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

## Document category: COMPULSORY

# Scope

## Project / contract information

| | |
|---|---|
| Project name | Broads Asset Maintenance |
| Project SOP reference | ENV6004936R |
| Contract reference | 32367 |
| Date | 26 May 2021 |
| Version number | 3 |
| Author | [redacted] |

## Revision history

| Revision date | Summary of changes | Version number |
|---|---|---|
| 23/03/2021 | First issue | 1 |
| 28/04/2021 | Additions to cover requirement for efficiencies, commercial meetings and carbon recording | 2 |
| 26/05/21 | Amendments to S103 grass cutting requirements, S302 Site Investigations and S604 BIM requirements | 3 |

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 | Minimum Technical Requirements | | 19/03/2020 |

## Contents List

# S 100 Description of the *works*

## S 101 Description of the *works*

The *works* is the delivery of asset maintenance activities in the Broads. As part of a collaborative team, the *Contractor* will provide the resources, equipment and facilities required to deliver the operational tasks and will act as Principle Contractor in accordance with the CDM regulations.

The *works* are described in detail in S 103 Technical Requirements. The *works* are described as 'routine' or 'non-routine'. Routine work refers to known deliverables that will form the baseline programme. Non-routine work refer to deliverables that will be determined by inspection and managed as a compensation event.

Additional details to support the Technical Requirements are included in appendices A1 to A8.associated appendices A1 to A8.

## S 102 Purpose of the Works/ Outcome required

This is a collaborative project. The *Client, Contractor* and the consultant will work together in an open and positive manner to deliver excellent asset management in Broadland.

Excellent asset management will be proactive planning and delivery of works that keeps assets in a target condition appropriate to the risk. The existing strategic approach to sustaining an overtopping regime across the Broads flood risk systems will be managed though continued monitoring and maintenance of crest levels.

Given the rural nature of many of Broadland's flood risk management assets, there will be an emphasis on a best value approach to planning and delivering maintenance. Also given the high landscape and environmental value of Broadland, civil engineering will need to be fully integrated with environmental consideration.

To demonstrate best value there is a requirement to identify and provide delivery efficiencies in relation to programme, cost and carbon.

Knowledge sharing is a key aspect of the collaboration. The *Contractor* is required to engage in a knowledge sharing programme, which is necessary as asset management in Broadland transitions from a twenty year supplier led Public Private Partnership project.

The outcome required from knowledge sharing is that the *Client* develops the depth of local asset and operational knowledge required to make well informed future management decisions and has the information and knowledge to package and tender future maintenance work.

**S 103 Technical requirements**

**1 Raised Defences: Flood Embankment grass cutting**

**Deliverables:**

| | |
|---|---|
| **Routine** | Delivery of annual programme of grass cutting on flood embankments<br>Minimum frequency: 1 cut per year for all embankments<br>2 cut per year for overtopping areas |

**Requirements:**

1.1 The management of embankment vegetation is to continue with a grass cutting programme similar to that provided through the Broadland Flood Alleviation Project (BFAP). As an example Appendix 4 includes embankment lengths and associated cut options as per the 2019 BFAP specification.

1.2 An annual programme with cut specifications will be provided by the consultant.

1.3 The cut specification options used through BFAP will be adopted. There will however there will be some changes to align with the *Client's* maintenance standards (see Appendix A2) and adapt to changing environment and ecological needs.

1.4 The *Contractor* will coordinate with the consultant in developing the programme, in particular advising on practicalities of access, scale and cost.

1.5 Cutting equipment shall be of an appropriate type, well maintained and correctly adjusted to give a clean cut without causing ribbing, ridging or scalping. Cutting equipment shall also be of an appropriate type and weight to avoid bank damage or undue damage to grass or weed growth.

1.6 The *Contractor* and the *Client* will monitor progress of delivery and work together to adapt and prioritise the programme if required in response to environmental conditions and unforeseen constraints.

**2 Raised Defences: Flood embankment tree and scrub removal**

**Deliverables:**

| | |
|---|---|
| **Routine** | Small tree and bush removal |
| **Non-routine** | Large tree and significant scrub removal |

**Requirements:**

2.1 In general trees and scrub should not be present on the crest and slopes (landward and riverside) of raised flood embankments. Inspections and assessment by the *Client* and the consultant will determine the need for tree and scrub removal where present.

2.2 It is assumed that the removal of large trees and significant scrub may be complicated practically or ecologically and therefore no action should be taken without the assessment by the Client and the consultant.

