

CASE HISTORY

Application: **Mining**

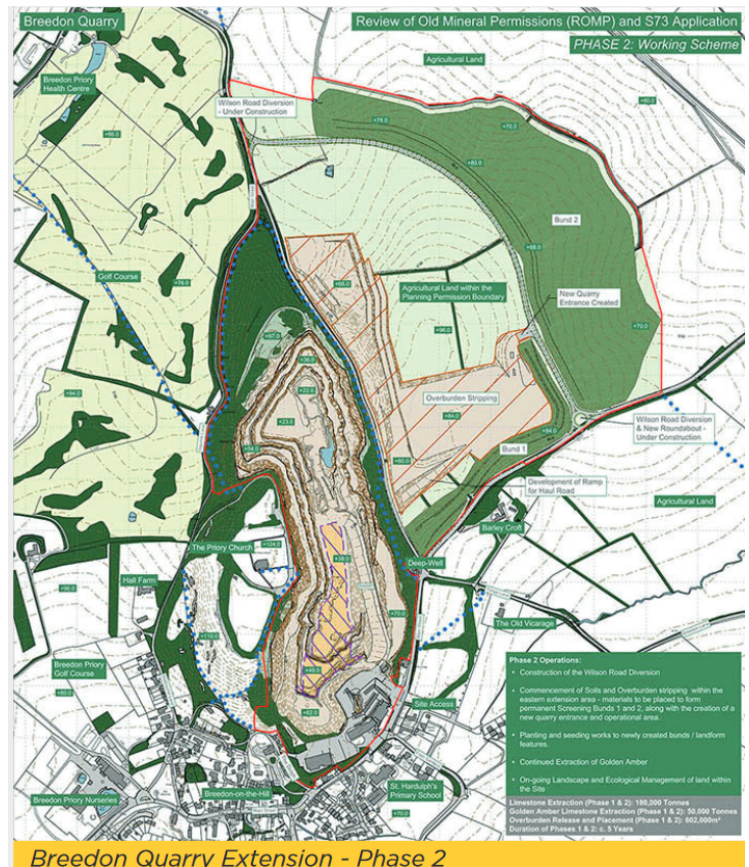
Technology: **High Resolution Optical Televiewer (Hi-OPTV), 3-Arm Caliper**

Location: **Breedon on the Hill, Leicestershire, UK**

Breedon is a leading construction materials group in Great Britain and Ireland. Producing cement, aggregates, asphalt, ready-mixed concrete, Welsh slate and specialist concrete and clay products, and offer a range of contracting services.

Robertson Geo Operational Services successfully completed a geotechnical inspection for Breedon on three boreholes utilising their High Resolution Optical Televiewer (Hi-OPTV) and 3-Arm Caliper probes. The boreholes locations are indicated on the map as 4, 5 and 6 to the north of Breedon quarry in Leicestershire.

The projection of the boreholes when viewed on the map is an indication of the extension direction (Shown in Phase 2) the client is taking with all three boreholes lined in a row.



Following phase 2, the client will begin the extraction of 6,375,000 tonnes of limestone and 1,455,000 tonnes of Golden Amber. The duration of this stage is c.15.7 years, which will be determined by the time taken to work out the Golden Amber and thus release future tipping space for further stripping of the extension.

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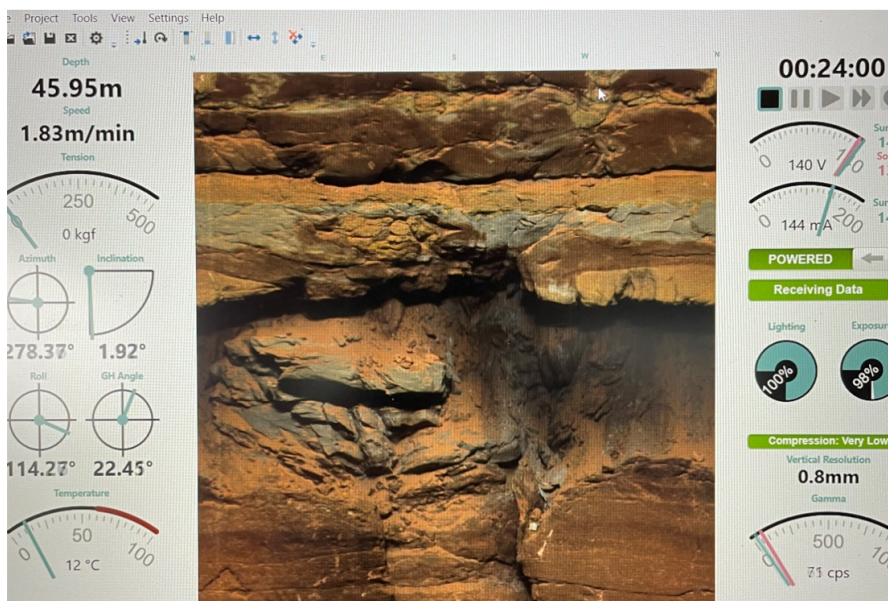
The Data:

The High Resolution Optical Televiewer (Hi-OPTV) provides a continuous, very high resolution-oriented image of the borehole wall using a conventional light source. A unique optical system based on a fisheye lens allows the probe to survey 360 degrees simultaneously.

Fractures faults and voids:

Can be detected using the Hi-OPTV to characterise features intersecting the borehole wall, including bedding, drilling-induced/natural fractures and faults. Integrated orientation measurements allow the inclination and direction of features to be understood relative to the borehole dip direction, or true or magnetic north.

The clarity of the Hi-OPTV was superb as illustrated in the below image making it easy to identify fractures, voids, bedding and the changing geology at given depths below ground level. All vital information for a client in a geotechnical investigation such as this.



*The latest 4x4 logging unit at
Robertson Geo Operational Services
increasing our off-road capabilities.*