iLZ CONSULTING
Ilanga Lezintaba Zolwandle Consulting
GEOTECHNICAL & GEOHYDROLOGICAL CONSULTANTS
Reg. 2015/103674/07

Suite 7 Epcot Centre | 615 Umngeni Road
Morningside | Durban | 4001

+27 31 316 5068
+27 81 711 1390

086 505 7676

sphesihle@ilzconsulting.com

Managing Director: S.C Mdlalose

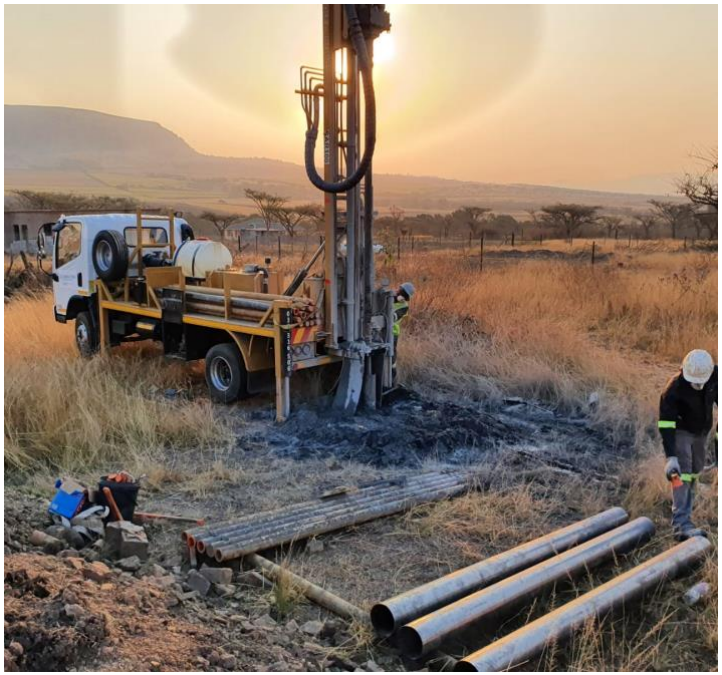
ABOUT US

Ilanga Lezintaba Zolwandle Drilling (Pty) Ltd here within referred to as ILZ Drilling, is a specialist groundwater detection and borehole drilling company that was established in 2019 by Mr. Sphesihle Mdlalose. We are a 100% black youth owned company – level 1 BBBEE.

iLZ Drilling aims to implement cost effective and sustainable techniques of groundwater utilization, development, management and equipping of boreholes to the satisfaction of its valued clients.

Our investigations form part of the planning, they influence the designs, and we monitor the construction phase of the project to ensure that the recommended guidelines are adhered to.

Our services include: geophysical surveys / groundwater assessments, borehole drilling, pump testing and installations, water quality testing and analysis as well as equipping of boreholes ranging from small household use; agricultural and irrigation use, water and sanitation in schools and hospitals, community boreholes to large industrial and mining boreholes.



PROFESSIONAL REGISTRATIONS

BWA	- Borehole Water Association of South Africa
GAKZN	- Groundwater Association of KwaZulu Natal
SACNASP	- South African Council for Natural Scientific Persons
SAIEG	- South African Institute for Engineering & Environmental Geologists

CIDB GRADING

4CE
1GB

BBBEE STATUS

Level 1

iLZ CONSULTING
Ilanga Lezintaba Zolwandle Consulting
GEOTECHNICAL & GEOHYDROLOGICAL CONSULTANTS
Reg. 2015/103674/07
Suite 7 Epcot Centre | 615 Umngeni Road
Morningside | Durban | 4001
+27 31 316 5068
+27 81 711 1390
086 505 7676
sphesihle@ilzconsulting.com
Managing Director: S.C Mdlalose

BOREHOLE DRILLING

Groundwater is undeniably an important freshwater resource for drinking water supply, irrigation and industry, in addition to its natural role of sustaining river flow and aquatic ecosystems. Sustainable groundwater development is fundamental in order to provide universal access to safe drinking water.

