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OMAVI Geotechnical & Environmental Services (OMAVI) is a technical advisory, consulting, and contracting firm specialising in the fields of geotechnical engineering, construction material testing, environmental management services, mineral exploration / mining support, and oil & gas permitting services. OMAVI is headquartered in Windhoek, Namibia, which also houses our advanced construction materials testing laboratory. From this central base, we deliver services throughout Namibia and across the wider SADC region..

OMAVI was primarily established with the aim of providing clients with tangible and sustainable value adding solutions through cost-effective, efficient and client-/project-centred technical solutions that are tailored to meet specific client needs.

Our team comprises and array of engineering geologists, geotechnical engineers, material specialists, construction materials technicians, and environmental scientists. Together, they collaborate seamlessly to deliver tailored solutions that meet our clients' unique needs. We take great pride in our exceptional team and our steadfast commitment to ethical business practices.





OMAVI stands out as a robust and highly experienced geotechnical service provider. Leveraging our extensive expertise, well equipped materials testing laboratory, advancedground testing, and specialized geotechnical drilling equipment—we deliver comprehensive, turn-key solutions.

We serve a wide range of sectors including the construction industry, real estate development, energy sector, mining and resource extraction, mine tailings facilities management, and research institutions and academia. Partnering with OMAVI for integrated geotechnical solutions ensures optimal quality control, saving clients valuable time and resources while eliminating the challenges of coordinating multiple vendors.



OMAVI offers comprehensive Onshore and Offshore Geotechnical Investigation/ Assessment Services across Namibia and the broader SADC region for a diverse range of sectors including roads, railways, bridges, dams, infrastructure, industrial-commercial and residential buildings, renewable energy (solar farms, wind farms, hydrogen plants), mine infrastructure, deep basements & deep excavations, road and railway cuttings, and water infrastructure (reservoirs, pipelines, dams).

- GEOTECHNICAL SERVICES
- CONSTRUCTION MATERIAL TESTING SERVICES
- ENVIRONMENTAL MANAGEMENT & PERMITTING SERVICES
- MINERAL RIGHTS PERMITTING / LICENSING SERVICES
- OIL AND GAS PERMITTING / LICENSING SERVICES



## GEOTECHNICAL SERVICES

At OMAVI we offer tailor made geotechnical solutions, aligned with industry best practice, whilst leveraging the latest technologies to meet our client's unique project requirements. Our specific expertise and services offerings in this regard include:

- Foundation design (including bearing capacity and settlement analysis).
- Nearshore and offshore marine geotechnical survey services using a suite of innovative tools for seabed soil sampling and characterization of offshore geotechnical samples.
- Slope stability assessments.
- ▶ Inspections of foundations and excavation during construction.
- Geotechnical characterization site foundation design, earth slope designs, mine box cut designs, retaining structure designs, as well as soil nail / anchor design.
- Sectechnical site characterization for earth works planning, budgeting tenderdocumentation input.
- Liquefaction potential assessment of tailings and nearshore ground.
- Excavatability assessment ground earmarked for specific development.
- Pavement investigation and pavement material characterization.
- optioneering Ground improvement options for problematic soils/ ground.
- Design, assessment and certification temporary platforms pads and for construction purposes (for cranes, pilling rigs, etc.).
- > Forensic engineering investigations.



# Specialist Geotechnical Drilling and Sampling

OMAVI operates an in-house fleet of specialized geotechnical drilling equipment, complemented by advanced in-situ testing tools. This setup enables rigorous quality control and assurance for soil and rock sampling, giving OMAVI a distinct advantage in delivering precise, high-quality data. Our specialized geotechnical drilling services include:

- Rotary core drilling with continuous core recovery of Vertical and Inclined holes.
- > In-house geotechnical logging.
- Standard Penetration Testing (SPT).
- Shelby tube sampling for collection of undisturbed soil samples.
- Exploration Diamond Drilling.
- Drilling for construction and environmental purposes.





## **Material Investigation** (Centerline and Borrow Pit Investigation)

- Borrow identification pit and investigations.
- Centerline investigations.
- Pavement designs.
- Quality assessment and testing of materials to probe suitability for use in various construction work (e.g. for concrete, backfilling, layer works).
- Preparation of project-specific Environmental Management and Rehabilitation Plans (EMRPs) for identified borrow pits to ensure compliance to local environmentalregulations.

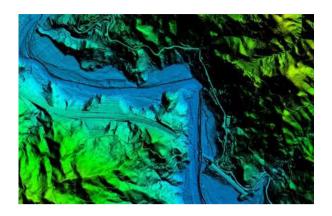






## **Transport, Power & Pipeline Route Location Studies**

OMAVI offers expert and knowledge-based advisory services for Route Location Studies of Linear structures across the Transport, Water and Power infrastructure sectors



#### **Land Capability Evaluation**

OMAVI offers practical advice and provide efficient solutions to clients requiring terrain, land suitability and land capability evaluation services for problems associated with their land development projects. Our range of services in this regard include:

- OIS and Aerial photo mapping.
- > Hazard and risk assessment relating to land instability, flood proneness.
- Identification, mapping and assessment of potential land contamination and groundwater problem areas.
- Selection and categorization of site suitability for housing, roads, railways, industrial, energy infrastructure development.
- Assessment and review of available geotechnical and hydrogeological data.





