.454	373509.441	6.117
P60 (MB309)	556243.566	373286.164	5.86
P62 (L051) *	556210.190	372741.663	6.755
P64 (MB334)	556274.128	372148.374	6.699
P66 (L052) *	556369.136	371734.644	6.81
P68 (MB351)	556543.512	371264.799	7.474
P70 (L053) *	556722.986	370811.578	7.183
P72 (MB371)	556907.703	370295.947	6.711
P74 (L054) *	557058.788	369792.808	6.601
P76 (MB390)	557171.993	369305.137	6.607
P78 (L055) *	557360.074	368835.078	6.623
P80 (MB406)	557399.786	368516.673	6.526
P82 (L056) *	557465.074	368127.352	6.542
P84 (MB426)	557402.792	367510.468	6.529
P86 (L057) *	557372.368	366889.901	6.882
P88 (MB448)	557320.166	366403.170	6.724
P90 (L058) *	557284.330	365888.034	6.683

From the primary reference points, the *Contractor* establishes appropriate secondary survey stations at suitable locations close to the *works*. The *Contractor* proposes the location of the secondary survey stations for acceptance by the *Supervisor* and *Project Manager*.

The *Contractor* periodically checks the secondary survey stations against the primary reference points and notifies the *Supervisor* immediately of any discrepancies.

In advance of any survey station being demolished during the *works*, the *Contractor* transfers it to a new location. Similarly any survey station which is damaged or dislodged during the contract is to be re-installed by the *Contractor*. The *Contractor* proposes the surveyed values of all transferred and re-installed survey stations for acceptance by the *Supervisor* before making use of them.

The *Contractor* checks that the existing ground levels and levels and locations of structures where they are relevant to the *works* as indicated in the contract are correct. If the *Contractor* considers there is an inconsistency with the information given they will refer it to the *Project Manager* for resolution before work commences.

## Constraints imposed to meet the requirements of others

### Nourishment in the vicinity of outfalls

Outfalls shall not be trafficked over, unless the *Contractor* has assessed the impact and demonstrated to the *Project Manager* that it is safe to do so. Prior to commencement, the *Contractor* is to provide to the *Project Manager*, for acceptance, an assessment of the anticipated loading on the outfall structures by the Equipment to be used, concluding whether it is safe to traffic over and what safeguards are to be put in place. The *Contractor* is to ensure all safeguards are in place throughout the period when trafficking over the outfalls. Any subsequent change to the Equipment to be used must undergo a similar assessment before accessing over the outfalls.

Any damage to the outfalls and/or associated structures as a direct result of the *Contractor's* actions, remains a *Contractor* held risk.

Nourishment shall be transitioned off in accordance with drawing information and instruction from the *Project Manager* and *Supervisor*. Ordnance Survey National Grid Reference for the landward ends of outfalls are:

Ingoldmells Outfall	TF 5748 6869
Chapel Outfall	TF 5620 7294
Anderby Outfall	TF 5525 7595
Boygriff Outfall	TF 5338 7996
Trusthorpe Outfall	TF 5159 8412
Mablethorpe Outfall	TF 5084 8539

### Vibration, noise and dust

The *Contractor* takes all reasonable measures to minimise the generation of noise and vibration resulting from their activities, including but not limited to:

- (i) employs 'best practicable means' as defined in the Control of Pollution Act 1994 to minimise the noise and vibration resulting from their operations;
- (ii) complies with the recommendations and requirements of BS 5228 Code of Practice for Noise Control on Construction and Demolition Sites;
- (iii) all equipment is fitted with effective exhaust silencers, maintained in good repair and in accordance with the manufacturer's instructions and operated as to minimise noise emissions;
- (iv) only 'sound reduced' compressors or other alternatives approved by the *Supervisor* are used and any parts fitted by the manufacturer for the purpose of noise reduction is maintained and operated so as to minimise noise;
- (v) any pneumatic operated percussive tools are fitted with approved mufflers or silencers which are kept in good repair;
- (vi) any machinery which is intermittent in use is shut down in intervening periods of non-use or where this is impractical is throttled back to a minimum;
- (vii) stationary equipment (e.g. pumps, compressors, generators, etc.) are situated as far as possible from residential property and acoustic screens are erected if required by the *Supervisor*. Other equipment is screened if necessary;
- (viii) equipment known to emit noise strongly in one direction is, where practical, orientated so that noise is directed away from noise sensitive areas; and
- (ix) as far as possible, construction operations are not so noisy as to be a danger to those on or about the works or to be a nuisance to the neighbourhood.

The *Contractor* takes all reasonable measures to control the generation of dust and mud resulting from their activities, including but not limited to:

- (i) watering exposed surfaces using mobile bowsers equipped with sprinkler bars;
- (ii) limiting vehicle speeds to 5 mph on the Area of Occupation and on unsurfaced roads;
- (iii) covering dust creating materials being delivered to or removed from *site* on the truck;
- (iv) cleaning vehicles leaving *site*; and

- (v) Immediately removing any debris deposited on the public highway.

### **Licences and Consents**

The *works* are undertaken under the *Client's* powers of permitted development and have been approved by Natural England. The *Client* has obtained the following licences and consents for the works:

- Marine Management Organisation (MMO) licence (not including any dredging works) - MMO Letter, issued 25th April 2016, and Marine Licence (Licence Number L/2016/00118/5) - Licence is valid to 30<sup>th</sup> September 2021.
- The licence to carry out the works post 30<sup>th</sup> September 2021 is currently being processed by the *Client*
- Crown Estates notification - to be provided prior to the works.

### **S 202 Confidentiality**

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

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

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

The *Contractor* shall keep the public fully informed of the works and of the dangers present on *site*.

The *Contractor* considers the security of neighbouring properties and does not leave unattended scaffolding, ladders or any condition, which provide or assist access to neighbouring properties. Where permanent security fencing to neighbouring properties is removed as part of the works, it is to be replaced by suitable temporary fencing when the *site* is unoccupied.

The *Contractor* is responsible for the security of the Working Areas, Area of Occupation, *site* offices, *site* yard and any other facilities deemed necessary by the *Contractor*.

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

Not used.

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

The *Contractor* shall be responsible for maintaining the current standard of protection of the flood defences during execution of the works.

Where an existing flood defence has to be removed, lowered or weakened as part of the works, the *Contractor* provides a temporary flood defence ensuring that the existing standard of flood defence is maintained at all times. The *Contractor* gains the *Project Manager's* acceptance and the Environment Agency's statutory consent for the temporary flood defence. This will be achieved through completion of the Environmental Permitting (England and Wales) Regulations 2016, updated 2018 and 2019.

Except where required as part of the works, the *Contractor* ensures that the structural integrity and performance of existing flood defences are not damaged by their activities during the works.

The *Contractor* shall take reasonable measures to avoid damage to existing roads, property and other works caused by their operations. The *Contractor* is responsible for any damage to existing roads, properties and other works caused by its operations. Prior to any work commencing on *site* the *Contractor* provides, for acceptance by the *Supervisor*, a photographic record of the condition of the existing roads and any other existing works which may be affected by his operations. On Completion

of the works, the *Contractor* returns the roads and any other affected existing works to a condition not inferior to that pertaining at the access date.

Information concerning the believed location of apparatus of the Statutory Undertakers, Highway Authority or others is included, where available, in the *site* Information.

The *Contractor* liaises with all relevant Statutory Undertakers, the Highway Authority and other owners of apparatus before commencing any excavations and satisfies themselves as to the exact position of existing apparatus which may affect or be affected by the construction of the works. The *Contractor* complies with all specific requirements from these third parties.

Where any portion of the works is close to, across or under any existing apparatus of Statutory Undertakers, the Highways Authority or other parties, the *Contractor* shall obtain all necessary licences and consents and temporarily supports and works around, under or adjacent to all apparatus in a manner designed to avoid damage, leakage or danger and to ensure uninterrupted operation.

Should any leakages or damage to existing services, highways or apparatus be discovered, the *Contractor* at once notifies the Statutory Undertaker, Highways Authority or owner concerned, as appropriate, and the *Project Manager*. The *Contractor* affords every facility for the repair or replacement of the apparatus affected.

Before mechanically excavating close to services, the *Contractor* undertakes full preliminary investigations in accordance with PAS128:2014 – Specification for underground utility detection, verification and location - parts A to D and by means of electromagnetic and other locating devices and hand-dug trial holes to locate the existing services. The *Contractor* notifies the *Project Manager* of the results of these investigations without delay.

The *Contractor* notifies the *Project Manager* in advance of any diversion or removal of apparatus, which the *Contractor* requires for their own convenience or because of their proposed methods of working. The *Contractor* arranges (including obtaining any necessary permissions, notices, licences or consents) and undertakes any such additional diversion or removal of apparatus but complies with any requirements of the *Project Manager*.

The *Contractor* provides photographs and a record drawing of services and apparatus encountered, highlights the differences from the information provided by the Statutory Undertaker and Highway Authority and issues this to the *Project Manager*.

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

The *Contractor* shall take all reasonable care to protect the works from damage, including weather and tidal related conditions.

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

Refer to the Minimum Technical Requirements.

## **S 208 Traffic Management**

### **Traffic safety and management**

The *Contractor* is responsible for traffic safety and management, including obtaining traffic signals consents and nominates one of their *site* staff to be responsible for all related activities.

Before any work in or affecting the use of any highway or road is commenced, the *Contractor's* proposed method of working, including any special traffic requirements, is agreed with and confirmed in writing to the *Project Manager* and all relevant authorities.

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

The *Contractor* prevents vehicles entering and leaving the *site* depositing mud or other debris on the surface of adjacent roads, pavements or footpaths and removes promptly any materials deposited.

The *Contractor* provides the *Project Manager* with an up-to-date list of ‘*Supervisors*’ and ‘*Operatives*’ who have achieved accreditation in the relevant activities in the New Roads and Street Works Act 1991 or The Street Works (Northern Ireland) Order 1995.

### **Permanent closures and diversions**

No permanent highway, road or footpath closures or diversions are required for the works.

The *Client* arranges all the necessary permissions, notices and licences for these and any other permanent closures or diversions that become necessary.

### **Temporary closures and diversions**

The *Contractor* arranges all the necessary permissions, notices and licences for these and any other temporary closures or diversions that become necessary. The *Contractor* will notify the requirement to the *Client* 13 weeks in advance of requirement.

The *Contractor* arranges all the necessary permissions, notices and licences for these and any other temporary closures or diversions that become necessary. Contacts are: Lincolnshire County Council, Highways & Planning Directorate, 4th Floor City Hall, Lincoln, LN1 1DN.

The *Contractor* arranges all necessary temporary traffic control measures and maintains them in good working order and condition at all times, re-positioning, covering or removing them as necessitated by the progress of the works.

### **S 209 Condition survey**

The *Contractor* shall undertake a condition survey in accordance with the Minimum Technical Requirements. As stated in S201.

