



BAZI DUKHAN CONSULTING ENGINEERS

GEOTECHNICAL | STRUCTURAL | CIVILS

"ENGINEERING CONFIDENCE FOR CRITICAL INFRASTRUCTURE"

Award-Winning Structural, Geotechnical and Civil Engineering Solutions Trusted By
Major South African Public and Private Sector Clients, Government, State-Owned
Entities, Developers and Industry Leaders Since 2008

GEOTECHNICAL ENGINEERING

Understanding the Ground Before You Build

Successful infrastructure begins with a thorough understanding of the ground conditions beneath it. At Bazi Dukhan Consulting Engineers (BDCE), our geotechnical investigation services provide the critical data required to support safe, efficient, & cost-effective engineering design.

From residential and commercial developments to major infrastructure, industrial facilities, ports, and mining projects, BDCE delivers comprehensive ground investigations that identify subsurface conditions, evaluate geotechnical risks, and provide reliable recommendations for design and construction.

Our investigations combine industry-leading field techniques, laboratory testing, engineering analysis, & practical experience to ensure that projects are founded on accurate & dependable geotechnical information.

WHY GEOTECHNICAL INVESTIGATIONS MATTER

Ground conditions can significantly influence project cost, construction methods, foundation design, and long-term structural performance. Early identification of geotechnical risks reduces uncertainty, minimizes construction delays, and provides confidence during planning and execution.

OUR INVESTIGATION SERVICES

-  SITE INVESTIGATIONS
-  GEOTECHNICAL ASSESSMENTS
-  GEOTECHNICAL MAPPING
-  LABORATORY TESTING

AREAS OF EXPERTISE

TRANSPORTATION INFRASTRUCTURE ♦ COMMERCIAL & INDUSTRIAL

MARINE & COASTAL INFRASTRUCTURE ♦ WATER INFRASTRUCTURE

RESIDENTIAL DEVELOPMENTS ♦ MINING & RESOURCE PROJECTS

VISIT OUR WEBSITE



STRUCTURAL ENGINEERING

At Bazi Dukhan Consulting Engineers (BDCE), we provide comprehensive structural engineering services for projects ranging from residential developments & commercial buildings to industrial facilities, infrastructure, and marine structures.

Our structural engineering team combines technical excellence, practical construction knowledge, and innovative design methodologies to deliver safe, economical, & sustainable structural solutions. We work closely with developers, architects, contractors, & project stakeholders to ensure every structure is designed to perform efficiently throughout its intended lifespan.

Whether supporting new developments, upgrades to existing facilities, or complex infrastructure projects, BDCE delivers engineering solutions that balance safety, functionality, durability, and cost-effectiveness.



STRUCTURAL DESIGN CAPABILITIES



REINFORCED CONCRETE DESIGN

Foundations, beams & slabs, columns, retaining walls, elevated structures, and water-retaining structures.



STRUCTURAL STEEL DESIGN

Industrial buildings, warehouses, canopies, pipe racks, support structures, and heavy-duty steel frameworks.



MARINE AND WATERFRONT STRUCTURES

Jetties, piers, berthing facilities, marine retaining structures, and coastal protection works.



FOUNDATION ENGINEERING INTEGRATION

Shallow, raft & pile foundations, ground improvement systems, and settlement-sensitive structures.

OUR STRUCTURAL ENGINEERING SERVICES



RETAINING STRUCTURES & EARTH RETENTION



STRUCTURAL ASSESSMENTS & AUDITS



REHABILITATION & STRENGTHENING



INFRASTRUCTURE ENGINEERING



BUILDING STRUCTURE DESIGN



INDUSTRIAL STRUCTURES

Successful structural engineering requires an understanding of how structures interact with the ground, the environment, and their intended use. BDCE's multidisciplinary approach ensures that every solution is practical, buildable, & aligned with project objectives. Our team works throughout the project lifecycle, from concept development & feasibility studies through detailed design, construction support, & final completion.

