

# **Geotechnical Analysis & Studies**



Sometimes your site isn't a straight forward dense sand site, and the ground conditions require a deeper understanding to mitigate geotechnical risk and enable an efficient, sustainable design. We work with our clients to overcome a wide range of complex problems.

# **Consolidation Studies**

Sites with soft compressible materials can be impacted by excess settlement and geotechnical risk. With some detailed investigation and 3D finite element settlement modelling, we provide the time and load-dependent settlement of the material at your site. We provide solutions to these problems using ground improvement, pre-loading and deep foundations.

#### **Geophysical Analysis**

Where the ground conditions between physical investigation locations need to be defined we engage onshore and offshore geophysical specialists to undertake surveys, we combine the data with existing geotechnical information to provided comprehensive site recommendations reducing geotechnical risk to a minimum.

## **Slope Stability Analysis**

Using a wide range of limit equilibrium or finite element analysis packages coupled with well defined and selected geotechnical parameters, we can model slopes and provide optimisation or remediation designs. We provided clients who operate large ANCOLD dams and tailing facilities with software and model packages that allow real-time stability monitoring of their assets using VWP and groundwater monitoring as direct inputs into the model.

### **Complex Ground Conditions and Loading**

WML undertakes 2D and 3D finite element analysis for structures including underpasses, tunnels, dive structures, retaining walls, bridge abutments, large surcharge loads or a combination of the above.

### **Forensic Analysis**

Where structures or earthworks have failed, WML undertakes investigation and report writing for use as expert witness testimony.



