



BELEK
CONSULTING LIMITED

STRATEGY | DELIVERY | SUSTAINABILITY | IMPACT

GEOTECHNICAL ENGINEERING |
MATERIALS TESTING |
GROUND INVESTIGATION

*Building
Resilient
Infrastructure
for a Stronger
South Sudan*

Ground Intelligence. Engineering Confidence.

Integrated geotechnical investigation,
materials testing and ground engineering
solutions across South Sudan.



SAFE
INFRASTRUCTURE



EVIDENCE
DRIVEN



SUSTAINABLE
SOLUTIONS



STRONGER
COMMUNITIES

*From
Ground
Investigation
to Engineering
Decision.*

Reliable data.
Practical solutions.
Lasting impact
for South Sudan.



01 | GEOTECHNICAL SITE INVESTIGATION

UNDERSTANDING THE GROUND

We undertake comprehensive geotechnical investigations to establish soil, rock and groundwater conditions, providing the critical data for safe, economical and resilient infrastructure.

- Borehole drilling and soil investigation
- Trial pits and test pits
- Standard Penetration Testing (SPT)
- Soil and rock sampling (disturbed & undisturbed)
- Groundwater observations and monitoring
- Geological logging and soil profiling
- Foundation investigations
- Pavement and subgrade investigations
- Borrow-pit and construction material assessments



02 | LABORATORY & MATERIALS TESTING

ACCURATE TESTING. BETTER DECISIONS.

We provide reliable laboratory testing for soils, aggregates and construction materials to support design, construction and quality assurance.

- Natural moisture content
- Sieve and hydrometer analysis
- Atterberg limits (LL, PL, PI)
- Standard/Modified Proctor (MDD/OMC)
- California Bearing Ratio (CBR)
- Density and compaction testing
- Direct shear, triaxial and consolidation (where required)
- Permeability and collapse/swell testing
- Aggregates and construction-material testing



03 | GEOTECHNICAL DESIGN & INFRASTRUCTURE SUPPORT

TURNING DATA INTO SOLUTIONS

We translate investigation results into practical engineering recommendations and provide geotechnical advisory support throughout the project lifecycle.

- Bearing capacity and settlement assessment
- Foundation recommendations (shallow and deep)
- Ground improvement solutions
- Retaining structures and slope stability
- Earthworks and pavement design support
- Roads and airstrips
- Dams and flood infrastructure
- Buildings and other structures
- Water and WASH infrastructure
- Technical review and design input



04 | SOUTH SUDAN FIELD CAPABILITY

LOCAL EXPERIENCE. REAL SOLUTIONS.

Our team has extensive field experience across South Sudan, enabling efficient delivery in challenging environments.

- Remote mobilization and field logistics
- Difficult-access sites
- Seasonal flooding considerations
- Expansive and black cotton soils
- High groundwater conditions
- Field quality assurance and control
- Technical reporting and documentation
- Stakeholder coordination
- Coordination with design and construction teams
- Support for UN agencies, government and development partners

SECTORS WE SUPPORT



Roads &
Bridges



Airstrips



Buildings



Water & WASH



Dams &
Flood Protection



Energy &
Industrial

INFRASTRUCTURE FOR PEOPLE. OPPORTUNITIES FOR TOMORROW.



RELEVANT EXPERIENCE

Experience of BELEK's technical team includes infrastructure and geotechnical-related assignments in Juba, Torit, Pibor, Maban, Malakal, Fashoda, Wau, Terekeka and Aweil.

This includes geotechnical investigation planning for the Pibor airstrip, involving CBR, Proctor (MDD/OMC), sieve analysis and plasticity index to determine runway subgrade suitability, as well as water and flood infrastructure survey experience in Torit and Maban.



LOCAL GROUND CONDITIONS

Expansive black cotton soils and seasonal flooding are significant engineering considerations in parts of South Sudan. Site-specific investigation is essential to understand ground conditions and develop safe, durable and cost-effective infrastructure solutions.

Investigate. Test. Analyse. Design. Verify.

BELEK Consulting Limited | Geotechnical Capability Statement | South Sudan | 2026