INDUSTRIES WE SERVE

COMMERCIAL DEVELOPMENTS

INDUSTRIAL FACILITIES

RESIDENTIAL DEVELOPMENTS

MINING INFRASTRUCTURE

PORTS & MARINE FACILITIES

ENERGY & RENEWABLE PROJECTS

WATER & WASTEWATER FACILITIES

MUNICIPAL INFRASTRUCTURE

TRANSPORTATION INFRASTRUCTURE

At BDCE, we believe that effective structural engineering is about more than compliance with design standards. It is about delivering resilient, economical, & sustainable solutions that add value to every project. **From concept to construction, BDCE provides the structural expertise needed to turn engineering challenges into lasting infrastructure.**

CIVIL ENGINEERING

At Bazi Dukhan Consulting Engineers (BDCE), we provide comprehensive civil engineering services that transform concepts into functional, reliable, and sustainable infrastructure. Our team delivers innovative and cost-effective solutions for public and private sector projects across a wide range of industries.

From planning and design through to construction support, we work closely with our clients to develop infrastructure that meets current needs while supporting long-term growth and resilience.

OUR CIVIL ENGINEERING SERVICES

-  **ROADS & TRANSPORTATION INFRASTRUCTURE**
Road & pavement design - Access roads & intersections - Parking facilities
Traffic accommodation planning - Road rehabilitation and upgrades
-  **WATER & WASTEWATER INFRASTRUCTURE**
Reservoirs & storage facilities - Sewer reticulation networks - Pump stations
Water reticulation systems - Wastewater treatment infrastructure
-  **LAND DEVELOPMENT ENGINEERING**
Township infrastructure - Commercial & industrial developments
Bulk earthworks design - Site grading and platform design
Services coordination
-  **MUNICIPAL INFRASTRUCTURE**
Urban & rural infrastructure projects - Public facilities
Community development infrastructure
Civil services upgrades & expansion
-  **STORMWATER MANAGEMENT**
Attenuation & detention facilities
Erosion control measures - Stormwater drainage systems - Flood risk assessments
Sustainable drainage solutions

DELIVERING INFRASTRUCTURE THAT LASTS

BDCE combines sound engineering principles, practical experience, and innovative thinking to deliver infrastructure solutions that are safe, sustainable, and fit for purpose.

From roads and drainage systems to water networks and land development projects, BDCE provides civil engineering solutions that support communities, businesses, and future growth.

WHY LEADING ORGANISATIONS CHOOSE US



**MULTIDISCIPLINARY
ENGINEERING
EXPERTISE**



**PROVEN PUBLIC
SECTOR DELIVERY**



**LARGE
INFRASTRUCTURE
EXPERIENCE**



**AWARD-WINNING
DESIGN SOLUTIONS**



**ISO QUALITY
ASSURANCE**



**HIGHLY EXPERIENCED
TECHNICAL
LEADERSHIP**



SOME OF OUR PROJECTS

Delivering Excellence Across Multiple Sectors

OUR ACCREDITATIONS

-  ISO ACCREDITED
-  CESA ACCREDITED
-  LEVEL 1 B-BBEE
-  NHBC REGISTERED
-  ECSA REGISTERED PROFESSIONAL ENGINEER
-  AWARD-WINNING ENGINEERING SOLUTIONS

WHERE WE OPERATE

Proudly delivering engineering solutions across South Africa and the African continent.

OUR REGIONAL PRESENCE

-  DURBAN (HEAD OFFICE)
-  JOHANNESBURG
-  CAPE TOWN
-  PRETORIA
-  EASTERN CAPE
-  GAUTENG
-  INTERNATIONAL PROJECTS

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MAKRO PIETERMARITZBURG RECONSTRUCTION



BUILDERS EXPRESS MARGATE REDEVELOPMENT



RIVERHORSE VALLEY WAREHOUSE, OFFICE BLOCK & SUBSTATION



N2/N3 EB CLOETE INTERCHANGE CAPACITY IMPROVEMENTS



LOWER UMKHOMAZI BULK WATER SUPPLY SCHEME