Environment Agency
NEC4 professional services contract (PSC)
Scope

Project / contract information

Project name	Felixstowe Ferry Recovery Works 2019
Project 1B1S reference	ENV0002761C
Contract reference	TBC
	06 10-2021
Version number	2.0
Author	[redacted]

Revision history

Revision date	Summary of changes	Version number
28 07 21	updates to various sections based on queries from Jacobs and further changes to the preferred option.	1 2
16 08 21	Updates from Jacobs	1 3
27.08.21	Updates following Jacobs review and suggestions	1.4
08.09.21	Updated to include Sustainability section.	1.5
06.10.21	New section 2.2.2: Exclusions and aspects outside of scope	2.0

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 *services* are to be compliant with the version of the Minimum Technical Requirements.

Document	Document Title	Version No	Issue date

412_13_SD01	Minimum Technical Requirements	11	4/05/2021

1 Overview

Storm Ciara, Storm Dennis and Storm Jorge arrived within quick succession in February 2020 leading to high river levels, tidal surges and significant wave heights As a result some FCRM assets in East Anglia suffered damage. Recovery work is now required to restore the affected defences so that they will be resilient against future flood events for which they are designed

This scope covers the design requirements for recovery works associated with a coastal defence asset at Felixstowe Ferry, Suffolk. The asset is an earth embankment near to the mouth of the River Deben During Storm Ciara the embankment suffered localised front face erosion and has been exposed to further damage by loss of beach material.

As a temporary emergency measure, large sand bags were placed on the foreshore in front of the most vulnerable length of the embankment to reduce further erosion. Also an outline options appraisal was undertaken to identify potential permanent solutions and budget costs Funding approval has been received to progress a permanent solution to repair the asset and protect it from further foreseeable erosion.

To mitigate avoidable risk, the recovery works to put in place a permanent solution are considered urgent and required to move at pace to safeguard people and property.

Following the development of a Technical Note by the *Consultant*, which presented a range of temporary and permanent solutions for the eroded area of embankment, several reviews and discussions were held with the project team and a *Client* decision made to progress with the most viable solution within the available FSoD approval limits of [redacted]. This solution is to include a rock revetment delivered within the FSoD approval limits of [redacted], along the full 120m stretch of beach where the erosion exists (further details can be found on Asite in Technical Note ENV0002621C JAC ZZ 00-SO Z 0001_P03).

1 1 Objectives of the *services*

Objective

The main objective of the recovery works programme is to reduce flood risk by restoring asset condition to an acceptable standard in order to safeguard people and property

The approval received for Felixstowe Ferry is to progress an ‘enhanced recovery’ scheme. This takes into account the ‘Hold the Line’ policy outlined in the current Shoreline Management Plan for Suffolk (2010) This ‘scheme’ covers a 120m stretch of unprotected earth embankment situated between an existing concrete wave wall to the south and an existing concrete block revetment to the north.

The specific objective of the enhanced recovery work at Felixstowe Ferry is therefore to provide a scheme that reduces the present risk of further rapid erosion of the unprotected earth embankment, and thus any increased risk of flooding resulting from a breach through that bank

Following the preparation of a comprehensive Technical Note by the *Consultant*, and review and discussion with the *Client*, a final decision by the Client was made to progress with the short term rock revetment option along the 120m stretch outlined above, design life determined by the available FSOD. This option is intended to provide 5 to 10 years resilience while further studies are undertaken and a longer-term approach to the wider frontage is determined

Outcome Specification

The required outcome of this commission for Felixstowe Ferry is for the *Consultant* to develop a detailed design for the preferred rock revetment option, that will enable the works to be priced and constructed within the limits of the approved FSoD (noting that the full approved FSoD budget also includes for design, surveys and other investigation costs identified in this scope)

The resultant scheme should be designed to:

- Minimise further erosion of the earth embankment at the top of the beach sufficiently to prevent breach within the next 5 to 10 years (based upon current trends);
- Maximise the longevity of the protection within the available budget In particular work in conjunction with ESE Contractor to optimise the design and buildability to achieve best value for money;
- Have an elevation similar to (and not significantly exceeding) the crest level of the existing adjacent sea wall and concrete block revetment;
- Not increase, and ideally improve, the potential for wave overtopping over the length of the scheme.