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

Where elevated levels of vibration are expected the *Client* shall undertake pre-condition surveys of the existing buildings that might be affected. The *Client* shall give the *Contractor* 7 days’ notice of such surveys and the *Contractor* shall attend the surveys and sign the survey reports in acknowledgement of their accuracy. In the absence of such attendance and signature, the *Contractor* shall be deemed to have attended the surveys and acknowledged the accuracy of the survey reports.

Noise and vibration monitoring shall be undertaken in accordance with the Minimum Technical Requirements except that the *Contractor* shall propose a specialist consultant for both noise and vibration monitoring for acceptance by the *Project Manager*. Should any of the vibration or noise levels exceed those noted in the Minimum Technical Requirements the *Contractor* shall stop works, identify the cause and agree remedial actions to comply with the limits noted with the *Supervisor*.

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

The *Contractor* shall ensure that all site personnel are respectful of the public.

### **S 2012 Site cleanliness**

The *site* shall be kept clean and tidy to avoid any wind-blown rubbish.

**S 2013 Waste materials**

Refer to the Minimum Technical Requirements.

**S 2014 Deleterious and hazardous materials**

Not used

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

### **S 301 Design responsibility**

The *Contractor* designs the following parts of the works: None

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

Not applicable

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

Not applicable

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

#### **Interfaces with the Client's or others**

The *Contractor* provides information to the *Client* and *Project Manager* on the availability of dredgers and other equipment and materials for use on these works and co-operates with the *Client* in defining the timing of the works.

#### **Operations & Maintenance Manual (incorporating the Health and Safety File)**

Details of the requirements of the Health and Safety File, which incorporates any Operation and Maintenance are detailed in the Pre-Construction Information in S 1100. The *Contractor* shall provide the information detailed in the Pre-Construction Information to the *Project Manager* within 4 weeks of completion of each nourishment area.

#### **Record drawings**

Record drawings are prepared showing the 'as built' works by the *Contractor* for inclusion in the Health and Safety File. Furthermore, all bathymetric and survey or modelling information should be issued to the *Client* within the H&S file.

The *Contractor* submits the full set of record drawings for an area of the works to the *Project Manager* for acceptance within 4 weeks after physical completion of each nourishment area.

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

The *Contractor* will work with the *Client* to ensure all *Contractor* proposed beach profile design changes can be developed, reviewed, adopted and implemented without any negative impact on the programme.

### **S 306 Requirements of Others**

Refer to S 900 for requirements of Others.

### **S 307 Copyright/licence**

Not applicable.

### **S 308 Access to information following Completion**

Not applicable as the *Contractor* shall ensure that all information and deliverables are issued to the *Client* for their use in future operations.

### **S 309 Site investigations**

Not applicable.

## **S 400 Completion**

### **S 401 Completion definition**

Prior to Completion the *Contractor* shall provide the *Project Manager* with the following:

- 1 electronic copy of information for inclusion within the Health and Safety File including as-built drawings (in pdf, AutoCAD and paper copies)
- Digital copies of photographs, videos, surveys and models of all stages of the works (titled and dated)
- a fully populated version of the *Client's* Project Cost and Carbon Tool, or any successor.
- Transfer to the *Client* databases of BIM data
- Delivery of the Final Cost and Carbon Report

The *Contractor* shall also ensure that:

- the frontage is fully cleaned and safe for public use and that no foreign objects exist on the foreshore. All beach frontages shall be thoroughly cleaned to ensure the removal of all debris including any rock shards. The beach should be cleaned a minimum of twice, each after a high tide to ensure full removal of all debris.
- all areas for temporary storage, compounds, etc. are to be fully restored and reinstated to their original condition.

The *Contractor* is to discuss the future of the site compound with the *Client* prior to undertaking its removal. The site compound is to be left clean and tidy during the works and between campaigns.

All works and obligations as described in the Scope shall be executed prior to Completion.

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

Sectional completion for this Contract is the same as Completion Requirements above.

### **S 403 Training**

Where training courses are held on site as part of the *Contractor's* general duties, the courses should be offered to the wider project team.

### **S 404 Final Clean**

Not used

### **S 405 Security**

Not used

### **S 406 Correcting Defects**

Access for the correction of any Defect after Completion shall be arranged via the *Project Manager* and *Client*.

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

A joint walk through of the works may be arranged with the *Contractor, Project Manager, Supervisor, Client* and Environment Agency's Operations personnel to agree any defects that require attention prior to Acceptance Certificate being issued.

### **S 408 Take over**

At the *Client's* discretion the *Client* may take over part/parts of the *works* prior to Completion, The *Contractor* may offer up nourishment areas for takeover to the *Supervisor* for acceptance from the *Client* or otherwise. The Pre-Completion arrangements detailed above shall be followed before any *works* are taken over by the *Client*.

The defects correction period will start upon the issue of the Acceptance Certificate for the *works*.

## **S 500 Programme**

### **S 501 Programme requirements**

#### ***Contractor's programme***

The *Contractor* includes the following information as separate activities in the programme in addition to that stated in the ECC clause 31.2 and includes alignment and submission of the BEP and Master Information Delivery Plan (MIDP):

- Opening the compound
- Total Beach Survey and issue date
- Mobilisation;
- Nourishment operations
- Demobilisation;

### **S 502 Programme arrangement**

Not used

### **S 503 Methodology statement**

Method statements submitted with a programme for acceptance are to include but are not limited to the following matters:

- Health & safety measures;
- Extent of working areas and protective barriers;
- Access to working areas, including confined spaces;
- The implementation of relevant statutory regulations;
- The design and construction of temporary works and de-watering measures;
- Compliance with the Environmental Action Plan;
- How the environmental impact of the activities are to be minimised;
- Equipment requirements, siting and mode of operation;
- Labour requirements and supervision;
- Delivery and storage of materials;
- Provision of access to third parties;
- Details of the construction sequence;
- Details of working methods;
- Detailed programme with key dates;
- Result of any consultation with third parties;
- Contingency plans in the event of flooding, other difficulties or emergencies; and
- Risk and COSHH assessments.

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

The *Contractor* shall allow continued access for the *Client* during any *works*.

The *Contractor* shall provide access to the Environment Agency Operations personnel. These access arrangements shall be included in the *Contractor's* management plan. The *Contractor* shall

provide 1 weeks' notice of any change to the management plan to Environment Agency Operations personnel.

**S 505 Information required**

Not used

**S 506 Revised programme**

All submissions of revised programmes should include a full explanation of any changes in sequencing and duration of the work activities from the previous accepted programme.

## **S 600 Quality management**

### **S 601 Samples**

Samples of materials shall be provided as required in the Scope. The *Contractor* shall allow sufficient time for samples to be taken and accepted and if required additional samples taken in order not to impact on the programme. Refer to testing requirements in S 1800's

Results from the sample testing must be submitted to the *Supervisor* within 2 weeks of the material being placed on the beach.

### **S 602 Quality Statement**

The *Contractor's* Quality Control Manager is to certify that activities have been carried out in accordance with the contract when:

- an experienced and qualified Surveyor has checked and certified that the work is in its correct position, level and alignment;
- a works checker has checked and certified that materials, workmanship cleanliness and other matters not checked by the surveyor are correct; and
- a testing technician has certified materials tests.

Copies of relevant supporting certificates relied on by the Quality Control Manager are to be attached to their certificate.

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

- documents used in connection with the certification process, including but not limited to site diaries, calibration certificates, memos etc.; and
- interview persons involved in Providing the works.

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

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

The *Contractor* is to describe the Quality Management System in a Quality Plan, which is to be provided to the *Project Manager* for acceptance within 28 days of the Contract Date.

The quality of the works is self-certified by the *Contractor* as set out in the accepted Quality Plan. State any requirements for a quality management system, including accreditations or legislative standards.

### **S 604 BIM requirements**

The *Contractor* needs to provide a dedicated BIM Information Manager to the support the project BIM requirement.

**S 700 Tests and inspections**

**S 701 Tests and inspections**

Testing and inspection of Materials and works shall be undertaken in accordance with the Scope specifications.

**S 702 Management of tests and inspections**

As per Scope.

**S 703 Covering up completed work**

As per Scope.

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

As per Scope.

**S 705 Reduction of carbon against the original solution carbon budget**

Refer to the sustainability appendix

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

### **S 801 Project team – Others**

The project team 'Others' includes, but is not limited to:

- *Client's* Project Executive
- *Client's* Project Manager
- *Client's* Project Sponsor
- *Client's* Senior User and Senior User Representative
- *Client's* NEAS officers
- *Client's* Designer
- Environment Agency's Operations personnel
- Environmental Clerk of Works
- CDM Principal Designer
- Communications officer
- BIM manager

### **S 802 Communications**

Monthly progress meetings are to be held on *site* and chaired by the *Project Manager* who provides an agenda and minutes the meeting. Meetings shall be attended by the *Contractor's* project manager, agent, HSQE Manager and QS as a minimum.

Monthly progress reports shall be prepared by the *Contractor* and provided to the *Project Manager* for distribution to the project team a minimum of three (3) working days in advance of each monthly progress meeting. The progress report shall include those details listed in the Minimum Technical Requirements and also:

- Progress
  - Activities started, progressed and completed during the month;
  - Activities planned for the forthcoming month;
  - Summary of ground conditions encountered;
  - Summary of weather conditions experienced; and
  - Instructed changes to the Scope.
- Labour/Materials/Equipment
  - Summary of principal equipment and materials brought to *site* or taken off *site*;
  - Subcontractors on *site*; and
  - Approximate numbers on *site*.
- Programme
  - A marked up copy of the current programme showing progress and percentage completion of each activity; and
  - A revised programme (if appropriate)
- Issues
  - Problems encountered or anticipated.
- Information/services required from the *Client*

- Information required by the *Contractor*
- Public Relations
  - Contacts with the public or other third parties; and
  - Complaints or claims.
- Health & safety incidents
- Environmental
  - Breaches of the EAP;
  - Carbon calculator update
  - Pollution incidents, etc.; and
  - Recycling and waste reports.
- Efficiency register
- Team Performance Measures (or equivalent)
- Representative progress photographs.
- Any other issue/subject requested by the *Project Manager*

Communications to and from the *Contractor* and storage of project files shall be administered through *Client E-CDE (A-site)*

The *Client's* NEC standard contract forms shall be administered through Fastdraft contract management system

All contract communications shall contain a unique reference number and shall be appropriately titled. Numbering logic and sequencing to be agreed with the *Project Manager* and in line with the IDP requirements.

The *Contractor*, *Project Manager* and *Supervisor* shall attend a weekly issues meeting, chaired by the *Project Manager*. This meeting may include members of the *Client* team via MS teams or similar.

The *Contractor* shall provide a summary 2 week look ahead programme which shall be updated and issued on a weekly basis to the *Project Manager* and *Supervisor*.

### **S 803 Monthly Progress Reporting**

Producing monthly Checkpoint/Highlight Reports and linking into the *Project Manager's* Reports that include at least the following: financial, progress, programme, technical and environmental considerations, communications, meetings undertaken and those planned, risk, issue reports, deliverables, plans and photographs. Review and update the issues log during monthly progress meetings and determine the appropriate action required to resolve.

