



Framework: Collaborative Delivery Framework
Supplier: Jacobs UK Ltd
Company Number: 02594504

Geographical Area: North West
Project Name: Leigh East Strategy
Project Number: ENV0004434C

Contract Type: Professional Service Contract
Option: [REDACTED]

Contract Number:

Stage: Other

Revision	Status		Originator		Reviewer		Date

PROFESSIONAL SERVICE CONTRACT under the Collaborative Delivery Framework
CONTRACT DATA

Project Name Leigh East Strategy

Project Number ENV0004434C

This contract is made on
between the *Client* and the *Consultant*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 12th 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

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



Option for resolving and
avoiding disputes

W2

Secondary Options

X2: Changes in the law

X9: Transfer of rights

X10: Information modelling

X11: Termination by the *Client*

X18: Limitation of liability

X20: Key Performance Indicators

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

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

Z: *Additional conditions of contract*

The *service* is To identify and develop a series of requirements to form the basis of creating a scope of works and provide information to support the creation of a Full Business Case (FBC) to develop an Asset Management Strategy that enhances the understanding of flood defence

The *Client* is

Environment Agency

Address for communications

Richard Fairclough House
Knutsford Road
Latchford
Warrington
WA4 1HT

Address for electronic communications



The *Service Manager* is

Address for communications

Jonathan Wright
Environment Agency
Richard Fairclough House
Knutsford Road
Latchford
Warrington
WA4 1HT

Address for electronic communications



The *Scope* is in

Leigh East Strategy PSC Option E scope v6

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
None

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
conditions to be met
'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 [REDACTED]

The *Client* provides access to the following persons, places and things
access
All people & places

access date
[REDACTED]

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

The *completion date* for the whole of the *service* is [REDACTED]

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 forecast of the Prices is £62,093 00

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

The *interest rate* is 2 00% per annum (not less than 2) above the Base 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

1. 'not used'
2. 'not used'
3. 'not used'
4. 'not used'

5. 'not used'

8 Liabilities and insurance

These are additional *Client's* liabilities

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

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

EVENT	MINIMUM AMOUNT OF COVER	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE <i>SERVICE</i> OR TERMINATION
The <i>Consultant's</i> failure to use the skill and care normally used by professionals providing services similar to the <i>service</i>	██████████ in 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	██████████ in 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	<i>Legal minimum</i> in respect of each claim, without limit to the number of claims	<i>For the period required by law</i>
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	██████████	

Resolving and avoiding disputes

The *tribunal* is litigation in the courts

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

Address for electronic communications ['to be confirmed'](#)

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

Z 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

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 2 weeks

OPTION X18: Limitation of liability

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

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

The *end of liability* date is 6 years after the 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 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
not used not used

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

[Redacted]

Address for communications

[Redacted]

[Redacted]

[Redacted]

The fee percentage is

[Redacted]

[Redacted]

The key persons are

Name (1)
Job
Responsibilities
Qualifications
Experience

[Redacted]

Name (2)
Job
Responsibilities
Qualifications
Experience

[Redacted]

Name (3)
Job
Responsibilities
Qualifications
Experience

[Redacted]

Name (4)
Job
Responsibilities
Qualifications
Experience

[Redacted]

Name (5)
Job
Responsibilities
Qualifications
Experience

[Redacted]

Name (6)
Job
Responsibilities
Qualifications
Experience

[Redacted]

Name (7)
Job
Responsibilities
Qualifications
Experience

[REDACTED]

The following matters will be included in the Early Warning Register

3 Time

The programme identified in the Contract Data is

Resolving and avoiding disputes

The Senior Representatives of the Consultant are

Name (1)
Address for communications

[REDACTED]

Address for elec

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Client execution

for and on behalf of the Environment Agency

[REDACTED]

Date

Role

Signed Underhand by

for and on behalf of

██████████

[REDACTED]

114

██████████

Environment Agency NEC4 professional services contract (PSC) Scope

Project / contract Information

Project name	Leigh East Strategy 21/22
Project SOP reference	ENV0004434C
Contract Name	██████████ Jacobs – Scoping Services
Contract Reference	35533
Document Reference	ENV0004434C-EA-XX-XX-SO-PM-G0300-S3-P01-G0300
Date	17/03/22
Version number	6
Author	Jonathan Wright

Revision history

Revision date	Summary of changes	Version number
27/01/2022	First issue	1
02/02/2022	Additional data provided by client updated	2
09/02/2022	DRAFT issue to Consultant for comment	3
21/02/2022	Revised further to Consultant review	4
01/03/2022	Fifth issue for DGC review	5
17/03/2022	Final issue for Bravo upload	6

This Scope should be read in conjunction with version 11 of the Minimum Technical Requirements which is current at the Contract Date. In the event of conflict, this Scope shall prevail.