Based upon the above, the Consultant is to advise the *Client* on the likely standard of protection, scheme life, and residual risks, based upon current information and trends, to inform their future management of the asset and scheduling of assessments for the wider frontage.

Working with the *Client* and Early Supplier Engagement (ESE) *Contractor*, the *Consultant* shall be responsible for ensuring the design is acceptable to the *Client*, (noting works are likely to be permitted development so excludes planning approval) seeking associated approvals as necessary, to enable works to commence. Acceptance will not be unreasonably withheld.
Acceptance of the design by the *Client* will be considered given once formal written communication has been received by the *Consultant* stating as such (e g email) Acceptance will not be unreasonably withheld.

1.2 *Consultant* project management

The overall management of the commission shall include for the following:

Adhering to the project stages and timing of these stages and roles and responsibilities in particular identifying those to be responsible for quality assurances that are removed from the day to day running of the project

Agreement and management of change (NB This is referring to the function of change being managed as part of overall PM responsibilities, as opposed to the costs of the change which is catered for by individual CEs, for which costs for time to prepare are included under NEC4)

Attendance and on-going management of project risk and programme reviews to achieve the scope. Programme to include post OBC activities to construction start, in accordance with PCM programme guidance

Monthly risk register review, update (including *Consultant* risk budget) and implementation of resulting actions.

Provide input to project efficiencies register

Monthly progress meeting attendance and management of actions, including input into performance assessment/KPIs and management and implementation of associated actions arising

Monthly financial updates and forecasts to meet the *Client's* deadlines together with the production of checkpoint reports, end stage reports, exception reports (as required), end project report, daily log and other management products in accordance with PRINCE2.

Attend project board meetings and programme board meetings as required in capacity as *Consultant* (assume 3 total)

Consultant project manager to be responsible for delivery of s*ervices* and products in line with accepted programme The accepted programme should include activities and timelines for client and third party consents, which will be deemed to have been accepted by the *Client* as part of overall acceptance of the programme.

Co-operate with the *Client* in the role of the BIM Information Manager

Handover package of project deliverables.

Consultant environmental lead to provide monthly progress and risk reviews in monthly report.

The environmental lead is an integrated member of the project team and also attends progress meetings, risk workshops, project board and programme board meetings as above, when required.

Review and update the lessons learnt log during monthly progress meetings and disseminate any key lessons learnt to the business.

Review and update the issues log during monthly progress meetings and determine the appropriate action required to resolve

On behalf of the *Client*, the *Consultant* should apply for appropriate licences, consents etc. as required to enable the project to be delivered. These may include footpath closures, land drainage consent, one application to MMO that covers work above and below MHWS, also managing the passage of these approvals.

The *Consultant* should also apply for protected species licences if required (Nov 2020 PEA did not note the need for any), on behalf of the *Client*

All model and survey information will be provided to the *Consultant* in an encrypted format (using WinZip 128 bit encryption) according to the *Client's* Data Security Policy It is expected that once the commission is completed, all the original data sent to the *Consultant*, which is classed as commercially sensitive, is returned in an encrypted format using WinZip 128 bit encryption

Project deliverables such as model files, survey data or anything of a personal nature such as questionnaires or address data must also be returned in an encrypted format using WinZip 128 bit encryption

Design philosophy statement, giving design process, standards used and assumptions made to the satisfaction of the *Client (to be determined by written formal acceptance of this)*. This should demonstrate compliance with the *Client*'s sustainability targets

Monthly checkpoint report, end stage report, end project report, exception reports (as required) in standard template giving progress against programme, deliverables received and expected and financial summary against programmed

1.3 Previous studies

The previous studies have been undertaken by or for the *Client* using reasonable skill and care and have been accepted. The *Consultant* shall review the information provided and notify the *Client* of any deficiencies in its adequacy in relation to its intended purpose or use within the project at the time of the deficiency review. Following this review, and completion of any work required to rectify the deficiencies identified (that work being the subject of a Compensation Event), the *Consultant* shall take the risk of any deficiencies in existing data quality and quantity that were reasonably identifiable at the time of the deficiency review which have not been notified to the *Client* For the avoidance of doubt, the *Consultant* shall not carry the risk of any deficiencies not identified at the same time of the deficiency review in the event that a subsequent change of scope or focus of the project changed the intended purpose or use of the previous studies

Item	Comments
Jacobs report: "Coastal Protection Works Options" for Felixstowe Ferry, dated 28th February 2021	Current high level assessment of the issue and range of options for recovery. The design work for Felixstowe Ferry is expected to build upon this
Topographic survey, May 2021	Topographic survey undertaken to specification as provided by Consultant.

