



nafasi
water

For a water
secure future



At Nafasi Water, we believe in investing in and applying innovative technologies and responsible management to ensure that development takes place not at the cost of future generations, but in an environmentally conscious way.

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Word from the CEO

Water security is at the heart of economic growth, environmental sustainability, and the well-being of communities.

At Nafasi Water Technologies, we take this responsibility seriously. We develop integrated water projects, that address the growing demand for alternative water sources and environmental rehabilitation. From desalination to the reuse of industrial and municipal wastewater, we deliver turnkey, fully financed solutions that ensure long-term sustainability.

Our mission is simple yet powerful:



With our desalination and hydro metallurgy expertise and value from waste solutions, we help industries reduce risk, reduce costs, and ensure a water-secure future.

By investing in local skills, supply chains, and communities, we are shaping a future where sub-Saharan Africa thrives with secure and sustainable water resources.

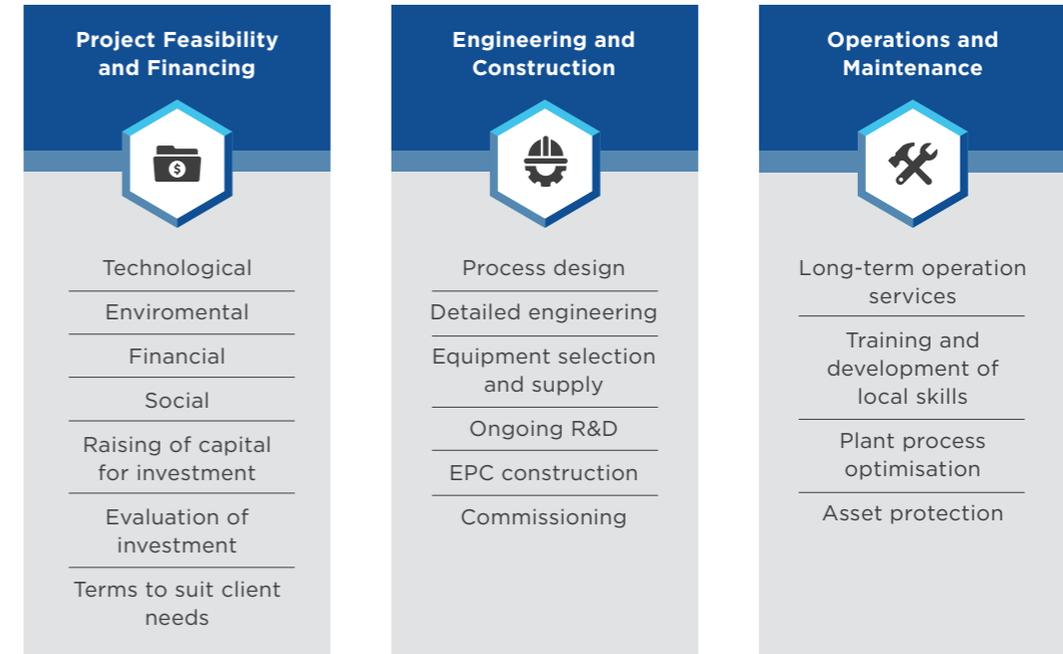
Welcome to Nafasi Water – your trusted partner in water security solutions.

Suzie Nkambule
Chief Executive Officer
Nafasi Water



Our Value Proposition

Industrial, Municipal, Mine Impacted Water Treatment, and Seawater Desalination Specialists



Our Sustainable Mining Track Record



eMalahleni Water Reclamation Project

The eMalahleni Water Reclamation Plant, commissioned in 2007, is a flagship project designed and operated by Nafasi Water. Initially treating 20,000 m³/day of acidic mine water, the plant was expanded to 45,000 m³/day after Phase 2, producing potable water at a recovery rate of 99.0% to 99.5%. This award-winning facility also generates gypsum sludge as a by-product, sold to the manufacturing industry. The plant's dual-phase design effectively managed diverse feed water qualities from multiple Anglo American Thermal Coal collieries, showcasing Nafasi Water's operational expertise and commitment to sustainable water re-use.