1.0 Form of Contract

NGSA Collaborative Delivery Framework NEC4 PSC [REDACTED]

2.0 Details of the services

2.1 Objective and Description of the work:

The objective of this contract is to provide information and support for the creation of a Full Business Case (FBC) to develop a flood risk management strategy including an Asset Management Strategy that enhances the understanding of flood defence assets in the Leigh East catchment. The Asset Management Strategy is a requirement of the Environment Agency to comply with ISO55000.

The development proposals and works undertaken as part of this contract should be consistent with the requirements of the Leigh East Strategy 21-22 Project Delivery Plan (PDP) v3.

The Services required under this contract are:

- Review all existing relevant data (listed on page 7 & to be provided by the *Client*) and identify any gaps in information and schedule additional data gathering requirement to inform the Strategy development. If additional data gathering is required, the *Client* will issue an instruction on how to proceed.
- Produce a proposal that identifies the *Consultant's* suggested delivery approach for the Strategy. This should identify tasks and activities required to develop the strategy and assist the *Client* to develop the Scope of requirements for the subsequent delivery of the strategy. The *Consultant* is not required to produce the scope as part of this contract.
- Support the Client to produce a Business Case to secure approvals to progress the development of the strategy. This is to include the production of cost estimates and a delivery programme of the *Consultant's* proposal for inclusion in the FBC.

2.2 Background

The Leigh East area is a predominantly urban area and includes tributaries draining to Bedford Pumping Station down to the confluence with the River Glaze downstream of the A580. The area has been identified as being at high flood risk, with the Flood Risk Management Plan 2 (FRMP2) identifying the area as a nationally significant Flood Risk Area. There is a low SoP due to reliability issues and deterioration associated with the Strategically Important Asset's (SIAs'). The need for intervention in the area was identified in the Catchment Flood Management Plan and Glaze Strategic Overview Report in 2009, the CFMP also recommends the policy of "take further action to reduce flood risk now and/or in the future" for this study area.

The drainage of water from Bedford Brook and its tributaries by means of gravity is not possible due to the subsidence of the ground levels due to historic Coal Mining in the area. The SIA's within the study area, Bedford Pumping Station and Atherton Lake Flood Storage Reservoir, are estimated to protect over 600 properties. If the Environment Agency stopped operating the pumping station, a flash would form after about a day on the subsided land upstream of the pumping station and subsequently over 600 properties would be permanently flooded. These properties would be economically written off but more significantly there would be significant risk to the life to the occupants of these affected properties. In order to continue to manage the flood risk, there is a requirement to understand the impacts of climate change and how this will change the Standard of Protection in the study area.

In addition to the flood risk, there is a clear and urgent business need to move from the largely reactive management of the SIA's to the application of planned whole life asset management. To do this, the financial and carbon cost of actively operating and reactively maintaining these assets needs to be understood. Planning interventions will also help to meet wider EA business objectives, contributing to carbon reduction and sustainability goals.

The strategy study area is shown in Figures 1 and 2 below. The main focus of the strategy will be around the management of the Strategically Important Assets (SIA's) inclusive of Bedford Pumping Station and Atherton Lake flood storage reservoir.