2 *Services* required

2.1 Definition of completion and defects

It is an absolute requirement of the contract that Completion is only certified when:

- All of the *services* have been provided and accepted by the *Client.*
- Transfer to the *Client's* databases of BIM data
- Completion of the relevant phase of the *Client's* carbon tool
- Clause 11.2(2) work to be done by the Completion Date.

A Defect is any *service* provided which is not in accordance with the scope or the law A Defect is also any site query post completion that is a result of errors or incomplete design details

2.2 The detailed design (outputs and deliverables)

As part of the services the *Consultant* is to produce/provide the following outputs/deliverables. This is not an exhaustive list and other outputs may be required.

2.2.1 Detailed Design including drawings and specifications for construction of works.

The *Consultant* will complete a full detailed design, sufficient for a contractor to set out and construct the works The detailed design should include but is not limited to:

i. Calculations;
ii Drawings (including landscape/ ecological design drawings/ planting schedules);
iii Specifications (including any additional clauses to Environment Agency standard specifications i e Environment Agency NEAS Landscape Specification template);
iv Design report, including asset schedule, buildability statement and maintenance plan;
vi. Designer's Risk Assessments;
vii Public Safety Risk Assessments;
viii. Updated Pre-construction information, based on *Client* PCI;
ix. Application for consents, including Environmental permit, planning consent and MMO licence as required;
x. Environmental action plan.

2 2 2 Exclusions and aspects outside of this scope

- *Client* pays the fees for the MMO licence and any other permits or consents;
- *Client* pays the fee for desk based services search;
- As no settlement criteria has been set by the *Client* it is currently assumed the rock revetment may move naturally during the design life and this will be acceptable to the *Client* (unless settlement criteria provided through separate *Client* instruction);
- Settlement assessment will be predominantly qualitative, unless instructed separately by the *Client*;

- *Client* to undertake any liaison with Natural England or other consultees including Navigation Authority and Deben Estuary Pilot;
- Excludes for any inputs and or design of navigation markers, unless instructed separately by the *Client;*
- Excludes costs of any protected species licences/surveys;
- Assumes PROW diversion, is by others;
- As the Information Delivery Plan (IDP) has not currently been provided by the *Client* it is assumed the BIM deliverables are the design documents.

The *Consultant* shall assist with pricing and buildability which will be led by the Early Supplier Engagement (ESE) Contractor

The *Consultant* shall discuss designs with the *Client* including the Field Service and Area Teams

The *Consultant* shall discuss with the *Client* where environmental information, landscape details, archaeological information, methodologies or on-site management deviate from that stated in the Environmental Statement or associated documents. This will enable any legal implications to be checked and for the environmental implications of the changes to be assessed.

The *Consultant* shall discuss developments in the design with the appointed Principal Designer.

The *Consultant* shall facilitate a design workshop and attend a risk workshop

The sustainability of the design shall be analysed using appropriately detailed carbon costing to gauge influence of carbon costs of the design It shall be run on the Environment Agency's carbon calculator.

Note: detailed design documents required, not an FBC document, as FSoD has already been secured under the recovery business case.

2 3 Sustainability

The *Consultant* shall report on the CEEQUAL assessment in accordance with the hub workload plan.

AD: The Consultant shall complete the CEEQUAL assessment in line with CEEQUAL V6 Technical Manual requirements based on 5 10 Assessment Issues plus Assessment Criteria 7 2 Assessment Issues will be selected by NEAS in collaboration with the Consultant based on their relevance to the project.

AD: The Consultant shall scope the Assessment Criteria questions for the Assessment Issues identified in agreement with the Employer and provide a qualified CEEQUAL assessor to set the project up on the BRE portal and undertake both the assessment and evidence-gathering throughout the Services.