2.3 It is assumed that the removal of bushes and small trees will be simple and low cost in most areas; therefore as a default, these should be removed from flood embankment crests and slopes as part of routine vegetation management.

## 3 Raised Defences: Flood embankment crest level maintenance

**Deliverables:**

| | |
|---|---|
| **Non-routine** | Delivery of crest raising works and associated mitigation |
| | Approvals for and management of footpath restrictions |

**Requirements:**

3.1 Broadland is effectively a system of interrelated flood compartments. Defence crest levels for each compartment have been designed and maintained to provide a predictable overtopping regime.

3.2 As set out in Section 8, crest level surveys will be used to monitor settlement, identify low spots and inform a forward programme of crest raising works required to sustain the overtopping regime. The requirement for crest raising will be specified by the consultant and instructed by the *Client*.

3.3 Where a need for crest raising is identified the works will be designed by the consultant. The *Contractor* is required to coordinate with the consultant particularly with regard to material sourcing

3.4 Wherever possible the topping-up works will take place to the crest of the embankment in order to avoid the need to excavate the landward slope of the bank and encroach on the folding. Topping up will be in designed layers with a suitable key into existing embankment structure.

## 4 Raised defences: Flood wall maintenance

**Deliverables:**

| | |
|---|---|
| **Routine** | Maintenance checks and associated routine tasks |
| | Cut long vegetation (adjacent to crest piling) |
| **Non-routine** | Removal of young trees, shrubs and grass affecting walls |
| | Maintenance repairs (e.g. copings, capping timbers, crack repair) |

**Requirements:**

4.1 There is around 56km of walls within the portfolio of flood defence assets in Broadland that form significant elements of flood defence assets. An approximate breakdown is shown in Table 2.

| Wall type | Approximate length (km) |
|---|---|
| **Flood walls** | |
| Concrete flood walls | 9.5 |
| Steel flood wall (not crest piles) | 0.6 |
| Masonry flood wall | 1.5 |
| **Crest Piles** | |
| Mostly steel or plastic, but some asbestos | 15.0 |

Table 2: Flood defence walls and crest piling

4.2 Maintenance will be undertaken in line with the *Client's* standards for wall maintenance set out in Appendix A2. This outlines the typical requirements of routine maintenance checks and associated tasks including repair of expansion joint seals and some mortar joints, clearance of weep-holes, small scale debris clearance and identification of larger scale works.

4.3 All walls will require periodic cutting of vegetation where present to allow inspection. The

minimum period for this will be every 2 years. The need to cut long vegetation will generally apply only to crest piling; most of the concrete and masonry walls are in more urbanised or managed environments.

4.4 Vegetation such as young trees, shrubs and grass will need to be removed where it may affect the structural integrity of the wall.

4.5 Wall maintenance will also include repair or replacement of wall copings and pile cappings and repair of cracks or holes. The need for such repairs will be identified by visual inspection by the *Client* or during maintenance checks by the *Contractor*.

## 5 Erosion protection maintenance

**Deliverables:**

| | |
|---|---|
| **Routine** | Provision and helming of survey boat to support inspection of waterside assets (e.g. erosion protection), as Section 10 |
| | Provision of locally experienced land agent as required to assist with piling transfer agreements |
| **Non-routine** | Undertake intermittent maintenance tasks |

**Requirements:**

5.1 Erosion protection forms part of the flood defence in some areas and needs to be checked and maintained. A breakdown with approximate total lengths is given Table 3.

| Wall type | Approximate length (km) |
|---|---|
| **Piling** (steel, timber and concrete) | 30 |
| **Rip-rap stone** | 4 |
| **Blockwork revetment** (e.g. Armorflex) | 8 |
| **Open stone asphalt** | 6 |
| **Gabions** | 3 |
| **Scour protection matting** | 1 |
| **Geotextile tube** | 3 |
| **Other** (e.g. River Ant post and netting) | 1 |

Table 3: Erosion protection assets

5.2 Visual inspection of all erosion protection assets will be undertaken by the *Client* in line with the requirements and tasks set out in Section 9. Inspection will generally need to be undertaken from the water and on suitably low tides. The *Contractor* will provide and helm a suitable survey boat licenced to operate on the Broads navigation

5.3 The visual inspections will identify the need for intermittent tasks. Typical intermittent maintenance tasks include backfill of erosion pockets, repair or replacement of public safety measures and repair or replacement of failing elements.