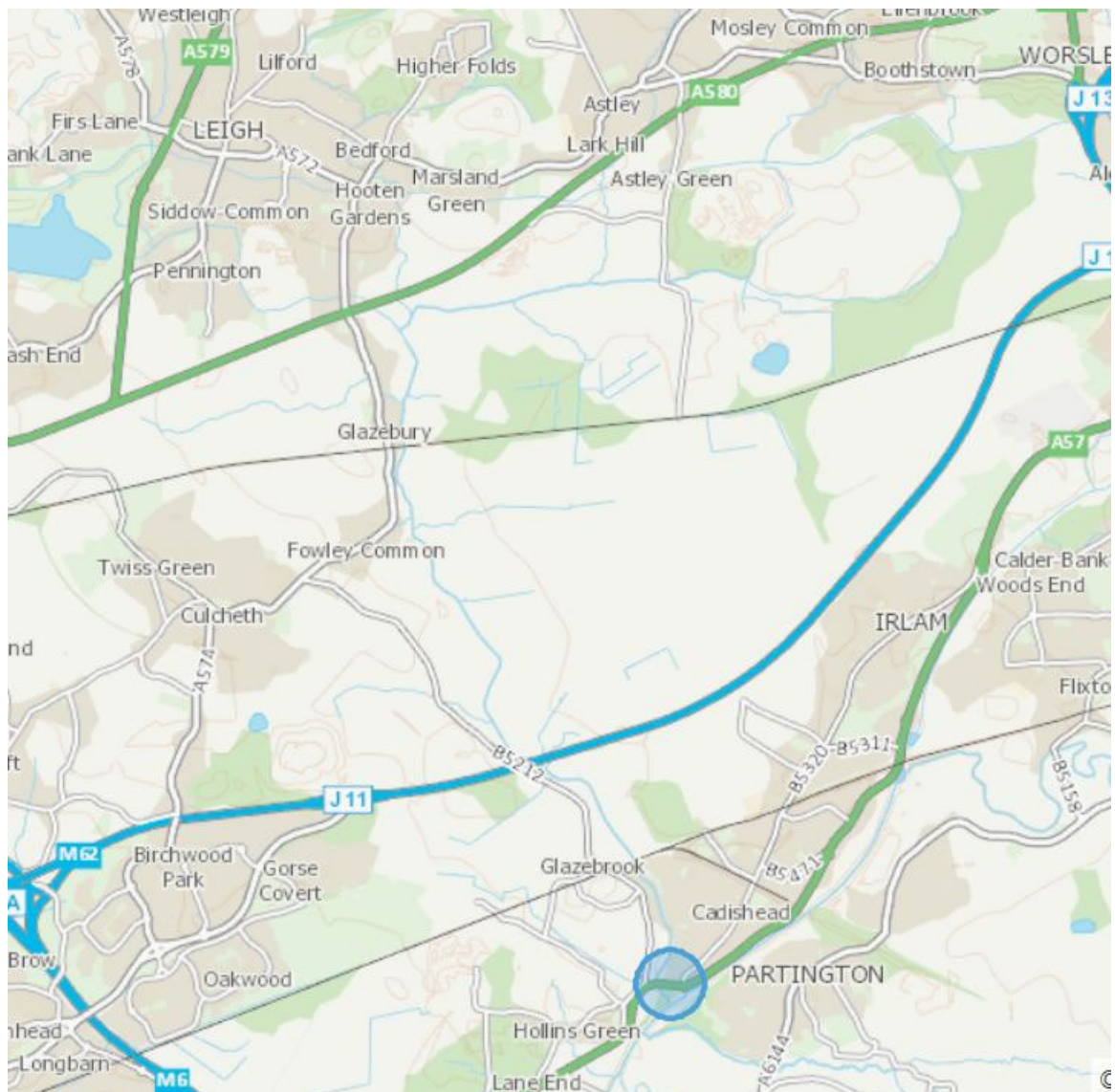


Figure 1: Map of the downstream study area, the River Glaze or “Glazebrook” as it’s otherwise known terminates in the River Mersey, shown by the Blue Circle.