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

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

Refer to S 504.

### **S 902 Co-operation**

#### **Public relations**

The *Contractor* understands the importance of and assists the *Client* to establish and maintain good public relations during the course of the contract and thereafter. Public relations include keeping the general public informed; publicising the project and the work of the *Client* in general; liaising with local residents, businesses and landowners; dealing with complaints; and dealing with the press and media. The *Contractor* shall inform the *Client* within 48 hours of any complaint.

The *Contract* to provide a means of informing the public of the *works* before during and after. Also collect feedback of all public communications.

The *Contractor* notifies the *Project Manager* of all press or media enquiries and refers them to the *Client*.

Also refer to the Minimum Technical Requirements.

#### **Special Requirements in Relation to UK Piers Ltd (Owners of Skegness Pier)**

The *Contractor* is to keep the owner of the pier fully informed of any work in the vicinity of the pier. Refer to contact details for the owners of Skegness Pier:

Organisation	Contact	Address
UK Piers Ltd	CJ Paine	Skegness Pier Grand Parade Skegness PE25 2UE  Tel. 01754 767376 Fax. 01754 766939

#### **Special Requirements in Relation to Highways Division of Lincolnshire County Council**

- 2 weeks prior to the delivery of any plant, cabins, pipelines, etc. the *Contractor* is to meet on *site* with a representative of the Highways Division to agree access routes.
- The *Project Manager* is to be informed of the results of this meeting within 48 hours of the meeting.

Refer to contact details of the Lincolnshire County Council Highway Division:

Council	Contact	Address
Lincolnshire County Council	Mr N Armstrong	Divisional Highways Manager
East Lindsey Division (Wolds and Coast)	Mr P Danby	Manby Middlegate Manby Louth LN11 8SU

Tel: (01507) 327771

### Special Requirements in Relation to Lincolnshire Coast Fishermen's Association

- The following accesses are regularly used by the members of the Lincolnshire Coast Fishermen's Association (LCFA) and are not to be restricted:

Seaview Pullover	Co-ordinates	N 557180 – E 363960
North Shore Pullover	Co-ordinates	N 557170 – E 364600
Jacksons Corner	Co-ordinates	N 557300 – E 366200
Ingoldmells Point	Co-ordinates	N 531920 – E 355411

- Where pipelines along the beach restrict access the *Contractor* is to provide ramps over the pipelines suitable for a Landrover and fishing boat trailer.
- The *Contractor* is to provide the LCFA with a 24-hour, 7 days a week contact telephone number.
- The *Contractor* is to liaise regularly with LCFA and to generally co-operate with its members. In particular the *Contractor* shall inform LCFA 2 weeks before pipelines are moved.
- The *Contractor* shall provide LCFA with marked-up charts showing pipeline positions.

Refer to contact details of the Lincolnshire Coast Fishermen's Association:

Position	Contact	Address
Secretary	Mr P R West	Northlands House 2 Louth Road Horncastle Lincolnshire LN9 5ED
Chairman	Mr P Martin	20 Castleton Crescent Skegness Lincolnshire PE25 2TJ Tel 01754 610887

### **Special Requirements in Relation to Eastern Inshore Fisheries and Conservation Authority (Eastern IFCA)**

- Prior to commencing work the *Contractor* is to liaise fully with the Eastern IFCA with particular regard to the position and movement of pipelines, routes the *Contractor's* vessels will take between the dredging area(s) and the onshore site.
- The *Contractor* is to furnish the Eastern IFCA with a marked-up chart showing pipeline positions and access routes etc.

Refer to contact details for ESFJC:

Position	Contact	Address
Clerk	Julian Gregory	6 North Lynn Business Village Bergen Way Kings Lynn Norfolk PE30 2JG
		Tel: 01553 775321

### **Special Requirements in Relation to other Offshore Fishing Interests**

- The *Contractor* may be required to attend and participate in a pre-commencement meeting and then monthly meetings with representatives of the offshore fishing interests. A final meeting may be held following the completion of the dredging operations.
- The meetings, if required, will be arranged by the *Client* and held in either North Norfolk, Cambridgeshire or Lincolnshire.
- If meetings are to be held, the *Contractor* shall prepare a chart indicating the route to be taken by vessels travelling between the dredging area(s) on the onshore site.
- Meetings are not expected to last longer than 2 hours.

### **Special Requirements in Relation to the Department for Environment, Food and Rural Affairs (Fisheries Office)**

- One month prior to the commencement of dredging the *Contractor* is to contact the Department for Environment, Food and Rural Affairs Ministry of Agriculture (Defra) at Lowestoft and Grimsby so that a Notice to Fishermen may be issued.
- The *Contractor* is to liaise with Defra regarding the position and movement of pipelines and routes between the dredging area(s) and the onshore site.
- The *Contractor* is to work to the Code of Practice for the Extraction of Marine Aggregates December 1981.

Refer to contact details for the Defra District Inspector of Fisheries:

Position	Contact	Address
Defra District Inspector of Fisheries	Mr P Bryan	Estuary House Wharnecliffe Road Grimsby DN31 3QL

#### **Special Requirement in Relation to Port of Boston Ltd**

At award of contract the *Contractor* shall provide the Harbour Master with sufficient information to enable the issue of a Notice to Mariners. Refer to contact details for the Port of Boston Ltd:

Position	Contact	Address
Harbour Master	Mr Walker	The Dock Office Boston Lincolnshire PE21 6BN

Tel 01205 365571

#### **Special Requirements in Relation to King's Lynn Conservancy Board**

At award of contract the *Contractor* is to contact the Deputy Harbour Master and provide similar details to those submitted to the Port of Boston Ltd. Refer to contact details for the King's Lynn Conservancy Board:

Position	Contact	Address
Deputy Harbour Master	Mr P Bailey	King's Lynn Conservancy Board Harbour Office Common Staith King's Lynn Norfolk PE30 1LL

Tel: 01553 773411

#### **Special Requirements in Relation to Royal National Lifeboat Institution**

There are RNLI stations in Mablethorpe and Skegness at the northern and southern end of the works respectively. The lifeboats are launched from Tower Esplanade in Skegness and from the promenade in Mablethorpe.

The *Contractor* shall:

- Ensure that at no time is the launching of the lifeboats impeded by pipelines, plant, etc.
- Provide the coxswains of the lifeboats with a 24-hour, 7 days a week contact telephone number.

Refer to contact details for the RNLI:

Position	Contact	Address
Hon. Sec. Mablethorpe Lifeboat	Mrs H Howells	16 Wellington Road Mablethorpe Lincolnshire LN12 1HR
Vice-Chairman Skegness Lifeboat	Mr P Newsome	Skegness Lifeboat Station Tower Esplanade Skegness, Lincolnshire PE25 3HJ
		Tel 01754 763011

### Special Requirements in Relation to Trinity House

If the dredged sand is pumped ashore along a submerged pipeline from a fixed floating buoy moored offshore, the *Contractor* shall meet the following requirements:

- The floating buoy shall be yellow spherical;
- At any time that the dredger is not alongside the buoy, the buoy shall exhibit a flashing yellow light of minimum range 3 nautical miles Flash every 2.5 or 5 seconds;
- Temporary notice boards are to be erected on the north and south of where the pipeline comes ashore, warning mariners to stay clear of the pipeline and associated works; and
- All dredgers are to exhibit signs and signals as per the Prevention of Collision at Sea Regulations.
- And/or any other provisions required by Trinity House.

The *Contractor* shall notify Trinity House that the pipeline has been marked in accordance with these instructions.

Should the *Contractor* use another method for bringing dredged sand ashore they are to comply with any alternative conditions that Trinity House may impose. The *Contractor* will be responsible for informing Trinity House in good time to avoid delays.

### Special Requirements in Relation to HM Coastguard

At award of contract the *Contractor* shall notify the coastguard of the commencement of the *works*. Refer to Table 9 for contact details. The *Contractor* shall provide details of the lights, buoys, etc. to be used to mark pipelines, etc. Refer to contact details for the HM Coastguard:

Position	Contact	Address
District Operations Manager, Yarmouth MSRC	Mr C Tomlinston	4th Floor Havenbridge House North Quay Great Yarmouth NR30 1HZ

### **Special Requirements in Relation to Lincolnshire County Archaeologist**

The *Contractor* shall inform the County Archaeologist of their intentions at least 4 weeks before any nourishment takes place.

Refer to contact details for the Lincolnshire County Archaeologist:

Position	Contact	Address
County Archaeological Officer	Mr S Catney	County Archaeologist Archaeology Section Highways and Planning Directorate 3 <sup>rd</sup> Floor City Hall Lincoln LN1 1DN
		Tel: 01522 553075

### **Special Requirements in Relation to Natural England**

The *Contractor* shall inform Natural England of their intentions at least 4 weeks before any nourishment takes place.

Refer to contact details for Natural England:

Position	Contact	Address
Maritime Conservation Officer	Mr C Donnelly	Eastern Area Team The Maltings Wharf Road Grantham Lincs LNG31 6BH

### **S 903 Co-ordination**

The *Contractor* employs the services of an Onshore Fisheries Co-ordinator to be based in the *site* offices and a Fisheries Liaison Officer(s) aboard each of the *Contractor's* dredgers involved in the *works*.

The Onshore Fisheries Co-ordinator shall be expected to be on call 7 days per week, 24 hours per day, during the construction period. They should also be present at the *site* office for a minimum of 10 hours each week when one or more dredgers are operating on the nourishment *works*. The duties of the Onshore Fisheries Co-ordinator shall be generally as detailed in, but not limited to, the following:

- Receive reports from Fisheries Liaison Officer(s) and pass on information to fishing organisations, the *Contractor* and the *Project Manager* as appropriate;
- Contact the *Project Manager* to report abnormal events or potential problems;
- Provide a brief report of abnormal incidents weekly to the *Project Manager*;
- Contact fishing organisations regularly (at least weekly) to liaise and inform of potential problems or abnormal operations. Circulate typed newsletter monthly (or more frequently, if necessary) to fishing organisations at affected ports;
- Liaise with the *Contractor* to prepare and update as necessary method statements for liaison arrangements, times of transit and the inshore working area. The text of these statements shall be agreed with the Defra District Inspector of Fisheries prior to issuing to fishing organisations;
- Set up a rota to ensure the continuity of Fisheries Liaison Officer(s) on the dredging vessels;
- Arrange for standby Skippers in case of illness or unforeseen unavailability;
- Arrange for the local ports/areas (Grimsby, Lincolnshire, Boston and District, Kings Lynn, Wells and District and Lowestoft) to be represented on the Fisheries Liaison Officer(s)' rota;
- Manage the Fisheries Liaison Officer(s) in accordance with their specified Responsibility and Duties; and
- Collate and provide Fisheries Liaison Officer(s) logs to the *Project Manager*.