5.4 Some lengths of erosion protection piling are no longer required for flood defence, but continue to be maintained by the Environment Agency. Generally this is due to secondary use by third parties, in such cases consideration will be made to removal, formal ceasing of maintenance or transfer to a third party.

## 6 Conveyance channel maintenance (cut and clear)

**Deliverables:**

| | |
|---|---|
| **Routine** | Watercourse inspection (in coordination with the *Client*) |
| | Cut and clear, up to 55km as required by inspection |
| **Non-routine** | De-silting and reactive obstruction removal |
| | Associated ecology mitigation and monitoring |

**Requirements:**

6.1 The boundary of the Broadland Asset Performance Area is shown in Appendix A1. The Environment Agency main rivers are also shown. The main rivers in the Broads consist of tidal watercourses and fluvial watercourses. All of these main river watercourses need to provide adequate conveyance for the level of flood risk.

6.2 The tidal main rivers in Broadland generally provide adequate conveyance without maintenance intervention by the *Client*.

6.3 There is approximately 100km of fluvial main river watercourses, as listed in Table 4. These are mostly gravity fed watercourses and 55km have required some active channel maintenance through the BFAP project. The typical maintenance frequency is also shown in Table 4.

6.4 Conveyance channel maintenance shall be deemed to include the cutting and clearing of material likely to cause a risk of flooding to adjacent land and property. Cut and clear generally refers to the clearance of in-channel vegetation and removal of undesirable and obstructive woody debris or low branches. Cut and clear forms the majority of the annual channel maintenance programme and is specified by routine inspection.

6.5 Conveyance channel maintenance does not include continuous silt clearance or minor dredging works, however there is an occasional need for de-silting works and reactive clearance of obstructions.

| Watercourse | Length (m) | Typical channel maintenance frequency |
|---|---|---|
| Hassingham Beck | 1833 | Annual |
| Cantley Watercourse | 1702 | None |
| Limpenhoe Landspring | 2854 | None |
| Spixworth Beck | 13332 | Annual |
| Beighton Drain | 2086 | Annual |
| Surlingham Landspring | 891 | None |
| Barsham Beck | 5213 | Annual |
| Mettingham New Dyke | 3140 | Annual |
| Lake Lothing Landspring | 4780 | None |
| Lillywater Landspring | 3947 | None |
| Blundeston Landspring | 2778 | Annual |
| Gunton Watercourse | 1841 | None |
| Haddiscoe Landspring | 8418 | None |
| Colemans Drain | 931 | 5 year |
| Barnby 100 Drain | 3999 | None |
| Moulton Drain | 1223 | Annual |
| Trowse Newton Drain | 1095 | None |

| | | | |
|---|---|---|---|
| Stone Beck | 6944 | None | |
| Acle Landspring | 4940 | Annual | |
| Witton Run | 7369 | None | |
| Hellington Beck | 6476 | Annual | |
| Carleton Beck | 4733 | Annual | |
| River Chet | 8047 | Annual | |
| **Total** | **98572** | | |

Table 4: Fluvial main river watercourses

6.6 The ongoing channel maintenance programme will continue to focus on the same 55km of watercourses.

6.7 The actual programme and works specifications will be determined by annual inspection by the *Contractor* and *Client* subject, and will be in line with the *Client's* standards for open channel maintenance set out in Appendix A2. The programme and specification for channel maintenance will also be subject to appropriately timed ecology surveys and assessment of the need for mitigation and monitoring.

## 7 Structures inspection and maintenance

**Deliverables:**

| | |
|---|---|
| **Routine** | Routine maintenance and operation checks |
| | Servicing |
| | Provision of a boat where required for maintenance and checks |
| **Non-routine** | Additional checks as required in response to events, particularly clearance of debris screens and inspection of flood gates and boards. |

**Requirements:**

7.1 This section covers the maintenance required for the various catchment and moveable flood defence structures including:

- 30 catchment structures, including outfalls, sluices, spillways and screens. These are simple mechanical or static structures
- 1 pumped outfall, Acle Pump, which is the only mechanical-electrical asset in Broadland.
- 30 moveable flood defence structures, all of which are manually operated flood gates and flood boards.