Constructing, or repairing, boreholes requires specialized knowledge and technical expertise, and if they are not properly sited, designed and constructed in the first place, supplies cannot be maintained, and investments are wasted. And in the longer term, if groundwater resources are not effectively managed, there is risk of over-abstraction and pollution and massive failure of drinking water supplies. This cannot be allowed to happen, and which is why we are here to assist our clients in ensuring the proper process are followed in all stages of the drilling process.

Borehole drilling involves 4 steps:

1. Geophysical survey (borehole siting)

A geohydrological / geophysical is an essential step in understanding groundwater resources and siting new water boreholes. Choosing a borehole site is a critical part of the process of providing a safe and reliable supply of groundwater. The best sites are those in which catchment (natural water input) may be maximized.
Methods we use:

- Resistivity method,
- Electromagnetic method
- Electro-seismic method
- Magnetic method.

2. Borehole drilling

Once a suitable site has been selected and borehole drilling decided on, the proper drilling method must be chosen. The actual borehole is drilled using an automated Drill Rig and 21 Bar Compressor, with the method determined by the geological conditions on site. We mainly use 2 methods:

- Percussion drilling
- Rotary percussion

Once drilled, permanent steel casing (see image below) will be installed from surface through unstable, unconsolidated or fractured materials usually occurring in the near surface.

iLZ CONSULTING
Ilanga Lezintaba Zolwandle Consulting
GEOTECHNICAL & GEOHYDROLOGICAL CONSULTANTS
Reg. 2015/103674/07
Suite 7 Epcot Centre | 615 Umngeni Road
Morningside | Durban | 4001
+27 31 316 5068
+27 81 711 1390
086 505 7676
sphesihle@ilzconsulting.com
Managing Director: S.C Mdlalose

BOREHOLE DRILLING (continued….)

3. Pump testing and Water Quality Analysis

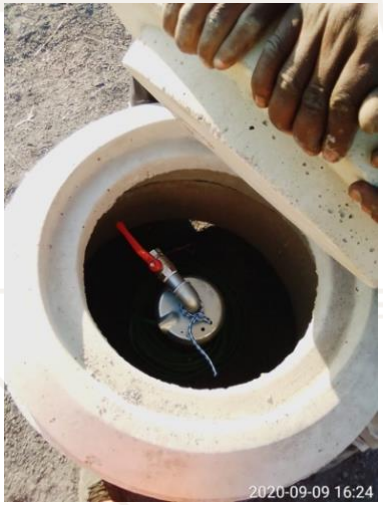
Aquifer testing (4hr stepped, 24hr discharge, 24hr constant, and recovery monitoring) will be performed on each borehole, in order to determine the aquifer parameters (amount of water available) to enable proper equipping of the borehole with a pump. The results of this test will determine how much water is available for abstraction without an adverse effect on the regional groundwater.

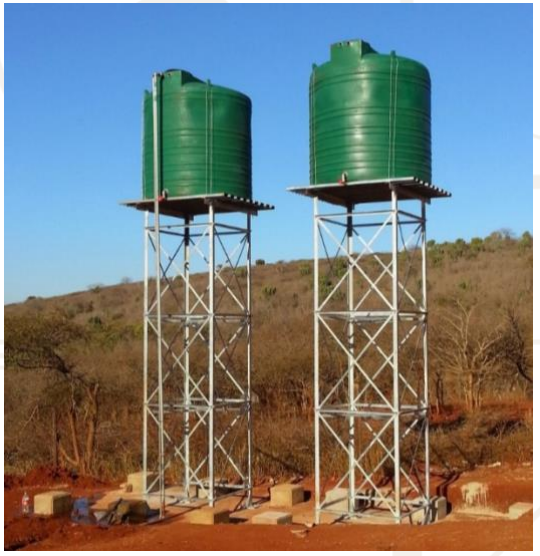
During the aquifer test, a sample of water will be collected from each borehole for testing according to SANS 241 drinking water standards. Tests will be done at a SANAS accredited laboratory.

