

# JONES & WAGENER (PTY) LTD

## COMPANY PROFILE



Jones & Wagener was founded in 1966 with the view to providing specialist civil engineering consulting services to the construction, mining and industrial sectors. The construction background of the founding partners gave the company a practical approach to problem solving that has remained ever since.

We are a medium-sized organisation employing over 113 technical staff, just under half of whom are professionally registered engineers or scientists including many acknowledged leaders in their specialist fields both locally and abroad.

We take pride in encouraging growth and innovation among our young professionals. Our working environment supports the advancement of motivated individuals and strives to develop young engineers and scientists of a high caliber and integrity. The result is a flat company structure, with a strong base of technical expertise reflected in numerous small teams of experts working together.

Jones & Wagener is a level 2 B-BBEE contributor with a Procurement Recognition level of 125 %. We are proud of this achievement which confirms our continued commitment to the values underpinning B-BBEE in South Africa. We are ISO 9001:2008 accredited. We carry a NOSA 5 star safety rating.



**Jones & Wagener**  
Engineering & Environmental Consultants

## ABOUT US



Jones & Wagener takes pride in the relationship that we have fostered over the years with contractors and other consulting organisations. These find expression in design and construct projects and joint ventures with fellow professionals ranging from large international consultants to smaller niche-market specialists. We are also proud of our involvement with the wider civil engineering profession, both in South Africa and abroad. These relationships assist us in our quest to provide an effective service to our clients and to leaders in our fields of expertise.

Jones & Wagener, as a civil engineering and environmental consulting firm, operates in a number of specialist fields, namely:

- Geotechnical engineering
- Structural engineering
- Waste and Tailings engineering
- Mining infrastructure
- Environmental engineering
- Hydrological engineering
- Environmental management
- Environmental science





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## VISION

Jones & Wagener aspires to remain leaders in our specialist fields by providing practical, sustainable, integrated solutions to our valued clients through promoting personal technical development in a fulfilling work environment.

## MISSION

Jones & Wagener's mission is to:

- Maintain commitment to our clients as a key stakeholder in the company
- Provide an excellent service, as well as quality products, and add value to our clients
- Remain a specialised company through continued employee development and industry involvement
- Remain an Employer of choice and employ the highest caliber people who are at the forefront of their respective fields
- Provide a fulfilling work environment and encourage employee growth
- Run a profitable organisation
- Remain an employee owned company

## VALUES

The values of Jones & Wagener are:

- Integrity
- Professionalism
- Taking responsibility
- Sharing expertise
- Embrace diversity
- Ingenuity and creativity
- Inclusivity
- Fairness



## KEY OPERATIONAL AREAS



### GEOTECHNICAL ENGINEERING

Geotechnical engineering has been a core focus since our inception. Our geotechnical engineers and engineering geologists provide integrated site investigation services, geotechnical designs and construction support on a wide range of projects including industrial, commercial, residential and mining developments. This includes power stations, dams, canals, roads, railway lines, box-cuts, declines, pre-sink shafts, deep excavations and remediation of sinkholes. We work closely with other consultants and contractors to provide practical and effective solutions to challenging problems. We specialise in design-and-construct projects particularly in the fields of lateral support, concrete block and mechanically stabilised retaining walls, slope stabilisation, soil improvement, grouting, piling & pile testing, underpinning, shaft sinking and raise boring that arise in Southern Africa.

We provide assistance with the assessment of insurance claims, dispute resolution and expert evidence for legal matters. In addition, we also offer expert review of geotechnical reports and designs by others through industry leaders in the field of geotechnical engineering.

Jones & Wagener has been instrumental in the development of dolomite practice in Southern Africa over the past 50 years, and our current staff include several Level 4 dolomite practitioners who remain actively involved in the assessment of dolomitic land, D4 reviews and development of National Codes.

We are proud of our contributions to the broader profession including tertiary education institutions, the Engineering Council of South Africa, the South African Bureau of Standards, the Geotechnical Division of the South African Institute of Civil Engineering and the International Society of Soil Mechanics and Geotechnical Engineering.

### STRUCTURAL ENGINEERING

Structural engineering is the second pillar on which the company was founded. Our focus is on, but not limited to, developments within the mining, metal, mineral processing, cement, paper, power generation, petro-chemical and glass industries.



Our Structural Engineering Department is passionate about the design of efficient and innovative structures in a variety of materials. We have significant experience in the engineering design and development of: foundations for both dynamic and static loads, buildings, water treatment works, silos, stacks, gantries, crane support structures and many others.

In addition, our Structural Engineering Department has successfully completed many asset revitalisation projects through the repair and upgrading of structures. We are regularly called upon to conduct comprehensive design reviews, forensic studies and condition assessments. Our Structural Engineering Department is also able to handle smaller, more intricate projects that arise in niche markets.

Our services can incorporate all stages of a project, from conception to completion.