7.2 This section also covers the maintenance required for Environment Agency maintained bridges including:

- Single lifting pedestrian bridge, mechanical winch operated (Clayrack Marshes)
- Fixed pedestrian bridges at Geldeston Locks

7.3 A schedule of these flood defence structures is included in Appendix A5. The schedule covers the minimum routine maintenance and servicing requirements specific to each asset. Additional checks and maintenance may be required to prepare for forecast tidal or meteorological events or in response to such events.

7.4 The basic requirement for outfalls, sluices and screens is an operational check typically monthly, to ensure they are ready to perform as designed and to check public safety measures are in place. A more thorough service check including basic repairs and lubrication of any moving parts is typically done twice a year.

7.5 Spillways do not require routine operational checks, maintenance tasks will be identified by either

during condition surveys or during maintenance/operational checks of the adjacent assets. The exception is the spillway on Hellington Beck that requires some periodic vegetation clearance.

7.6 Flood gates and flood boards typically require a service check twice a year to ensure gates are operational and boards are not damaged or missing. An operational check will also be undertaken each year before the start of the winter season. This will involve positioning and securing gates and boards for which the *Client* is responsible for operating, and checking correct installation of third party operated assets.

7.7 Acle Pumping Station is the only powered asset in Broadland. The specific routine check and service requirements along with pump details are included in the Operations Manual for Acle Pump included in Appendix A6.

7.8 Bridges require routine maintenance of these fixed elements, typically twice a year, including cleaning of decks and elements to allow inspection and prevent accelerated degradation and slippery surfaces. The need for further maintenance will be defined by the visual inspections undertaken by the *Client* or the consultant.

7.9 Mechanical elements of bridges need appropriate inspection and servicing. In the case of the lifting bridge at Clayrack Marshes, an appropriate regime of inspection and servicing will be developed by the *Client* for delivery by the *Contractor.*

**8 Topographical surveys & crest level monitoring**

**Deliverables:**

| | |
|---|---|
| **Routine** | Topographic surveys |
| | Supply of digital survey data |
| **Non-routine** | Topographical surveys required for design or additional flood risk information |

**Requirements:**

8.1 The minimum requirement is to complete a full crest level survey every two years. The crest level survey will include a long section of the effective crest of all flood defence embankments and walls at a maximum spacing of 50m. Data points will be related to the Ordnance Survey (OS) coordinate system using GPS and levels will be relative to Ordnance Datum (Newlyn).

8.2 Data needs to be in ESRI compatible formats. Acceptable pre-processing data formats are:

- tabular information (.csv, .txt, .xls, .dbf);
- ESRI feature classes (Shapefiles (.shp), or personal geodatabase feature classes);
- raster information – ESRI grids as ArcGIS layers, group layers or tiles within a group layer.

8.3 All data and datasets are to be supplied to the *Client*.

**9 Asset inspections and condition assessment**

**Deliverables:**

| | |
|---|---|
| **Routine** | Provision and helming of survey boat to support inspection of waterside assets |

**Requirements:**

9.1 Asset inspections will be undertaken by the *Client* and the consultant. All assets will be inspected typically with a minimum frequency of 24 months.

9.2 Some assets, in particular erosion protection will require inspection from the water. For these

inspections the *Contractor* will provide and helm a survey boat.

9.3 The survey boat will need to be shallow drafted and suitable for close access to the river bank. The boat will also need to be licenced for the Broads navigation.

9.4 The *Contractor* will need to coordinate with the *Client* and the Consultant to develop a suitable programme for inspections.

**10 Incident Management**

**Deliverables:**

| | |
|---|---|
| **Routine** | Provision of standby management, including a duty roster available to the Environment Agency |
| | Provision of standby resources |
| | Provision of standby plant |
| | Provision of standby materials |
| **Non-routine** | Operational response to incidents, including time and resource records |

**Requirements:**

10.1 The *Client* has an incident management process with 'Incident Duty Officers' rostered 24/7 that can give direction and information during events or reported incidents. The *Contractor* is to provide operational support for incident response in Broadland including the following:

i. The provision of a Standby Management including a rostered Operations Duty Manager and Back-up Operations Duty Manager.
ii. The provision of the Standby Resources from a workforce that is fully competent, trained, experienced, available at short notice, and has local knowledge.
iii. The provision of Standby Plant, either available locally in depots or through an emergency hire arrangement.
iv. The provision of Standby Materials.

10.2 Standby provision is be part of the routine requirement of this contract. Standby provisions and operational response may be required to manage flood risk or environmental incidents. Operational response to incidents will be managed as a compensation event.