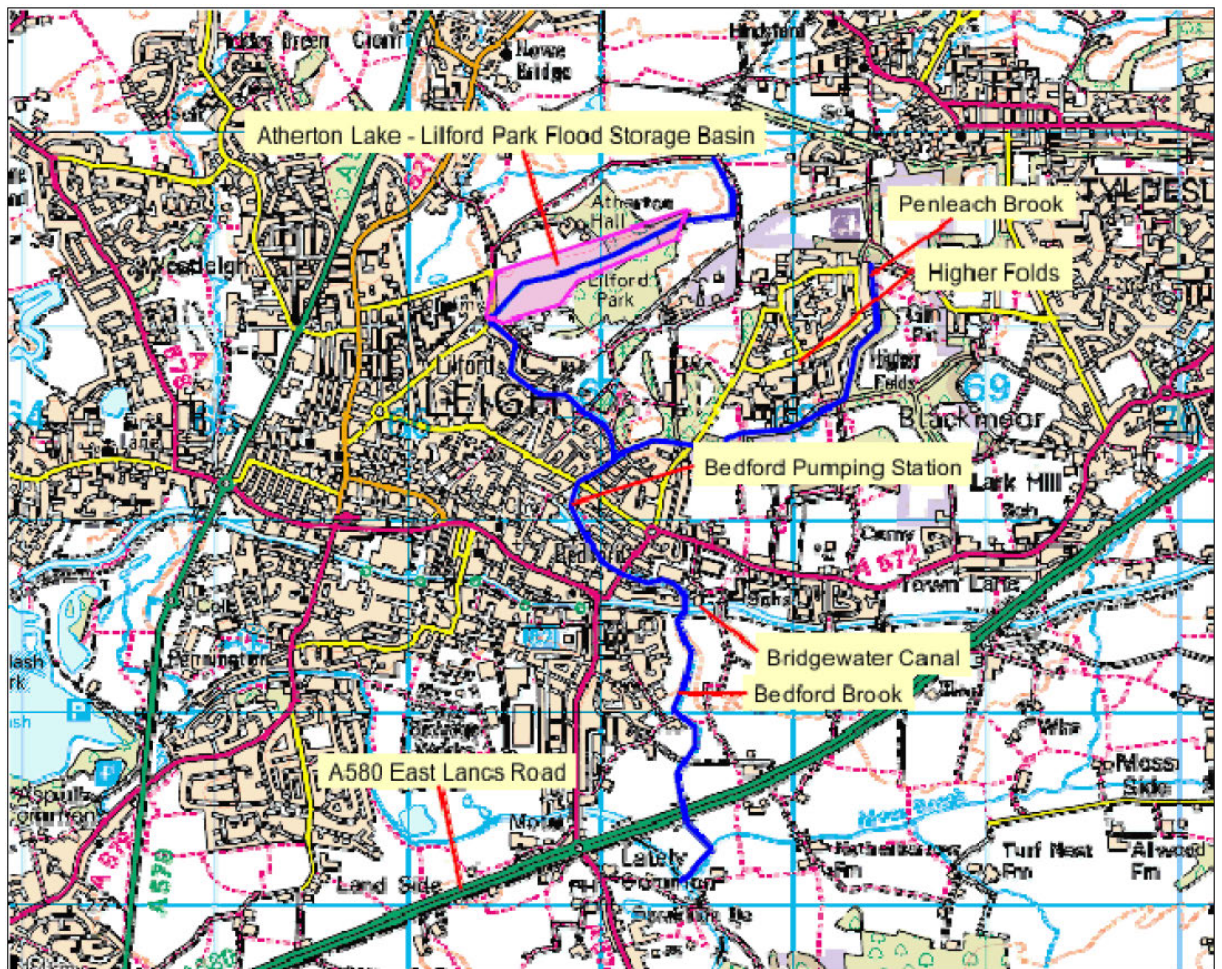


Figure 2: Map of the upstream study area in Leigh. The SiA's within the study area are Atherton Lake Flood Storage Reservoir AKA "Lilford Park" and Bedford Pumping Station.