The duties of the Fisheries Liaison Officer(s) shall be generally as detailed in, but not limited to, the following:

- To act as a contact between fishing vessels and dredging vessels during the operations to minimise disruption to the fishing activity in the area of operations. Fisheries Liaison Skippers are only required on the dredging vessels when vessels are operating on the *works*.
- One Fisheries Liaison Officer(s) per operating vessel is required 24 hours per day for 7 days per week when the vessels are operating on the *works*.
- The Fisheries Liaison Officer(s) will take instructions from and report to the Onshore Fisheries Co-ordinator on the following matters:
  - requirements of duty rota
  - submission of log sheets
  - abnormal events or potential problems
- The Fisheries Liaison Officer(s) will keep a detailed time related log of:
  - the dredger's movements
  - weather and sea conditions (including visibility)
  - details of any fishing vessels working in the dredging area in the vicinity of the transit routes and in the working area
  - communication by the dredger captain, dredger crew and Fisheries Liaison Officer(s) with any other vessels
  - any incidents occurring which may affect fishing interests
  - in addition, full details are to be recorded of any incident involving loss or damage to fishing gear
- The Fisheries Liaison Officer(s) will keep a listening watch on V.H.F Channel 16 and communicate, where necessary, with other vessels on Channel 8;

Any incidents which are of a serious nature are to be reported immediately to the Onshore Fisheries Co-ordinator. The Fisheries Liaison Officer(s) will not give instructions to the *Contractor* or to any other vessels.

Log sheets are to be in accordance with the Fisheries Liaison pro-forma with the following information:

- Wind speed and direction: Beaufort Scale 0-12 e.g. SW4
- Sea state: Calm, smooth, slight, moderate, rough, very rough, high, very high, phenomenal, (over 37ft)
- Swell: Direction and height in metres
- Visibility: In nautical miles
- Date: In top left corner, to be entered when beginning a new sheet
- Dredger activity: Enter whatever vessel is doing at time of log entry or any activity with implications for fishery, e.g. dumping of cargo
- In addition to entry of incidents occurring, log to be completed at 0800, 1200, 1600, 2000 and 2400 hrs

Block capitals to be used for all entries.

Standard of Service required is as follows:

- The Onshore Fisheries Co-ordinator and Fisheries Liaison Officer(s) shall have a minimum of 5 years relevant experience. The Fisheries Liaison Officer(s) shall be members of a Fishermen's Organisation of the local ports/ areas e.g. Grimsby, Lincolnshire, Boston and District, Kings Lynn, Wells and District and Lowestoft.
- Fisheries Liaison Officer(s) shall be familiar with GPS and able to use radar.
- The Onshore Fisheries Co-ordinator and Fisheries Liaison Officer(s) shall hold a valid VHF radio licence.
- The Onshore Fisheries Co-ordinator and Fisheries Liaison Officer(s) shall have completed a Merchant Navy Training Board approved Basic Survival At Sea Course.

All written reports and method statements provided by the Onshore Fisheries Co-ordinator shall be typed.

The *Contractor* forthwith and with despatch raises and removes any vessel, material or equipment belonging to them or to any Subcontractor or to any person employed by them which may be sunk or beached in the course of the execution and completion of the works or otherwise deal with the same as the *Project Manager* may direct. Until the item has been raised and removed the *Contractor* sets all such buoys and displays at night such lights and does all such things for the safety of navigation as may be required by the appropriate authorities or by the *Project Manager*. In the event that the *Contractor* does not carry out the obligations imposed on them by this clause the *Project Manager* may buoy and light the item and raise and remove the same (without prejudice to the right of the *Client* to hold the *Contractor* liable) and the *Contractor* refunds to the *Client* all costs incurred therewith. The fact that the sunken vessel, material or equipment is insured or has been declared a total loss does not absolve the *Contractor* from their obligations under this clause to raise and remove the same.

The *Contractor* notifies the *Project Manager* of any requests for meetings with third parties relating to the works so that the *Project Manager* has the option to attend or send a representative.

The *Contractor* records all meetings and agreements with third parties relating to the works and notifies the *Project Manager* of the details.

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

Information concerning the believed location of apparatus of the Statutory Undertakers, Highway Authority or others is included, where available, in the Pre-Construction Information. Note that the information relates to data received in 2020.

The *Contractor* liaises with all relevant Statutory Undertakers, the Highway Authority and other owners of apparatus before designing (where relevant) or commencing any excavations and satisfies themselves as to the exact position of existing apparatus which may affect or be affected by the construction of the *works*.

Where any portion of the *works* is close to, across or under any existing apparatus of Statutory Undertakers, the Highways Authority or other parties, the *Contractor* temporarily supports and works around, under or adjacent to all apparatus in a manner designed to avoid damage, leakage or danger and to ensure uninterrupted operation.

Should any leakages or damage to existing services, highways or apparatus be discovered, the *Contractor* at once notifies the *Project Manager* and the Statutory Undertaker, Highways Authority or owner concerned, as appropriate and the *Contractor* affords every facility for the repair or replacement of the apparatus affected.

Before mechanically excavating close to services, the *Contractor* undertakes full preliminary investigations by means of electromagnetic and other locating devices and hand-dug trial holes to locate the existing services. The *Contractor* notifies the *Project Manager* of the results of these investigations without delay.

The *Contractor* arranges (including obtaining any necessary permissions, notices, licences or consents) and undertakes the following diversions or removal of apparatus which are required: None.

The *Contractor* notifies the *Project Manager* in advance of any additional diversion or removal of apparatus, which the *Contractor* requires for their own convenience or because of their proposed methods of working. The *Contractor* arranges (including obtaining any necessary permissions, notices, licences or consents) and undertakes any such additional diversion or removal of apparatus.

The *Contractor* provides a record drawing of services and apparatus encountered and highlights the differences with the information provided by the Statutory Undertaker and Highway Authority and issues this to the *Project Manager*.

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

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

There is a requirement for public access to parts of the *site* to be maintained during the whole period of execution of the *works* (see also S 201), and also for operation and maintenance and emergency access through the *site* by Environment Agency Operations. Such use of the *works* will not constitute the *Client* taking over any part of the *works*.

### **Environment Agency as regulatory authority**

The Environment Agency's position as a regulatory authority and as *Client* under the contract are separate and distinct. Actions taken in one capacity are deemed not to be taken in the other.

Where statutory consents must be obtained from the Environment Agency in its capacity as a regulatory authority, the *Contractor* is responsible for obtaining these and paying fees. The Environment Agency's acceptance of a tender and the *Project Manager's* instructing or varying work does not constitute statutory approval or consent.

An action by the Environment Agency as regulatory authority carrying out enforcement investigation/action and/or prosecution is not in its capacity as *Client* and is not a compensation event.

Through the progression of this scheme the *Contractor* may need to consult with a number of different Environment Agency staff in different functions. This should be via the *Project Manager, supervisor* and *Client* Project Manager.

### **Working with others**

The *Contractor* will liaise with the *Client, ECC Project Manager, NGSAs* Suppliers and other relevant parties to resolve any technical queries.

The *Contractor* will attend and support any public engagement events, at least one, to be specified by the *Client*.

### **Co-operation with the CDM Principal Designer**

The works on *site* as well as all detailed design leading to construction will be subject to notification to the HSE.

The *Client* will provide a CDM Principal Designer for this scheme. The *Contractor* shall be responsible for supplying risk assessments, method statements and any other data for their comment and include for any work required following review.

The *Contractor* will co-operate with the CDM Principal Designer.

The *Contractor* will pro-actively support the preparation and completion of the H&S File. The production of the file shall commence at the beginning of the commission and be actively managed throughout.

Through the progression of this scheme the *Contractor* may need to consult with a number of different Environment Agency staff in different functions. The *Contractor* must ensure that they record these discussions and issue to the *Client* with 5 working days.

The *Contractor* shall work to the Environment Agency's governance structure and communication plan.

## **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* shall, in addition to the Minimum Technical Requirements, provide and maintain the following for use by the *Project Manager*:

- a broadband connection with a suitable internet service provision of at least 50 MB/s and pay all connection and monthly charges;
- an all-in-one printer/fax/scanner/copier colour laser jet A3/A4, USB cable and connection cable for the fax, software and a supply of ink cartridges/toner and paper;
- a supply of postage and packaging materials and postal collection and delivery from *site*.

The *Contractor* will provide a means of informing the public such as use of a mobile Public Information Unit (PIU) and shall be responsible for the maintenance and management of the Unit. The *Contractor* shall be responsible for providing scheme relevant information within the PIU which has been agreed with the *Client*.

The *Contractor* shall support the Design Consultant with any of the following service elements, they will include but are not restricted or limited to the following:

- Defence's makeup, condition, residual life and standard.
- All modelling, survey and monitoring aspects (the present and future conditions).
- Assessment of the frontage.
- Identify social, environmental, heritage and landscaping risks and opportunities.
- Health, safety and wellbeing matters.
- Solutions to maintain the need (Strategic and specific programme / project).
- Economics – Damages, Costs and Benefits.
- Financial – Value for money, Grant-in-Aid and third party contributions.
- Gaining all approvals and align business needs and aims with partners.
- Risk Management.
- Communications and publicity products.
- Meeting, monitoring and achieving Environment Agency standards and requirements, for example e:Mission.

#### **Building Information Management (BIM)**

- a) The *Contractor* notes that this Contract will be executed using Building Information Modelling (BIM) in line with the Government Construction *Client* Group BIM Working Party Strategy Paper. The *Contractor* delivers this Contract while providing information in the requisite format.
- b) The *Client* requires the *Contractor* to deliver Building Information Modelling (BIM) in line with the Environment Agency and Government Construction Strategy. The Environment Agency is considering how it will deliver BIM. When the Environment Agency's national position on BIM is developed, the *Contractor* will align with it when delivering the services.
- c) The Cabinet Office is co-ordinating Government's drive to develop standards enabling all members of the supply chain to work collaboratively through Building Information Modelling (BIM). This will be a phased process working closely with industry groups, in order to allow time for industry to prepare for the development of new standards and for training. This will require fully collaborative 3D BIM (with all project and asset information, documentation and

data being electronic) as a minimum and the *Contractor* supports the *Client* in the delivery of this target.

- d) *The Contractor:*
- Take responsibility for the BIM infrastructure and sharing data electronically (technology should be no more complex than systems already in use within the industry).
  - Comply with Standards BS 1192, PAS 1192-2, PAS 1192-3, PAS 1192-4, PAS 1192-5, PAS 1192-6, ISO19650 and the associated standards including those under development as well as operational, employee information instructions and protocols developed by the Environment Agency.
  - Demonstrate how BIM influences key decisions in the delivery of projects.
  - Deliver information from 3D models for separate disciplines (for example architecture, structural, services, AM) together with programme data and costs.
  - Handover documents and information electronically during and at the end of the project. The Government Construction Board is expecting manufacturers to be producing their customer information in a variety of forms so it would be a case of the *Contractor* providing the files that the manufacturer has. This could, for example, include video clips demonstrating maintenance procedures for specific items.
  - Support the Government Soft Landings initiative.
  - Take responsibility for the cascade of information through their supply chain.
  - Demonstrate details of the approach to project information management.
- e) Further obligations will be placed on the *Contractor* as the BIM initiative develops.
- f) Develop and maintain a live coastal model, to be produced and maintained by the *Contractor*. Say 1km inland to 5km offshore from the length of SGPS frontage.