10.3 The speed of operational response should be appropriate to the risk and agreed with the *Client's* Incident Duty Officer. The mobilisation to site of standby resources, plant and materials shall be possible within 12 hours of receiving an instruction, subject to safe and lawful access to site.

10.4 Emergency response is also covered by a separate contract through the Collaborative Delivery Framework. Where an incident requires a significant operational mobilisation with a requirement for resources beyond the above outlined provisions, it may be appropriate to manage the response through such an alternative contract.

10.5 Time and resource records must be kept for all operational responses.

**10.6 Standby Management requirements are as follows:**

10.6.1 The *Contractor* will maintain, management duty rosters to ensure that its nominated Operations Duty Manager or back-up can be contacted by the *Client's* Incident Duty Officer at all times during both working and non-working hours. The Operations Duty Manager and back-up will be contactable by telephone and will have access to emails.

10.6.2 The Operations Duty Manager and back-up will have the local and operational knowledge necessary to assist the *Client's* Incident Duty Officer with information and decisions on appropriate operational response to incidents.

10.6.3 In the event of an incident, forecast incident or incident report, the *Client* Incident Duty Officer,

Senior User or Project Manager will issue an instruction to respond. The Operations Duty Manager will coordinate and manage the use of the Standby Resources, Standby Plant and Standby Materials.

10.6.4 The standby roster including the names and contact details for the Operations Duty Manager and Back-up Operations Duty Manager will be kept up to date and made available to the *Client*.

**10.7 Standby Resources requirements are as follows:**

10.7.1 During normal working hours the emergency response will be provided from the nearest appropriate site or maintenance gang.

10.7.2 At all times outside of normal working hours, a minimum of three stand-by personnel with suitable four-wheel drive transport shall be available for mobilisation on an immediate basis as a primary response.

10.7.3 This level of resource may need to be increased in response to the requirements of an incident or significant forecast event. The time to mobilise additional resource will be appropriate to the risk and as soon as reasonable practicable.

10.7.4 All personnel will be experienced and knowledgeable of the Project Area and will be familiar with and competent in the type of work that they are likely to undertake in an emergency situation. They will be equipped with means of communication, personal protective equipment, maps of the Project Area and such constructional plant and equipment as is appropriate.

**10.8 Stand-by plant requirements are as follows:**

10.8.1 Emergency response vehicles to be used by stand-by personnel will contain basic constructional plant and equipment, appropriate to the need.

10.8.2 In addition, basic construction and water management plant shall available on standby locally in depots, available for remobilisation from accessible local working sites or available through hire providers through a standing emergency deployment arrangement.

10.8.3 The basic construction and water management plant to be available within 12 hours for incident response should include mobile pumps (up to at 8”), generators, site flood lighting, winches. Other plant such as tracked excavators may be required as part of an incident response however mobilisation to site will be as soon as practical taking into account potential specific considerations such as haulage, ground conditions and any lifting operations.

**10.9 Stand-by materials requirements are as follows:**

10.9.1 Large quantities of bags and sand will be stored at suitable locations within the Broadland Area.

10.9.2 In addition to sandbags, the *Contractor* will hold or have access to a stock of light steel sheet piles, walings, timber and tie rods and similar materials suitable for temporary repairs. Whilst it is unlikely that these materials will generally be utilised as part of the emergency response, i.e. within the first 12 hours of the incident, they will be available for any following remedial work.

10.9.3 If needed and available, the *Client* will allow the use of its pollution control booms for the purpose of emergency response to environmental incidents in Broadland.

## 11 Remedial Works

**Deliverables:**

| | |
|---|---|
| **Non-routine** | Delivery of remedial works |
| | Ecological mitigation measures |
| | Ground investigation if required to inform design |

**Requirements:**

11.1 Given the extent of earth embankments, variable ground conditions and high level of public access defects requiring remedial action will occur. Common issues that will likely need to be addressed as a maintenance activity include:

- leaks, erosion and cracking of earth embankments
- erosion protection repairs
- repair and replacement of PSRA measures
- crest piling repairs
- structure repairs (e.g. replacement flaps, boards, seals etc.)

11.2 The requirements for remedial works will be identified by inspection by the *Client*. Where the remedial works are considered simple and low value these should be programmed accordingly.

11.3 Some remedial works will be more complex and require geotechnical or structural design and may also require consents and ecological assessment and management. Such works will not be considered routine maintenance and will be managed as a compensation event.