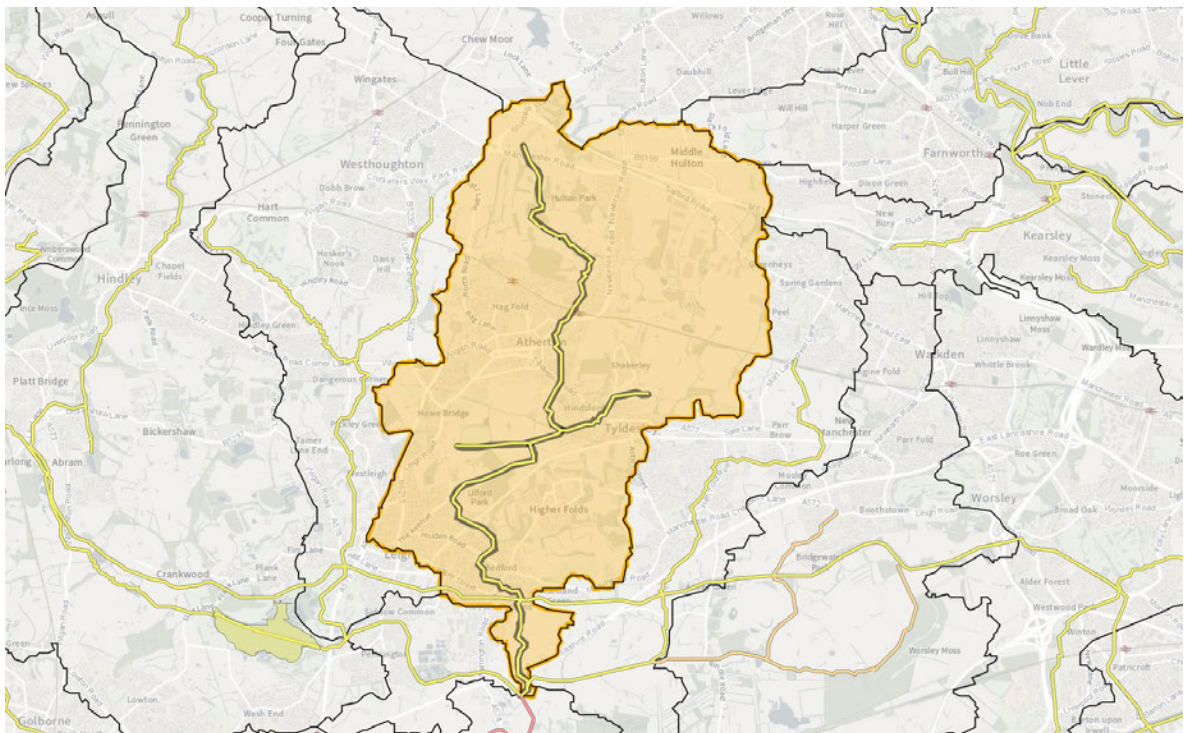


Figure 3: Map of the Leigh East Catchment showing the full extent of the study area.

2.3 Outcome Specification

The required outcome of this PSC contract is for the *Consultant* to review the existing information and produce a proposal that identifies additional data, study and modelling necessary to inform the strategy.

The *Consultant's* proposal will recommend how the Flood Risk Management strategy will be delivered. This should include a detailed programme and cost estimate that will be used to inform the creation of an FBC to develop a Strategy. A draft of the project proposal is required to be produced and issued to the *Client* by the 18th July 2022.

The project study will be delivered in accordance with EA carbon reduction hierarchy to aspire and contribute to EA 2030 net zero carbon reduction targets.

For the development of the detailed proposal of works for the strategic study, the *Consultant* shall ensure the following key considerations are included and considered:

- The *Consultant* shall develop proposals to be consistent with the requirements of the Project Delivery Plan.
- The *Consultant* shall ensure that national best practice is incorporated into proposal development and demonstrate how optimum flood risk reduction, natural processes, recreation, good ecological water quality, environmental outcomes and visual amenity can be combined.
- The *Consultant* shall produce a proposal on how they would deliver the strategy study, this should consider but not be limited to economic, social and environmental factors. This proposal will be used by the *Client* to populate an FBC.
- The *Consultant* shall support the Client to ensure that the scope of works enables the Client to achieve efficiency targets set for this commission and for future stages of the project.
- The *Consultant* shall support the *Client* in stakeholder and customer engagement and partnership working.
- The *Consultant* shall, when considering the scope of works for the future study, ensure adherence in accordance with carbon hierarchy to aspire and contribute to EA 2030 net zero carbon reduction targets.

When undertaking the gap analysis and strategy proposal, the *Consultant* should consider that the future flood risk management strategy will need to include:

- As a minimum, satisfy the requirement for the Client to adhere to ISO55000. The *Client* needs a plan for how to manage the system of assets in the future, with an associated timeline of works and budget costs.
- Assessment of the existing system, its costs, negative impacts and benefits (impacts/benefits include ecosystem services and recreation).
- Developing alternative strategic level approaches for the future delivery of FRM in the study area.
- When doing this, be cognisant of the *Client's* eMission 2030 aims and carbon targets.
- Support the *Client* in producing a plan as to how to engage partners and the public in the strategy development and options appraisal process.
- Recommendations on preferred approaches for future asset management and an implementation plan.
- A review of the current model and hydrology of the study area. As a part of this, the consultant shall review surface water/pluvial flood risk and determine whether and how best to integrate this within the existing model tool.

The services associated with this PSC specifically excludes the following:

- There is no requirement under this contract to undertake any work to the existing hydraulic model for the study area.

- The *Consultant* is not required to write the scope of works for the subsequent PSC contract, the *Client* will write the scope with support and input from the *Consultant*.

