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Tender

## **Design and build geothermal infrastructure for the UK Geoenergy Observatory at Cuningar Loop, Glasgow, UK**

UK Research & Innovation

F02: Contract notice

Notice identifier: 2021/S 000-005420

Procurement identifier (OCID): ocds-h6vhtk-029c9d

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### **Section I: Contracting authority**

#### **I.1) Name and addresses**

UK Research & Innovation

Polaris House, North Star Avenue

Swindon

SN12 1FL

#### **Contact**

Kate Richardson

#### **Email**

[kate.richardson@ukri.org](mailto:kate.richardson@ukri.org)

#### **Telephone**

+44 756267366

#### **Country**

United Kingdom

**NUTS code**

UKK14 - Swindon

**Internet address(es)**

Main address

[www.ukri.org](http://www.ukri.org)

**I.3) Communication**

The procurement documents are available for unrestricted and full direct access, free of charge, at

<https://www.delta-esourcing.com/tenders/UK-UK-Swindon:-Construction-work./XE899B3ED7>

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

<https://ukri.delta-esourcing.com/respond/XE899B3ED7>

Tenders or requests to participate must be submitted to the above-mentioned address

**I.4) Type of the contracting authority**

Body governed by public law

**I.5) Main activity**

Other activity

Research

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**Section II: Object**

**II.1) Scope of the procurement**

**II.1.1) Title**

Design and build geothermal infrastructure for the UK Geoenergy Observatory at Cuningar Loop, Glasgow, UK

Reference number

UKRI-1107

### **II.1.2) Main CPV code**

- 45000000 - Construction work

### **II.1.3) Type of contract**

Works

### **II.1.4) Short description**

The British Geological Survey (BGS) and the Natural Environment Research Council (NERC) are constructing a mine water geothermal research facility on the Cuningar Loop in east Glasgow as part of the UK Geoenergy Observatories project (from now on referred to as the 'Glasgow Observatory'). Both NERC and BGS form a part of the UK Research and Innovation (UKRI).

The tender is for the procurement of a supplier to provide the design and build support to BGS (the Client) in delivery of the geothermal infrastructure for the Glasgow Observatory.

The Contractor's main responsibilities will include but are not limited to: detailed design and construction of the works; testing and commissioning the works.

The supplier shall be appointed under an NEC4 ECC.

### **II.1.5) Estimated total value**

Value excluding VAT: £310,000

### **II.1.6) Information about lots**

This contract is divided into lots: No

## **II.2) Description**

### **II.2.2) Additional CPV code(s)**

- 45210000 - Building construction work

- 71541000 - Construction project management services
- 71500000 - Construction-related services
- 76300000 - Drilling services
- 45100000 - Site preparation work
- 45120000 - Test drilling and boring work
- 45200000 - Works for complete or part construction and civil engineering work
- 45220000 - Engineering works and construction works

### **II.2.3) Place of performance**

NUTS codes

- UKM82 - Glasgow City

Main site or place of performance

Glasgow City

### **II.2.4) Description of the procurement**

UK Research and Innovation (UKRI) wishes to establish a contract for design and build of geothermal infrastructure for the UK Geoenergy Glasgow Observatory.

The supplier will develop the 'Detailed Design Specification' through collaboration with the Client, to deliver an engineering design for the bespoke research infrastructure that meets the science requirements within the specified budget. Assuming the design is accepted, the supplier will build the design such that the facility is 'research-ready'.

The geothermal infrastructure will comprise (but may not be limited to) the following:

1. Extend four of the mine-water borehole wellheads above ground level and construct a low brick wellhead chamber and associated pipework.
2. To complete the hydraulic and thermal design of a pumping main and reinjection main, associated manual valve work and other infrastructure. To excavate and install this pipe infrastructure in trenches.
3. To install a cable duct within the main pipework trench to be routed to a control panel at a heat centre at Site 1.
4. To select and install an electrical submersible pump, associated cabling and rising main

in boreholes GGA05 and GGA07. Consideration should be given to the termination and support of these items through the upper wellhead flanged plate. A suitable valve arrangement and wellhead sensors are also to be incorporated into the design.

5. To design and install a reinjection main in boreholes GGA01 and GGA08, with a corresponding pressure-tight wellhead upper-flanged plate. A suitable valve arrangement and wellhead sensors are also to be incorporated into the design.