#### Coastal Model

The model shall be compliant with BS 1192, PAS 1192 and ISO 19650. The model needs to be multi-dimensional to BIM level 3 and cover a 3D image, then start to include other dimensions such as time, cost, safety, environmental and so on. A function of the model will provide a clear visual representation of a) overtopping risk and breaching potential b) the existing and future defences and c) the benefits and impacts of the project along with flooded area. It should be used to inform the project team of outcomes as well as a potential platform to show a wider audience of the risks and impacts along with the benefits of the solution. The model shall be developed, as the team goes on the journey, to reach the major project in around 10 years (2031). This is a design model not and a sediment movement model.

The model will need to interact with and incorporate data from other data sets for example:

- a) beach surveys (In and Out surveys) and photographic imagery (including ortho-photographs and geo-referenced photographs).
- b) information relating to health, safety and environmental constraints.
- c) incorporating Environment Agency's Lidar data.
- d) the seabed topography surveyed using the latest Rapid Airbourn Multibeam Mapping System (RAMMS)
- e) bathymetric surveys
- f) 360° camera surveys
- g) Asset residual life study (*Interaction only at Contract setting stage*)
- h) Drone survey data of the beach from Saltfleet to Gibraltar Point from the required February survey (flown at times of low tide to maximise data recovery);

The model will need to run from Saltfleet to the Gibraltar point, where the defence returns in land. The co-ordinates are:

Location	X(Easting)	Y(Northing)	Nearest Post Code
Saltfleet	345406	393904	LN11 7RJ
Gibraltar Point	555744	355009	PE24 4BA

The 3D model, visual “drive-through” and other georeferenced information will be available in the Public Information Unit (PIU). QR codes generated through the contractor’s CDE (Business Collaborator) will provide the link to more information.

The model will evolve over time; increasing in sophistication and functionality as the project progresses. Its development will draw upon numerous resources and disciplines to ensure it meets both the immediate needs of the project team and the long term requirements of the *Client* in respect of public engagement, asset management and incident response etc. The *Contractor’s* inputs to the model build will be from the following personnel resources:

- Survey;
- BIM technical lead;
- Project engineer / sustainability lead; and
- QSHEW manager.

In addition, the *Contractor’s* Contracts Manager and ESE Lead will lead the development of the coastal model. Thus ensuring continuity of its build throughout the contract and looking forwards to the future implementation of the work to deliver the ambition of the Saltfleet to Gibraltar Point Strategy (SGPS).

The ortho-photography shall be exportable into InfraWorks (part of the AutoDesk suite of software packages) and added to the DTM to create a 3D digital photographic overlay to the coastal model. The 3D model will be accessible and viewable in NavisWorks (the AutoDesk federation software that integrates the various AutoDesk products in a 3D model) as required by the Employer’s [BIM] Information Requirements (Appendix 2 to the Scope). Importantly, the use of NavisWorks provides capability to perform a visual “fly-by” view of the digitally captured terrain and seabed.

In parallel with developing the coastal model, the *Contractor* shall improve the use of Business Collaborator (BC), the *Contractor’s* existing Common Data Environment (CDE), so that its “map view” is used as standard from 2021, with all data being geo-referenced using the GeoConnect+ function that the *Contractor* has developed in collaboration with BC’s software specialists. At the end of the campaign, the BIM deliverables (including the H&S File, and with any written operational instructions also accompanied by a video demonstration) will be compiled into a GeoCOBie file for transfer to Asite.

The *Contractor* will produce and maintain the required live coastal model; this covering at least 1km inland to 5km offshore along the full length of the SGPS frontage in full compliance with the Scope requirements. Each year, the *Client* will, as a minimum, be provided with the following deliverables in full accordance with the Scope requirements:

- Development and update of the coastal model - provided as NavisWorks files with supporting Civils 3D (point cloud xyz data) and InfraWorks (ortho-photographic overlay) files; and
- GeoCOBie file containing all BIM deliverables, which will be geo-referenced.

### Data Exchange

Where data cannot be accessed directly in the master data set, for business or technical reasons, the data is exchanged. The *Contractor* provides processes for data exchange that maintain integrity, currency and confidentiality in a manner appropriate to the Business Impact Level of the data. The

*Client* reviews and approves the processes and reserves the right to audit the processes and data exchange.

### **Service Levels**

The *Contractor* describes the service levels which it will provide to the IDT and the services which it will require from the *Client*. These will be appropriate to the Business Impact Level for Availability.

### **Security**

- a) All systems handling or processing data are required to be accredited to a level commensurate with the defined Business Impact Level assigned to the data by the Executive Data Custodian. The accreditation process will follow the IS1/IS2 standards mandated by HMG. Satisfactory accreditation is achieved following the sign-off by the Environment Agency's Accreditor.
- b) The *Contractor* demonstrates how it will manage related systems and data that have Confidentiality Levels of 2 and 3.
- c) The data custodian for project deliverables from this commission will be the *Client*.

### **Business Continuity**

The *Contractor* provides details of its business continuity arrangements for the IDT, data and systems, which are appropriate to their integrity, availability and confidentiality. The *Contractor* defines how the business continuity plans are to be maintained and tested.

### **Intellectual Property**

- a) The *Client* will either own or have a very broad licence to use the IPR to the data, data models, tools, processes, models, and documentation created and used in the project team. The *Client* has the right to access any background IPR used by the *Contractor*. For the avoidance of doubt, the *Client* is able to continue to use the models and data used in the programme in the absence of the *Contractor(s)*.
- b) At the end of the Contract or at any other point determined by the *Client*, the *Contractor* provides this information. The format of the extract is determined by the *Client* at the time.

### **Change Management**

During the envisaged Contract term the standards, systems and processes within the *Client* will change. This may be for statutory and regulatory reasons or to support business change and best practice. The *Contractor* ensures that data, systems, tools, models and processes are updated to be consistent and compatible with those of the *Client*.

### **IT Governance**

The *Contractor* participates in IT Governance meetings between the *Contractor*, representatives of the *Client's* IDT staff and CIS. In the first instance these meetings will be monthly and will address escalated service and operational issues; data standards, data maintenance and data exchange; security; business continuity and change management.

### **Reporting**

The *Contractor* provides flexible, configurable reporting for Quality Assurance, Project Assurance, Key Performance Indicators, Key Performance Measures and other metrics as required by the *Client*. It is anticipated that in addition to standard reports the *Contractor* will be able to create and run ad-hoc reports, as requested by the *Client*, which support the review and analysis of the data driving the high-level metrics.

All parties are to comply with the requirements of the CIC BIM protocol – Production and Delivery Table - [Pow.bim4.info](http://Pow.bim4.info)

## Appendix 2 BIM Protocol – Employers Information requirements

### 1. Standards

The following standard(s) shall apply: \_\_\_\_\_

### 2. Parties

2.1 The parties involved in the Project are:

2.2 The role of Information Manager shall be performed by the following person or persons for the following stages:

<i>Stages</i>	<i>Person</i>
_____	_____
_____	_____

### 3. Employer’s Information Requirements

3.1 The Common Data Environment shall be \_\_\_\_\_

3.2 The Models shall be developed using the following versions of the following software:

3.3 The Models shall be delivered by the persons listed below in the following formats:

<i>Person</i>	<i>File format</i>
_____	_____

3.4 Files and layers shall be named and numbered in accordance with \_\_\_\_\_

3.5 The following units, annotation, dimensions, abbreviations and symbols shall be used in developing a Model \_\_\_\_\_

3.6 The following co-ordinate system shall be used \_\_\_\_\_

3.7 The zoning requirements are as follows \_\_\_\_\_

3.8 Data drops shall take place in accordance with the [Employer's Information Requirements/Execution Plan]. To the extent that the [Employer's Information Requirements/Execution Plan] requires a particular piece of information to be extracted from a Model in more than one format at any particular Stage, all such formats shall be extracted from the same Model.

### 4. Project Procedures

4.1 The following protocols/procedures shall apply to the Project:

4.1.1 Spatial Co-ordination protocol;

4.1.2 Model approval/information exchange protocol;

4.1.3 Archiving procedures;

4.1.4 Security requirements and access rights procedures;

4.1.5 [Other]

4.2 Resolution of conflicts

\_\_\_\_\_ specify any circumstances in which information extracted from a Model will take precedence over the Model.

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

The Contractor shall be responsible for reinstating the site compound area to its contract commencement condition before Completion.

## **S 1100 Health and safety**

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

The *Contractor* shall comply with the *Client's*, Safety, Health, Environment and Wellbeing Guidance 'SHEW CoP' May 2018 and any future editions.

### **S 1102 Method statements**

Method statements and risk assessments should be submitted to the *Project Manager* for acceptance for the following activities as a minimum:

- *site* set up
- Excavation works
- Maintenance ramps
- Any works impacting upon the local highways
- Interface with beach users and business operators
- Storage of materials
- Transportation of materials and routes (through/across the *site*)
- Other method statements as listed in the Environmental Action Plan

The *Contractor* shall submit the documents allowing the minimum period for reply unless agreed otherwise with the *Project Manager*.

### **S 1103 Legal requirements**

#### **CDM Regulations**

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

The CDM Principal Designer is: Lloyd Edmonds / Brian Smith – Mott MacDonald.

The CDM *Client* shall be the *Client's* Project Executive. All Risk Assessment and Method Statements shall be issued to the CDM *Client* and the CDM Principal Designer for review prior to carrying the activity to which the RAMS have been prepared.

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

### **S 1104 Inspections**

The *Contractor* shall make all health and safety records available to the *Project Manager* for inspection if required.

The *Contractor* shall submit a summary of the findings found during any audit, review or comment (including the *Client's* Green Book) along with the proposed action to sustain, learn or improve from the feedback. This summary shall be presented and discussed at every monthly management meeting with the *Client*, *Project Manager* and *Supervisor*.

### **S 1105 Emergency arrangements**

The *Contractor* maintains arrangements whereby they can quickly call out labour, equipment and materials outside normal working hours to carry out any work needed for an emergency associated with the *works*. The *Contractor* provides the *Project Manager* at all times with the names and telephone numbers of at least two senior members of the *Contractor's* site team who are responsible for organising emergency work. These people are included on the *Client's* emergency contacts arrangements form (included in the Contract Schedules).

The *Contractor* acquaints themselves and their employees with any relevant emergency arrangements including those of the *Client*.

The *Contractor* provides emergency vehicle access to properties at all times and gives reasonable access to members of the emergency services who may inspect the *site*.

The *Contractor* provides access to all parts of the *site* for the Environment Agency's Operations personnel to undertake emergency inspections or repairs to hydrometric equipment or flood defences.

### **S 1106 Hazardous substances**

Hazardous substances are not brought onto the *site* or used for any purpose unless the *Contractor* has previously obtained the written approval of the *Project Manager*, obtained the necessary licences and implemented the necessary safety and control measures.

