

CASE STUDY

Lynemouth mine water treatment scheme

Lynemouth Colliery is part of the coalfield in the North East of England which reaches from Morpeth in the west to West Chevington in the north. It is connected to Ellington Colliery and together they mined coal reserves under the North Sea from the 1950s to 2005.

While mining was taking place water levels were controlled by a number of pumping stations in the area but this reduced from 1994 with the colliery finally closing in 2005. Once pumping stopped, the water levels in the workings began to rise, posing a risk of pollution to the aquifer above the underground workings which provides essential drinking water for the local community and local businesses.

We've monitored the situation since the mine closed in 2005 and, due to the complexity of the chemistry and underground system, designed a flexible treatment approach which could expand in phases as needed. In 2015 2 lagoons with treatment facilities became operational. We continued to monitor the groundwater and found that levels were rising faster than expected so we accelerated the next phase of works. Five further settlement lagoons and 2 sludge drying beds are in construction and will be fully operational in autumn 2019. The swift action of our team and our supply chain will protect local water quality and the environment and avoid additional cost to the taxpayer from costly temporary treatment.

This scheme will be one of our largest mine water treatment schemes. At full capacity it will treat more than 6 billion litres of mine water per year – the equivalent of 2,400 olympic sized swimming pools – before discharging the treated water to the North Sea. It will remove 300 tonnes of iron per year and protect 1.6 million cubic metres of drinking water.