11.4 Works that improve the level of service or extend the design life of assets will be considered capital works and will managed through separate contracts.

## 12 Knowledge Sharing

**Deliverables:**

| | |
|---|---|
| **Routine** | Input to knowledge sharing programme |
| | Appropriately experienced operatives and managers to contribute to relevant knowledge sharing meetings and site visits. |

**Requirements:**

12.1 A key aspect of the collaborative approach to asset management will be cooperation and sharing of knowledge. As part of a successful transition from the Broadland Flood Alleviation Project will be the development knowledge by the *Client* and capture of this within Asset Management Plans. The *Contractor* will support the production of these plans through the sharing of asset and area specific knowledge with the *Client*.

12.2 The *Contractor* will coordinate with the consultant to develop and deliver a knowledge sharing programme. This will include a schedule of discussion meetings, site visits and where appropriate joint working. The purpose will be to achieve the following general outcomes:

a) The *Client* has the knowledge and information to produce costed asset management plans covering routine and capital interventions required to maintain assets in target condition in the short and medium term (next 30 years).
b) The *Client* is able to able to make informed risk based decisions on the operation and maintenance of assets and bid for funding for operational delivery to sustain the current level of service.
c) The *Client* has the information and knowledge to package maintenance works for delivery through internal teams, partner organisations or tender with external suppliers.

12.3 The Contractor will coordinate with the Client and the consultant to ensure the knowledge sharing programme covers the following specific learning points:

a) How the flood risk systems respond to flood events and how the flood compartments interrelate.
b) Which assets that are most critical or most vulnerable with regard to managing flood risk.
c) Flood events and incident response, lessons learnt from past events.
d) Key relationships, concerns and conflicts within the area. Particularly with regard to landowners/occupiers and associated access to and operation of assets.
e) Operation of all moveable assets and those that are operated by third parties through formal and informal arrangement.
f) The BFAP strategy and where and why this may differ from the typical Environment Agency approach to asset maintenance approach.
g) The BFAP environmental strategy, ecology records and how this has influenced the delivery of improvement and maintenance works delivered through BFAP.

12.4 The programme will need to be kept simple and practical with efficiency in coordinating meetings and site visits where possible with delivery of other tasks.

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

### S 201 General constraints

The following general constraints apply to the *works*.

- **Site access**

  Most of the assets to be maintained are located on and/or accessed through third party land. The *Contractor* is to arrange access requirements with third parties. The *Client* has power of entry to inspect and maintain assets and can action formal Notice of Intended Entry where required. However the use of Powers of Entry are a last resort and every effort should be made by the *Contractor* to provide landowners with reasonable notice and arrange access through mutual agreement.

- **Statutory consents**

  The *Client* will apply for statutory consents where required. The *Contractor* will be required to provide information to support statutory consent applications. Programming of works will need to take into account the consenting timescales and any associated conditions. Typical statutory consents that will need to be considered include:

  - Natural England assent relating to designated sites
  - Planning approval
  - Environment Agency Environmental Permits
  - Broads Authority Navigation Works Licences
  - MMO licences

- **Ecology**

  All work is to be planned with consideration to ecology. In particular where protected species are present on or close to many assets in the Broads. The *Contractor* will need to

work with *others* to ensure appropriate measures are undertaken to avoid harm to protected species.

- **Public access**

  Most of the assets to be maintained are accessible to the public. Managing public safety needs to be considered for all works. Managing public safety in relation to construction activities will be the responsibility of the *Contractor* including footpath diversions and closures when required.

**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**

Not used

**S 204 Security and identification of people**

Not used

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

Not used

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

Not used

**S 207 Cleanliness of the roads**

Not used

**S 208 Traffic Management**

Not used

**S 209 Condition survey**

Not used

**S 2010 Consideration of Others**

Not used

**S 2011 Control of site personnel**

Not used

**S 2012 Site cleanliness**

Not used

**S 2013 Waste materials**

Not used

**S 2014 Deleterious and hazardous materials**

Not used

## S 300 *Contractor's* design

### S 301 Design responsibility

There are no planned activities for which the *Contractor* is responsible for design.

As part of a collaborative team, the *Contractor* will cooperate with the *Client* and others to help inform design requirements.

The design of permanent works associated with non-routine activities, such as repair or remedial work, will be provided by the *Client*.

Where there is a requirement for temporary works, the design of temporary works will be the responsibility of the *Contractor*.

