

PSC scope template – design



Environment
Agency
15/02/19

NEC4 professional services contract (PSC)

412_13_SD05

Use the template on the pages that follow to assist you when preparing the scope for an NEC4 professional services contract (PSC).



Environment Agency

NEC4 professional services contract (PSC)

Scope

Project / contract information

Project name	Fowlea Brook – Elenora Street (FAS)
Project 1B1S reference	ENVIMMI001456
Contract reference	
Date	3 rd February 2021
Version number	V12
Author	

Revision history

Revision date	Summary of changes	Version number
	First issue	

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

Document	Document Title	Version No	Issue date
412_13_SD01	Minimum Technical Requirements	Insert latest version of MTR on ASite	Insert date of latest version of MTR on ASite

1 Overview

1.1 Objectives of the services

Objective.

Fowlea Brook is a tributary of River Trent with a catchment area of approximately 29km². It flows in a southerly direction through the city of Stoke-on-Trent, with headwaters in the rural area of Longbridge Hayes to the north of the City and a confluence with the River Trent within the City's urban heart. It also includes the tributary of the Scotia Brook, between Packmoor and Longport. The catchment is heavily urbanized and as a result shows distinct urban and rural responses,

The Fowlea Brook is characterized by long stretches of culverted and concrete lined open channels, modified historically due to Stoke-on-Trent's industrial history. Based on studies undertaken to date the focus of the scheme at the greatest risk of flooding is the urban area upstream of the confluence with the River Trent around Elenora Street and Liverpool Road.

An Initial Assessment was carried out in 2016 and the Strategic Outline Case (SOC) approved in 2017. The SOC presented several options including the construction of a bypass culvert at Elenora Street.

Stoke-on-Trent City Council produced an OBC (Outline Business Case) following the approved SOC which found a bypass culvert at Elenora Street to be the preferred solution. However, when this was reviewed by the Environment Agency it was found to have issues with the hydrology and also would cause significant issues to Fletcher Moorlands business.

Black and Veatch produced a revised OBC (approved 7th July 2020) which understood the main cause of flooding in the Fowlea Brook south area to be twofold: the under capacity of the culvert at Elenora Street and blockage of the screen at Liverpool Road. The OBC proposed works to relieve the culvert constriction would prevent backing up to Liverpool Road and overtopping at the road and throughout the city at large.

Alternative optioneering in the OBC highlighted the potential to replace the culvert underneath Elenora Street to achieve the same SoP which consists of the following elements:

- Replacing the existing culvert under Elenora Street with one of greater capacity;
- And upgrading the existing bund between the trash screen at the entrance to the culvert and under Liverpool Road.

Following submission and approval of the OBC Arup's (the *Consultant*) were appointed via the new CDF Framework to continue the development of the scheme.

A model review was undertaken by the *Consultant* to confirm the outputs of the model created for OBC by a previous consultant.

This review highlighted several inconsistencies which have now been rectified. However, this has shown a change in the understood flood mechanism.

This has further allowed an alternative option to be investigated which removed the need to divert services at Elenora Street, which was a key risk to the delivery of the replacement culvert option.

Outcome Specification

The *Consultant* is required to identify and develop to detailed design a scheme which protects properties surrounding the Elenora Street area to a 1 in 100 year + Climate Change event. The scheme also needs to increase the Standard or Protection on the Spode development site to the same 1% plus climate change AEP.

The following 4 areas have been identified as requiring works to alleviate flooding in the area:

- Liverpool Road Bund
- Liverpool Road downstream bridge parapet
- Walls between Liverpool Road and Elenora Street
- Spode Site

The *Consultant* shall deliver a detailed design building on the Outline Designs produced under the scoping contract for the Fowlea Brook, Elenora Street Flood Defence Scheme. The detailed design will form the scope for a future contract to deliver the works.

Working with the *Client* and Early Supplier Engagement (ESE) contractor, the *Consultant* shall be responsible for ensuring the design is acceptable to the *Client* (approval of gateway 3).

Working with the *Client* and Early Supplier Engagement (ESE) contractor, the *Consultant* shall be responsible for ensuring the design is acceptable to the *Client* (approval of gateway 3), **planning approval is required**, and other associated approvals to enable works to commence. The design shall be acceptable to statutory and key stakeholders.

***Consultant* apply for any** other associated approvals **identified** to enable works to commence. The design shall be acceptable to statutory and key stakeholders.

The design will ensure that the cost and quality of the construction work represents value for money and is affordable by the *Client* and within the agreed budget (i.e. approved 50%ile budget, as set at OBC approval).

The *Consultant* shall produce a design such that it proves value for money to the *Client* in line with Benefits in Full Business Case and results in economic efficiencies based on the project budget.

