



Framework: Collaborative Delivery Framework
Supplier: Ove Arup & Partners Ltd
Company Number: [REDACTED]

Geographical Area: Midlands
Project Name: Ox-Cam - Nene Storage Study
Project Number: [REDACTED]

Contract Type: Professional Service Contract
Option: [REDACTED]

Contract Number: [REDACTED]

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework CONTRACT DATA

Project Name Ox-Cam - Nene Storage Study

Project Number [REDACTED]

This contract is made on 16 April 2021
between the *Client* and the *Consultant*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 01st day of April 2019 between the *Client* and the *Consultant* in relation to the Collaborative Delivery Framework. The entire agreement and the following Schedules are incorporated into this Contract by reference
- Schedules 1 to 22 inclusive of the Framework schedules are relied upon within this contract.
- The following documents are incorporated into this contract by reference
20201124 NGSA PSC Scope Nene Storage V11 - Final

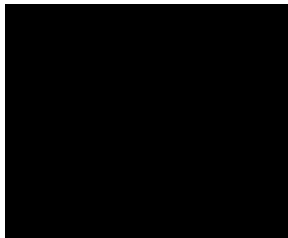
Part One - Data provided by the *Client*

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 secondary Options of the NEC4 Professional Service Contract June 2017.

Main Option [REDACTED] Option for resolving and avoiding disputes W2

Secondary Options



The service is The contract is to produce an assessment to ensure that future investment decisions are clearly evidenced for a network of existing and proposed nene storage study flood storage areas.

The *Client* is

Address for communications

Address for electronic communications

The *Service Manager* is
Address for communications

Address for electronic communications

The Scope is in
20201124 NGSA PSC Scope Nene Storage V11 - Final

The *partner contract* is
N/A

The *language of the contract* is English

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

The period for reply is 2 weeks

The period for retention is 6 years following Completion or earlier termination

The following matters will be included in the Early Warning Register

Early warning meetings are to be held at intervals no longer than 2 weeks

2 The *Consultant's* main responsibilities

The *key dates* and *conditions* to be met are
'none set' 'none set' 'none set' 'none set'

key date
'none set'
'none set'
'none set'

The *Consultant* prepares forecasts of the total Defined Cost plus Fee and expenses at intervals no longer than 4 weeks

3 Time

The *starting date* is 4th May 2021

The *Client* provides access to the following persons, places and things
access access date

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

The completion date for the whole of the service is 31st December 2021

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

4 Quality management

The period after the Contract Date within which the *Consultant* is to submit a quality policy statement and quality plan is 4 weeks

The period between Completion of the whole of the service and the defects date is 26 weeks

5 Payment

The *currency of the contract* is the £ sterling

The *assessment interval* is Monthly

The expenses stated by the *Client* are as stated in Schedule 9

The *interest rate* is [REDACTED] rate of the Bank of England

The locations for which the *Consultant* provides a charge for the cost of support people and office overhead are All UK Offices

6 Compensation events

These are additional compensation events

- Managing and mitigating the impact of Covid 19 and working in accordance with Public Health England guidance, as may vary from time to time, between 1 November 2020 to 31 March 2021.
- 'not used'
- 'not used'
- 'not used'
- 'not used'

8 Liabilities and insurance

These are additional *Client's* liabilities

- 'not used'
- 'not used'
- 'not used'

The minimum amount of cover and the periods for which the *Consultant* maintains insurance are

EVENT	MINIMUM AMOUNT OF COVER	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE SERVICE OR TERMINATION
The <i>Consultant's</i> failure to use the skill and care normally used by professionals providing services similar to the service	[REDACTED] respect of each claim, without limit to the number of claims	12 years after Completion
Loss of or damage to property and liability for bodily injury to or death of a person (not an employee of the <i>Consultant</i>) arising from or in connection with the <i>Consultant</i> Providing the Service	[REDACTED] respect of each claim, without limit to the number of claims	12 years after Completion
Death of or bodily injury to the employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with the contract	Legal minimum in respect of each claim, without limit to the number of claims	For the period required by law
The <i>Consultant's</i> total liability to the <i>Client</i> for all matters arising under or in connection with the contract, other than the excluded matters is limited to	[REDACTED]	

Resolving and avoiding disputes

The *tribunal* is litigation in the courts

The *Adjudicator* is Address for communications 'to be confirmed' 'to be confirmed'

Address for electronic communications 'to be confirmed'

The *Adjudicator nominating body* is The Institution of Civil Engineers

Z Clauses**Z1 Disputes**

Delete existing clause W2.1

Z2 Prevention

The text of clause 18 Prevention is deleted.