AD: The sustainability (CEEQUAL) lead is an integrated member of the Project Team attending options / design workshops, bi-monthly progress meetings and risk workshops as required, providing an update against CEEQUAL targets and championing sustainability across the project team

2.4 Site Investigation

2.4.1 Ground Investigation

Any ground investigation works shall be a CE

2.4.2 Topographical Survey

A Topographical survey has been completed in May 2021 in accordance with the specification provided by the *Consultant*, and will be shared with the *Consultant* to help inform detailed design

The *Consultant* shall also check existing data, identify any further gaps for detailed design stage and obtain services data from utility companies. This should include direct costs of obtaining data This should be incorporated into the appraisal, including preparation of plans

2 4 3 Services and diversion plan

The *Consultant* shall obtain services data from utility companies and shall ensure services data is requested from relevant landowners This shall include direct costs of obtaining data This shall be incorporated into the design, including preparation of plans.

The *Client* will arrange for a non intrusive survey to detect key utilities (e g GPR) to inform SI and/or detailed design. The Consultant shall determine the extent of the survey and produce a specification for the survey in accordance with EA Guidance and Principal Designer discussion; defining type and purpose of survey including extents and available information

The *Consultant* shall also provide a site supervisor to manage the survey supplier.

The outputs from this survey shall be included in the design, including revising the plans. The output shall be used to make recommendations for any further surveys required which would include intrusive investigations to inform the detailed design

2 4 4 Ecological surveys

The *Consultant* will arrange for additional surveys to be undertaken, consistent with current guidelines, where these are essential to securing permissions or are essential to achieving good environmental design The *Consultant* will utilise existing knowledge of the distribution of species and the current understanding of the factors governing their distribution. The *Consultant* will use the species and survey information in a scientific and informed way to justify environmental decision making.

2 4 5 Hydrology and hydraulics

The entrance to the Deben is a very dynamic system and the main estuary channel is currently aligned close to the shoreline and flood embankment. As a result the beach is vulnerable to loss of material and erosion Changes to the beach and flood embankment could affect beach morphology and this needs to be considered in the design, particularly at the toe of the structure of the chosen option

2 4 6 Landscapes and Environmental design

The *Client* National Environmental & Sustainability (NEAS) team have put together a Screening Extract report (17th Sept 2020) which provide details of key environmental issues for further consideration as well as likely environmental consents and approvals required This and the Screening Register Extract have been provided to the *Consultant* for review during the detailed design stage

2.4.7 Environmental considerations

The *Consultant* will work with the *Client* and project partners to reduce flood risk to people and property at Felixstowe Ferry through further developing the rock revetment option, which considers climate change and natural processes whilst:

i Creating a better place and maximising environmental outcomes for people and wildlife, which includes landscape character, aesthetics, and recreation;
ii Involving local people and organisations where appropriate to assist in the process of developing the chosen solution;
iii. Minimising by designing out where possible, and mitigating for unavoidable adverse environmental effects as a result of the scheme;
iv Minimising adverse impacts on economic activity, tourism, recreation and other human activity;
v Supporting and contributing to outcomes that meet the objectives of the Water Framework Directive (WFD) for the relevant water bodies.

Key environmental risks, issues and outcomes are described in the EIA Scoping Report. Any works below MHWS will also require a Marine Licence A preliminary Water Framework Directive assessment has been undertaken; this will need updating during the detailed design.

The *Consultant* shall produce a Stage 1 Habitats Regulations Assessment (HRA) and submit to Natural England (NE) so that they have a record of the proposed works Any further liaisons with NE shall also be made in the event of the following:

1) NE disputes the conclusion of the HRA;
2) if the Stage 1 screening assessment identifies that the project is likely to give rise to a significant effect, in which case the *Consultant* shall proceed to a Stage 2 Habitats Regulations Assessmnt (i.e. an appropriate assessment, which should be submitted to NE for their approval) (Should a Stage 2 HRA be required this would be a CE to the contract)

The *Consultant* shall also produce an Environmental Action Plan

3 Standards to be used

3.1 Health and safety

Health and Safety is the number one priority of the *Client* The *Consultant* will promote and adopt safe working methods and shall strive to deliver solutions that provide optimum safety to all.

3 2 *Client* standard documents

The *Consultant* should carry out their design using the following standards.