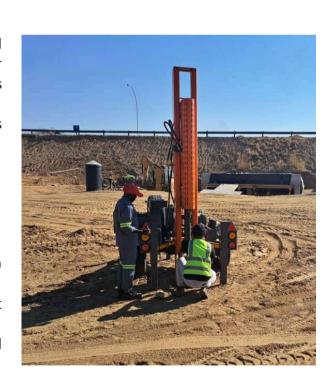
## CONSTRUCTION MATERIAL TESTING SERVICES

OMAVI operates a state-of-the-art construction materials testing laboratory in Windhoek, Namibia, professionally managed and staffed by highly qualified and experienced technicians. Through our in-house facility, we provide a comprehensive range of testing services, for soils, rock, concrete and asphalt, ensuring the highest quality for various projects.

We also offer the flexibility to establish on-site laboratories in remote locations, ensuring rapid turnaround times for test results. Below is an overview of our full suite of construction materials testing services.

#### **Soil Testing**

- Soil Compaction Testing (Standard Proctor and Modified AASHTO) for compaction quality control of earthworks and layer works.
- Particle Size Distribution (Sieve Analysis and Hydrometer Test).
- Atterberg Limits.
- Moisture Content.
- California Bearing Ratio (CBR).
- Soil pH.
- Soil Electrical Conductivity (EC).
- Unconfined Compressive Strength (UCS) of soilcrete.
- Soil aggressiveness tests for assessment of risk of attack to concrete and steel.
- Combined geotechnical tests for material quality assessment.



#### **Aggregate Testing**

- Sieve Analysis.
- Bulk Density test.
- Aggregate Crushing Value (ACV) test.
- Material Finer than 75µm.
- Wet and Dry 10% FACT test.
- Flakiness Index test.
- Systematic sampling on site and at commercial borrow sources.





#### **Rock Testing**

- Point Load Strength Index test for intact rock strength and hardness
- Unconfined Compressive Strength (UCS) for intact rock strength and hardness





#### **Concrete Testing**

- Concrete Mix Designs for various target strengths.
- Drilling and sampling of concrete.
- Compressive Strength testing of
- Concrete cores.
- Slump testing on site.
- Grout testing.
- Shotcrete testing.
- Trial mixes for road or pavement construction.







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## GEOTECHNICAL | ENVIRONMENTAL | MATERIAL-TESTING

#### **Field Tests**

- Dynamic Cone Penetration (DCP) Test.
- In-situ density testing by Nuclear method (Troxler).
- Determination of In-situ soil dry density by Sand Replacement Method.









# ENVIRONMENTAL MANAGEMENT & PERMITTING SERVICES

- Environmental and Social Impact Assessments.
- Baseline Environmental Studies and Assessments.
- Stakeholder Consultation.
- Application and renewals for Environmental Compliance Certificates.
- Environmental Management and Rehabilitation Plans for Mining, Energy, Construction and Mine Residue projects.
- Removal, transportation and storage of Radioactive materials.
- Environmental monitoring services include:
  - Water quality monitoring
  - Air quality monitoring
  - Mine residue and mine waste monitoring
- Soil contamination assessments.
- > Treatment of contaminated soils.





## • MINERAL RIGHTS PERMITTING / LICENSING SERVICES

- Application of various mineral rights including Mining Claims, Exploration Prospecting
- Licenses, and Mining Licenses.
- Land Access Agreements between mineral rights holders and land owners.



#### **Mineral Exploration Support Services**

- Diamond core drilling for exploration purposes
- In-country and on-the-ground support for Exploration campaigns in the form of:
  - Logistical support.
  - Efficient exploration camp set-up, establishment and operation.
  - RC and core logging.
  - Safe and secured collection, transportation and storage of drill samples and samples from geochemical surveys.
  - Exploration programme design and planning.
  - Exploration programme budgeting.
  - Exploration drilling program supervision.
  - Exploration drilling program logistics, project management and implementation.
  - Setting up and handling exploration camps and general logistics.







# • DIL AND GAS PERMITTING / LICENSING SERVICES

- Application of Petroleum Exploration Licenses (PEL). Oil Spill Response Plan (OSCP).
- In-country Office support for re-fuelling, medical and insurance services for Oilfield 0
- Services providers and International Oil Companies (IOCs).
- Supply, installation and commissioning of instrumentation for near real-time data monitoring for upstream-midstream and downstream effective asset management.
- Location data for effective asset management.