Delete the text of clause 60.1(12) and replaced by:

The service is affected by any of the following events

- War, civil war, rebellion, revolution, insurrection, military or usurped power;
- Strikes, riots and civil commotion not confined to the employees of the *Consultant* and sub consultants,
- Ionising radiation or radioactive contamination from nuclear fuel or nuclear waste resulting from the combustion of nuclear fuel,
- Radioactive, toxic, explosive or other hazardous properties of an explosive nuclear device,
- Natural disaster,
- Fire and explosion,
- Impact by aircraft or other aerial device or thing dropped from them.

Z3 Disallowed Costs

Add the following in second bullet of 11.2 (18) add:
(including compensation events with the Subcontractor, i.e. payment for work that should not have been undertaken).
Add the following additional bullets after 'and the cost of':

- Mistakes or delays caused by the *Consultant's* failure to follow standards in Scopes/quality plans
- Reorganisation of the *Consultant's* project team
- Additional costs or delays incurred due to *Consultant's* failure to comply with published and known guidance or document formats
- Exceeding the Scope without prior instruction that leads to abortive cost
- Re-working of documents due to inadequate QA prior to submission, i.e. grammatical, factual arithmetical or design errors
- Production or preparation of self-promotional material
- Excessive charges for project management time on a commission for secondments or full time appointments (greater than 5% of commission value)
- Any hours exceeding 8 per day unless with prior written agreement of the *Service Manager*
- Any hours for travel beyond the location of the nearest consultant office to the project unless previously agreed with the *Service Manager*
- Attendance of additional individuals to meetings/ workshops etc who have not been previously invited by the *Service Manager*
- Costs associated with the attendance at additional meetings after programmed Completion, if delay is due to *Consultant* performance
- Costs associated with rectifications that are due to *Consultant* error or omission
- Costs associated with the identification of opportunities to improve our processes and procedures for project delivery through the *Consultant's* involvement
- Was incurred due to a breach of safety requirements, or due additional work to comply with safety requirements
- Was incurred as a result of the *Client* issuing a Yellow or Red Card to prepare a Performance Improvement Plan
- Was incurred as a result of rectifying a non-compliance with the Framework Agreement and/or any call off contracts following an audit

Z6 The Schedule of Cost Components

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

Z23 Linked contracts

Issues requiring redesign or rework on this contract due to a fault or error of the *Consultant* will neither be an allowable cost under this contract or any subsequent contract, nor will it be a Compensation event under this contract or any subsequent contract under this project or programme.

Z24 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 *Service Manager's* certificate.

Delete existing clause 51.2 and replace with:

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 *Service 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

Z25 Risks and insurance

The *Consultant* is required to submit insurances annually as Clause Z4 of the Framework Agreement

Secondary Options

OPTION X2: Changes in the law

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

OPTION X10: Information modelling

The period after the Contract Date within which the *Consultant* is to submit a first Information Execution Plan for acceptance is [REDACTED]

OPTION X18: Limitation of liability

The *Consultant's* liability to the *Client* for indirect or consequential loss is limited to [REDACTED]

The *Consultant's* liability to the *Client* for Defects that are not found until after the *defects date* is limited to [REDACTED]

The *end of liability date* is [REDACTED]
Completion of the whole of the *service*

OPTION X20: Key Performance Indicators (not used with Option X12)

The *incentive schedule* for Key Performance Indicators is in Schedule 17

A report of performance against each Key Performance Indicator is provided at intervals of [REDACTED]
3 months

Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996

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

Y(UK)3: The Contracts (Rights of Third Parties Act) 1999

term beneficiary

Part Two - Data provided by the *Consultant*

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

1 General

The *Consultant* is
Name

Address for communications

Address for electronic communications

The *fee percentage* is

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

Name (5)
Job
Responsibilities
Qualifications
Experience

Name (6)
Job
Responsibilities
Qualifications
Experience

Name (7)
Job
Responsibilities

Qualifications
Experience

The following matters will be included in the Early Warning Register

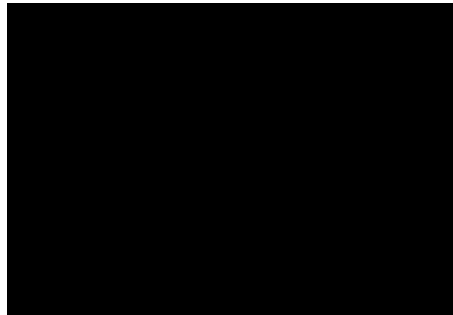
Impact of Covid-19 - delayed site visit and/or availability of EA/Co
Rate adjustment on anniversary of the framework
Data - Limited access to available data/incorrect format/drip fed to
Site - Access not being granted to site. Impact Delay in inspection:

3 Time

The programme identified in the Contract Data is

Resolving and avoiding disputes

The *Senior Representatives* of the *Consultant* are



Name (2)

Address for communications

Address for electronic communications

X10: Information Modelling

The *information execution plan* identified
in the Contract Data is
to be submitted within two weeks of the Contract Date

Contract Execution

Client execution


Signed under hand by _____ for and on behalf of the Environment Agency

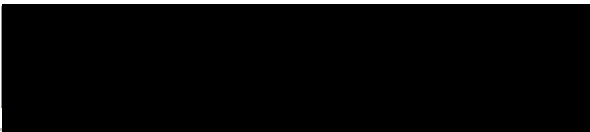
Signature 


Role _____

Consultant execution

Consultant execution

Signed under hand by  for and on behalf of Ove Arup & Partners Ltd


Signature _____ Role _____

Environment Agency

NEC4 professional services contract (PSC)

Scope

Project / contract Information

Project name	Ox-Cam - Nene Storage Study
Project 1B1S reference	██████████
Contract reference	
Date	20 November 2020
Version number	V11
Author	██

Revision history

Revision date	Summary of changes	Version number
17 October 2019	First issue	V1
07 November 2019	Minor changes to text and drawings, site information or reports section updated	V2 – V5
05 October 2020	Minor changes to text and drawings, site information or reports section updated	V6
15 October 2020	Remove reference to Phase 1 and 2	V7
22 October 2020	Updates relating to business case	V8
22 October 2020	Minor changes to text	V9
29 October 2020	Amendment to Section 2	V10
20 November 2020	Outcome Specification Clause 6 to be reviewed/removed	V11

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 following version of the Minimum Technical Requirements:

Document	Document Title	Version No	Issue date
412_13_SD01	Minimum Technical Requirements	2.0	18/03/2020

Details of the services

Details of the services are:

1. Description of the work:

Objective

The objective is to ensure that future investment decisions are clearly evidenced for a network of existing and proposed flood storage areas. The assessment will include current performance and management and how this could change taking account of growth and climate change.

2. Outcome Specification

Background

The River Nene through Northamptonshire is characterised by a range of flood and water management assets.

There are 22 existing Flood Storage Reservoirs (FSRs) in the Nene Catchment, including 6 statutory reservoirs on the River Nene and its tributaries. In 2011 a high level study of the feasibility of new storage structures on the river Nene was completed, with 12 locations being recommended as feasible for further investigation.

Growth is a key issue in Northamptonshire, and there are likely to be increasing opportunities to invest in existing and build new flood risk infrastructure as a result of new and expanding settlements linked to the Oxford Cambridge (Ox Cam) Arc. The Ox Cam Arc is defined as covering the ceremonial counties of Oxfordshire, Buckinghamshire, Northamptonshire, Bedfordshire and Cambridgeshire.

The required outcome of this commission is a review of existing asset performance (including surveys, reports and existing modelling) to investigate opportunities to invest in existing and build new flood risk infrastructure as a result of new and expanding settlements linked to the Oxford Cambridge (Ox Cam) Arc. This work will act as an evidence base to inform future strategies and studies for further significant capital investment in Flood Storage across the Nene Catchment.

Benefits assessment of the existing assets will include a high level feasibility of whether flood storage assets could also be dual purpose and act as a network of water supply to existing and new developments, and offer environmental benefits.

The *Consultant* shall ensure that the following activities are undertaken as appropriate:

1. Identification of the limitations of existing modelling of the River Nene catchment for undertaking investment decisions.
2. Identify any *client* data which needs to be updated due to quality concerns or data gaps and latest government guidance. This will include survey data.
3. Provide a GIS layer for showing the location of any data gaps.
4. Assessment of all current benefits based on existing information (residential, commercial, infrastructure, natural capital, agricultural) associated with existing Flood Storage assets on the Nene and its tributaries.
5. Assessment of benefits based on existing information (including residential, commercial, infrastructure, natural capital, agricultural) associated with proposed Flood Storage assets on the Nene and its tributaries.
6. Using the outputs from existing models, technical reports etc, form a professional judgement of future performance of both existing and proposed assets as a result of increasing flood flows associated with climate change

7. Assessment of the potential for existing and proposed assets to be dual operation as both flood storage and water resource assets.
8. Assess how existing assets work in parallel to reduce flood risk to existing urban settlements, specifically Northampton, Wellingborough, Rushden and Peterborough.

