

GEOTECHNICAL AND GEOLOGIC ENGINEERING AND CONTRACTING SERVICES

Geotech International Pte Ltd - Singapore

Geotech International (Australia) Company Pty Ltd - Australia

Geotech International Vietnam Company Ltd - Vietnam

Geotech International Lao Sole Company Ltd - Lao PDR

The Company

Geotech International are specialized geotechnical engineers and contractors working throughout Southeast Asia and Indochina from offices in Australia, Singapore, Vietnam, and Laos. The company is qualified and experienced in supplying site investigation, insitu testing, instrumentation, and construction quality control subcontractor services for Australian geotechnical engineering companies working in the Southeast Asia region. The company uses Australian qualified drilling, sampling, and testing equipment; combined with Australian-audited safety and risk management methodologies.

The Company has extensive experience in geotechnical site investigations by providing field drilling, sampling, insitu testing, geological, and geotechnical reporting to international and local hydropower, alternative energy, and mining developers; and multi-national project funding agencies. The Company provides specialized construction services including site improvement and foundation grouting.

The company also has extensive experience in geotechnical and structural instrumentation services through the design, supply, installation, and performance monitoring of hydropower and mining dams, and structures for international and local hydropower, alternative emergency, and mining developers; and multi-national projects.

The Company supports international geotechnical engineering companies working in Southeast Asia through international quality geotechnical drilling, sampling, insitu testing, and laboratory testing.



The Services Provided

Geotech International (Australia) and its associated companies has for over 20 years established competency with quality international clients in the following areas within its Territory of Australia, Indochina, and Southeast Asia:

- ✓ Geotechnical and geological engineering and site investigation
- ✓ Geotechnical, geological, and geophysical insitu testing
- ✓ Mining and tailing storage facility site investigation and instrumentation services
- ✓ Management of geotechnical projects - Geotechnical boring and sampling programmes
- ✓ Hydropower and alternative energy feasibility studies; and the provision of "Bankable Feasibility Reports"
- ✓ Geotechnical and civil structure instrumentation and monitoring
- ✓ Analysis and design of embankment dams and dikes
- ✓ Dam safety inspection and remedial design of unsafe water retention structures
- ✓ Hydro-geological ground water and surface water studies for mining and hydropower projects
- ✓ Construction monitoring with Quality Control and Quality Assurance (QC & QA) testing and auditing
- ✓ Geotechnical laboratory assessment and auditing
- ✓ Marketing, sales, and service of advanced technology geotechnical and alternative energy project equipment

HYDROPOWER AND ALTERNATIVE ENERGY DEVELOPMENT

Alternative Energy and Hydropower

Geotech International provides a full range of design and construction services for hydropower and alternative energy project development. Work is performed for private developers, owners, and consulting firms; ODA projects; government ministries and departments; international aid agencies; and multi-national lending agencies.

Hydropower and alternative energy project component	Specialized Experience and Capabilities
Feasibility studies	Feasibility level design and reporting: Hydrologic and meteorologic studies; hydraulic studies; construction material availability with quantity and quality measurement and assessment; wind, solar and hydraulic equipment requirements, cost analysis, construction estimates; economic documentation; presentations to lenders and licencing authorities
Site investigation	Design and performance of geotechnical boring and sampling programs: Boring sampling and testing; laboratory testing; quality control (QC) and quality assurance (QA) of all work
In situ testing and instrumentation	All forms of field and in situ testing: Permeability Lugeon; piezocone; field vane shear; instrumentation and in situ measurement of site conditions; Quality Control and Quality Assurance based monitoring and reporting of all work
Hydro-geology studies	Hydro-geologic database development, 2D and 3D ground water modelling, model verification, and model application to construction dewatering and river diversion; field management of hydro-geologic data collection and testing; development of hydro-geologic database; analysis and mathematical testing for dewatering, slope stabilization and surface water protection
Project design	Feasibility, preliminary, detailed and construction design level work: Dams and reservoirs; wind and solar power farms; hydrology and hydraulics; water conveyance; tunnels and penstocks; power plant; hydraulic machinery and power generation machinery; electrical switch yards; high power transmission lines
Dam performance monitoring	Instrument system design, procurement, and installation; data acquisition and data transmission; data analysis systems; assessment of safe and un-safe measurement values; alarm systems
Construction management & control	Contractor performance monitoring and management; field and laboratory QC testing of construction; quality assurance (QA) management and reporting.
Dam safety monitoring and remedial construction	Internationally qualified and trained site safety and dam safety inspectors and inspection; risk analysis; remedial design to improve the performance of unsafe structures; Preparation of Emergency Action Plans; flood mapping and emergency response; training and simulations.