6. To install two access tubes in all four boreholes, one of which shall be installed with a sensor to determine and log downhole water head, temperature and electrical conductivity.

7. The well equipment and pipework shall be selected to deliver a variable flow rate up to a maximum of 12 L/s and down to a minimum of 3 L/s, while maintaining a positive gauge pressure of at least 1 bar throughout the entire pumping-heat exchange-reinjection main system. 8. The wellhead flange plates should be designed to accommodate both a reinjection main and a pump rising main in the future.

9. To select and install a “heat centre” within the Site 1 compound.

10. To select and install a reversible water-air chiller / heat pump adjacent to the heat centre, with a nominal maximum output of 200 kW in both heating and cooling mode.

11. To design and install a heat exchanger circuit in the heat centre. The circuit should include three equally-sized shell-and-tube heat exchangers with a combined heat exchange capacity of 200 kW.

12. To design and install an insulated heat transfer fluid circuit connecting the heat exchangers to the heat pump / chiller unit, with temperature and pressure sensors, circulation pump, glycol pressure regulation and top-up equipment, any necessary thermal buffering, and a sampling tap for sampling the glycol.

13. To install monitoring equipment within the heat centre on the mine water circuit to include an electromagnetic flowmeter, chemical dosing pump, temperature, pressure and electrical conductivity sensors, and a sampling tap.

14. To equip the heat centre with a control panel / management system for receiving and logging signals from the various installed sensors, and also sending control signals to the submersible pumps and the heat pump/chiller.

15. To prepare full design, installation, operation and maintenance documentation for the infrastructure installed in this Contract.

16. To prepare a maintenance schedule for the facility.

17. Commission, test and demonstrate the facility.

18. To providing training on operating the system.

A brief summary of the requirements has been provided above, please ensure you review all additional appendices for full details of this contract.

#### **II.2.5) Award criteria**

Quality criterion - Name: Quality / Weighting: 70

Price - Weighting: 30

#### **II.2.6) Estimated value**

Value excluding VAT: £310,000

#### **II.2.7) Duration of the contract, framework agreement or dynamic purchasing system**

Duration in months

6

This contract is subject to renewal

No

#### **II.2.10) Information about variants**

Variants will be accepted: No

#### **II.2.11) Information about options**

Options: No

#### **II.2.13) Information about European Union Funds**

The procurement is related to a project and/or programme financed by European Union funds: No

#### **II.2.14) Additional information**

To respond to this opportunity please click here: <https://ukri.delta-sourcing.com/respond/XE899B3ED7>

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## **Section III. Legal, economic, financial and technical information**

### **III.1) Conditions for participation**

#### **III.1.2) Economic and financial standing**

Selection criteria as stated in the procurement documents

#### **III.1.3) Technical and professional ability**

Selection criteria as stated in the procurement documents

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## **Section IV. Procedure**

### **IV.1) Description**

#### **IV.1.1) Type of procedure**

Open procedure

#### **IV.1.8) Information about the Government Procurement Agreement (GPA)**

The procurement is covered by the Government Procurement Agreement: Yes

### **IV.2) Administrative information**

#### **IV.2.2) Time limit for receipt of tenders or requests to participate**

Date

21 April 2021

Local time

2:00pm

#### **IV.2.4) Languages in which tenders or requests to participate may be submitted**

English

#### **IV.2.6) Minimum time frame during which the tenderer must maintain the tender**

Duration in months: 3 (from the date stated for receipt of tender)

#### **IV.2.7) Conditions for opening of tenders**

Date

21 April 2021

Local time

2:00pm

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## **Section VI. Complementary information**

### **VI.1) Information about recurrence**

This is a recurrent procurement: No

### **VI.3) Additional information**

The contracting authority considers that this contract may be suitable for economic operators that are small or medium enterprises (SMEs). However, any selection of tenderers will be based solely on the criteria set out for the procurement.

For more information about this opportunity, please visit the Delta eSourcing portal at:

<https://ukri.delta-esourcing.com/tenders/UK-UK-Swindon:-Construction-work./XE899B3ED7>

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GO Reference: GO-2021317-PRO-17945094

### **VI.4) Procedures for review**

#### **VI.4.1) Review body**

UK Research and Innovation

Swindon

Country

United Kingdom