The findings of these works will inform and enable the production of a report with an assessment for each existing and proposed asset which will provide the basis for future strategies and studies.

The *Consultant* will engage with project teams undertaking relevant flood studies across the Ox-Cam Arc, specifically in Thames area and Cambs and Beds Environment Agency (EA) Area.

The *Consultant* shall undertake the following tasks as part of the data review:

Section 1: Strategy Review

- **Understand how FSRs fit into wider Flood Risk Management (FRM) Strategy for the area:** Review Environment Agency (EA) Flood & Coastal Erosion Risk Management (FCERM) Strategy, River Nene Catchment Flood Management Plans (CFMPs), Northamptonshire Flood Risk Management Strategy (FRMS), Peterborough FRMS, Northampton Strategic Flood Risk Assessment (SFRA), Anglian Water Strategy, and summary information provided by the *client* on major planned FRM schemes in the study area.

Section 2: Flood Risk Review

- **Appreciate scale of future flood risk:** Summarise latest UKCP18 rainfall and temperature projections and EA climate change guidance for the study area
- **Provide recommendations for use of models in FSR appraisals:** Review 2016 Upper Nene Model Report and scope for Middle Nene Model update. Provide comment on the currency of the upper Nene models with respect to known changes in survey data, structures, climate change hydrology etc. Identify any limitations of using the upper Nene models to represent proposed FSRs. This will inform the use of models within future projects and provide recommendations for the parallel Middle Nene model review and update.

Holistic assessment of flood risk: Review available (including from EA, SFRAs and Flood Risk Assessments) fluvial, surface water and groundwater flood maps, and risk of flooding from artificial sources. Review historic flood maps and information. Map and flood history database information will be provided by the *client*, and supplemented with the *consultant's* search for readily available information online.

Section 3: Existing Asset Review

The *consultant* will assess the three following aspects for each of the 22 existing FSRs (including 6 statutory reservoirs) in the study area:

- (i) **Assessment of flood risk management performance with climate change.** Based on analysis of available modelling (e.g. increasing frequency of extreme events), existing FSR capacities and operation understood from the *client*, as well as application of other relevant information (including any catchment scale modelling from the parallel Ox-Cam Economic Evidence Study for Investment in Flood Resilience and Adaptation), judge the likely performance of FSR assets, including with climate change.

- (ii) **How assets meet existing and anticipated legislation, design / freeboard/ risk category guidance (including any impact of new development and receptors).** Professional judgement (not a certified check) that FSRs comply with the industry design guides, including whether new development and additional receptors may change safety category. Consider implications of anticipated changes to the Reservoirs Act to introduce requirements for small reservoirs (e.g. 10,000 m³ or more). This may affect categorisation of non-statutory assets.
- (iii) **The condition, likely maintenance and anticipated lifetime of the asset.** The *consultant* will undertake joint site visits with the *client* to each of the 22 existing FSRs, and estimate remaining life and maintenance issues/budgets. A carbon assessment will be undertaken for any anticipated significant works. The *consultant* will also highlight any survey requirements. This task assumes that 1 representative from the *consultant* will be accompanied by a representative from the *client* at each site.

The *consultant* will also consider any implications for linked FRM assets on Main Rivers which might influence the FSR performance. The *consultant* will produce a report *pro forma* for each asset which summarises the assessment in (i) – (iii) above. The *client* will provide relevant information for each asset, e.g. inspection reports, maintenance reports, incident reports etc

Section 4: Proposed FSR Review

- **Review proposals for 12 FSRs from the 2011 River Nene Flood Storage Study.** The *consultant* will review the 2011 proposals in light of (i) new development plans and landowner information where available (ii) updated flood risk mapping and climate change allowances (iii) environmental designations and other high level constraints (iv) potential tie-ins with Water Resource planning (v) updated appraisal guidance, including Partnership Funding rules, natural capital and net zero carbon delivery. The *consultant* will provide recommendations for (i) an approach to a high level economic appraisal for future projects (including agricultural damages) and (ii) developing a funding strategy in the event of a Grant in Aid funding gap.

