Sands Civil Services Company Profile

Sands Civil Services is a company offering specialist materials testing, geotechnical, inspection & consultancy services operating from offices and laboratories located in Gaborone International Commerce Park. Established in 1996, we have extensive experience of specialist services for the road building and construction industries. In addition we have a construction division specialising in the supply & erection of pre-engineered and mobile buildings and in general building and remedial works. We also offer inspection services and insured loss assessment.

The attached profiles give an overview of the business:

- Construction Materials Testing
 - Construction, Remedials & Refurbishment
 - Geotechnical Consultancy
 - Insured Loss Investigation
 - Light Steel Frame Buildings
 - Engineering & Statutory Inspection
 - Materials & Corrosion Consultancy
 - Laboratory, Testing and Inspection Equipment Sales
 - Soil Testing for Agriculture



geotechnical surveys modular buildings inspection & testing insured loss assessment construction

If you have any queries, need to know more about our services or need a quotation please contact us:

Sands Civil Services		
Private Bag 00379 Gaborone Botswana	<i>Tcl: 267 3909864 / 7</i> <i>Fax: 267 3909 881</i> info@sandscivils.com <i>www.sandscivils.com</i>	
Soil & Materials Testing	Jack Sands - 72111072	jsands@sandscivils.com
Foundation Investigation Insurance Loss Adjusters	Patrick O Kgati – 75008722	pkgati@sandscivils.con
Pre-fabricated Buildings Building Contractors	Jack Sands - 72111072	jsands@sandscivils.cor
Statutory & Engineering Inspection	John Stonehill - 72767296	jstonehill@sandscivils.com
Laboratory Equipment Sales	Godiraone Sekaba	gsekaba@sandscivils.con
Agricultural Soil Testing	Tumisang Mabophiwa	tmabophiwa@sandscivils.co











Construction and building repairs, light steel frame buildings supply & erection:

Sands Civil Services

Construction

- Construction of:
 - Houses
 - Warehouses
 - Factories
 - Offices
- Building repairs, refurbishment and modifications
- Prefabricated & Light Steel Frame (LSF) buildings
- Underpinning and foundation repair
- Crack repair

Some of our projects:

Commercial:

Volvo - Workshop & Office, A R Investments – Warehouse Gaborone West, Office & W/S units Phakalane,

House building:

Private Houses: Phakalane Golf Estate, Phakalane, Ruretse, Block 9 Gaborone, Housing Estate: African Copper Mosetse, WGM House Phakalane,

Remedial & Refurbishment Work:

Refurbishment: Water Utilities 'On Site Electrolytic Chlorination' OSEC Plant', Gaborone Squash Club, Bush House Mokolodi Game Park Underpinning: Plot 13172 Broadhurst, Metsef Trade Centre, Refurbishment

Prefabricated & LSF Buildings:

Ministry of Health: Ghantsi, Kazungula, Molepolole, Serowe. Fraser International, Botswana Family Welfare Centre, ACHAP Resource Centres Francistown, Commercial Development Plot 154 GICP, Contractor's Camp Mmadinare, Contractor's Camp Kanye & Goodhope, Private House Mokolodi

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Pre-fabricated Buildings Light Steel Framed Buildings Building Contractors

Jack Sands – 72111072 jsands@sandscivils.com

Sands Civil Services Geotechnical Investigation & Testing











Specialist testing, location and investigation of materials for road building and construction:

- Location of gravels for construction
- Gravel & aggregate testing
- Concrete & cement testing
- QC of materials during construction
- Site investigations for building and structures
- **Road centerline and pipeline materials investigation**
- Complex site & foundation investigation
- Design of special foundations for problem areas
- Earthwork design
- Railway geotechnics*
- Caisson design*
- Soil & rock slope stability*
- Mine engineering, rock mechanics & undermined land*
- Embankment & tailings dam engineering*
- Dynamic consolidation *
- Pre-wetting*
- Waste disposal*
- * In conjunction with Golder & Associates

Some recent investigations:

Centreline & Gravel Surveys: Gaborone Roads Upgrade, Good Hope Infrastructure, Phakalane III &IV, Xakanaxa Air Strip, Kweneng Land Fill, Selebi Phikwe Infrastructure. **Pineline Soil Surveys:** NE District Omawaweneo Hukuntsi Tshane Lebutu Rural

Pipeline Soil Surveys: NE District, Omawaweneo, Hukuntsi, Tshane, Lehutu Rural Village water supply, Moshupa/Manayana, Ramotswa Booster Pump Station, Damtshaa Mine Supply.