## **S 1200 Subcontracting**

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

The *Contractor* submits their proposed procurement procedure to the *Project Manager* for acceptance. It is anticipated that all contracts will be back to back with the main contract. Where this is not the case, then approval will be required prior to entering into that contract. The procedure is not accepted if it:

- does not follow best practice principles;
- conflicts with the need to ensure transparency in the disbursement of public funds; or
- does not meet other requirements stated in this contract.

### **S 1202 Acceptance procedures**

*Contractor* to send through a list of proposed Subcontractors to the *Project Manager* for acceptance prior to the contract start date and updates as required.

In addition to those stated in ECC clause 26.3, the *Contractor* keeps the following accounts and records:

- The *Contractor's* senior representative on *site* shall attend a weekly meeting at which the progress of the *works* will be recorded by the *Project Manager*. At this meeting, the *Contractor* provides to the *Project Manager* a detailed statement of all plant and personnel employed on the *works*, together with details of dredger downtime, breakdowns, stoppages and accidents that occurred during the previous week or any other details the *Project Manager* reasonably requests. The *Contractor* also provides the *Project Manager* a statement as to what work is to be undertaken during the following week.
- The *Contractor* submits to the *Project Manager*, on a daily basis, a record of sea and weather conditions.
- Log sheet(s) to be completed by the Fisheries Liaison Officers(s).

**S 1300      Title**

**S 1301 Marking**

Where appropriate, indelible identification and orientation marks shall be put on all precast concrete components in such a position that the marks shall not show or be exposed in the finished work.

**S 1302 Materials from Excavation and demolition**

The *Contractor* has title to the materials from excavation and demolition, excepting those required in the *works*. Disposal of all materials shall be in accordance with statutory requirements. All deleterious material resulting from the *works* shall be disposed of in accordance with the statutory requirements. Before disposing of any material the *Contractor* submits to the *Supervisor* details of the proposed disposal area and the type of haul plant to be used together with the route to be adopted.

The *Contractor* shall reuse all excavated clay material on site and shall present proposals for reuse to the *Project Manager* in advance. Once all opportunities for reuse have been explored the *Contractor* shall dispose of remaining excavated clay material off-site to a suitable receptor. The *Contractor* shall notify the *Project Manager* of any proposed beneficial reuse opportunities for the clay material.

**S 1400      Acceptance or procurement procedure**

Not used

## **S 1500      Accounts and records**

### **S 1501 Additional Records**

#### **Contract administration**

The *Contractor* and *Project Manager* jointly maintain chronological indexes of each of the above items through NEC Manager on Fastdraft.

The following additional records are to be kept by the *Contractor*:

- Timesheets and site allocation sheets, which should be submitted with monthly applications. The Project Cost and Carbon Tool (PCCT) will be applicable on this project and both defined costs and forecasts must be consistent with Marine and Coastal Framework Agreement Schedules.
- Equipment records. The PCCT will be applicable on this project and both defined costs and forecasts must be consistent with Marine and Coastal Framework Agreement Schedules.
- Forecasts of the total Defined Cost. The PCCT will be applicable on this project and both defined costs and forecasts must be consistent with Marine and Coastal Framework Agreement Schedules.
- Specific procurement and cost reports. The PCCT will be applicable on this project and both defined costs and forecasts must be consistent with Marine and Coastal Framework Agreement Schedules.

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

#### **Monthly Progress Reports**

The *Contractor* submits monthly progress reports to the *Project Manager*, on a regular date to be stated by the *Project Manager*.

The monthly progress reports contents are discussed in S 802.

#### **Photographs**

In addition to the photographs taken during 'pre-starting condition surveys' the *Contractor* is to take regular photographs of the work as it progresses and as further required by the *Project Manager* or *Supervisor*.

The photographs are to be taken by a competent photographer using a digital camera. All photographs are to be date stamped and filed electronically in a chronological and identifiable manner. The photographs are to be submitted in electronic format to the *Project Manager* and *Client* on a fortnightly basis and uploaded on to the *Client's* CDE tool. All photographs should be zipped up and labelled as the Year, Week, profile/location, (1, 2, 3 etc.)

Representative progress photographs are to be included with monthly Progress Report.

Upon Completion, the *Contractor* is to ensure that all photographs have passed to the *Project Manager* or have been transferred to the *Client's* CDE. They become the property of the *Client*. The *Contractor* ensures that no use is made of the photographs without the written approval of the *Client*.

### **Video**

The *Contractor* shall support the requirements of the *Client* in providing video material to help support communications and complying with the requirements of BIM and data management. This material shall cover all operations required to deliver the works to support the project team in raising awareness of the project activities.

The material shall be used but not limited to presentations, webpages and newsletters.

The *Contractor* shall produce in conjunction with the *Client* the following training materials:

- A coastal learning video / material that could be used within primary schools.
- A coastal learning video / material that could be used within secondary schools.
- A video that records and demonstrates the world class nature of our Lincolnshire Coastal Works.
- An industry safety video.

**S 1600      Parent Company Guarantee (Option X4)**

Will require Parent Company Guarantee if Parent company exists

## S 1700 *Client's work specifications and drawings*

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

#### Preamble to specification

The following definitions apply to the roles and terms identified in CESWI 7:

- The *Client* is the Employer.
- Although specific reference the Contract Administrator has been removed, this is the *Project Manager* or *Supervisor* as appropriate.
- Although specific reference the *Contractor* has been removed, this is the *Contractor*.
- Approval is acceptance.

If the *Contractor* is in any doubt as to whether a matter should be raised with the *Project Manager* or the *Supervisor*, they shall ask the *Project Manager*.

#### Drafting conventions

To align with the style and convention of the Engineering and Construction Contract (ECC) and the Environment Agency new standard contract documentation, the Scope and Site Information are in 'plain English'. They are written in direct speech in the present tense and rely on the requirement of clause 10.1 of the ECC contract that the Parties "shall act as stated in this contract". Where published or standard legacy documents are referred to in this contract these may use the traditional and more formal drafting style which employs the term "shall" throughout to indicate contractual obligation. Interpretation of documents applies the conventions appropriate to either a plain English or a traditional document as the case may be.

#### Technical specification and drawings

The works are to be constructed according to the Scope and as shown on the drawings listed in S 1702. The final design volumes will be determined in February of each campaign. The actual volume and location of the *works* will be confirmed in writing to the *Contractor*.

### S 1702 Drawings

The following drawings for the *works* are provided (refer to appendix 6):

Drawing Ref	Title / Nourishment Areas
ENV0001081C-CH2-ZZ-L00-DR-C-1800 Rev P02	General arrangement – potential work areas and Site Compound
ENV0001081C-TVO-LD-YOF-DR-W-A0600_1-A6-A-A0600-EA5-LOD5-2018_203850_YOF	Site compound utility
ENV0001081C-CH2-ZZ-L01-DR-C-1801 Rev P02	Nourishment Area 1 - Mablethorpe, Trusthorpe and Sutton-on-Sea - detailed plan of potential nourishment areas
ENV0001081C-CH2-ZZ-L02-DR-C-1802 Rev P02	Nourishment Area 2 - Boygriff– detailed plan of potential nourishment areas

Drawing Ref	Title / Nourishment Areas
ENV0001081C-CH2-ZZ-00-DR-C-1903-A5-C02	Nourishment Area 3 - Huttoft and Moggs Eyes– detailed plan of potential nourishment areas
ENV0001081C-CH2-ZZ-00-DR-C-1904-A5-C02	Nourishment Area 4 – Wolla Bank and Chapel Six Marshes – detailed plan of potential nourishment areas
ENV0001081C-CH2-ZZ-00-DR-C-1905-A5-C02	Nourishment Areas 5 & 6 – Trunchlane and Ingoldmells – detailed plan of potential nourishment areas
ENV0001081C-CH2-ZZ-501-DR-C-1906-A5-C02	Standard beach nourishment profile – profiles 11-24
ENV0001081C-CH2-ZZ-502-DR-C-1907-A5-C02	Standard beach nourishment profile – profiles 25-60
ENV0001081C-CH2-ZZ-503-DR-C-1908-A5-C02	Standard beach nourishment profile – profiles 61-67
ENV0001081C-CH2-ZZ-504-DR-C-1909-A5-C02	Standard beach nourishment profile – profiles 68-79
ENV0001081C-CH2-ZZ-505-DR-C-1910-A5-C02	Standard beach nourishment profile – profiles 80-83
ENV0001081C-CH2-ZZ-501-DR-C-1911-A5-C02	Foreshore Ownership Plan Mablethorpe to Ingoldmells
ENV0001081C-CH2-ZZ-502-DR-C-1912-A5-C02	Signage Board Example

**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 and Carbon Tool	Costs and Carbon
	Sustainability Measures Form	
	Timber Policy Documents	
	300_10 SHE handbook for managing capital projects	
	300_10_SD27 SHE Code of Practice	

## **S 1800 Additional clauses relating to coastal works and beach nourishment projects**

### **S 1801 Environmental best practice**

The *Client* is committed to the environmental principles of stewardship and sustainability and has corporate goals to maintain and enhance the water environment. The Environment Agency's Statement on Sustainable Construction is included in S 101. The *Contractor's* plans and methods are to assist the *Client* in achieving these goals.

The *Contractor* shall complete a CEEQUAL assessment in line with the CEEQUAL scoping note to be provided by the *Client*, based on the current version of the CEEQUAL Technical Manual requirements (Appendix 8). In the absence of the CEEQUAL scoping note, the key considerations for the CEEQUAL Assessment are as follows:

- The CEEQUAL assessment required will relate to 'Construction Only';
- One CEEQUAL assessment should be made over the duration of the project, although evidence to support the assessment issue criteria must be gathered annually;
- In accordance with Environment Agency's CEEQUAL guidance, the project is expected to require the consideration of between 20 and 25 assessment issues; and
- The Contractor should allow for supplying information to the client for external verification discussions, and a final assessment visit and meeting with BRE at the end of the project.

The *Contract* or shall provide a qualified CEEQUAL assessor and scope the individual criteria within the assessment issues identified for agreement with the *Client*.

The *Contractor* shall set up and undertake the assessment and evidence-gathering throughout the Services, using the CEEQUAL online tool via BREEAM Projects.

The *Contractor* shall provide evidence to support the *Client* with scope submission to BRE, as well as provide supporting information to the *Client* when handling Verifier consultation.

The *Contractor* sustainability (CEEQUAL) lead shall be an integrated member of the project team, attending progress meetings, key project workshops including, but not limited to, options/ design and risk as required, providing an update against CEEQUAL targets and championing sustainability across the project team.

The *Contractor* shall provide all evidence to the *Client* upon request, to enable programme-level external verification.

The *Contractor* shall ensure completion of the CEEQUAL process including provision of all evidence onto the CEEQUAL online tool prior to contract completion.