Can treat 50 megalitres per day



Over 99% design plant recovery



Produces pure gypsum used for building materials



World's first large-scale AMD-to-portable treatment plant



Middelburg Water Reclamation Project

The Middelburg Water Reclamation Plant (MWRP), completed in 2015, is the world's first mine water treatment facility to achieve zero brine discharge without energy-intensive technology. Processing 20,000 m³/day with a peak capacity of 25,000 m³/day, the plant boasts a 99.7% water recovery rate, with only moisture in the dewatered sludge remaining. Through advanced membrane design and expert operations, the MWRP sets a global benchmark for sustainable water treatment.



Can treat 25 megalitres per day



99.7% design plant recovery



Zero brine discharge plant design without need for thermal brine treatment



Supports local water supply

Optimum Water Reclamation Project

Located near Hendrina in Mpumalanga, the Optimum Water Reclamation Plant was launched in 2008 to treat surplus water from mining activities.

Designed for a capacity of 15,000 m³/day, with a peak of 18,500m³/day, the plant a water recovery rate of 98%, supplying potable water to the local municipality and discharging excess into the Klein Olifants River Unique for its omission of upfront neutralisation reactors, the plant also produces pure gypsum sludge for the building industry, contributing to long-term water sustainability in the region.



Can treat 18 megalitres per day



98% design overall plant recovery



First mine impacted water plant in SA to achieve Blue Drop status



Was sole supplier of water to Hendrina Municipality



New Sources of Water – Seawater Desalination

Nafasi Water considers innovation a critical company value and has created an environment where innovation is celebrated. The outcome of this culture is that every new water treatment challenge is looked at through the lens of finding opportunity often new, creative ways to solve water treatment problems for our customers.

Discovering new ways of treating a water source which was not historically part of the water balance for the region and adding it as a new resource gives us a great deal of pride, as well as moves us closer to our vision of a water secure future.

The availability of fresh water supplies is under great pressure with the demands of global population growth, significant industrial development and changing climatic conditions.

As a result, it is critical that cost-effective ways of providing fresh water for human consumption and business use are developed. With this in mind, sea water desalination is considered an increasingly viable water source for industry and domestic consumption for coastal users.

Nafasi Water offers desalination treatment plant solutions which enable industrial and mining opportunities in coastal areas. Our solutions are also well suited to alleviating water shortages in environmentally sensitive areas.

Our flexible and innovative application of desalination technologies make allowance for varying feed water quality and delivers consistent performance at optimal operating conditions.





Erongo Desalination Project

Located in the Erongo desert region of Namibia, the Erongo Seawater Desalination Plant supports the Trekkopje Uranium Project by transforming seawater into potable water. Designed and constructed by Nafasi Water, it is Southern Africa's first large-scale desalination plant, delivering over 60MLD of treated water. Advanced ultrafiltration membranes enable efficient pre-treatment of the nutrient-rich coastal waters, ensuring reliable water supply for mining operations. The plant's strategic design and sustainable approach demonstrate Nafasi Water's innovation in seawater desalination.





Ground Water Supply

At Nafasi Water, we recognise that the path to water security lies not only in discovering new water sources but also in optimising existing ones through smart, sustainable solutions. Groundwater, often overlooked or underutilised, has become a valuable resource when responsibly accessed and properly treated.

Our approach to groundwater supply reflects the same values that define us — innovation, technical excellence, and environmental stewardship. By understanding the geological and hydrological characteristics of each location, we design treatment solutions that extract, purify, and deliver clean water efficiently and reliably.

Groundwater offers a critical buffer against the increasing volatility of surface water supplies caused by climate change, rapid urbanisation, and expanding industrial demand. When managed responsibly, it provides a resilient and decentralised water option. Nafasi Water's groundwater treatment solutions are engineered for long-term performance with minimal environmental disruption. Our modular systems and adaptive technologies enable us to deliver cost-effective, high-quality water where it's needed most — supporting economic development and environmental sustainability alike.



