



The Coal
Authority

The Coal Authority generates large volumes of environmental data through the part of our business which manages the environmental legacy of mining across the UK. We operate over 75 mine water treatment schemes that remove contaminating metals from mine water prior to the treated water being discharged into a receiving watercourse. Schemes range from complex process engineering plants, through pumped wet wells and boreholes / mineshafts, to totally natural (passive) schemes without a power source. The majority of treatment schemes comprise of aeration cascades, settlement ponds and reed beds. All schemes are subject to regulatory consents and licenses.

We have an extensive monitoring network across the mine water treatment schemes monitoring scheme performance. A wider network of boreholes and sampling locations is used to monitor changes in ground water level (monitoring mine water recovery across coalfields) and water quality within mine workings and at untreated mine water discharges. The total number of monitoring locations is around 2,000 but this may rise to nearer 3,000 as new treatment schemes are built or treatment trials carried out. We are increasingly helping others with monitoring of other types of mines.

Environmental data is collected across the treatment schemes and monitoring network which includes; laboratory analysis of water and solids, onsite water quality measurements, hydrometry data including manual and logged stage and flow readings from weirs and spot flow gauging, telemetered process data (such as pump rates or electric metering), manual and logged water level and temperature measurements from boreholes or mine shafts, logged rainfall data, manual or logged gas data and solid samples of lagoon sludge. Most data types are collected as continually expanding time series. A small part of the overall data comprises geophysical surveys of boreholes and shafts.

The Coal Authority is considering options for a single data storage system which will consolidate our environmental data sets, incorporate data processing, quality checking and editing tools (including recording of any automated, or manual data changes) and make the data more accessible for use across the business. Calculation of weir ratings & uncertainties and sample scheduling would also be useful additional tools. Data analysis suited to rapidly creating statistics from time series data is desirable.

Data is currently stored across a range of systems or in individual spreadsheets that will need to be migrated into the data management system. As there is a large amount of data migration that will

need to take place, there may be an opportunity for the supplier of the new system to provide this service. The system will need to allow software interfaces to internal and external data sources.

We are inviting interest for provision of an environmental data management system that will modernise the collection, quality checking, editing, storage, analysis and reporting of our environmental data. This system should also provide the means to interface to other systems on different platforms, utilising secure web technologies to achieve this.

We would like a system that can produce standard reports easily both on an ad hoc, or automated routine basis. The types of reports might include graphing data, providing statistical summaries and producing tabulated data in formats required by environmental regulators. Data should be easily viewed by a variety of users across the business. The system will also help us respond efficiently to the growing number of requests we receive for our data from other interested parties.

We would like to invite interested companies to make expressions of interest for potential involvement in a future tender process by way of responding to this advert, and if desired, providing a short summary (no longer than 2 pages) of how your solution could add value for us and offering suggestions on how we might fulfil our objectives through any future tender process

Please express your interest by contacting Gareth Billings, Procurement Business Partner at garethbillings@coal.gov.uk no later than midday Friday 15/01/2021

Participants should note that we reserve the right to use any information shared within this market engagement to develop a mature service specification for future procurement purposes. Following this exercise we shall determine if and how we will approach the market to secure the services. Any costs incurred by participating in this exercise must be borne by the participating organisations.

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Please note that any future procurement will be subject to a separate advertisement.

