

### CAPABILITY STATEMENT 06—GEOTECHNICAL MONITORING

Specification, Installation, Monitoring and Reporting of Geotechnical Instrumentation

#### KEEPING AN EYE ON THINGS

The ground is a tricky thing. It is incredibly variable and doesn't obey the same laws that govern the behavior of steel and concrete. So even with the best geotechnical design, it is often essential to monitor the progress of construction or the long-term performance of a slope, excavation or fill pad.

Geotechnical monitoring allows ongoing evaluation of actual ground performance against the geotechnical design assumptions. It allows the geotechnical engineer to make informed decisions about the performance of the ground and any changes required to construction or engineering measures for stabilisation that may be required.

Geotechnical monitoring may be required by statutory authorities on large projects, particularly when your project is close to sensitive structures (e.g. heritage buildings), services or built-up areas.

By using geotechnical monitoring, your risk can be managed and costs can be controlled by reducing the redundancy in your design.



#### WHAT DO WE MONITOR?

Geotechnical monitoring is usually aimed at monitoring ground movements, structural movements, water pressures and vibrations. Examples are:

- Inclinometers (monitoring movements of slopes and excavations)
- Settlement gauges or plates (observing settlements during the life of a project)
- Crack monitors and tilt meters (for monitoring of sensitive buildings near projects)



- Piezometers (for monitoring water pressures)
- Vibration monitors (for monitoring vibration levels at sensitive receptors near your project)
- Other specialist equipment as required

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#### WHAT CAN WE DO FOR YOU?

We understand what is required from a geotechnical monitoring package. From the start, we can specify the geotechnical monitoring package that will be suitable for your project, bearing in mind the geotechnical and other engineering objectives.

We have a good working relationship with several geotechnical equipment suppliers and can arrange hire or sale of equipment.

Our engineers are well versed in the installation of all forms of geotechnical monitoring equipment and our contacts with drilling and earthworks contractors allow us to get the monitoring package installed with minimal cost and minimal fuss.

During the monitoring of the project, we can provide an ongoing monitoring service and reporting or train your staff to undertake monitoring.

Naturally, we will also interpret the results of geotechnical monitoring equipment to guide the progress of the project, be it rate of loading of fill, rate and levels of excavation or dewatering requirements, so that the project team can make informed and rapid decisions about the progress of the project.

#### A RELIABLE SERVICE

Often consultants delegate the work of monitoring and interpretation to junior engineers or technicians who may not have the experience required to understand the finer points of monitoring equipment installation and interpretation. Not so at Galt—we will service your project with experienced staff who know what they're talking about.



#### GEOTECHNICAL MONITORING

Galt can help. Give us a call and we can discuss your needs.

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