Tsumeb Water Treatment Plant

Located in Tsumeb, Namibia, this plant was designed to treat raw water sourced from a network of boreholes and intermediate reservoirs. The facility delivers up to 300 m³/h of potable water that meets NamWater Group A water quality standards. Nafasi Water, in collaboration with civil partner Nexus Civils, undertook the full design, installation, and commissioning of the plant.

Construction began in June 2024, and the project was successfully handed over to the Tsumeb Municipality in February 2025. The treatment process includes advanced filtration, softening, and disinfection technologies to ensure reliable, high-quality water production.



Operations and Maintenance

The day-to-day management of water infrastructure remains a non-core function for our mining and industrial clients. As leading providers of complete water treatment solutions, we offer a cost-effective water management service that allows our clients to focus on their core business.

In our role as managers of water treatment plants, we take the responsibility for the plants' operation, while also providing technical assistance and head office support.

The services we offer include:



Water analysis



Utility management



Audit and condition monitoring



Routine maintenance



Equipment renewal



Machine learning

Our operations division is distinguished by its ability to consistently meet agreed performance criteria. We place the utmost priority on Safety, Health and Environmental standards, and offer performance guarantees to cover plant throughout, operating costs and process efficiencies.

The in-house Operations Management Tool - SIGMA OPS, enables alignment between operational goals, actual performance and asset (specifically membrane) monitoring. This product has allowed the consistent operation of highly technical membrane plants, while offering membrane guarantees that ensure the financial exposure of the client is well defined.

Nafasi Water operates with an Intergrated Management Systems aligned with three ISO standards. ISO 9001 - Quality Management System, ISO 14001 - Environmental Management System and ISO 45001 - Safety Management System.

Our People

Employment and Training

Nafasi Water stands firm in ensuring its people create consistent value for all stakeholders, by actively investing in the broader communities in South Africa. The company provides internal training programmes to upskill new employees, providing new prospects and well-defined opportunities for local employment.

A great utility service and technology company balances professional engineering, artisanal operations and maintenance skills pools. Nafasi Water is always on the lookout for talented people with a water technology obsession, particularly as we aim to capacitate the local industry to lead technology development. A core operations teams, with additional personnel sourced from local communities benefit from our consistent internal training programmes upskill employees and provide well-defined opportunities throughout the organisation.