## **WASTE AND TAILINGS ENGINEERING**

The Waste and Tailings Departments undertake projects related to the conveyance, storage, disposal and rehabilitation of residue or waste products generated by the municipal, mining, coal processing, power station, metallurgical and chemical processing and petro-chemical industries. We provide a complete professional service encompassing feasibility, costing of disposal options, initial planning, design, and project execution. Our involvement often extends to operational advice and on-going surveillance. Our geotechnical capabilities complement our expertise in the areas of geosynthetic and mineral clay liners and liner/waste stability. In order to stay abreast of the latest industry developments, we are actively involved in the Institute of Waste Management of Southern Africa and the Geosynthetics Interest Group of South Africa and are members of the International Geosynthetics Society.

### **- WASTE**

The Waste Department is responsible for the engineering and auditing of several general waste and commercial hazardous waste disposal facilities in South Africa and increasingly in Africa. Specific areas of expertise include landfill infrastructure design, landfill cell development, landfill auditing, landfill rehabilitation, closure and landfill gas extraction.

## - TAILINGS

The Tailings Department is responsible for the engineering, ongoing surveillance and auditing of tailings storage facilities, mine residue deposits and ash disposal facilities both in South Africa and in Africa.

Specific areas of expertise include geotechnical investigation of greenfield sites and existing facilities, stability analysis and interpretation, tailings dam breach analysis, design of facilities in earthquake regions, finite element modelling of stage development and siting of tailings storage facilities on land previously impacted by mining.

## ENVIRONMENTAL SCIENCES AND MANAGEMENT

The Environmental Sciences and Management Department provides a holistic approach towards environmental sustainability by implementing responsible environmental management to support long term sustainability and ensure legal compliance.

As part of environmental management, we undertake all environmental regulatory authorisations, approvals and licensing processes and their associated support requirements. Staying compliant within the legislative framework can be extremely challenging and onerous for developers. We offer an integrated authorisation process service. Close collaboration between our engineers and scientists ensures that our clients experience a seamless process for the optimal solution.

Our geochemists and geohydrologists are experts in the assessment and remediation of contaminated land. We have worked with a wide range of contaminants including DNAPL's, POP's, PAH's, BTEX, Cyanide, Mercury, Arsenic and radioactive trace elements amongst others. We provide baseline and brownfield geohydrological investigations for mining and industrial facilities. Other scientific services offered include waste classifications and specialist soil, land capability, visual and wetland delineation assessments.

Our experienced environmental scientists and engineers take care of project management, consultation with government authorities, tailor-made public participation processes, conducting impact assessments and report compilation. Our teams work closely together to ensure that the solutions adopted and infrastructure designed are optimised in terms of environmental considerations. We also offer a comprehensive compliance auditing and environmental control officer service that adheres to legal requirements

## ENVIRONMENTAL ENGINEERING

The focus of the Environmental Engineering Department is the integration of environmental sciences and engineering principles to prevent, limit or mitigate the negative impact of anthropogenic developments on the natural environment through the implementation of practical, cost-effective and sustainable solutions. The primary industries that we work within are the mining, energy and industrial sectors.

The services we offer include: design of post-mining landforms for the rehabilitation of opencast mines and discard dumps; mine closure planning; mine closure cost estimates; design of pump stations and pipeline systems; design of pollution control dams, silt traps and other pollution prevention infrastructure; water management planning; constructed wetlands and wetland rehabilitation; and procurement & construction management services.

Our professional services incorporate all stages of the project life cycle, from project inception, concept and viability, design development to documentation and procurement.



## HYDROLOGICAL ENGINEERING

The Hydrological Engineering Department provides water management solutions designed to ensure both long term environmental sustainability and economic viability.

The focus of our Hydrological Engineering Department is storm water and water balance management, primarily on mining and industrial sites. Flood studies and flood risk assessments, including dam breach analysis, form another core competency. We pride ourselves on developing solutions that provide an optimised design up-front in order to enhance the water management over the life of the project and operation, balancing both cost and environmental considerations. Our engineers and hydrologists are experts in water management planning, water balance modelling and catchment runoff modelling. Water balance modelling is a key strength of Jones & Wagener's Engineering Hydrology Department and we are leaders in the field in South Africa, particularly in the coal mining industry. We add value to a project through our water balance modelling, by undertaking scenario planning in order to optimise the water balance so as to minimise either the make-up water requirements or the surplus water make.

We adopt an integrated approach to water management planning, working closely with our engineering and environmental specialists to provide solutions that are holistic, in line with best practice and environmentally sound.

## MINING INFRASTRUCTURE

The Mining Infrastructure Department provides planning and design services to the mining industry. These include innovative solutions for infrastructure to support mining, such as haul roads, dragline walkways, water management infrastructure including dams, canals, river diversions, pumping and dewatering schemes, ROM tips, hard parks and workshops, infrastructure terraces as well as access roads. We have assisted a number of clients with the relocation of draglines over distances of up to 70km.

With our expertise in the geotechnical and environmental fields, these solutions take into account local conditions and materials and are environmentally compliant, practical, and cost effective.

As a result of longstanding relationships with our clients, we are often involved in the development stages of the project, assisting with conceptual studies, pre-feasibility studies and feasibility studies. During the implementation phase, we assist by providing detailed design of mining-related infrastructure and construction management during the execution of the work. We can offer a full EPCM service. We are therefore able to assist our mining industry clients with planning, costing, design and construction of all civil related infrastructure required for the mining of a reserve.

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Please contact us should you require more information in your field of interest.

## CONTACT DETAILS

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