### S 302 Site investigations

There are no planned activities that require site investigation.

Any requirement for site investigation will be specified and managed as a compensation event.

## S 400 Completion

### S 401 Completion definition

This is an asset maintenance contract and the programme of works consists of a series of discrete and geographically dispersed tasks.

Completion is defined as the delivery of a programmed task in accordance with the agreed specification.

### S 402 Sectional Completion definition

Not used

### S 403 Training

Not used

### S 404 Final Clean

Not used

### S 405 Security

Not used

### S 406 Correcting Defects

In the event that works are not delivered in accordance with the agreed specification, access for the correction of any Defects will be subject to approval by the *Client*.

### S 407 Pre-Completion arrangements

Prior to any works being offered for take-over or Completion the *Contractor* shall offer and if necessary arrange a joint inspection with the*, Client*.

### S 408 Take over

Not used

## S 500 Programme

### S 501 Programme requirements

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

The first version of the programme should include the 'routine tasks' as outlined in S 103 Technical Requirements.

The programme is to be developed and managed in Project Online. A copy of the latest programme is to be made available to the *Client* upon request and shall be supplied electronically in pdf format.

### S 502 Programme arrangement

The programme is to show a summary level relating to the tasks set out in S 103 Technical Requirements.

The programme is to show detail level information including sub-tasks by location.

Key resources, in particular labour and plant should be included in the programme.

### S 503 Methodology statement

Particular requirements for methodology statements, including any specific requirements for resource information.

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

Work and information provided by the *Client* and Others that is critical to the *Contractor's* delivery of tasks is to be included in the programme. This will include where relevant:

- Ecology surveys
- Grass cutting specification
- Asset inspections
- Statutory consents

### S 505 Information required

Not used

### S 506 Revised programme

The programme is to be revised monthly. Each revised programme should show the actual progress of tasks and resources used.

## S 600 Quality management

### S 601 Samples

Not used

### S 602 Quality Statement

Not used

### S 603 Quality management system

Not used

### S 604 BIM requirements

The *consultant* will lead on information modelling.

The BIM Information Manager is the *Client's* Project Manager.

The *Contractor* will provide information in accordance with an Information Delivery Plan (IDP) issued by the *Client*.

As a maintenance delivery project the BIM requirements will be basic. Deliverables expected to be included on the IDP and to be provided by the *Contractor* include:

- Topographic survey data
- Photographic records

## S 700 Tests and inspections

Not used

## S 800 Management of the *works*

### S 801 Project team – Others

This project is a collaboration between the *Client*, the *Contractor* and the consultant. The Project team structure and general roles and responsibilities are set out below.

| Role | | Description of general responsibilities |
|---|---|---|
| *Client* | Asset Performance Team | Lead on asset management and be responsible for programme approval, asset performance, engagement and inspections.<br>Includes project Senior User |
| | Project Manager | Oversight of the programme and ensures products are produced to the required quality, time and cost. |
| | ECC *Project Manager* | Contract administration and assessment of costs. May be combined with the Project Manager role. |
| Contractor | CDF Lot 2 supplier<br>BAM Nuttall Ltd. | Responsible for operational delivery including maintenance works, facilities and provision for emergency response. |
| | Senior Representative | Represents the interests of the *Contractor*; attends progress meetings. |
| Consultant | [redacted]. | Consultant to the *Client*, responsible for technical delivery including design, technical monitoring, programme development, design, ecology advice and asset |
| | Senior Representative | Represents the interests of the *Client's* consultant; attends progress meetings. |

### S 802 Communications

Monthly Progress Meetings:

The *Contractor* is required to attend a monthly progress meeting with the *Client* and the consultant. This meeting will include the following:

i. Review latest programme
ii. Health and safety update
iii. Surveys and inspections
iv. Knowledge sharing
v. Early warnings

The duration of the meeting should be approximately 1 hour and is to be held in a meeting room in the collaborative office provided by the *Contractor*. In the event this is not possible a virtual meeting will be held using Microsoft Teams.

The *Contractor* is to provide minutes of the monthly progress meeting within one week of the meeting date.

Quarterly Commercial Meetings:

The *Contractor* is required to attend a commercial meeting every three months with the *Client* and the consultant. This meeting will include the following:

i. Review latest programme
ii. Review latest forecast and potential efficiencies
iii. Actual carbon, forecast carbon and potential efficiencies
iv. Update and review risk register

The duration of the meeting should be approximately 1 hour and is to be held in a meeting room in the collaborative office provided by the *Contractor*. In the event this is not possible a virtual meeting will be held using Microsoft Teams.