## • PROJECT PORTFOLIO AND OUR EXPERIENCE BASE

## **Diversity of some Projects undertaken by OMAVI**

PROJECT NAME	OMAVI's SCOPE SECTOR	SECTOR	YEAR PROJECT WAS UNDERTAKEN	
Geotechnical Investigations and Drilling Projects.				
Design and construction of new radio station tower and associated commercial buildings on Erf 584 in Eros – Windhoek for NAMPOWER.	Full-scale Geotechnical investigation for foundation design and material re-use purposes.	Commercial Buildings Energy	2023	
Design and Construction of new heavily loaded structures for the Cesium and Germanium Plants at the Tsumeb Smelter site.	Full-scale Geotechnical investigation for foundation design of all lightly to heavily loaded structures.  Geotechnical laboratory testing.	Mine Infarstructure	2024 - 2025	
	Drilling, SPT testing and numerous insitu tests.			
	Gravity survey as part of dolomite stability assessment.			
Design and construction of double storey commercial building with basement parkisn on Erf 417 in Eros – Windhoek.	Full-scale Geotechnical investigation for foundation design and material re-use purposes.	Commercial Buildings	2022	
Design and Construction of an 85MW combined solar PV and green hydrogen power plant near Swakopmund.	Full-scale Geotechnical investigation for foundation design and material re-use purposes.  Geotechnical laboratory testing.	Energy	2022 - 2023	
	Drilling, SPT testing and numerous insitu tests.			
Upgrading of the Annixas Power Plant to 50MW capacity, Walvis Bay -Namibia.	Full-scale Geotechnical investigation for foundation design of main power house, chimney and HFO tanks.  Geotechnical laboratory testing.	Energy	2022	
	Drilling, SPT testing and numerous insitu tests.			

PROJECT NAME	OMAVI's SCOPE SECTOR	SECTOR	ZEAR PROJECT WAS UNDERTAKEN	
Upgrading of water infrastructure for the Aroab, Amunuis and Oderombapa Settlements in Namibia.	Full-scale Geotechnical investigation for foundation design of water reservoirs, route characterization for pipelines and material re-use purposes.  Geotechnical laboratory testing.	Water Infrastructure	2022 - 2023	
Upgrading of the Kranzberg to Tsumeb Railway line and associated infrastructure for the National Department of Works and Transport.	Full-scale Geotechnical investigation for foundation design of bridges and major culverts.  Geotechnical laboratory testing.  Supervision Drilling, SPT testing and numerous insitu tests.	Rail lines and rail bridges	2024	
Design and construction of extensions to commercial buildings on Erf 6996 in New Castle Street – Northern Industrial Area - Windhoek for NAMPOWER.	Full-scale Geotechnical investigation for foundation design and material re-use purposes.	Commercial Buildings Energy	2023	
Construction Materials Testing, Borrow Pit Investigations, Pavement Investigations.				
Upgrading of the Kranzberg to Tsumeb Railway line and associated infrastructure for the National Department of Works and Transport.	Siting and identification of potential borrow pits.  Quality assessment of materials from identified Borrow pits.  Centerline investigation.	Railway lines and Rail bridge	s 2023 - 2024	
Rehabilitation of several paved roads within the Tsumeb Municipality - Namibia	Centerline investigation.  Material Investigation.	Roads	2024	
Maintenance of several paved roads within the Otavi Municipality - Namibia.	Material Investigation.  Density testing for compaction quality control.	Roads	2022 - 2024	
Construction of Access road and Satellite Tower near Unam in Windhoek.	Centerline investigation.  Density testing for compaction quality control.  Quality control testing for concrete works and mansory units.	Roads and Tower infrastructure	2022 - 2024	

PROJECT NAME	OMAVI's SCOPE SECTOR	SECTOR	YEAR PROJECT WAS UNDERTAKEN		
Upgrading of the Peter Nanyemba Road (former Monte Christo Road) to dual carriageway in Windhoek - Namibia.	Geotechnical investigation of rock cuttings.	Roads and Road structures	s 2022 - present		
	Geotechnical investigation of major culverts.				
	Density testing for compaction quality control.				
	Quality control testing for concrete works and mansory units.				
Environmental Management Projects					
Operation of the largest Dimension Stone products Factory in SADC for BC Stone Products in Walvis Bay - Namibia.	Environmental compliance permitting.	Mine Processing	2022		
	Development of waste management plan.	Waste Management			
Operation of the Marmorwerke Dimension	Environmental compliance permitting.	Mine Processing	2022		
Stone products Factory in Karibib - Namibia.	Development of waste management plan.	Waste Management			
Construction of a medium- scale dimension stone quarry,	Environmental compliance permitting.	Mine Processing	2023		
access roads and associate d support infrastructure south – east of Karibib on Mining License (ML) 194 - Namibia.	Development of waste management plan.	Waste Management			
Construction of a medium- scale dimension stone quarry,	Environmental compliance permitting.	Mine Processing	2024		
access roads and associate d support infrastructure on Farm Trekkopje near Arandis - Namibia.	Development of waste management plan.	Waste Management			
Offshore exploration drilling and bulk sampling for placer diamonds on several offshore Exploration Prospecting Licenses on the west coast of Namibia.	Environmental compliance permitting.	Marine Mining	2021 - 2024		



## **OMAVI COMPANY PROFILE**

- **(** +264 81 478 6303 | +264 81 214 3721
- info@omavi.com.na | geotech@omavi.com.na
- https://omavi.com.na
- P.O. Box 1642, Windhoek
- Erf 194 Mandume Ndemufao Ave,Windhoek Namibia

