

## Automated Monitoring



Datalogger powered by the solar panel installed at Bolsover Dam

**“One accurate measurement is worth more than a thousand expert opinions.”**

*Admiral Grace Hopper*

Automated monitoring during construction allows for early detection of instability and movements. The real-time data collection can provide valuable and timely information allowing engineers and constructors to make proactive modifications to their means and methods and assist with evaluating critical design assumptions, minimizing damage to adjacent structures, etc. Accurate and timely automated monitoring helps to minimize risks due to damage claims.

Datalogger stations collect data with specialized software that enables the user to set alert thresholds and, when compared against the alarm threshold values, alarms are generated with alerts sent to project stakeholders via email, text message, or physical alarm in the field (strobe light, siren, etc.). Using wireless modems and antennas, numerous datalogging stations can be installed on a project, reducing the installation time and cabling required for connecting the systems and beginning the collection of data. We have successfully installed datalogger locations powered by solar energy for remote monitoring locations with limited or delayed access to AC power.

Automated monitoring reduces costs and construction delays by limiting the amount of time required for manual reading, data importing and the lag between reading collection and reporting, which can be extremely important for sensitive structures in the vicinity of a tunneling or construction project.

Automation is also beneficial, and is used regularly, within our vibration monitoring product line. With wireless connection to each unit, the notification of an event on any site can be received within 3-5 minutes of its occurrence. By automating vibration monitoring, we can provide proactive vibration results which can allow the contractor to modify their means and methods to decrease the amount of vibrations occurring, thereby reducing the amount of potential damage and disruptions due to neighbours complaints.



Installation of in-place inclinometer for automated monitoring



Preparing datalogger for installation