The *Contractor* is to provide minutes of the monthly progress meeting within one week of the meeting date.

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

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

Not used

### S 902 Co-operation

As a collaboration between the *Contractor, Client* and the consultant there is a requirement for co-operation as set out in the Technical Requirements.

### S 903 Co-ordination

As a collaboration between the *Contractor, Client* and the consultant there is a requirement for co-ordination as set out in the Technical Requirements.

### S 904 Authorities and utilities providers

Not used

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

Not used

## 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*

**Office Facilities**

Suitable serviced office accommodation in the Norwich area will be provided by the Contractor sufficient for all the collaboration partners to be co-located.

The *Client* and the consultant will be offered an agreed proportion of the office accommodation for a cost no greater than cost of such area to the *Contractor*.

The proportion of the office accommodation the *Client* will require use of will include a minimum of two desks and suitable library shelving for hard copies of the documents formally handed over to the *Client* at the end of the Broadland Flood Alleviation Project.

The office will require a bookable meeting room, internet through a secure local Wi-Fi network and suitable welfare facilities.

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

Not used

## S 1100 Health and safety

### S 1101 Health and safety requirements

The *Contractor* is required to undertake all works in compliance with all relevant health and safety law and approved Health and Safety Executive (HSE) Codes of Practice and guidance notes. In addition the *Contractor* must:

- Adhere to the Environment Agency's 'Safety, health environment and wellbeing (SHEW) code of practice' (May 2018 and any subsequent versions)
- Maintain a full record of all incidents relating to health and safety, and make such records available to the *Client* upon request
- Immediately notify the Agency of any health and safety incident which is immediately notifiable to the HSE under the reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013.
- Procure that its Subcontractors shall at all times comply with all of the health and safety requirements here stated in S 1101.

### S 1102 Method statements

Method statements and risk assessments are to be made available to the *Client* for all tasks. For non-routine tasks, the *Contractor* is required to submit method statements and risk assessments to the *Client* for acceptance.

### S 1103 Legal requirements

Where CDM regulation apply, the roles of the *Client, Contractor* and the consultant in accordance with the CDM regulations are as state below.

| CDM role | Designated party |
|---|---|
| Client | The *Client* |
| Principle Contractor | The *Contractor* |
| Designer | The consultant |
| Principle Designer | Others |

### S 1104 Inspections

Not used

## S 1200 Subcontracting

### S 1201 Restrictions or requirements for subcontracting

Not used

### S 1202 Acceptance procedures

As Clauses 26.3 and 11.2(25)

## S 1300 Title

### S 1301 Marking

Not used

### S 1302 Materials from Excavation and demolition

Unless otherwise instructed, the title of materials from excavation and demolition will not be the *Contractor*.

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

The *Contractor* is to submit an Application for Payment each month. The Application for Payment is to include a summary of the actual resources used and associated time and cost.

The *Project Manager* will review the Application for Payment and the latest programme and make an assessment for payment.

## S 1500 Accounts and records (Options C and E)

### S 1501 Additional Records

The *Contractor* must keep and make available to the *Client* the following:

- Timesheets and site allocation sheets,
- Equipment records,
- Forecasts of the total Defined Cost,(Forecasts are to include, but not be limited to costs to date, costs to completion including detailed breakdown of staff, sub-contract and major material items)
- Carbon recording (carbon emissions associated with the actual works delivered are to be recorded and carbon emissions associated with the forward programme are to be forecast). This is to provide a baseline for benchmarking and identifying efficiencies.

Timesheets for incident response (as outlined in Section 10 of the Technical Requirements) are to be kept separately and made available to the Client.

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

## S 1600 Parent Company Guarantee (Option X4)

Not used

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

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

See S103 Technical Requirements and associated appendices A1 to A8.

### S 1702 Drawings

See S103 Technical Requirements and associated appendices A1 to A8.

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

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

| Ref | Report Name | Where used |
|---|---|---|
| | Project Cost Tool | Costs |
| | Sustainability Measures Form | |
| | Timber Policy Documents | |
| | 300_10 SHE handbook for managing capital projects | |
| | SHEW Code of Practice (May 2018) | |

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

**All *Client* issued information referenced within the Information Delivery Plan remains within the *Site Information* unless it is referenced elsewhere within the *Scope***