The options will also demonstrate that the *Consultant* has learnt from best practice and demonstrate how optimum flood risk reduction, natural processes, recreation, good ecological water quality and visual amenity can be combined.

1.2 *Consultant* project management

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

- **Adoption of quality assurance processes that meet the requirements of an LRQA approved Quality Management system. Document review and approvers to be clearly identified on all project deliverables**
- Agreement and management of change.
- Attend project kick off meeting with *Client* to agree appropriate standards for the scheme. The *Consultant* should use this meeting as a basis of completing a design philosophy statement.
- Attend a project risk workshop and on-going management of project risk and programme reviews **during monthly progress meetings** to achieve the scope. Programme to include post-OBC activities to construction start, in accordance with PCM programme guidance.

- Monthly risk register review, update (including *Consultant* risk budget) and implementation of resulting actions.
- Provide input to and actively maintain project value register.
- *Consultant* shall attend Commencement/weekly progress meetings/ Monthly whole team progress meeting/ handover meeting attendance and management of actions
- Monthly financial and **input into carbon 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.
- Delivery of a design solution which achieves the required reduction against the carbon budget. The carbon budget is the limit set for the project and shall be applied to the appraisal contract, by which the consultant is required to reduce their carbon on a project level bases. **Carbon budget less (40%)** The measure for this carbon reduction is to be calculated using the Environment Agency carbon tool (inclusive of calc and associated reports) Reporting updates must be provided on a monthly basis and at the end of each business case cycle FBC, in this instance. Failure to achieve the required reduction against the carbon budget will be a Defect.
- Attend project board and programme board meetings as required in capacity as *Consultant*.
- *Consultant* project manager to be responsible for delivery of *services* and products in line with accepted programme.
- Co-operate with the *Client* in the role of the BIM Information Manager
- Quarterly input into performance assessment/KPIs and management and implementation of associated actions arising.
Handover package of project deliverables.
- *Consultant* environmental lead to provide monthly progress and risk reviews in monthly report.
- The environmental lead is an integrated member of the project team and also attends progress meetings, risk workshops, project board and programme board meetings as above.
Review and update the lessons learnt log during monthly progress meetings and disseminate any key lessons learnt to the business.
- Review and update the issues log during monthly progress meetings and determine the appropriate action required to resolve.
- On behalf of the *Client*, the *Consultant* should apply for planning permission **including associated documentation to support this** and other consents such as land drainage consent and flood defence consent, if required, and manage the passage of these approvals.
- Approval in principal from SoTCC for proposed works to Liverpool Road Bridge.
- Liaise with the NEAS Archaeologist to ensure that the heritage and archaeological risks are identified and addressed and to determine if efficiencies can be made by joint working.

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

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

Design philosophy statement, giving design process, standards used and assumptions made to the satisfaction of the *Client*. This should demonstrate compliance with the *Client's* sustainability targets.

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

Consider the following and document how they are addressed on this contract:

- **Public:** how to effectively engage with and how they perceive us, the diverse public throughout projects
- **Project team:** how to create an inclusive environment for our project team
- **Framework:** identify opportunities to support diverse workforces on our projects across our organisations.

1.3 Previous studies

Report	Date	Format	Outcomes of study
Outline Business Case	May 2020	Digital format already supplied	Preferred option – Elenora Street Culvert widening.
Carbon reporting tool			
NEAS screening report	February 2018	Digital format to be supplied to <i>Contractor</i>	No further NEAS input required.
Strategic Outline Case	2017	Digital format to be supplied to <i>Contractor</i>	
Initial Assessment	September 2016	Digital format to be supplied to <i>Contractor</i>	Preferred option which was developed at SOC stage.

2 Services required

2.1 Definition of completion and defects

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

- all of the *services* have been provided and accepted by the *Client*.
- Population of the *Client's* latest version of the Project Cost Tool, or its successor.
- Transfer to the *Client's* databases of BIM data
- Completion of the relevant phase of the *Client's* carbon tool
- Clause 11.2(2) work to be done by the Completion Date.

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

2.2 The detailed design (outputs and deliverables)

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

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

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

- i. Calculations
- ii. Drawings (including landscape/ ecological design drawings/ planting schedules)
- iii. **Environmental Products**
 - PEA
 - WFD Assessment
 - Landscape Detail Drawings
 - Environmental Impact Report
- iv. Specifications (including any additional clauses to Environment Agency standard specifications - i.e. Environment Agency NEAS Landscape Specification template)
- v. Design report, including asset schedule, buildability statement and maintenance plan
- vi. Designer's Risk Assessments
- vii. Public Safety Risk Assessments
- viii. Pre-construction information
- ix. NEC4 Scope documents and **Site Information** for incorporation into the construction contract of this scheme
- x. Environmental action plan

2.2.2 Additional Deliverables

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

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

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

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

The *Consultant* shall facilitate design workshops and attend risk workshops. The sustainability of the design shall be analysed using appropriately detailed carbon costing to gauge influence of carbon costs of the design. It shall be run on the Environment Agency's carbon calculator.

