



## CASE STUDY: Sirius Minerals Potash Exploration, North Yorkshire

### The Commission:

FWS Consultants Ltd was commissioned by York Potash to provide geological, geotechnical and hydrogeological leadership throughout the development of their proposed potash mine in Whitby. This work includes: mineral resource assessment and co-ordination of the deep drilling mineral exploration programme; advising on geological, geotechnical and hydrogeological conditions influencing the location of deep shafts; and construction of the mine site and associated 37 km conveyor tunnel to the Teesside processing and export plant.

**Client:** York Potash Ltd

**Cost:** >£1,000,000

**Status:** Ongoing

### Our Role:

A desk study of all available literature, legacy boreholes and wireline logs provided an initial interpretation of the North Yorkshire evaporite sequence, enabling us to draft a JORC-compliant Exploration Target report, and plan a deep drilling exploration programme to depths over 1,700 m. Throughout the exploration process we provided 24 hour geological supervision of coring including drill pad design and supervision, core logging, sampling, coordinated wireline logging, reporting results and updating the geological model. We have specified and coordinated mineral assay testing by the British Geological Survey to provide verified and reliable data for the quantification and resource estimates in compliance with JORC 2012. We also provide specialist environmental, geotechnical and hydrogeological advice on waste management, hydrogeological modelling of dewatering, environmental and pollution impacts, and a geotechnical evaluation of construction elements of the mine shafts, minehead and plant sites, and conveyor tunnel.

### Client Benefits:

Our knowledge and understanding of the rock sequence and modelling of the polyhalite deposit has enabled York Potash to quantify resources and reserved, design the mine and plan the location of the shafts with confidence. Our holistic knowledge of the project, and detailed understanding of the geotechnical and hydrogeological properties of the strata, has enabled cost effective construction and waste management solutions to be developed.