

Geotechnical Engineering

Kleinfelder provides the highest quality geotechnical investigation, design and construction phase services to support our clients' projects from the ground up.

PROJECTS:

- Undertook exploratory test pitting, and chemical soil and geotechnical laboratory testing. Conducted thermal and in-situ electrical resistivity testing, pile load testing, and pile drivability testing for the development of a 149 MW solar farm. Provided client with a geotechnical evaluation report and corrosion protection report, then utilised both to provide an economic detailed steel pile foundation design. Glenrowan, Victoria (Signal Energy)
- Determined a target list for ground truthing, mapping and assessment of soils, to inform 350km firetrail design around a proposed training area. Included areas of soft or dispersive ground, duricrusts, silts, river crossings and naturally occurring asbestos. Greenvale QLD (Dept Defence)
- Provided pavement condition assessment, geotechnical and pavement investigation services, interpretative reporting and pavement design for a range of transport improvements projects. Lake Macquarie, NSW (LMCC)
- Completed detailed ground investigation to provide further understanding of the subsurface condition on large infrastructure project. Included over 85 geotechnical, environmental, and hydrological boreholes and performing geotechnical sampling and field tests. Torrens to Darlington, SA (DIT)



Our highly skilled and experienced staff have a strong understanding of the geotechnical issues faced by modern construction teams and how these issues can impact the overall project. Kleinfelder's geotechnical professionals provide innovative solutions and advice to mitigate project risks and anticipate and overcome challenging ground conditions.

Specialising in the design of solar array piles, Kleinfelder has provided detailed foundation design and construction supervision for solar projects generating more than 26 Gigawatts of renewable energy across Australia and the United States.

Kleinfelder's geotechnical capabilities include, but are not limited to:

- Geotechnical investigation and design
- Solar pile load testing
- Tailings dam auditing and design
- Design of shallow and piled footings for all structures
- Basement design
- Temporary works design
- Slope stability analysis and remedial works design
- Mining subsidence studies
- Design of shallow foundations for commercial, residential, industrial, and mine structures
- Pile design including settlement reducing piles
- Ground improvement measures for construction on soft ground
- Geotechnical audits and design of tailings dams
- Soil nail design and rock anchor design
- Pavement design
- Assessment of rock cuttings and design of rockfall protection measures