**Prior Information Notice – Hydrometry Framework**

This notice is not a call for competition - The Coal Authority intends to issue the call for competition on or after September 2023.

Supplier engagement notification

Prior to starting the formal tendering process, The Coal Authority will host several supplier engagement events via Microsoft Teams.

The purpose of these events are to provide further information about this requirement, the tendering process, and to invite feedback and questions from potential bidders. So we can provide more detail of our requirements, we are proposing to deliver a session on each Lot. We have also included some sessions where we will cover all of the Lots in a single session for those who are already familiar with our requirements.

Dates/times –

Lot 1 – Options Assessment: 15/08/2023

Lot 2 – Weirs and Flumes: 15/08/2023

Lot 3: Loggers and Sensors: 17/08/2023

Lot 4: Spot flow gauging and water quality: 17/08/2023

Lot 5: Pipe flow meter verification: 17/08/2023

All Lots: 18/08/2023

Interested parties should email Adam Beckett - AdamBeckett@coal.gov.uk to book a place or if there are any queries about this requirement.

We may also offer some site visits to see some of our recent flow measurement and logger installations, as part of the tender process.

Requirement Overview

Deliverables from this contract are to provide a service to undertake Hydrometric Monitoring for The Coal Authority, at coal and metal mine sites across the UK.

Package

The Coal Authority intends to tender for the provision of Hydrometric Monitoring services. The framework will be divided into approximately 6 lots, as shown below:

| Lot No | Name | Description/ Scope |
| --- | --- | --- |
| 1 | Options Assessment, design and build | Site survey, options report, detailed design and then construction. |
| 2 | Weirs and Flumes | Installation, maintenance and decommissioning of weirs and flumes in accordance with ISO standards/ MCERTS. |
| 3 | Loggers, Water Level Sensors, Rain Gauges, velocity sensors and Water Quality Sensors | Installation, calibration, maintenance and decommissioning of loggers, water level sensors, water quality sensors, velocity sensors and rain gauges.Installation of velocity sensors may include confined space entry. |
| 4 | Spot Flow Gauging and Water Quality Sampling | Spot flow gauging (salt dilution gauging, current meter gauging and ADCP) and water quality sampling programmes, in accordance with ISO standard. |
| 5 | Flow meter verification | Verification of pipe flow meters at our pumped Mine Water Treatment Schemes, using either clamp on meters, insertion meters or similar, and of our radar meters installed at weirs/ flumes, using a datum/ bounce plate.  |
| 6 | Hydrometric Monitoring (General Lot) | For Projects which include aspects of more than 1 of the above Lots. All suppliers who are successful for the above Lots will be added to this Lot. |

This is a non-exclusive framework agreement, and The Coal Authority is unable to guarantee the volume and value of allocated work. Tenderers may submit a bid for single, multiple or all lot(s).

We may also split some of the lots regionally, so suppliers do not have to necessarily be able to cover the whole of the UK.

This framework is to be co-used by NRW (further details will be published in the ITT)

The estimated framework value, over a 4 year period, is £4m (4 million).

**Lot 1 – Options Assessment, design and build**

At locations where we don’t currently have any existing flow monitoring, we will often conduct an options assessment. This involves a site survey, options report and then detailed design drawings of the preferred option. Suppliers will need to be able to demonstrate a comprehensive understanding of flow measurement techniques, measurement uncertainty, requirements of the relevant ISO standards/ MCERTS, the pros and cons of each option and have demonstrable experience of designing and managing a contractor to install flow measurement solutions, often at remote sites. In most cases, the supplier who undertakes the options assessment will then be appointed to install the preferred solution, together with the logger and sensors. Given the lack of existing infrastructure at most of these sites, the supplier must either have an in-house civils team, or work alongside a civils sub-contractor. The supplier must supervise this work to ensure that the millimetre tolerance required when installing flow measurement structures is achieved.

Flow measurement solutions may include, but not be limited to: weirs and flumes, weir tanks, velocity meters, pipe flow meters, Stage-Discharge or Velocity-Index sites etc.