The *Contractor* provides the *works* in accordance with environmental best practice. The *Contractor's* attention is drawn to, but not limited to, the following documents:

- BRE – Green Guide to Specification;
- BRE – Materials Information Exchange;
- CIRIA SP122 – Waste Minimisation and Recycling in Construction (practical guidance);

- CIRIA C513 – The Reclaimed and Recycled construction materials Handbook;
- CIRIA C533 – Environmental Management in Construction;
- CIRIA C692 – Environmental Good Practice on Site (EA 2010)
- Considerate Constructor Scheme;
- General Guide to the Prevention of Water Pollution: PPG1;
- Works in, near or liable to affect Watercourses: PPG5;
- Working at construction and demolition sites: PPG6;
- Pollution Prevention Guidelines Marinas and Craft: PPG14; and
- Pollution Prevention Guidelines Pollution incident response planning: PPG21.

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

#### **Site Waste Management Plan**

The *Contractor* complies with the Work Instruction “Implementing Site Waste Management Plans for Agency construction projects”.

#### **Environmental Action Plan**

The *Contractor* complies with the Environmental Action Plan.

#### **Environmental staff**

The Environment Agency’s Area representative for statutory environmental approvals and consents is: External Relations Team Leader, Northern Area Office Environment Agency, CERES HOUSE, SEARBY ROAD LINCOLN INCOLNSHIRE LN2 4DW.

The *Contractor* copies all correspondence between the Environment Agency’s Area representatives and the *Contractor* to the *Project Manager*.

An Environmental Clerk of Works (ECW) will monitor the *works* against the Environmental Action Plan.

## **S 1802 Flood Defence Requirements**

### **Maintenance of existing standards of flood defence**

The existing flood defence seawalls within the boundaries of the *site* are shown on the drawings listed in S 1702.

Existing flood defences expected to be affected by the *works* include: The beach and seawalls between Mablethorpe and Skegness.

Where an existing flood defence has to be removed, lowered or weakened as part of the *works*, the *Contractor* provides a temporary flood defence ensuring that the existing standard of flood defence is maintained at all times. The *Contractor* gains the *Project Manager's* acceptance and the Environment Agency's statutory consent for the temporary flood defence.

Except where required as part of the *works*, the *Contractor* ensures that the structural integrity and performance of existing flood defences are not damaged by their activities during the *works*.

### **Land drainage consents**

The *Contractor* complies with the Land Drainage Act 1991, the Water Resources Act 1991 and Byelaws.

The proposals for any *works* and/or temporary works, to be carried out in, over, under or adjacent to a watercourse may require the prior statutory consent of the Environment Agency. A consent application is submitted to the Environment Agency with full and detailed information of the proposed works.

Any consent issued by the Environment Agency does not relieve the *Contractor* of their responsibilities regarding temporary works and the Environment Agency will not be held liable for any damage resulting from the construction thereof.

### **Control of pollution requirements**

The *Contractor's* attention is drawn to the control of pollution provisions in the Water Resources Act 1991. The *Contractor* is to take all necessary precautions to ensure that no polluting discharge either of solid or liquids is made to any watercourse or to the underground strata and that no work carried out in any watercourse is done in such a manner as to cause pollution. Any materials which accidentally fall into any watercourse are to be removed immediately.

The *Contractor* is to obtain the consent of the Environment Agency before making any discharge to any watercourse or the underground strata.

The *Contractor* is to take all necessary precautions to protect all watercourses, together with water in underground strata, against silting, erosion and pollution.

The *Contractor* ensures that:

- equipment is cleaned prior to delivery to *site* and maintained to ensure efficiency and to minimise emissions;
- all fuel, hydraulic fluids, lubricating oils or chemicals stored in bulk on *site* are located as far away as reasonably possible and in no case closer than 10 m, from any watercourse/drain and that such stores are sited on impervious bases and surrounded with an effective and impervious bund capable of holding the full contents of the store plus 10%. The drainage system of the bund is to be sealed with no discharge to any watercourse, drain, land or groundwater and delivery and vent pipes are to terminate within the bund;

- all stores are kept locked when not in use and all containers are clearly labelled with their contents. Leaking or empty oil drums or chemical containers are removed from the *site* immediately;
- equipment which leaks any fuel, lubricant or hydraulic fluid is not used and all static equipment using fuel oil is located as far away as reasonably possible from any watercourse and surrounded with oil-absorbent material to contain spills or leaks;
- refuelling or servicing of equipment is undertaken in designated locations away from watercourses or drains and refuelling is supervised and carried out by pumping through a trigger type delivery nozzle;
- an adequate supply of oil absorbent materials is readily available on *site* at all times. Any spillage is immediately contained, removed from *site* and disposed of to a licensed tip and the *Supervisor* promptly informed;
- equipment is not used in a watercourse or to ford a watercourse without the consent of the Environment Agency. Regular river crossings are to be by way of temporary bridges or culverts and to be by agreement of the Environment Agency;
- haul roads and approaches to watercourses are regularly scraped and maintained free from deposits of slurry. Any slurry so removed is disposed of in an agreed location avoiding pollution of the watercourse. Precautions are to be taken to ensure surface water drains are not contaminated by solids from workings and associated transport;
- there is to be no discharge or seepage of cement slurry from any concreting work, mixing plant or ready-mix vehicle into any watercourse;
- equipment parking and servicing areas and wheel washing facilities are to be located in agreement with the Environment Agency;
- any imported fill or construction material is to be free from polluting or toxic substances where drainage from the material can directly enter surface or underground waters; and
- suitable sheeting is to be provided under any structure over a watercourse which is to be cleaned by mechanical or chemical means and/or painted to prevent material entering the watercourse.
- Compliance with the 50m exclusion zone around the end of outfalls.

Without the consent of the Environment Agency, the *Contractor* is not to remove from a watercourse, deposits accumulated due to a dam, weir or sluice nor promote the removal of deposits by causing them to be carried away in suspension in the waters.

### **Water resource requirements**

The *Contractor's* attention is drawn to the Water Resources Act 1991. The *Contractor* is to take all necessary precautions to protect water abstractions whether licensed or not. A list of licensed abstractions is available on a public register but the *Contractor's* attention is also drawn to the possible existence of domestic abstractions exempt from licensing.

The *Contractor's* attention is also drawn to the Conservation of Habitats and Species Regulations 2017, and Countryside & Rights of Way Act 2000.

The *Contractor* is not to reduce or materially alter the rate of flow passing down a watercourse, either permanently or temporarily.

Should there be works of a permanent nature in a watercourse which results in impounding of water, this may require a licence and the *Contractor* is urged to contact the Environment Agency as soon as possible to initiate the procedures.

The abstraction of water from surface sources or underground sources for use in the works may require an abstraction licence and the *Contractor* is to contact the Environment Agency to initiate the procedures.

### **Conservation and fisheries requirements**

The *Contractor's* attention is drawn to the Salmon and Freshwater Fisheries Act 1975, the Water Resources Act 1991, the Wildlife and Countryside Act 1981, Ancient Monuments and Archaeological Areas Act 1979 and the Badgers Act 1991, Conservation of Habitats and Species Regulations 2017, and Countryside & Rights of Way Act 2000; and the Water Framework Directive. The *Contractor* is to take all necessary precautions to ensure that no work in any watercourse corridor is done in such a manner as to cause damage to flora and fauna.

The *Contractor* is to ensure that:

- no riverbed or bankside material is removed for use in construction or for temporary bunds;
- no vegetation, other than fallen trees, is removed from any watercourse unless agreed with the Environment Agency;
- aquatic weeds are not removed in the period from the beginning of May to the end of August;
- aquatic weeds are not sprayed at any time;
- cut vegetation from approved clearance works does not enter any watercourse; and
- all necessary precautions are taken to prevent the spread of Japanese Knotweed and Giant Hogweed. In particular, any spoil contaminated with the rhizomes or roots of these species is not to be spread to areas where those plants are not currently growing.

### **Navigation requirements**

The *Contractor* complies with the conditions of the MMO Marine Licence. This licence may require updating of vessel information prior to starting the works and will be provided by the *Project Manager* when received.

### **Controlled Waste**

Where materials arising from or required for the works constitute 'Controlled Waste' under the Environmental Protection Act 1990, the *Contractor* is to provide the *Supervisor* with a copy of the carrier's licence to transport the materials and copies of all Waste transfer notes.

### **S 1803 Sustainable Materials**

#### **New timber**

The *Contractor* gains chain of custody certification on all work involving the use of timber. All new timber is provided from legal and sustainable sources – complete with FSC, PEFC or CSI certification.

#### **Environmentally considerate hydraulic fluids**

The *Contractor* is to endeavour to utilise Equipment which uses environmentally considerate hydraulic fluid (either a synthetic ester or a vegetable oil-based derivative) in their hydraulic systems.

All 360° tracked excavators and bulldozers on *site* must only use environmentally considerate hydraulic fluid. Traditional mineral oils and glycols are not permitted. The *Client* or *Supervisor* may extract samples of oil from excavators on *site* for analysis at an independent laboratory. Failure to comply with this requirement results in the excavator not being permitted to work on *site*.

#### **Recycled materials**

The *Contractor* complies with the Site Waste Management Plans Regulations 2008. The *Contractor* is to endeavour to meet or exceed the Environment Agency objective of 20% or more of materials being used in construction work being recycled, as defined below:

- New (primary) materials – basalt, clay, crushed rock, granite, gravel, limestone, sand, sandstone, other stone, concrete (ready mix) and other naturally occurring materials;
- Secondary materials – nourishment material, china clay, china/pottery etc, colliery spoil, combustion residue, foundry sand, quarry waste, refractories, shale, slate waste, furnace slag, pulverised fuel ash (PFA), furnace bottom ash, etc.

Recycled materials – recycled brick, crushed concrete, glass, natural stone masonry, processed road surface, tarmac, selected excavated fill (NB re-used general backfill material and re-used topsoil should not be included unless moved from one component to another), etc.

$$\text{Percentage recycled materials} = \frac{\text{Secondary} + \text{Recycled materials}}{\text{Total materials used}}$$

The *Contractor* is to prepare quarterly reports for the *Project Manager* detailing the breakdown of materials used (delivered) on *site* in the quarter and cumulatively to date. The data is presented in cubic metres (m<sup>3</sup>) with the calculated 'percentage recycled materials' expressed as a percentage to one decimal place. Data includes materials provided or used by Subcontractors.

## S 1804 Materials

### Acceptance of material for beach nourishment

Materials for beach nourishment are only be taken from approved Crown Estate licensed dredging areas which must be accepted for compliance by the *Project Manager*.

The material required for beach nourishment complies with the grading envelope requirements defined in S 1805 (7&8). The nominal D50 size of the material is 600 microns and the actual D50 size of the material lies within the range -50 microns to +150 microns of the nominal size. The material is free from clay, organic matter, heavy metals, oils and other contaminants. To achieve this the *Contractor* may:

- Use sand from one or more sources;
- Mix sand from two or more sources to provide a composite sand.