Our Communities

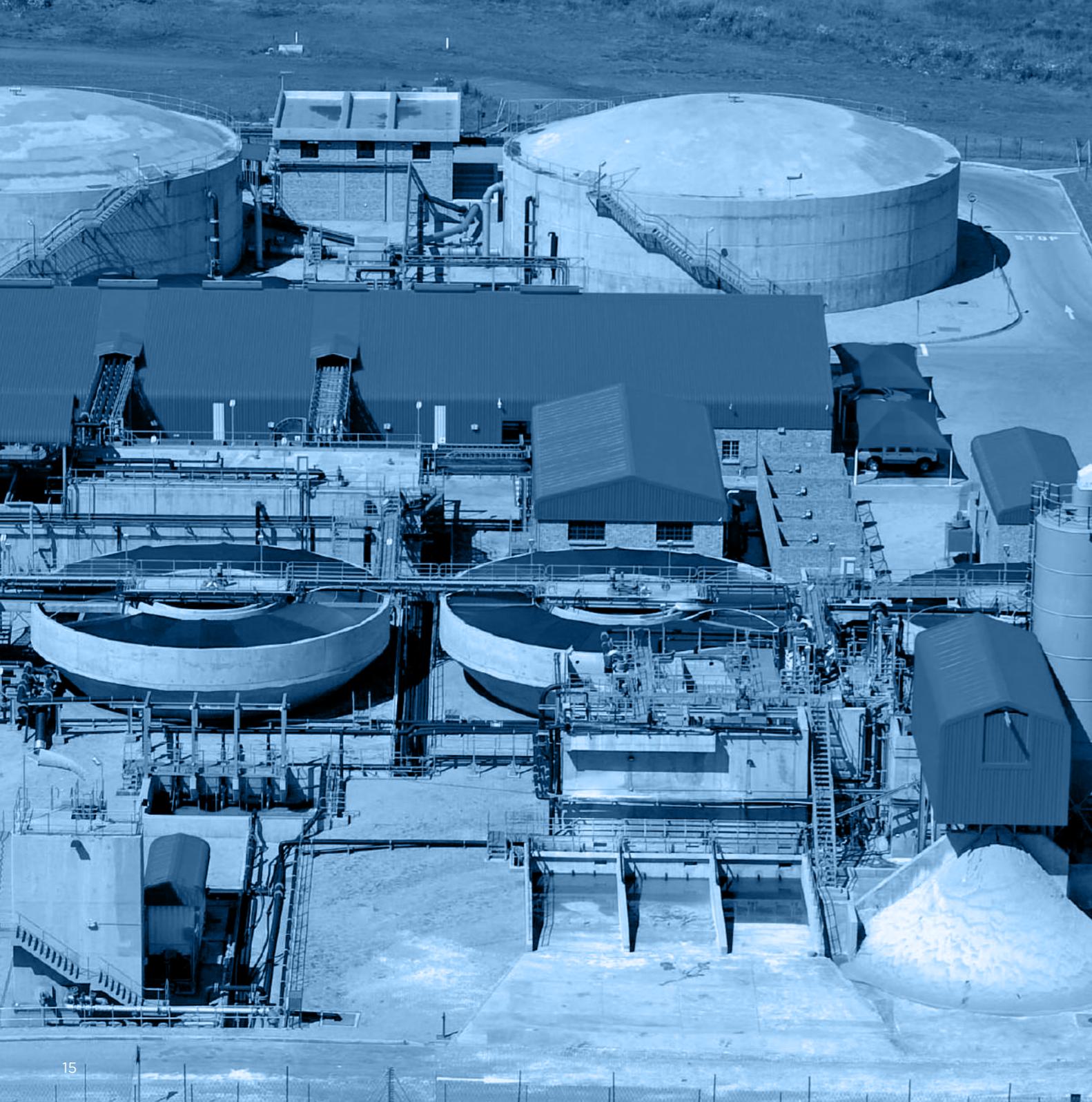
Our Corporate Social Investment

Our investment in local communities promotes an environment of learning, breeding the next young engineering talent through training, while allowing expertise to be transferred to every new plant through the core business operations team. This social engagement adds value for the communities and stakeholders, demonstrating equitable benefits for the business and client's bottom line.

It is essential for Nafasi Water to facilitate and sponsor communities with effective water grids for long-term sustainability that brings about a better quality of life, while simultaneously assisting them in becoming self-sufficient all round.

Our students come from Tshwane University of Technology (TUT), Vaal University of Technology, and various TVET colleges, joining us for practical training and industrial exposure. We also engage in community development initiatives with TCTA (one of our key clients), have a partnership with the Adopt-A-School Foundation, and foster collaborations with the communities surrounding our sites.





Our Flagship Project References

Client						
Project Name	eMalahleni Water Reclamation Plant (EWRP)	Middleburg Water Reclamation Plant (MWRP)	Optimum Water Reclamation Plant (OWRP)	Vaal Central Basin Water Treatment Plant	Vaal Eastern Basin Water Treatment Plant	Erongo Desalination Plant (EDP)
Location	Mpumalanga, South Africa	Mpumalanga, South Africa	Mpumalanga, South Africa	Gauteng, South Africa	Gauteng, South Africa	Swakopmund, Namibia
Segment	Mining	Mining	Mining	Public	Public	Industrial
Capacity per day	50 MLD	25 MLD	18 MLD	85 MLD	110 MLD	60 MLD
Start date	2007	2015	2009	2021	2021	2010



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