3.0 Managing the Services

3.1 Key Activities

The key activities the *Consultant* is required to undertake for this contract are:

- General Project Management.
- Engineering Services and advice.

Full details of requirements are included in Section 4 – “Services Required”.

3.2 Deliverables

The key deliverables that the *Consultant* is required to provide, for *Client* acceptance and Sign-off are listed below:

General Project Management:

- Monthly Progress Report (including updated programme, financial updates and forecasts in line with the *Client* PoL reporting procedure).
- Assist the *Client* in capturing Lessons Learnt, Efficiencies and Issues as they arise.
- BIM Execution Plan & Updated Master Information Delivery Plan (MIDP).
- Review of transmittal record of documentation provided by the *Client*.

Engineering Services and Advice:

- Recommendation for any further information requirements. This is to be reported to the *Client* and the *Service Manager* shall instruct on how to proceed.
- Delivery proposal for the future strategy, including a programme of all required tasks and activities. -A draft of this proposal shall be issued to the *Client* by the 18th July 2022.
- Cost estimate for the *Consultant* led activities in the delivery proposal for post FBC works. A draft cost estimate shall be issued to the *Client* by the 18th July 2022.
- Develop a Project Risk Register in collaboration with the *Client* for the strategy proposal. A draft risk register shall be issued to the *Client* by the 18th July 2022.

3.3 Previous Studies & Additional Data Provided by the *Client*

The *Consultant* is to refer to and use all existing and available information (which will be provided by the *Client*) to support the delivery of this contract.

The *Consultant* can assume the documentation supplied by the *Client* to be accurate and correct. However, if the *Consultant* shall discover that any of the existing scheme documentation or supporting information provided is not correct, contains anomalies, its accuracy is not adequate for purpose, or the *Consultant* disagrees with assumptions made in deriving said information, then the *Consultant* shall inform the *Client* and seek instruction on how to proceed.

The following table of documents will be provided to the *Consultant* on commencement of this contract:

	Date	Title	Author
	Jan-22	Leigh East Strategy 21/22 Project Delivery Plan v3	EA
Pipeline Assessment 2019-20	2020	ENV0001757C Full Business Case (Short Form) Asset Investment Plans for MEICA Strategically Important Assets	EA
	2020	NWO013E/901A/164A, ENV6003073R-JAC-ZZ-00-RP-Z-001 - Capital Pipeline Studies	EA
	2020	ENV6003073R-JAC-ZZ-00-RP-Z-001 - GMMC Capital Pipeline Studies, Pre-Mandate Investigations	Jacobs
	2019	Capital pipeline Methodology	EA
Reports, Studies, Data	2019	Capital scheme damages scenarios	EA
	2021	Leigh East Integrated Project Mandate_Aug2021	EA
	2018	Bedford PS Sump Works Gateway 4 Report	EA
	2017	Bedford PS Business Case Update Report (Form G)	EA
	2012	Bedford PS Project Appraisal Report (Business Case)	EA
	2009	River Glaze Strategic Overview	EA / B&V
	2009	Leigh East FRMS Form A	EA
	2005	Bedford Brook Pre-Feasibility Final Report	EA / B&V
	Nov-21	Bedford PS Gateway 5 Report & Appendices	EA
	Nov-18	Bedford PS Sump Remedial Works H&S File	EA
	Apr-17	Bedford PS Updated Corrected As-Built Drawings	Volker Stevin
	Jun-14	Bedford PS H&S File v1	EA
	Apr-14	Bedford PS O&M Manual & Appendices	Volker Stevin
	May-21	FRMP Measures Action Plan v2	EA
	2009	Leigh East FRMS Handover to NCPS Brief	EA
	2009	Mersey Estuary Catchment Flood Management Plan - Summary Report	EA
	2016	Leigh East Hydraulic Model, Flood Modeller Pro-Tuflow	EA
	2009	Lilford Park Flood Storage Area Reservoir Inspectors Report due end March 2009	EA
	2009	System Asset Management Plan (SAMP) for Bedford, due end March 2009	EA
	2009	Major Asset Programme Summary Spreadsheet, February 2009	EA
	2007	Whole Life Costing for Bedford Pumping Station	ARUP
	2007	Whole Life Costing for Lilford Park Flood Storage Area	ARUP
		Integrated Opportunities Mapping (CLIMB)	EA
		Existing Asset Data (AIMS data)	EA
		Existing Asset Maintenance Information including cost to undertake routine maintenance (Financial costs for maintenance, repair and Carbon costs for annual maintenance).	EA

