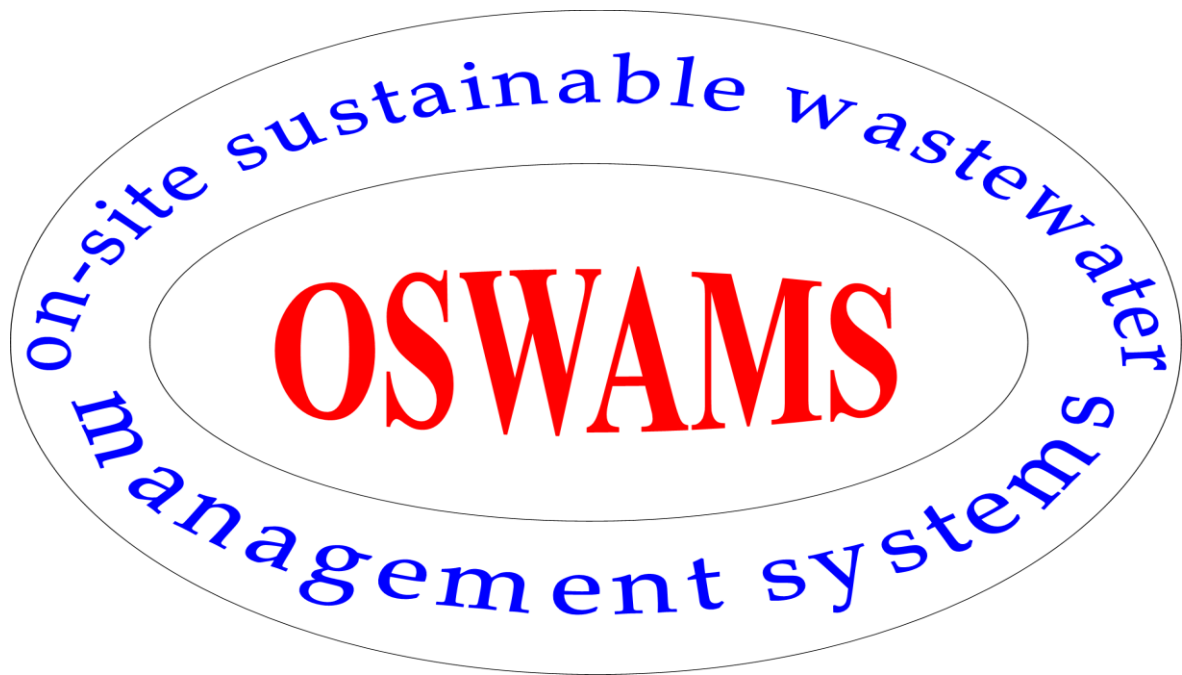


WASTEWATER SOLUTIONS



COMPANY PROFILE

P.O. BOX 78349, DAR ES SALAAM

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WASTEWATER SOLUTIONS

1.1 About Wastewater Solutions

Wastewater Solutions is a Specialist Contracting Company, registered under Contractor Registration Board (CRB) with registration no. SPC3/0652/08/2014, dealing with on-site sustainable wastewater management from domestic and non-chemical processing industries. The process can be well performed through the application of latest wastewater treatment technology using anaerobic digesters. This technology offers the following benefits;

- ❖ Provides recycling and reuse of wastewater
- ❖ Insures high purity level of treated water
- ❖ Provides effluent with no odor
- ❖ Occupies very little space, preferably underground
- ❖ Reduces the construction costs up to 50 percent
- ❖ Needs little maintenance and running costs, if any.
- ❖ Produces negligible but highly stabilized sludge
- ❖ Cuts all costs and disturbances due to emptying waste pits
- ❖ Provides environmental friendly technology and reliable for sustainable development.

1.2 Problem statement

Traditional practices of wastewater management using septic tanks and soakage pits as well as pit latrines has been contributing negatively to the environmental degradation by releasing trace elements such as ammonia, sulphate, nitrate as well as pathogens to the environment. The main reason of this failure is associated with technology selection, design and operation &

maintenance. These trace elements and pathogens released from failed systems react with other media and cause environmental pollution.