Foundation Investigations: National Museum Extension, Gaborone Coal Depot, Kgale Earth Station, STD Training Centre, Shoprite-Checkers Lobatse, Phakalane Golf Estate Clubhouse, Government Housing – Kasane, Francistown, Ghanzi, Tsabong, Total Garage Kang, BPC Offices Francistown, RADS Hostel Kweneng District, Bedia Factory Shells Gaborone.

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Soil & Materials Testing Foundation Investigation Jack Sands – 72111072 Patrick O Kgati – 75008722 jsands@sandscivils.com pkgati@sandscivils.com

Sands Civil Services Insured Loss Assessment

Independent Assessment of:

- Validity of claim
- Compliance With Loss Cover
- Root Cause Analysis of Loss
- Repair/Rebuilding Procedures
- Remedial Work Costs
 - Civil Engineering Claims
 - Flooding & Storm Damage
 - Lightning Damage
 - Subsidence
 - Fire Investigations
 - 'All Risks' Loss
 - Engineering Claims
 - Corrosion, Degradation
 - Boiler Failure
 - Mechanical Failures
 - Theft of Materials & Equipment

Sands Civil Services

Private Bag 00379 Gaborone Botswana

Insurance Loss Adjusters

Tel: 267 3909864 / 7 Fax: 267 3909 881 info@sandscivils.com **www.sandscivils.com**

Jack Sands – 72111072 jsands@sandscivils.com











Light Steel Frame Buildings:

- Offices
- •Accommodation Blocks
- •Ablutions
- •Clinics
- •Site Offices & Labs
- •Mine & Construction Camps

Light steel frame building consists of structural wall frames and roof trusses, manufactured from cold-formed light gauge galvanized steel sections.

Exterior finish is insulation board fixed to the wall frames and finished with Weber Base Coat, a cement-based, fibre-reinforced base plaster that is used in conjunction with Weber Glass Mesh. It must be covered with a finishing plaster or paint applied by trowel or machine sprayed.

Services - electricity and plumbing - are installed in the wall cavity created by the light steel frames. Gypsum board, fixed to the light steel frame, is used for internal wall cladding.

Ceilings can be gypsum board fixed to the steel frame or suspended acoustic panels .

Light steel frame building offers a wide range of benefits when compared with conventional building or other framing materials, in terms of quality, cost, durability and speed.

Reduced wastage, lower logistical costs and reduced time of construction could offer cost savings of 20% or more.



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Pre-fabricated Buildings Building Contractors

Sands Civil Services Engineering & Statutory Inspections





- Fitness for Service
- Compliance With Legislation
- Root Cause Analysis of Defective Equipment
- Assessment and Drafting of Repair Procedures

Statutory Inspections:

Botswana Factories Act Chap 44:01 Mines and Quarries Act Chap 44:02

Both Acts call for periodic, independent inspection and testing of the following equipment

- Boilers, steam receivers, air receivers, pressure vessels
- Lifting Equipment

Engineering Inspections:

- Third Party Inspection
- Ultrasonic Thickness Survey
- Wet & Dry Paint Thickness
- Dye Penetrant & Magnetic Particle Crack Detection
- Metal, Rubber & GRP Hardness Testing
- Corrosion Investigation
- Failure Investigation
- Quality Assurance & Quality Control
- Pressure testing sewage gas holders
- QC assurance steel rebars

Clients:

Include: De Wet Drilling, Murray & Roberts, Unitrans, KBL, KSI, Engen, Clover, Parmalat, Eureka Wholesalers

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Statutory & Engineering Inspection

John Stonchill - 72767296 Godiraone Sekaba - jstonehill@sandscivils.com gsekaba@sandscivils.com

Sands Civil Services Soil Testing for Agriculture

Assessment of:







- Nitrates
- pH
- Lime Requirements
- Potassium
- Calcium
- Phosphates
- Magnesium
- Electric conductivity

Soil testing plays an important role in the agricultural sector. Nutrients in the soil can be lost out due to various conditions such as soil erosion, leaching, and over use of fertilizers. Soil Analysis is an important tool for farmers as it assists in fertilizer recommendations and good crop land management.

Using the Palintest Soil Management test kit, we are able to carry out all necessary soil tests efficiently. It is a rapid reliable means of soil testing. Through the use of a simple colorimetric method, the kit offers a range of important soil tests.