Section 5: Review of potential for dual-use assets

- **Understand potential application of dual-use storage area to the study area:** Based on recent work for the Regulators' Alliance for Progressing Infrastructure Development (RAPID; Ofwat, EA, Drinking Water Inspectorate), the *consultant* will undertake a high level review of dual use FRM / Water Resources FSRs. This will include the identification of potential scheme ideas related to the River Nene, how similar schemes have worked elsewhere and suggested next steps.
- **Further develop links with Water Resources East (WRE) towards dual use storage areas:** The *consultant* will liaise with WRE and feedback to the Client key considerations for Dual Use Storage areas to inform future projects.

Section 6: Proposed Development Review

- **Comment on development locations with respect to current/future flood risk, and proximity to existing/proposed FSRs:** Six Local Plans: Daventry District, South Northamptonshire District, Northampton District, Wellingborough District, Kettering District, East Northamptonshire District. The *consultant* will consider National Planning Policy Framework (NPPF) requirements for new development, and review completed

FRAs for major developments (assumed to be up to ten). The *client* will request development area mapping from each local authority.

Section 7: Technical Summary and Recommendations for future projects

- **Summarise the data review and provide recommendations for future projects.**
The *consultant* shall produce draft and final reports, and allow sufficient time for review by the *client*. The final deliverables from the data review stage will include the following:
 - An assessment for each of the 22 existing FSRs and the 12 proposed FSRs which summarises the costs and benefits identified in the assessments.
 - A conclusion as to the limitations of existing modelling of the River Nene catchment for undertaking investigations into optimising storage.
 - Identify any data which needs to be updated due to quality concerns or data gaps and latest government guidance. This will include survey data.
 - GIS layer showing the location and type of any data improvements required, including detail on how to secure improved data.
 - Assessment of the potential for existing and proposed assets to be dual operation as both flood storage and water resource assets.

The services specifically exclude the following:

- a) A detailed review or re-running of the 14 flood models covering the upper and middle Nene, and the associated river gauge network. This work was undertaken for the models in the upper Nene in 2016, and is being undertaken by others on the middle Nene.
- b) Any work which will be undertaken as part of future projects which will build on this data review, use modelling and other analysis to optimise proposals for existing and future FSRs, as part of an adaptive plan to improve FRM.

3. Drawings, site information or reports already available

Report / Information	Date	Format (e.g. Digital format (enclose), paper copy (enclosed) or paper copy (available for inspection))
Topographic data	Varies	
Hydraulic model inputs, outputs and model reports	Varies	
AIMS data		Shapefiles: <ul style="list-style-type: none"> • Flood Map for Planning (Rivers and Sea) - Flood Storage Areas • Flood Map for Planning (Rivers and Sea) - Spatial Flood Defences (without

Report / Information	Date	Format <i>(e.g. Digital format (enclose), paper copy (enclosed) or paper copy (available for inspection))</i>
Report 'Nene Flood Storage Study, Opportunities for Flood Storage in the Nene catchment'	August 2011, Final Report Rev2	Digital format
Reservoir Data		Digital Format

4. Specifications of standards to be used

- a) ICE Flood Reservoir Safety (Fourth Edition) 2015
- b) Design, Operation and Adaptation of Reservoirs for Flood Storage 2016
- c) Plus others as required (e.g. Defra Guide to Drawdown Capacity for Reservoir Safety and Emergency Planning)

5. Constraints on how the *Consultant* provides the services

- a) Fortnightly remote progress meetings to include financial updates and forecasts to meet EA 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.
- b) The Consultant shall measure and take active steps to reduce their carbon on a project level basis. The measure for this carbon reduction is to be calculated using the Environment Agency carbon tool.

6. Requirements of the programme

- a) The programme complies with the requirement of Clause 31 and also includes alignment and submission of the BEP and Master Information Delivery Plan (MIDP).
- b) The following are absolute requirement for Completion to be certified:
 - Population of the *Client's* latest version of the Project Cost and Carbon Tool, or its successor
 - 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

7. Services and other items provided by the *Client*

- a) Information on major planned FRM schemes in the study area
- b) Map and flood history database information
- c) development area mapping from each local authority
- d) Understanding of existing FSR capacities and operation
- e) Undertake site visits with the *client* to each of the 22 existing FSRs, and estimate remaining life and maintenance issues/budgets
- f) Provide relevant information for each FSR asset, e.g. inspection reports, maintenance reports, incident reports etc
- g) A Site Access

Appendix 1 - BIM Protocol – Production and Delivery Table

All *Client* issued information referenced within the Information Delivery Plan requires verifying
ced elsewhere within the *Scope*.