Reports Recalled box	Various	Historical flood history information stored off site. Specific boxes for different Years available upon request	EA
GMMC Incident Management Toolbox	Various	Information available upon request. Inclusive of Operational Plans including exceedance, current procedures, triggers, resource requirements.	EA
Previous GI Study		*To be confirmed*	EA
Model Analysis	2016	Leigh_East_Model_Report_FINAL_REV2	EA
	2016	Leigh East Model ea013_0206	EA
Land Ownership	Various	Mapping ongoing with EA PSO Team	EA
Legal Agreements	Various	Estates team to provide all existing legal agreements	EA

4.0 Services Required

4.1 Project Management

4.1.1 Project Management - General

As part of the general project management duties the *Consultant* shall, as a minimum, undertake the following activities:

- General Project Management and Monthly Progress Reporting no later than the second Monday of each month (including progress update report, record of deliverables issued, updated programme, financial updates & forecasts, and risk management updates).
- Attend a start-up workshop within 2 weeks of contract award with all internal *Client* project stakeholders to review the scope, programme, and proposed delivery plan for the commission.
- Attend monthly progress meetings and produce meeting minutes for issue by the *Client*. The *Consultant's* Project Manager (or nominated delegate) shall attend each monthly progress meeting with additional technical representation provided on an as needs basis.
- Provide project updates to the *Client* via phone or telecon on at least a weekly basis.
- Maintain and update a project issues log which will be reviewed at monthly progress meetings and determine the appropriate actions necessary to resolve the issues.
- Capture lessons learnt relevant to strategy delivery on the scheme lessons learnt log, this is to be reviewed at progress meetings. Ensure that any key lessons learnt are shared with the project team to enable the Project Manager to disseminate to the Collaborative Delivery Team (CDT) and wider business.
- Co-operate with the *Client* in the role of the BIM Information Manager. Prepare/produce a BIM Execution Plan and updated Master Information Delivery Plan (MIDP) using the BIM Implementation Plan and MIDP structures provided by the *Client*.
- Provide input to project efficiency register at monthly progress meetings.
- Provide support to the *Client* in developing Communication and Stakeholder Engagement plan and supporting information for the *Client* to secure landowner agreements to support right of entry for any survey/investigation works.
- Ensure quarterly input into framework performance assessment and implementation of associated actions arising.
- Provide input to carbon and sustainability reporting at key project milestones.
- General quality assurance of the deliverables and services provided under this commission.

4.1.2 Project Management - Deliverables

The *Consultant* shall produce and provide:

- BIM Execution Plan and updated Master Information Delivery Plan.
- Monthly Progress Report (including updated programme, financial updates, forecasts and updated Issues Log).
- Monthly progress meeting minutes and actions for *Client* review and distribution.
- Updated Project Lessons Learnt Log.
- Updated Project Efficiency Register.

4.2 Engineering Services Input:

4.2.1 Engineering Services and advice – General

The *Consultant* shall, as part of this contract, undertake the following general engineering services tasks:

- Develop a Project Risk Register and Issues Log in conjunction with the *Client*.

The *Consultant* shall undertake this contract in a manner that is consistent with the Environment Agency's sustainability targets (as outlined in the CDT Framework's Sustainability Chapter) and gives due consideration to the carbon impact of the proposed works as they are developed.

4.2.2 Engineering Services and advice – Data Review and Gap Analysis

The *Consultant* shall undertake a review of existing data and information provided by the in sufficient detail to produce the strategy proposal.

The *Consultant* shall provide a recommendation for any further information gathering and present this to the *Client*. Should further information be required, the *Client* shall issue an instruction on how to proceed.

4.2.3 Engineering Service and advice – Strategy Proposal

The *Consultant* is required to produce a *Consultants* proposal on delivery of the future strategy post FBC. The proposal should include the following. If the gap analysis identifies further requirements, this can be added in agreement with the *Client* and an Instruction will be given by the *Service manager*.

- A programme of all activities and tasks required to deliver the strategy proposal
- A cost estimate of the programme of tasks and activities to deliver the strategy proposal.
- A project risk register.
- A methodology to deliver the strategy.

The *Consultant* shall provide information to the *Client* for inclusion in the FBC to get FSoD approval to deliver the strategy.