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Agricultural Soil Testing

tmabophiwa@sandscivils.com





We can supply <u>all</u> your requirements for soils & concrete testing, laboratory, engineering & coating inspection equipment:

Geotechnical Test Equipment

- Moulds for Concrete Test Cubes
- Slump test
- Bitumen penetrometer
- Thermometers
- Nuclear density gauge
- Portable conductivity meter
- Concrete compression testing machine
- Laboratory Glassware
- Sample bags

Porosity:

- Glass plate
- Steel Tampers
- CBR Equipment
- Electronic balances
- Drying ovens
- **Compaction hammers**
- Magnetic Stirrer
- Piezometer
- Sieves







- **Coating thickness:** Coatings, plating, plastics, GRP
- Ultrasonic wall thickness: Metals & non metals
- Moisture Concrete, paper, crops, soils, aggregates
- Paint testing equipment: Abrasion, Density, Drying, Elasticity, Flashpoint, Hardness, Opacity Test Charts, Scratch Tests, Viscosity
 - Test meters: Airflow, Dew Point, Thermometers, pH, Tachometers, Weather, Pressure, Sound Level, Meters, Test Pumps
 - Grit Blast Profile Gauges, Salt Detection, Surface Cleanliness, Pictorial Stds, Surface preparation: International Stds
 - Hardness: Metal, Rubber, Concrete
- Inspectors' Accessories: Magnifiers, flexible telescopic mirrors, safety torch, fiberscope, load cells, hire or purchase load bags
 - Adhesion: Pull or Push-Off, Cross Hatch Cutters
 - Spark, Sponge Pin Hole Detectors
 - Metal Detectors: Conduits, Bars, Studs, Wall Ties, Electric Cable Locator
 - **Concrete Thickness:** Over Steel Pipes & Re-Bars, Diameter & Direction
- Distance & level meters: Ultrasonic, Lasers, Roller Wheel, Levelling, Plumb
 - Viscometer Cone & Plate models Rotational Divital Viscosity Cuns

Sands Civil Services

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Laboratory Equipment Sales

John Stonchill - 72767296 Godiraone Sekaba -

jstonehill@sandscivils.com gsekaba@sandscivils.com

Sands Civil Services: CV's – J B Sands



J B Sands

Work History:

- Rockbourne Civil Engineering Contractors – Assistant Engineer
- Sir Alexander Gibb, Consultant Engineers, Kenya – Engineer
- Gulliver Consolidated, Botswana Site Engineer/Agent
- L.J. Whyle Botswana (Pty) Ltd Site Engineer/Agent
- 💳 Team Engineers, Botswana Director
- Sands Civil Services, Botswana Director

Principal Consultant

Jack Sands has over 20 years experience in civil engineering and consultancy work around the world.

He has the following qualifications:

BSc. (Hons) Civil Engineering from Southampton University, UK Professional Engineer registered with The Engineering Council of South Africa Graduate member of the Institution of Civil Engineers

He has carried out the following projects, activities and responsibilities:

- Carried out geotechnical site investigations for large and small structures throughout Botswana
- > Operated a materials laboratory in Gaborone
- Completed gravel exploration for contractors and consultants
- Supplied quality control services for contractors in and around Botswana
- Investigated engineering claims for Insurance companies

Provided consultancy services to contractors (preparation of tenders, computing monthly measures, etc.)

- Projects Pipeline Soil Surveys:
 - Scott Wilson Kirkpatrick: Hukuntsi village water
 - o EHES: Moshupa Manyana connection
 - **Civil Planning Partnership:** N.E. District village water
 - Pula Consultants: Ramotswa pumphouse & trunk Lines
 Geoflux (Pty) Ltd: Water Supplies: Damtshaa Mine,
 - Mabutsane, Serowe, Omaweneno
 Gibb Africa: Selebi Phikwe Water Master plan
 - Bergstan Africa: Molepolole Water and Sanitation, Thuni Dam Bulk Pipeline Routes
- > **<u>Projects Foundation Investigations:</u>**
- MNRC: National STD Training Centre, Gaborone
- Government Houses in Kasane, Francistown, Ghanzi & Tsabong
- Time Projects: Shoprite Checkers, Lobatse
- William Lee Associates: National Museum Extension, BEDIA Factory Shells, Gaborone
- **Gauff Liebenbeg & Stander:** Coal Depot Gaborone, RADS Hostels Kweneng District
- Burrow Binnie: Ministry of Tourism Offices and Housing, Tsabong, Abattoir for GCC, Gaborone
- o Bauer Consult: Total Garage, Kang
- o BTC: Kgale Earth Station
- NMA: Club House, Phakalane Golf Course
- Lasco Eng: Offices and Workshops for BPC Francistown, Sports Stadium, Jwaneng
- ADA: Dept. of Information and Broadcasting Offices, Serowe, Shopping Mall in Mogoditshane
- C3 Africa: Ostrich Abattoir for BDC
- Phakalane Estates: Phakalane School