If a source other than an approved Crown Estate licensed dredging area is proposed to be used by the *Contractor*, then prior to acceptance of the use of the proposed source, the *Contractor* provides evidence of the suitability of the source. This includes:

- (i) Analysis for potential contaminants such as organic matter, heavy metals, oils demonstrating that the material from the source has similar or less contaminant levels than those found at the *site*;
- (ii) Analysis demonstrating that material from the source is not liable to decompose under the action of seawater;
- (iii) Grading curve analysis from samples of the proposed material to demonstrate that the material is free of clay and complies with the grading envelope requirements.

Tests and analyses are in accordance with standard British or European specifications such as BS1377 Part 3 and BS1377 Part 2.

The *Project Manager* may reject the proposed source, if it is other than a Licensed Area. The *Contractor* then proposes an alternative source for the beach nourishment material meeting the requirements.

Any material larger than 100mm in size is removed from the site.

## Testing of material for beach nourishment before placing

Sand samples are analysed to determine the particle size distribution in accordance with clause 9.2, BS 1377 Part 2: 1990. Silt particles are expressed as a percentage of the total.

In order to comply with the MMO Licence item 5.2.11 the *Contractor* shall obtain and test samples from the beach within the Area of Operation(s) prior to any *works* commencing within that length of coastline. The *Contractor* shall take at least 3 samples per Area of Operations or as agreed with the *Supervisor*. All sampling to comply with above.

## Determination of compliance

Where the sand is used directly for beach nourishment (i.e. is not part of a composite sand) the results from the testing comply with the requirements of S 1804, and up to 5% of the testing results may be coarser than the upper limit of the grading envelope, and up to 5% may be finer than the lower limit of the grading envelope.

Where the sand is to become part of composite sand, then a composite particle size distribution curve is determined by combining the particle size distribution curves, tested in accordance with S 1804, for the samples for the sand sources used to provide the composite sand. The composite particle size distribution curve complies with the requirements of S 1804, and up to 5% of the testing results may be coarser than the upper limit of the grading envelope, and up to 5% may be finer than the lower limit of the grading envelope.

The actual cumulative D50 lies within the range -50 microns to +150 microns of the nominal D50 size given in S 1804.

The actual cumulative D50 is measured as a rolling average over 100,000m<sup>3</sup> of sand within each nourishment area or over the total volume of sand within each nourishment area for nourishment areas requiring less than 100,000m<sup>3</sup> of sand.

The *Contractor* undertakes a visual inspection of nourishment material in the dredger during the dredging operation and does not transport to and deposit on the *site* nourishment material that is visibly not compliant with S 1804.

The *Contractor* supplies to the *Supervisor* as soon as practicable, and in any case within 36hrs of delivery of the sand to which the samples/analyses relate, results of the sampling and analysis required under S 1804. These results include the values of the specified parameters for the particular delivery and the cumulative position with regard to the specified parameters.

The *Project Manager* does not certify for payment any delivery (and subsequent placing and profiling, etc) where samples have not been taken and analysed in accordance with the requirements of the Specification.

If at any point during the nourishment of a continuous length of coastline, on or after delivery of the first 10,000m<sup>3</sup> of sand, any of the parameters on a cumulative basis do not meet the specified compliance criteria, the *Contractor* forthwith notifies the *Supervisor* of the actions which they are taking to bring the relevant parameter(s) back into compliance (on a cumulative basis).

If in the opinion of the *Supervisor* at any stage during the contract, the *Contractor* persistently delivers and places sand which does not meet the requirements of S 1804 or the *Contractor* fails to control compliance on a cumulative basis or to effectively bring the relevant parameter(s) back into cumulative compliance within a reasonable time, the *Project Manager* may instruct the *Contractor* to cease

operations until the *Contractor* has proposed, and the *Project Manager* has approved, suitable measures for the *Contractor* to take.

In calculating the actual cumulative mean particle size distribution for determination of compliance the *Project Manager* is free to ignore any series of deliveries/placements (including the initial 10,000m<sup>3</sup>) where the sand does not meet the requirements of S 1804 and the *Contractor* produces the cumulative results excluding such deliveries as the *Project Manager* may from time to time request.

## **S 1805 Excavation, backfilling, and restoration**

### **Beach nourishment**

No material is removed from the existing beach without prior written permission from the *Supervisor*. The only deviation from this the requirement to comply with the beach material testing.

### **Method of working**

In areas where nourishment is undertaken in front of the natural dune systems special care is taken to avoid disturbance and damage to any vegetation in the beach.

The *Contractor's* method of working does not reduce the existing beach levels.

Where nourishment material is to be placed over or against rock armour, or in similar situations where voids may be formed, the method of placing is such that all voids are filled to prevent subsequent surface collapse and settlement.

### **Pipelines and boosters**

The *Contractor* makes their own arrangements for the provision of sites for the fabrication of any pipelines.

At least three weeks prior to commencing *works* the *Contractor* submits drawings to the *Project Manager* showing details of any proposed pipelines and booster stations and their positions. One of the main reasons for this requirement is to enable fishermen to be notified.

All anchors or mooring points on the pipeline and the seaward connection point are clearly marked with marker buoys.

### **Beach nourishment profiles and placing tolerances**

The finished profiles of the nourished areas at acceptance by the *Supervisor* are as shown on the drawings listed in S 1702.

The permitted tolerance for the finished profile of the beach at the time of acceptance by the *Supervisor* is as shown on the drawings listed in S 1702.

To confirm the completed beach nourishment profiles are within tolerance, cross-sections are taken by the *Contractor* at a maximum spacing of 25 metres and extend from the existing sea defences to the water's edge. Surveys of newly-completed lengths of beach are undertaken at low tide on the day they are completed or on the following low tide.

### **Measurement and acceptance**

A Segment of the *works* is accepted by the *Supervisor* if the requirements of S 1805 are met.

Sand is profiled as soon as reasonably possible after placing. With each request for issue of an Acceptance Certificate for a Segment of the *works*, the *Contractor* submits 'as built' drawings of the relevant Segment to the *Supervisor*. Provided there are no other reasons preventing acceptance, the Segment of *works* is accepted by the *Supervisor*

Stockpiling of sand is not permitted on previously accepted lengths of beach.

The *Contractor* determines pre-nourishment beach profiles above low water level through an 'in-survey' prior to nourishment. The pre-nourishment beach profiles are taken at 25 metre spacings in the Nourishment Areas and are measured at low water. The pre-nourishment beach profiles are provided to the *Supervisor* as early as reasonably practicable.

Unless otherwise agreed between the *Contractor* and the *Supervisor*, the volumes of nourishment material required are estimated by the *Contractor* using the pre-nourishment in-survey beach profiles and the design profiles given in the drawings listed in S 1702. The volumes of nourishment material required are advised to the *Supervisor* as early as reasonably practicable.

The volumes of sand required and placed are determined by the *Contractor* for each 100m length of beach and are advised to the *Supervisor* before nourishment of that length of beach commences. The *Contractor* proposes for acceptance by the *Supervisor* the volume of sand required for each 100m length of beach.

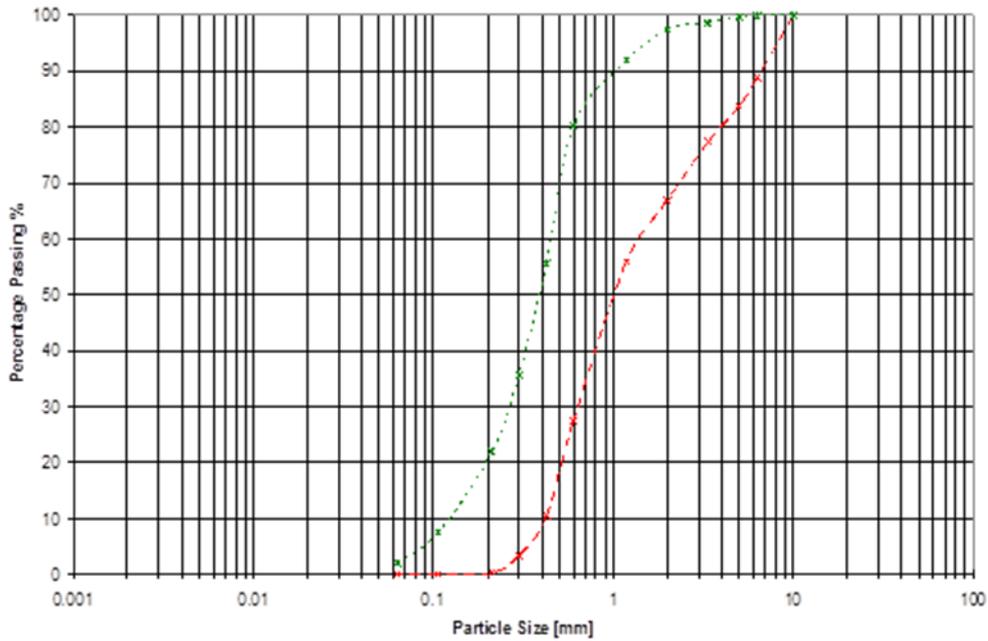
### **Testing of placed nourishment material**

At 100 metre intervals along the beach the placed sand is sampled at the top of the beach and at one-third and two-thirds the distance to the water's edge. Sampling is undertaken at low water and at each location the *Contractor* takes samples at a depth of between 500mm and 1000mm from the surface. The samples are representative of the material placed on the beach at each location. Each sample weighs 5kg and samples for each location are thoroughly mixed to provide one representative sample. The mixed samples are analysed to determine the particle size distribution in accordance with clause 9.2. BS 1377 Part 2 1990. Silt particles are expressed as a percentage of the total.

### **Beach nourishment grading envelope**

The graph shows the upper and lower limits.

Beach Recharge Material Grading Envelope



Beach nourishment grading table

Sample Size	Upper Limit	Lower Limit
[mm]	% passing	% passing
10	100	100
6.3	88.8	99.9
5	83.8	99.6
3.35	77.3	98.7
2	66.9	97.4
1.18	55.9	92
0.8	40.0	86.5
0.6	27.5	80.3
0.425	10.5	55.6
0.3	3.4	35.7
0.212	0.3	22
0.106	0	7.5
0.063	0	2

**Assistance for the *Project Manager and Supervisor***

The *Contractor* provides reasonable assistance to the *Project Manager and Supervisor* in carrying out their duties.

The *Contractor* provides the services of competent surveying assistants, as and when required by the *Supervisor* at one hour's notice. The assistants will undertake surveying and other duties as the *Supervisor* requires.

### **1806 Additional Works**

The *Client* will require the *Contractor* to undertake other services and construction activities (for example but not limited to: structural investigations, rock work, revetment works and/or concrete works) required for coastal defence along this stretch of coastline, generally known as “Additional Works”.

These additional works requirements will be shared with the *Contractor* at the beginning of each Campaign (February). Any changes in scope (focused on beach management), risk ownership and mitigation measures and amendments, will be agreed for each element of additional work through ECC Project Manager Instruction.

If the *Contractor*, when acting reasonably, considers that they are not able to provide the instructed Additional Works economically and in accordance with the *Client*’s requirements, it shall advise the *Client* accordingly and not be obliged to perform them.

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

Please refer to section S 1000 for more information.