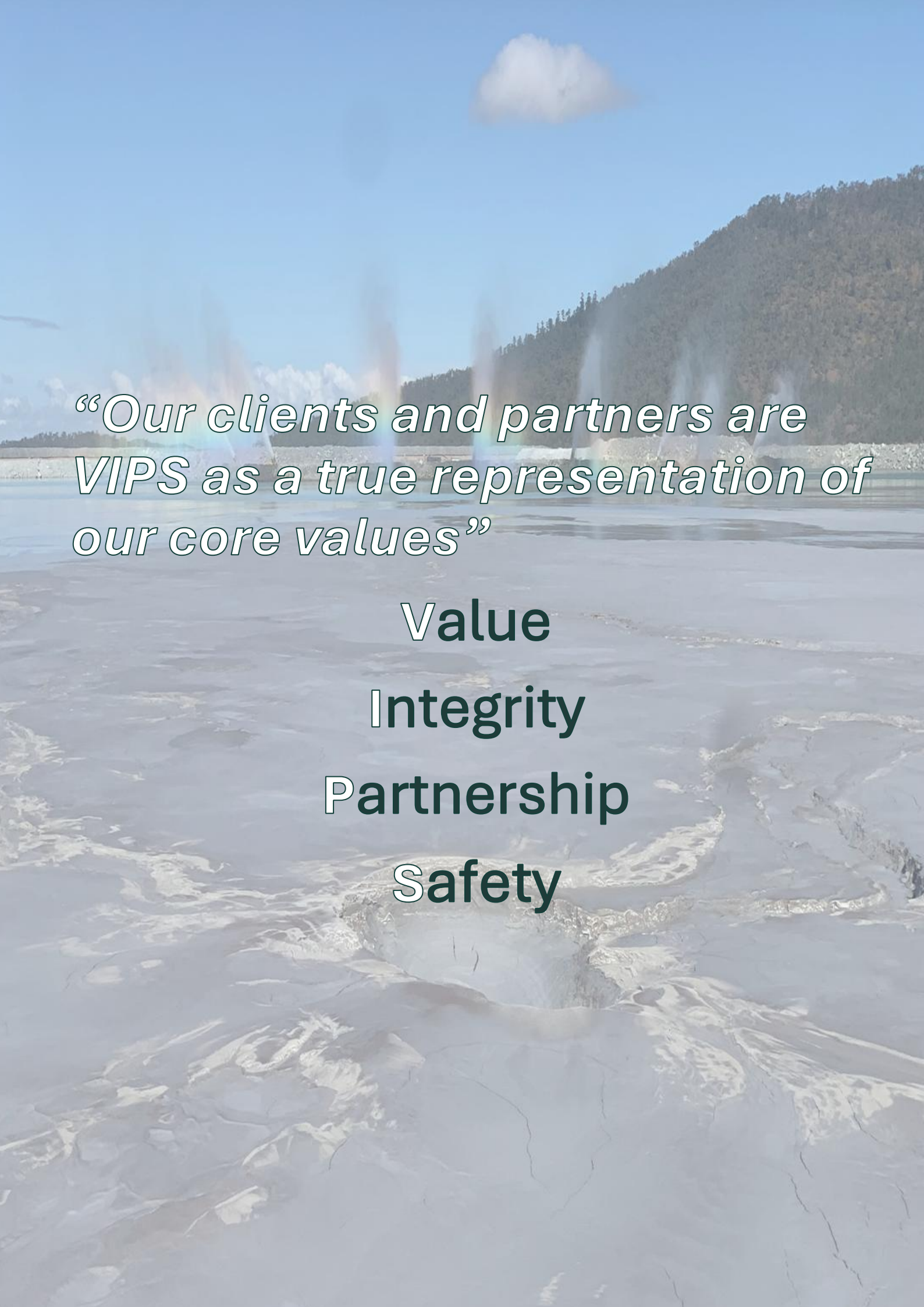




CAPABILITY STATEMENT



*“Our clients and partners are
VIPs as a true representation of
our core values”*

Value

Integrity

Partnership

Safety

Table of Contents

1. Who we are
2. Value Proposition Statement
3. Core values
4. Business units
5. Capabilities
6. Partner projects
7. Affiliations

Who we are

Geotailnics Pty Ltd is a specialist consulting firm with more than two decades of high-level, multidisciplinary experience across the **mining and civil geotechnics sectors**. We provide **practical, innovative, and risk-informed solutions** throughout the lifecycle of mining projects, ensuring the safety and long-term stability of critical mine infrastructure.

Our expertise is grounded in advanced technical knowledge, global operational experience, and a deep commitment to governance and stewardship in geotechnical engineering and tailings geotechnics.