Theun Hinboun Expansion Project - Lao PDR

Geotech international provided all of the geotechnical exploration and geotechnical design for preparation of the successful Bankable Feasibility Study needed to approve, finance, and build the project



Theun Hinboun Expansion Project - Lao PDR

Geotech international provided all of the geotechnical exploration, seepage measurement and seepage management structural design for control of potential seepage from limestone formations located on the rim of the reservoir

GEOTECHNICAL FIELD, LABORATORY, AND DESIGN SERVICES

Site Investigation and Construction Material Geotechnical Field Services

Geotech International has the following capability, experience, and client base in providing geotechnical field and laboratory boring, sampling testing and reporting services. These services are available throughout Australia, Southeast Asia, and the South Pacific.

Market Segment	Specialized Experience	Typical Clients
Geotechnical engineering, foundation design and investigation	Design, management of geotechnical boring and sampling programs; construction quality control (QC) and quality assurance (QA); instrumentation and performance monitoring of civil structures and soil embankments	Private developers, owners, and consulting firms; ODA projects; government ministries and departments; international aid agencies; multi-national lending agencies
Insitu testing	Piezcone; field vane shear, Lugeon permeability, quality control (QC) and quality assurance (QA) testing	Private developers, owners, and consulting firms; ODA projects
Hydro-geology for hydropower and mining	Hydro-geologic database development, 2D and 3D ground water modelling, model verification, and model application to mine dewatering and pit slope stabilization; field management of hydro-geologic testing; development of hydro-geologic database; analysis and mathematical testing for dewatering, slope depressurization and surface water protection	National and international-based and financed mining projects; international and national-based hydropower projects
Embankment and RCC dam design	Site investigation; material investigation and resource management; foundation design; embankment design; construction contract documentation; construction management with QC and QA functions	Private owners; government agencies; bi-lateral funding agencies; multi-lateral financing agencies
Construction management and monitoring	Contractor performance monitoring and management; construction quality control (QC) and quality assurance (QA) testing and reporting.	Private developers, owners, and consulting firms
Dam safety monitoring and remedial construction	Internationally qualified and trained dam safety inspectors and inspection; risk analysis; remedial design to improve the performance of unsafe structures; Dam safety manuals and Emergency Action Plans	Mining projects, hydropower projects, and government infrastructure projects



Geotech International Boart Longyear drill performing site investigation for hydropower dam in the Lao PDR



Dam safety instrumentation supply and installation services for one of the largest tailings dams in Asia



Computer controlled insitu permeability testing and grouting instrumentation for mining project in the Lao PDR



Dam safety instrumentation piezometer, inclinometer, and settlement, instrumentation for dam safety project in Vietnam

EQUIPMENT SALES AND SERVICE

Equipment Sales and Service

Geotech International provides sales and service for major manufacturers of civil engineering and environmental monitoring instrumentation throughout Australia, Indochina, and Southeast Asia:

All equipment sales are backed with complete calibration and repair services.

Product lines - Sales and service

	<p>Durham Geoslope Indicator - USA</p>	<p>Geotechnical & structural instrumentation</p> <ul style="list-style-type: none"> ✓ Piezometers ✓ Inclinometers ✓ Displacement ✓ Structural 	
<p>Technologies to manage risk for infrastructure</p>	<p>Geocomp - USA</p>	<p>Automated geotechnical laboratory testing</p> <ul style="list-style-type: none"> ✓ Triaxial (Static, cyclic & dynamic) ✓ Consolidation ✓ Resonant column ✓ Shear (DS & DSS) 	
	<p>Tensar Geosynthetics - England</p>	<p>Soil-structure strengthening and stabilization</p> <ul style="list-style-type: none"> ✓ Landslide repair ✓ Hydropower & wind turbine construction ✓ Retaining walls 	
	<p>Willowstick Technologies - USA</p>	<p>Seepage location and management</p> <ul style="list-style-type: none"> ✓ Dams ✓ Canals ✓ Water channels ✓ Seepage barriers ✓ Building foundations 	
	<p>Prime Resins - USA</p>	<p>Chemical grouting for seepage control</p> <ul style="list-style-type: none"> ✓ Flowing water control in tunnels & dams ✓ Seepage control in building foundations 	

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