

### Surveying the Ryedale Windypits

The Ryedale Windypits are four archaeologically significant natural underground features within the North York Moors National Park. Detailed three dimensional surveys, were commissioned jointly by the North Yorkshire Moors National Park Authority and the Forestry Commission to allow a better understanding of the relationship between different parts of the caves and the overlying ground surface.

Although LIDAR is currently often presented as the only way to record complex enclosed spaces this survey was achieved by using a combination of conventional and reflectorless total station survey, and traditional compass and tape survey. The restricted nature of many of the cave passages, would have made laser scanning impractical.

Data was processed to produce both two dimensional and three dimensional files to allow a better understanding of the caves and to provide estate managers with information about areas where the use of heavy plant and machinery may be hazardous both to the workers and may result in damage to the caves. This method produced competent models of the caves and ground surface at a fraction of the cost of a comparable LIDAR survey.

This work followed on from a conservation and management plan also produced by Meerstone. We have also carried out an audit of material recovered from the Windypits held in local museum collections. This included setting up a database of finds and activities in the caves which can be added to and expanded as further work is carried out.

More details of how we surveyed the caves can be found [here](#).