Projects – Construction:

- BoFWA: Offices, counseling chambers in Maun, Kanye & Gaborone
- o Grinaker/LTA: Offices in Phakalane
- Boipelego: Classrooms and Hostels in Sehitwa, Etsha, Kachikau and Kasane
- **MoH:** Laboratories in Molepolole and Serowe
- o Murray & Roberts: Housing & Offices at Hatsalatladi
- ACHAP: Offices Francistown
- Volvo: Workshop Gaborone
- Private houses in Ruretse, Notwane & Phakalane
- Projects Centreline and Gravel Surveys:
- Asphalt Botswana: Gaborone Roads Upgrading
 CPP: Goodhope Infrastructure
- NMA: Phakalane Phase III, Phase IV, Gaborone SHHA Area, Xakanaxa Airstrip, Orapa – Mabaleng Infrastructure, Jwaneng Infrastructure
- Arup: Paje to Mabeleapodi Upgrading
- Excavator Hire: Lobatse to Mmathethe Upgrading
- Roughton International: Middlepits to Bokspits
 Upgrading, Shoulder Investigations, Serowe, Palapye, Molepolole, Kanye, Western Bypass to
 Metsemotlhaba Road Upgrade –
- Stewart Scott Int: Gaborone Central Area
- Brian Colquhoun, Hugh O'Donnel & Partners: Selebi Phikwe Infrastructure
- Liebenberg & Stander: Kweneng Landfill
- Bothakga Burrow: Palapye to Serule, Tsholofelo Infrastructure, Lobatse Infrastructure
- Bergstan Africa: Setloa Estates, Gaborone, Thuni Dam Bypass and Access Roads
- MNRC: Moshupa Infrastructure Development

Sands Civil Services: CV's – P O Kgati



P O Kgati

Work History:

Sands Civil Services, Botswana – Geologist

Patrick Ogomoditse Kgati has over 5 years experience in geological engineering and consultancy work around SADC.

He graduated from University of KwaZulu Natal in 2009 with a BSc in Geological Science

He has carried out the following projects, activities and responsibilities:

- Carried out geotechnical site investigations for large and small structures throughout Botswana
- > Operated a materials laboratory in Gaborone
- Completed gravel exploration for contractors and consultants
- Investigated engineering claims for Insurance companies

Provided consultancy services to contractors (preparation of tenders, computing monthly measures, etc.)

Projects - Pipeline Soil Surveys:

- Bothakga Burrow Botswana: Ghanzi and Tsabong water supply
- o Ace Gibb: Dukwi Kutamogore Water supply
- Thune Dam Consultants Joint Venture: Bobonong Lepokole Pipeline
- Bothakga Burrow Botswana: Water supply from Selibi Phikwe to the neighbouring western villages
- Bothakga Burrow Botswana: Orapa wellfield 7
- Geoflux (Pty) Ltd: Oodi water supply
- Ace Gibb: Gaborone Lobatse water supply
- Bergstan Africa: Bokaa water reticulation

> Projects - Foundation Investigations:

- Geoflux: Bakgatle School, Mochudi, University of Botswana, Maun Campus
- o Debswana: Morupule Colliery Extension
- Time Projects: Shoprite Checkers, Lobatse
- Pego Projects: BURS Pioneer Gate
- o Bergstan: Mmadinare Police Station, Gabz FM Building
- o Abdulla Associates: Ramotswa RAC
- Merz & M^cLellan: Livingstone substation, Zambia Merz & M^cLellan
- **CPP Botswana:** Gabane Taxi Rank
- **NMA:** Jwaneng Contractors Camp
- Herbco Technical Services: Kalamare School
- **ADA:** Travel Lodge, Gaborone
- AMA Projects Botswana: Shopping Mall in Rakops
- Abdulla Associates: Tsabong School, Mall in Kanye
- Pula Consultsants: Staywell Lodge, Mogoditshane
- Golder Assosciates: Stormwater Drainage, Orapa, Damtsha and Letlhakane Mine, Fines Residue Disposal Orapa Mine

> Projects – Centreline and Gravel Surveys:

- Herbco Technical: Nnyungwe Infrastructure, Kasane
- Aquaducts: Ghanzi and Francistown (Gerald Phase 1) Infrsatructure
- Geoflux: Maun (Disaneng, CBD and Matshwane) Infrastructure, Martins Drift and Sefhope Road upgrade
- o Tshepho Tile Products: Maratadiba Modipane Road
- Kwa Nokeng: Fuel Depot
- Sabelo's Express: Hardstanding and access road
- Kalcon/ WBHO: Sir Seretse Khama Airport Cargo Runaway
- Lesedi Consulting engineers: Improvements on Western Bypass, Gaborone
- Gaborone City Council: Khama Crescent, Gaborone
- Bothakga Burrow Botswana: Thamaga Infrastructure Road 5
- Bergstan Africa: Access road to Molapo Crossing Mall and Railway spur to Tshele Hills