The *Consultant* shall prepare the Particular Specification for the main works tender document. The Particular Specification shall not contradict the *Client's* standard documents. If there is a requirement to do so the *Consultant* shall justify the need and obtain the prior written agreement of the *Client*.

2.2.3 Principal Designer

As per the framework guidance, the *Consultant* will provide a Principal Designer for this scheme.

The Principal Designer duties will included for a review of any site based services at the appraisal stage and notify the HSE of these, as well as the outline/detailed design.

The *Consultant* shall supply designers risk assessments, drawings and any other data for the Principal Designer comment and include for any work required following review.

2.2.4 Full Business Case

The *Consultant* shall produce a Full Business Case which meets the requirements of the Environment Agency's 5 case business model and government Green Book Guidance.

2.3. Site Investigation

2.3.1 Ground Investigation

A scope for the Ground Investigation works has been completed by the *Consultant* and delivered separately to this contract to enable the *Contractor* to undertake the Ground Investigation works required to support the design works.

2.3.1.1 Ground investigation deliverables

- All design contracts should include any ground investigation required to inform the design within the Scope of this contract.
- *Consultant* to produce a Ground Investigation interpretative report based on GI results from investigations undertaken by *Contractor*.
- *Consultant* to produce a structural interpretative report based on structural investigations undertaken by *Contractor*.

2.3.2 Topographic survey

Table 1 lists out data from previous studies and data produced at appraisal stage.

Topographical Survey – Liverpool Road Trash Screen	Sheet 1 of 5	ENVIMMI01456-GBV-ZZ-300-SU-G-00001	October 2019
Topographical Survey Liverpool Road Trash Screen	Sheet 2 of 5	ENVIMMI01456-GBV ZZ 300-SU-G-00002	October 2019
Topographical Survey – Elenora Street Culvert	Sheet 3 of 5	ENVIMMI01456-GBV-ZZ-300-SU-G-00003	October 2019
Topographical Survey – Elenora Street Culvert	Sheet 4 of 5	ENVIMMI01456-GBV-ZZ-300-SU G-00004	October 2019
Topographical Survey Elenora Street Culvert	Sheet 5 of 5	ENVIMMI01456-GBV-ZZ-300-SU-G-00005	October 2019

Topographic survey deliverables

A topographic survey was undertaken in 2019 an additional topographical survey has been instructed outside of this contract to obtain data relevant to the revised scheme.

2.3.4 Services and diversion plan

The *Client* will arrange for a non-intrusive survey to detect key utilities (e.g. GPR) to inform SI and or design documents.

The *Consultant* shall confirm the extent of the survey and produce a specification for the survey in accordance with *Client* Guidance and Principal Designer discussion if required; defining type and purpose of survey including extents and available information.

The outputs from this survey should be included in the design documents, including revising plans.

2.3.5 Ecological surveys

Undertake one habitat survey for the extent of the Fowlea Brook Scheme.

2.3.6 Hydrology and hydraulics

An ESTRY-TUFLOW model for part of the study reach was produced for the OBC study. A copy of the model and model report will be shared via sharefile.

This model has been reviewed and updated by the *Consultant* to reflect inconsistencies highlighted by the *Consultant* and produce outline designs to meet the required Standard of Protection.

This model is to be used for updating levels with detailed design components, if the *Consultant* feels this is necessary.

Following completion of the detailed design, this model will be handed over to the Flood Incident Management team and the model should be able to determine thresholds of flooding and trigger levels. All electronic data should be in an agreed format in line with the scheme data management plan. A copy of the plan will be provided by the *Client*.

2.3.7 Landscapes and Environmental design

2.3.8 Environmental considerations

The *Consultant* will work with the *Client* and project partners to reduce flood risk to people and property in Stoke-on-Trent through an adaptive approach that is resilient to climate change and that works with natural processes whilst:

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

Key environmental risks, issues and outcomes are described in the EIA Scoping Report. An Environmental Statement will be required to accompany the planning application.

A preliminary Water Framework Directive assessment has been undertaken; the *Consultant* shall update this assessment once as part of this Scope.

A Habitats Regulations assessment is not required as there is no likely significant effect on the downstream SPA and no additional risks should be introduced

3 Standards to be used

3.1 Health and safety

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

3.2 *Client* standard documents

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

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

Ref	Report Name	Where used
	Project Cost Tool	Costs
	Sustainability Measures Form	
	Timber Policy Documents	
	677_15 v2 SHEW CoP, 2017 handbook for managing capital projects	
	300_10_SD27 SHE Code of Practice	
	Landscape Specification	Topsoil preparation, grass seeding works and establishment aftercare
	Minimum Technical Requirements NB Operational Instruction 17_17 and supporting documents do not apply at present.	