These sites are predominantly metal mines catchments, in remote parts of the country, where there is no existing continuous flow monitoring installed, and are thus mostly in Wales, the South-West of England and the Pennines/ Lakes/ Yorkshire.

**Lot 2 – Weirs and Flumes**

This lot will involve the installation of weirs and flumes predominantly at our existing Coal Mine Water Treatment Schemes (MWTS). We operate over 70 MWTS across the UK (South Wales, Scotland, Midlands, Yorkshire, North-East and North-West England), and have a programme of upgrading the flow measurement weirs at these schemes. Over the first 2 years of the upgrade programme, we have upgraded the outlet weirs at 13 schemes (with some having more than 1 measurement structure), and we have a forward programme to continue this work at the remaining sites over the course of this framework.

This work will involve replacing existing flow measurement structures or to design and install new ones within existing channels. Design and installation work should be undertaken in accordance with the relevant ISO standard/ MCERTS, and all installation work will be carried out under CDM. The installation work will often require the supplier to install loggers and sensors at the new weirs.

**Lot 3 – Loggers, Water Level Sensors, Rain gauges and Water Quality Sensors**

This lot will involve the installation of data loggers, water level sensors, rain gauges, velocity sensors and water quality sensors. Wherever possible, the data loggers should be installed on telemetry, and be battery powered with solar panels. We currently use Hydro-Logic Flexi-Loggers, OTT EcoLog and NetDL loggers, and our preference is to appoint suppliers who can install, maintain, calibrate and decommission these logger types. All installation work will be carried out under CDM.

Applications include:

* Water level sensors for flow monitoring at weirs and flumes – either pressure transmitters or non-contact sensors such as radar sensors.
* Velocity sensors for flow measurement in partially full pipes (often in confined spaces).
* Groundwater monitoring in boreholes
* Rainfall monitoring
* Water Quality monitoring

**Lot 4 – Spot Flow Gauging and Water Quality sampling**

This lot will involve spot flow gauging and water quality measurements, often taken at several locations within a particular catchment, or to validate existing flow measurement sites. This work is often undertaken to provide baseline data within catchments where we are proposing to undertake more detailed monitoring by installing continuous flow measurement structures (under Lot 1). The catchments are often remote, with difficult terrain. Spot flow gauging techniques required will include Salt Dilution Gauging, Current Meter Gauging and ADCP Gauging, in accordance with the relevant ISO standard. Water quality sampling will include taking samples for laboratory analysis (in most cases sent to SOCOTEC laboratories), and manual measurements using a hand held water quality meter.

This work is largely at our metal mine sites, so will predominantly be in Wales, the South-West of England and Yorkshire/ Pennines/ Lake District.

**Lot 5 – Flow meter calibration**

We operate over 70 Mine Water Treatment Schemes, of which 49 are pumped where we have approximately 70 electromagnetic pipe flow meters installed to measure the quantity of water that we abstract from the mines. These meters require a programme of routine verification checks using a clamp-on meter (or similar) in order to confirm their measurement accuracy. Where there are slight discrepancies we would like the supplier to be able to reconfigure the electromagnetic pipe flow meter at the time of test (rather than requiring a revisit), and where there are more significant issues, these should be listed in the report together with suggested remedial actions and, where possible, budgetary costs.

Further to this, we are likely to require the installation of insertion meters at some of our sites where ochre accretion is present on the inside of the pipes, in order to confirm the accuracy of those meters and inform the required maintenance regime.

As we install new weirs and flumes (via Lot 2) at the outlet of our schemes, we will also have a requirement to undertake routine verification of the look-down VEGA radar meters installed by using a datum/ bounce plate.

**Lot 6 – Hydrometric Monitoring (General Lot)**

This will be a general lot, for projects which include aspects covered by more than 1 of the above.

**Note:** Any work involving construction or installation will be undertaken in accordance with CDM. Installation of loggers and velocity meters may be required on a hire basis from time to time.

**About the buyer**

Adam Beckett

The Coal Authority

200 Lichfield Lane

Mansfield

NG18 4RG

England

Email - AdamBeckett@coal.gov.uk