1.3 Company Objectives

The company main objective is to protect and promote human health by providing a clean environment and breaking the cycle of disease. The intention is to ensure that the services provided by Wastewater Solutions are technically feasible, economically viable, environmentally sustainable and socially acceptable.

1.4 Vision

To make environment green and free from contamination

1.5 Mission

To promote sustainable development through recycling and reuse of wastewater from domestic and industries; using Anaerobic Wastewater Treatment Technology.

1.6 Anaerobic Wastewater Treatment

Anaerobic Treatment system involves different stages of anaerobic digestion of wastewater from the source as indicated on the figure below;

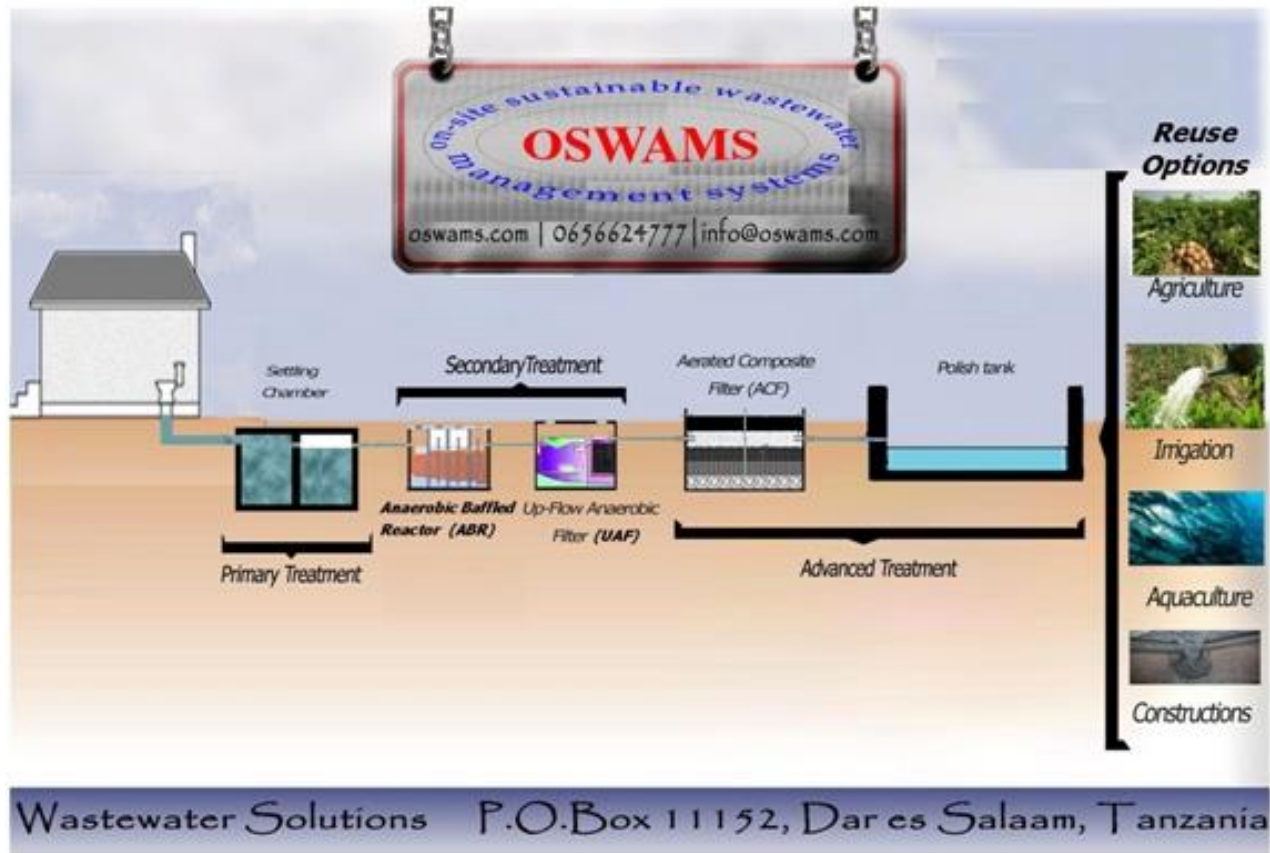


Figure 1.1 OSWAMS Model

1.6.1 Settling Chambers

This is the primary treatment in which raw waste is digested in anaerobic condition and filter out all settleable and floating materials. Heavy liquid with suspended and dissolved solids from settling chamber flows to the secondary stage for further treatment.

