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Contract

Dispersed Alkaline Substrate Treatment Pilot Trials at the Parys Mountain and Cwm Rheidol Metal Mines

Natural Resources Wales

F20: Modification notice

Notice identifier: 2024/S 000-017545

Procurement identifier (OCID): ocds-h6vhtk-046ddb

Published 6 June 2024, 10:00am

Section I: Contracting authority/entity

I.1) Name and addresses

Natural Resources Wales

Ty Cambria House, 29 Newport Road

Cardiff

CF24 0TP

Email

CymorthRheoliContractau@cyfoethnaturiolcymru.gov.uk

Telephone

+44 3000653000

Country

United Kingdom

NUTS code

UKL - Wales

Internet address(es)

Main address

<http://naturalresourceswales.gov.uk>

Buyer's address

https://www.sell2wales.gov.wales/search/Search_AuthProfile.aspx?ID=AA0110

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Dispersed Alkaline Substrate Treatment Pilot Trials at the Parys Mountain and Cwm Rheidol Metal Mines

II.1.2) Main CPV code

- 71241000 - Feasibility study, advisory service, analysis

II.1.3) Type of contract

Services

II.2) Description

II.2.2) Additional CPV code(s)

- 71241000 - Feasibility study, advisory service, analysis
- 24962000 - Water-treatment chemicals

II.2.3) Place of performance

NUTS codes

- UKL - Wales

II.2.4) Description of the procurement at the time of conclusion of the contract:

Abandoned Metal Mines cause multiple failures of the Water Framework Directive (WFD) standards in Wales, with 1300 mines impacting over 700km of rivers. Cwm Rheidol and Parys Mountain are two out of the top five most polluting abandoned metal mines in Wales; Parys Mountain is unique, complex and the most polluting metal mine in the UK, whilst Cwm Rheidol is a mine complex with two point source discharges.

Previously, the only proven options available to NRW that will fit the challenging terrain have included High Density Sludge (HDS) treatment, HDS variants or electrochemical methods to successfully remove metals from water that is discharged from metal mines. These are expensive options (cost disproportionate in relation to clean-up benefits afforded) and

unsightly in Special Landscape Areas to roll out at Parys Mountain or across the more typical metal mine deposits encountered across a large programme of mines.

There is an opportunity at both Cwm Rheidol and Parys Mountain to trial an innovative passive treatment system in Wales that has already been demonstrated at full-scale in Spain, in order to ensure we deliver value engineering treatment solutions for the public purse while ensuring that all the heritage, habitat and landscape constraints at both the Parys Mountain and Cwm Rheidol sites are adhered to.

Dispersed Alkaline Substrate (DAS) is a passive treatment system for acid mine drainage with high metal loading, developed over the last decade (Nieto, J.M et al 2013. Acid Mine Drainage in the Iberian Pyrite Belt. 1 & 2. Nieto, J.M et al 2019 & Martinez, N.M. et al 2019). The high treatment performance of DAS is based solely on inorganic dissolution of calcite (which removes Al, Fe(III), Cu and Pb) and Magnesium Oxide (which removes divalent metals), without reliance on bacterial sulphate reduction (typical for Vertical Flow Ponds that would require a much larger footprint of land ~1 hectare unavailable at Cwm Rheidol).

DAS achieves higher acidity removal than other conventional passive treatment systems, as metals accumulate intentionally in DAS. This high acidity removal rate reduces the footprint necessary to implement a full-scale DAS passive treatment system, which is also ideal for these mines with challenging terrain.

The trials will also include a tertiary treatment (Witherite/ BaCO_3) element of the solution that may be required to treat the sulphate that will not be removed by the DAS treatment.

This purchase will support with assessing the most appropriate long-term treatment, economically & logistically, for both of these mines.

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

Duration in months

36

II.2.13) Information about European Union Funds

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

Section IV. Procedure

IV.2) Administrative information

IV.2.1) Contract award notice concerning this contract

Notice number: [2020/S 120-293649](#)

Section V. Award of contract/concession

Contract No

45374

Title

Dispersed Alkaline Substrate Treatment Pilot Trials at the Parys Mountain and Cwm Rheidol Metal Mines

V.2) Award of contract/concession

V.2.1) Date of conclusion of the contract/concession award decision:

21 September 2020

V.2.2) Information about tenders

The contract/concession has been awarded to a group of economic operators: No

V.2.3) Name and address of the contractor/concessionaire

Golder Associates (UK) Limited

Golder House, Tadcaster Enterprise Park, Station Road

Tadcaster

LS249JF

Telephone

+44 1938836800

Country

United Kingdom

NUTS code

- UKE2 - North Yorkshire

The contractor/concessionaire is an SME

No

V.2.4) Information on value of the contract/lot/concession (at the time of conclusion of the contract;excluding VAT)

Total value of the procurement: £230,000

Section VI. Complementary information

VI.3) Additional information

(WA Ref:142038)

VI.4) Procedures for review

VI.4.1) Review body

High Court

Royal Courts of Justice, The Strand

London

WC2A 2LL

Telephone

+44 2079477501

Country

United Kingdom

Section VII: Modifications to the contract/concession

VII.1) Description of the procurement after the modifications

VII.1.1) Main CPV code

- 71241000 - Feasibility study, advisory service, analysis

VII.1.3) Place of performance

NUTS code

- UKL - Wales

VII.1.4) Description of the procurement:

Modifications to the original contract due to unforeseen circumstances include:

Parys Mountain – decommissioning of pilot treatment trials and waste disposal

VII.1.5) Duration of the contract, framework agreement, dynamic purchasing system or concession

Duration in months

48

VII.1.6) Information on value of the contract/lot/concession (excluding VAT)

Total value of the contract/lot/concession:

£366,908

VII.1.7) Name and address of the contractor/concessionaire

Golder Associates (UK) Limited

Golder House, Tadcaster Enterprise Park, Station Road

Tadcaster

LS249JF

Country

United Kingdom

NUTS code

- UKE2 - North Yorkshire

The contractor/concessionaire is an SME

No

VII.2) Information about modifications

VII.2.1) Description of the modifications

Nature and extent of the modifications (with indication of possible earlier changes to the contract):

Modifications to the original contract due to unforeseen circumstances include:

Parys Mountain – decommissioning of pilot treatment trials and waste disposal

Decommissioning works to be undertaken June/July but by 30th September 2024

VII.2.2) Reasons for modification

Need for additional works, services or supplies by the original contractor/concessionaire.

Description of the economic or technical reasons and the inconvenience or duplication of cost preventing a change of contractor:

Due to the nature of the sites and the contract being a trial with the contractor holding the associated patents for the treatment schemes

being trialled, this contract and its associated modifications can only be delivered by one contractor.

VII.2.3) Increase in price

Updated total contract value before the modifications (taking into account possible earlier contract modifications, price adaptations and average inflation)

Value excluding VAT: £366,908

Total contract value after the modifications

Value excluding VAT: £434,850.58