4. Borehole Equipping & Registration

After successful drilling of borehole, it will be equipped with any of the below, depending on the clients' request:

- Pumps - Submersible pump and motor
  - Solar pumps
  - Hand pumps
  - Pressure booster pumps
- Tank - Eco tanks, Jojo tanks, Roto tanks up to 60 000 litres
  - Vertical, horizontal and troughs
- Tank stands – galvanized steel/ pressed steel
  - Concrete base/plinth
- Borehole protection - pump houses, lockable manholes etc.
- All plumbing and related excavations and connections.
- Electrical connections and compliance certificate
- Borehole registration with the Dept of Water Affairs' National Groundwater Archives (NGA)





iLZ CONSULTING
Ilanga Lezintaba Zolwandle Consulting
GEOTECHNICAL & GEOHYDROLOGICAL CONSULTANTS
Reg. 2015/103674/07
Suite 7 Epcot Centre | 615 Umngeni Road
Morningside | Durban | 4001
+27 31 316 5068
+27 81 711 1390
086 505 7676
sphesihle@ilzconsulting.com
Managing Director: S.C Mdlalose

PERSONNEL

DIRECTOR

Sphesihle Mdlalose:- is a Managing Director and Founding Member ILZ Drilliing. He is a Certificated Scientist in terms of the South African Council for Natural Scientific Profession (SACNAPS). He holds a BSc Honours in Environmental and Engineering Geology. He has worked and managed several geotechnical engineering project which include inter alia, foundation designs and roads. He has also worked on several hydrogeological projects dealing with groundwater development and monitoring of surface and groundwater.

KEY PERSONNEL

POSITION / ROLE	Name
Project Manager	Sphesihle Mdlalose
Health & Safety Officer	Lungani Mngomezulu
Drill Rig Operator	Sipho Masango
Finance & Admin	Lindiwe Mdlalose

PROFESSIONAL AFFILIATIONS FOR COMPANY AND/OR INDIVIDUAL

- South African Council for Natural Scientific Profession (SACNASP)
- South African Institute of Engineering Geologist (SAIEG)
- Ground Water Division of the Geological Society of South Africa (GWD-GSSA)
- Ground Water Association of KZN (GAKZN)
- Borehole Water Association of Southern Africa (BWA)

iLZ CONSULTING
Ilanga Lezintaba Zolwandle Consulting
GEOTECHNICAL & GEOHYDROLOGICAL CONSULTANTS
Reg. 2015/103674/07

Suite 7 Epcot Centre | 615 Umngeni Road
Morningside | Durban | 4001

+27 31 316 5068
+27 81 711 1390

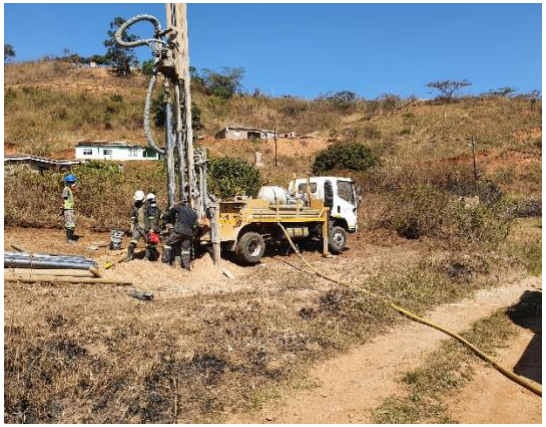
086 505 7676

sphesihle@ilzconsulting.com

Managing Director: S.C Mdlalose

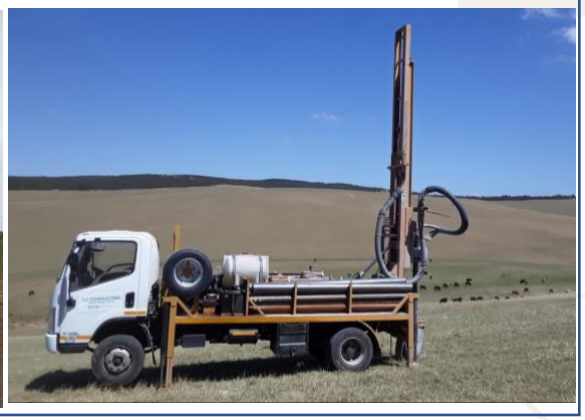
PROJECTS

PRIVATE RESIDENTIAL / COMMUNITY USE



SCHOOLS

FARMS AND AGRICULTURAL USE



HOSPITALS