The *Consultant* shall assist the *Client* in producing a detailed scope of works for the subsequent contract to deliver the strategy as per the *Consultants* proposal.

5.0 Specifications of standards to be used

5.1 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. The *Consultant* shall comply with the Environment Agency SHEW CoP for all works undertaken as part of this contract.

The *Consultant* will promote and adopt safe working methods and shall strive to deliver solutions that provide optimum safety to all.

5.2 *Client* Standard Documents

All works prepared by the *Consultant* shall be compliant with the version of the *Client* Minimum Technical Requirements current at the Contract Date.

Furthermore, the *Consultant* should carry out their services using the following relevant standards, some of which are accessible on the Collaborative Delivery Community on SharePoint. Access to this should be given at a Framework Level to relevant staff.

Ref	OI No	Report Name
1	183_05	Data management for Flood Risk Management projects and good data management considerations
2	-	eMission 2030
3	-	Fluvial Modelling Standards https://www.gov.uk/government/publications/river-modelling-technical-standards-and-assessment
4		FCERM Appraisal Guidance https://assets.publishing.service.gov.uk/media/613205c1d3bf7f05b9705049/The_full_technical_FCERM_appraisal_guidance.pdf
5	84_09	How to produce a Flood and Coastal Risk Management Strategy Plan 23_04_09

6.0 Constraints on how the *Consultant* provides the services

6.1 Constraints

The *Consultant* shall note that there is limited FSoD available to deliver a full business case and scope for future works prior to FBC approval. The *Client* has approval to spend £100k prior to full business case approval, this includes all *Client* staff costs and *Consultant* costs.

7.0 Reporting Requirements

7.1 Monthly Progress Reporting

The *Consultant* shall provide a schedule of tasks, resource and hours consistent with the cost forecast for the contract and submit it to the *Client* for acceptance within two weeks of contract award.

The *Consultant* is required to report on proportion of tasks completed and financial progress each month against the accepted activity schedule. The monthly reporting shall include an assessment of percentage complete, spend to date and forecast cost to completion for each activity and comment on how this compares to the accepted cost forecast.

7.2 Requirements of the programme

The *Consultant* shall submit a programme in accordance with the Contract Data and the requirements of Clause 31 of the conditions of contract in the form of a Resource Analysed Critical Path Network linked bar chart showing start and finish dates for each activity. It shall clearly identify those activities forming the critical path. The programme is to be provided in an electronic format in Microsoft Project 2016 (*.mpp) and *.pdf formats.

The Clause 32 programme shall include actual and forecast progress against the baseline together with a brief narrative in the progress report on the changes since the last accepted programme

The *Consultant's* programme should be compatible with the *Client's* whole life programme for the overall project in the Project Delivery Plan (PDP) attached to this document.

The *Consultant* ensures that the programme includes activities for the submission of the BEP and Master Information Delivery Plan (MIDP).

The *Consultant* shall ensure that the programme includes appropriate time allowances for the internal quality assurances and review of all deliverables prior to issue to the *Client*.

The *Consultant* shall allow the *Client* a period of ten-working days to review each of the deliverables prior to their finalisation and this should be reflected in the programme.

8 Services and other things provided by the *Client*

8.1 Data and Information Management and Intellectual Property Rights

The *Consultant* is to make full use of the *Client's* web-based project collaboration tool (currently Asite /Adoddle) for the handover of project deliverables. All project and contract communications and records are to be distributed and stored using the project collaboration tool in-place at the time of contract award.

The *Consultant* is required to supply all *Consultant* deliverables through Asite and the Information Delivery Plan with appropriate BIM referencing. All *Client* issued information referenced within the Information Delivery Plan requires verifying by the *Consultant* unless it is referenced elsewhere within the *Scope*.

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

8.2 Data Custodianship

The data custodian for project deliverables from this commission will be the Partnership and Strategic Overview team.

8.3 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.

8.4 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* 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.

8.5 Data Security

All survey information will be provided to the *Consultant* in an encrypted format (using WinZip 128 bit encryption) according to *Client* 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.

8.6 Client's Advisors

The *Client* has several advisory departments. Instructions will only be deemed enacted from them when they are confirmed by an Instruction from the *Client* Project Manager. These departments include Area, NEAS, etc.

8.7 Quality

The *Consultant's* Quality Plan and quality management system shall comply with the requirements of ISO9001 and ISO14001.