Value Proposition



Optimisation

Efficiency and Expertise



Partnering

Collaboration and Trust



Solutions

Delivery and Results

Collaboration and Trust

We are not just a consultant but a collaborative partner. We believe in building long-term relationships, providing technical mentorship, and integrating with the client's internal team

Efficiency and Expertise

We apply advanced methods to achieve the best optimised outcome. We specialise in moving beyond “safe but expensive” designs to truly optimised ones, using advanced analytical methods, including artificial intelligence

Delivery and Results

Our focus is on actionable results, not just theoretical reports. We are committed to resolving complex geotechnical problems and delivering tangible outcomes (design, governance, and construction support)

Core Values





Business units

Our three main business units are:

Consulting:

- Advice / Design / Deliver

Projects:

- Project Management
- Concept to definitive feasibility
- Project stage transition management

Operations:

- Client Partner Support
- Advisory
- Risk analysis

“We get in the trenches to deliver”



Capabilities

Tailings Geotechnics

We provide end-to-end expertise in managing mine waste risk and driving compliance with evolving global standards:

Design:

- Site characterisation and performance objectives
- Conceptual to Definitive Feasibility Study (DFS) level design for new TSFs
- Stage raising scoping and study for existing facilities
- Dewatering strategies assessment and options analysis
- Stability assessments
- Deformation analysis
- Liquefaction assessment
- EOR/ RTFE capability
- Spillway design
- Third-party design reviews

Construction Support:

- Performance calibration relative to design objectives
- Project management

Risk Profiling – Identification , Analysis and Evaluation:

- Risk profiling for design – Multi-criteria analysis (MCA)
- Failure modes and effect analysis (FMEA) – event and fault tree analysis
- Dam break analysis
- Development of trigger response plans (TRPs)
- Dam Safety Reviews (DSRs)

Instrumentation and monitoring:

- Design, installation, monitoring, and interpretation of instrumentation
- Development of trigger response plans (TRPs)
- Data interpretation for design or interrogation

Mine Closure:

- Provide capping design and placement strategy assessments
- Geotechnical studies for progressive rehabilitations and mine closure plans
- Landform Evolution Assessments

Mine Geotechnics

We support efficiency and safety through expert rock and soil mechanics assessments across life of mine stages.

Open-Pit Geotechnics

Due diligence studies:

- Feasibility study and due diligence
- Third-party technical reviews
- Ground Control Management Plans (GCMP) reviews and formulation
- Design audits
- Geotechnical economic evaluations

Slope stability and design:

- Advanced design and analysis of pit slope walls – saprolite and rock environments
- Technical support for mine design
- Pit slope stability assessments – including deformation, rockfall, and settlement analysis
- Groundwater assessment and evaluations
- Erosion assessment

Geotechnical site characterisation:

- Site characterisation for design – Geotechnical investigation and laboratory testing planning
- Geotechnical mapping to inform design
- Logging for site characterisation

Instrumentation and monitoring:

- Monitoring strategy framing and planning
- Instrument data analysis and recommendations
- Monitoring strategy reviews

Advanced Risk Assessment and Modelling:

- Predictive risk analysis and uncertainty analysis
- Failure modes and effects analysis
- Critical risk identification
- Critical control implementation and standardisation
- Critical control verification and assurance
- Reporting and governance

Soil/Rock Pads/Dumps or Stockpile Geotechnics

Design:

- Soil/rock dump design and analysis
- Geotechnical investigation – planning and oversight of drilling programs
- Soil/Rock Dump or stockpile stability assessments

Instrumentation and Monitoring:

- Design, monitoring, and interpretation of instrument data
- Deformation analysis
- Formulation of TARPs

Underground Geotechnics

Underground:

- Ground support design, review and audits
- Mapping and structural analysis
- Review of hazard management plans / ground control management plans
- Stope backfill assessment
- Progressive rehabilitation closure plan assessments
- Settlement assessments
- Instrumentation monitoring and review

Geotechnical Risk Assessment

Geotechnical engineering is often associated with risk, dealing with the behaviour of soil, rock and groundwater. Geotechnics approach to associated and inherent risk is to understand the uncertainty through uncertainty quantification to inform predictive risk assessments.

Risk management strategies:

- Identify
- Assess
- Control
- Verify and Audit
- Governance

Partner Projects



**FORRESTANIA
RESOURCES**

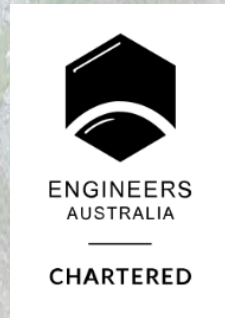


**BROKEN HILL
MINES**



Sahara

Affiliations





Contact us:

www.geotailnics.com.au



admin@geotailnics.com.au | www.linkedin.com/geotailnics | +61 481 269 414

Partnering towards optimised solutions