Designs produced must be in compliance with the *Client* Minimum Technical Requirements
Contract Documents produced must be in compliance with latest *Client* standard template

4 Constraints on how the *Consultant* provides the *services*

4.1 Funding

The project has Grant in Aid funding of [redacted] for the 2021/22 financial year Delivery of the construction works should therefore be completed before the end of March 2022. The *Consultant* should work with the contractor to provide a design to a programme that enables the contractor the opportunity to delivery the construction works with these timescales

4.2 Public access and recreation

Felixstowe Ferry is a popular local recreation destination A well used footpath runs along the crest of the flood defence embankment and the embankment and adjacent sand bank provide a popular access point for the beach.

Pedestrian access along the current footpath alignment, or via a new determined route, will need to be accommodated safely in the design and temporary restrictions associated with construction work will need to be considered.

The *Consultant* shall consider in the design effects on safe beach access and work with the *Client* and *Stakeholders* to identify the need for continued beach access from this asset and any associated public safety measures.

4 3 Deben navigation

The Deben is navigable and a marked navigation channel is close to the shore near the site. The design and associated construction requirements will need to consider any implications to navigation and consultation must be made with the Navigation Authority and Deben Estuary Pilot.

5 Requirements of the programme

5.1 Programme

The following are absolute requirement for Completion to be certified:

- Transfer to the *Client* of BIM data;
- Completion of the relevant phase of the *Client's* carbon tool;
- Clause 11.2(2) work to be done by the Completion Date.

The programme complies with the requirement of Clause 31 and also includes alignment and submission of the BEP and Master Information Delivery Plan (MIDP).

The *Consultant* shall provide a detailed project plan in Microsoft project format version 2016 meeting all requirements of Cl 31 of the *conditions of contract* A baseline plan shall be provided and this will be updated monthly for progress meetings with actual and forecast progress against the baseline, also submitted through FastDraft for formal approval.

The programme shall cover all the activities to be undertaken by the *Consultant* and other members of the project team. Include all major project milestones from commencement to the end of the design stage and readiness to start on site.

Include appropriate review and consultation periods for drafts, scoping reports, statutory consultation etc.

The following consultation periods should be incorporated into the programme, with adequate allowance for review and revision of documents by the project team, where appropriate:

a) *Consultant* internal review (as per your quality review procedures) and *Client* review of all outputs before circulation to the wider project team to ensure high quality of all output;
b) Sufficient allowance for internal and external consultation. Statutory consultation periods at scoping & draft stages Note local authority approvals through cabinet prior to public consultation can take a long time;
c) *Client* approvals as required to include for working in watercourse approvals;
d) Time for pricing up of the works by a Contractor;
e) Submission for approval and time allowance for the *Client's* approval process.

6 Services and other things provided by the *Client*

6.1 Data and information management and intellectual property rights

All of the data listed as being supplied to the *Consultant* as part of this study remains the IP of the *Client*.

6 2 Data custodianship

The data custodian for project deliverables from this commission will be the area PSO team

6.3 Licensing information

Licences for LiDAR Data, Ordnance Survey Mapping, Model, survey, hydrometric and historical data will be provided to the *Consultant* upon award of this commission

6.4 Data management and metadata

The *Client* populates a metadata database called the Information Asset Register (IAR) It is a requirement that all information produced by modelling work is appropriately tagged with metadata. The *Client* project manager will supply an IAR spreadsheet (and any supplementary local metadata requirements if appropriate) where all relevant metadata can be recorded and handed over on project completion.

6.5 Data security

All model and survey information will be provided to the *Consultant* in an encrypted format (using WinZip 128 bit encryption) according to Environment Agency Data Security Policy. It is expected that once the commission is completed, all the original data sent to the *Consultant*, which is classed as commercially sensitive, is returned in an encrypted format using WinZip 128 bit encryption.

Project deliverables such as model files, survey data or anything of a personal nature such as questionnaires or address data must also be returned in an encrypted format using WinZip 128 bit encryption.

Further details regarding security measures will be discussed at the start up meeting for this commission

6.6 Timesheets

Timesheets as normally utilised by the *Consultants* shall be submitted with fee notes unless otherwise agreed with the *Client* Project Manager Electronic submissions would be acceptable.

6.7 Payment procedure

Payment is subject to the procedure agreed under the Collaborative Delivery Framework and in accordance with Cl XX of the *conditions of contract*

6.8 Quality

The quality management system complies with the requirements of ISO9001 and ISO14001

Appendices

Appendix 1 BIM Protocol Production and Delivery Table

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