4 Constraints on how the *Consultant* provides the services

Mandatory security and vetting procedures for *Consultant* staff with access to the *Client's* IT systems.

If in the performance of a Contract, the *Consultant* staff members are to have access to the *Client's* IT systems, the Contract will be subject to the following mandatory security and vetting procedure. This shall only apply to all Contracts for secondment of staff where access to the *Client's* IT systems is required

Verification of identity

The *Consultant* is responsible for verifying the identity of their staff prior to commencement of employment on the Contract. This includes the verification, copying and checking of the appropriate documentation:

- Confirmation of name, date of birth and address
- National Insurance number
- Confirmation of qualification/licences
- Confirmation of permission to work in the UK (if appropriate)

This information should be checked to ensure no obvious gaps exists and a copy kept on file.

Verification of nationality and immigration status

The *Consultant* is responsible for carrying out a physical check of appropriate documentation or (by exception) through an independent check of UK Border Agency (UKBA) records to ensure the individual has the right to remain in the UK and undertake the work in question. This needs to take place prior to commencement of employment.

Verification of employment history

The *Consultant* is responsible for verifying the candidates past 3 years employment history. Any unexplained gaps are to be brought to the attention of the Project Manager prior to commencement of employment.

Verification of criminal record (unspent convictions only)

The *Consultant* is responsible for verifying unspent criminal records using Basic Criminal Record (CRB) check provided by Disclosure Scotland (DS) prior to the commencement of employment. This also applies to all agency and sub-consultant staff. Any convictions, other than minor offences, are to be brought to the attention of the Project Manager prior to commencement of employment.

In exceptional circumstances the *Client* may decide to undertake a risk assessment where delays would impact on operation of business to allow an individual to start on conditional employment contract whilst waiting for results of the check.

Individuals with evidence of valid and live CRB, Counter Terrorist Check (CTC), Security Check (SC) or Developed Vetting (DV) clearance will not be required to undertake Baseline Personnel Security Standard (BPSS) clearance again (except proof of identity).

Keeping records

The *Consultant* should keep a BPSS verification record of each individual employed on such Contracts on the personal file. A standard form is provided by the Cabinet Office. Where individuals have valid and live clearance, this should be obtained in the form of the BPSS verification record from their previous organisation. There is no requirement to renew the BPSS once it has been approved. It is the responsibility of the *Consultant* to keep records for temporary agency and sub-consultant staff. The *Client* may audit the *Consultant's* referencing and vetting processes upon request.

5 Requirements of the programme

5.1 Programme

Suggested content may include all or some of (include a range of fill activities), Start date, Completion date and other key milestones (Sectional Completion) should be included in Contract data Part one and detailed here.

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

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

The *Consultant* shall provide a detailed project plan in Microsoft project format version X meeting all requirements of Cl.31 of the *conditions of contract*. A baseline plan shall be provided for the project start up meeting and this will be updated monthly for progress meetings with actual and forecast progress against the baseline.

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

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

Include internal project team/board decision gateways (as a minimum) for:

- a) Gateway 2, to ensure the detailed design is sufficient to allow for works on site
- b) Gateway 3, to ensure the costings are complete and the works can be constructed within the allowed time and budget

These gateways are critical in managing project expenditure, programme and scope creep and shall be well considered and managed to ensure project remains on time and cost.

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

- a) *Consultant* internal review (as per your quality review procedures) and *Client* review of all outputs before circulation to the wider project team to ensure high quality of all output.
- b) Sufficient allowance for internal and external consultation. Statutory consultation periods at scoping & draft stages. Note local authority approvals through cabinet prior to public consultation can take a long time.

- c) Local Authority time for planning approval
- d) *Client* approvals as required to include for Reservoirs Act, impoundment licence and working in watercourse approvals
- e) Time for pricing up of the works by a Contractor
- f) Submission for approval and time allowance for the *Client's* approval process.

6 Services and other things provided by the *Client*

6.1 Data and information management and intellectual property rights

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

6.2 Data custodianship

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

6.3 Licensing information

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

6.4 Data management and metadata

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

6.5 Data security

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

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

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

6.6 Timesheets

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

6.7 Payment procedure

Payment is subject to the procedure agreed in or under the

6.8 Quality

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

Please detail any other requirements of the Quality Plan

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6.9 Parent company guarantee

N/A

Appendices

Appendix 1 BIM Protocol – Production and Delivery Table

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

www.Pow.bim4.info

You need google chrome for this link to work. Once the table is completed it should be printed for issue in the tender document, so that the correct baseline position can be seen by suppliers