1.6.2 Anaerobic Baffle Reactor

Further digestion of biodegradable matters continues in anaerobic baffled reactor with the liquid moving up and down through different compartments of the reactor to enhance the contact between the incoming waste and the already settled bacteria.

1.6.3 Up-flow Filter

Finally, effluent passes through filter materials surrounded by bacteria membrane which is more effective in removing dissolved solids remain from the above stages. At this stage the effluent is safe and clean enough to be infiltrated to the soil without polluting the ground water.

1.6.4 Advanced Treatment

Prior to the reuse for different human activities or discharge to the environment, the effluent has to go through advance treatment for complete elimination or reduction of all parameters to the allowable limits according the available environmental standards. This treatments includes aerated composite filter and polish tank.

1.7 Beneficiaries

Residential houses, Schools, Industries, Hotels & Restaurant, Markets, Religious Institutes, Public toilets, Offices, and Camps.

Table 1. 1 List of some few Projects with Wastewater Solution systems

No.	Project location	Location	Client Contacts
1.	Mr. Mohammed Juma	Chamazi, Dsm	0656 624777
2.	Rambo Hotel & Lodge	Manzese Tip Top, Dsm	Mr. Manyanga 0713 211 515
3.	Said Salim Bakhresa & Co.ltd	Buguruni Flour Mill -Dsm	Mr. Masumba 0714 072 178
4.	Libermann pre & Primary School	Mbezi beach	0719 253 597
5.	Mr. Kirango – Residential House	UNUNIO	0659 574 004

6.	JWTZ – Kunduchi PTC	KUNDUCHI MTONGANI	QM 0715 736 274
7.	Mr. Kiwera – Girls' Hostel	TEGETA – NYUKI	0754 596 591
8.	Hon. Alhaj Ali Hassan Mwinyi residential house	MIKOCHENI	P/secretary: 0713 981 811
9.	Mikocheni Senior Police Houses	TPF Mikochen	Eng. Kinyasi 0655248384
10.	Kunduchi Junior Police Houses	TPF Kunduchi	Eng. Kinyasi 0655248384

1.8 Cost Analysis

Cost analysis of wastewater treatment and disposal to the ground through perforated pipes (French drainage) is as indicated on the table bellow;

Table 1. 2 Cost analysis for wastewater treatment technology

S/No.	WASTEWATER GENERATED (m³/day)	DIMENSIONS (m) (outside)	AMOUNT (TSHS)
1.	1	3.45x1.50x1.75	4,605,326.00
2.	3	3.70x2.00x2.00	6,668,217.50
3.	6	4.95x2.30x2.00	9,641,200.00
4.	10	6.75x2.30x2.50	14,818,000.00
5.	15	6.75x3.65x2.50	18,369,192.00
6.	25	8.55x3.65x2.50	30,900,226.00
7.	30	8.55x4.45x2.50	32,224,847.00
8.	35	8.55x5.45x2.50	36,601,607.30

1.8 List of Photos of constructed treatment plant with final effluents and its benefits



Photo 1. 1 Construction of Anaerobic Baffle Reactor at Kunduchi Senior police Houses



Photo 1. 2 Installation of French pipe for ground discharge of final effluents from ABR



Photo 1. 3 Effluents from different levels of Treatment



Figure1.2 Re use of treated effluents for agriculture

Table 0.3: Company's Details

Company Name : WASTE WATER SOLUTIONS
Established : 2010
Company Address: HOUSE NO. 3, ARUSHA/MANYONI STREET, ILALA. P. O. Box 78349, Dar es Salaam, Tanzania (EA)
Company Contacts: Mobile +255 656 324 777 / 0783 345 353
E-mail; aquawaste@gmail.com
Key Executives : A.S. Mkwawa - Managing Director
M.N. Juma – Technical Director.
Business Scope : Waste water recycling & reuse through “OSWAMS”
Membership : Contractors Registration Board Tanzania [C.R.B]
Banker : NBC –AC/ NO. 071103001453, Chang’ombe Branch.
TIN : 110-755-244
VAT : 40-016203-W
Company slogan: Environmental Management for Sustainable Development