Sands Civil Services: CV's J C Stonehill



J C Stonehill BSc MSc

Work History:

- **WK** Ministry of Defence
- Trelleborg Gummifabriken Sweden
- British Steel Corporation Teeside
- Laporte Industries Ltd Senior Metallurgist
- Stonehill Materials Services Principal
- Engineering & Legislative Inspection Botswana
- 💳 Sands Civil Services Botswana

John Stonehill graduated from Surrey University UK in 1976 with a BSc in Metallurgy and then completed an MSc in Corrosion Science at UMIST Manchester UK.

He has over 30 years experience providing corrosion, metallurgical and materials testing, inspection and advice services to clients around the world.

He is a Botswana Government approved inspector of:

Boilers and Steam Receivers

- Pressure Vessels
- Lifting Appliances & Lifting Gear

under the requirements of:

- Factories Act Cap 44:01 Mines & Quarries Act Cap 44:02

In addition to completing inspections he supervises the inhouse design, drawing and fabrication operation.

He has:

- Recommended materials of construction for process plant
- Performed laboratory and plant corrosion trials and monitoring
- Inspected plant using non-destructive techniques.
- Drafted inspection schemes for sites
- Run research projects on:
- Submerged arc welding of steel plate
- Atmospheric corrosion of roofing materials \geq
- Corrosion of aluminium in the Food Industry
- Investigated material failures from sites
- Stainless steel centrifuge company won claim for incorrect heat treatment worth £1M
- Assisted investigation of fire at process plant value £26M
- Presented evidence to an international committee preparing a code of practice on storage of hydrofluoric acid
- Investigated corrosion inhibitor formulations for water treatment and disinfection products
- Managed the refurbishment of the OSEC plant at Gaborone Water Treatment Works
- Produced an in-house bulletin on materials issues
- Produced guidance notes to set 'company ٠ standards' for materials selection and inspection procedures
- Designed and installed a cathodic protection system for a water storage tank
- Developed and marketed a novel, corrosion resistant coating
- Advised on materials selection for the production of ultra high purity (<1 ppb) chemicals.
- Managed a team of four graduates, technicians and assistants.
- Trained as an assessor for NVQs.
- Tested corrosion inhibitors for marine diesel engines
- Successfully operated а self-employed as consultant.
- Provided materials advice and service to sites around the world including Laporte Industries, Baker Petrolite, NIPA Labs, Exide Batteries, Robinson Brothers Ltd, Cleanaway Ltd, Chemical Specialities Inc. Soderec International, Alumina Chemicals, Solvay Interox, Hays Chemicals, UK Government Health & Safety Executive (HSE).
- Prepared and distributed publicity material.
- Developed and sold corrosion related software.
- Produced a review document on thermoplastic storage tanks for the UK Government: www.hse.gov.uk/RESEARCH/hsl pdf/2006/hsl0621.pdf

Sands Civil Services: CV's Obert Elias



Obert Elias

Work History:

- Murray & Roberts (Multi Construction), Botswana – Bricklayer
- Grinaker (L J Whyle), Botswana Chargehand – general construction, bridges & culverts
- Team Engineers, Botswana General Foreman – general construction, management of erection teams – pre engineered units throughout Botswana

Sands Civil Services, Botswana – General Foreman. Reporting to Project Manager, Managing direct workforce of 25+ and all relevant sub-contractors

Principal Consultant

Obert Elias has nearly 20 years experience in all aspects of building work around Botswana.

He has recently completed a Supervisor's training course.

He has carried out the following projects, activities and responsibilities:

Foreman – residential & industrial construction and remedial works throughout Botswana

- Private House Phakalane: Steel framed construction
- Private House Ruretse: Traditional timber frame and thatched
- Private House Notwane: preengineered modular construction
- Erection of pre-engineered modular offices in Francistown, Gaborone
- Erection of pre-manufactured school classrooms in Kasane, Serowe, Molepolole
- Construction of Office & Workshops: Gaborone Commerce Park
- Construction of Warehouse: Gaborone West
- Supervision of underpinning works at major wholesale outlet: Broadhurst
- Supervision of underpinning works at private house Broadhurst
- > Measurement & setting out of all building work
- Management of labour, materials, site inspections
- Liaison with clients and subcontractors