

Kibera Town Centre

Kamkunji Grounds, Kibera, Nairobi, Kenya

Final Polishing of Treated Wastewater

MEL slow sand filters



The Kibera Town Centre (KTC) was funded and constructed as part of the Human Needs Project, <http://www.humanneedsproject.org/>. The project was approved by the Prime Minister (see copy of letter attached). It has been operating continuously since 2014.

Manz Engineering Ltd. (MEL) is one of several collaborators who contributed to the project (see attached list and <http://www.humanneedsproject.org/hnp-collaborators>).

The KTC deep well produces up to 20,000 L/hour. The water is distributed at three locations within the community, piped to neighboring clinics and businesses, and to the local primary school providing 4000 students with safe drinking water and water for sanitation.

The Centre has 22 toilets and 15 showers. The KTC Waste management system recycles 60,000 litres of wastewater daily which is then used for toilet flushing and irrigation. Five MEL slow sand filters provide final filtration by removing most pathogens (all parasites) and improving clarity to allow use of UV disinfection to destroy remaining bacteria and viruses. Each MEL slow sand filter can treat up to 1,000 L/hour.

A schematic of the wastewater recycling system and an engineering drawing showing the placement of five of the MEL filters are attached. Also attached are a few photographs of the filters under construction. All materials were sourced locally. Local contractors were hired to build the filters.



Republic of Kenya

Office of the Prime Minister

31 October 2011

Ref: PMO/LAN.CONST/107/VOL.1

Connie Nielsen
Human Needs Project
P O BOX 321-00100
Nairobi Kenya

Dear Madam,

Human Needs Project-Kamkunji Grounds

Following a meeting between the Prime Minister and a group of Langata Local Leaders on the 31st October 2011 in which your project above was discussed, I have been instructed that:

1. You have the Prime Minister's approval and support for the project and construction should start immediately.
2. That the project should restrict itself to the open area between the Kamkunji office and the Church and utmost care be taken to ensure the open grounds for meetings is not interfered with.

The Prime Minister takes this opportunity to express his gratitude towards Human Needs Project for having chosen Kibera for this project and encourages you to think of other such projects that will be of immense use and benefit to the community.

Yours Sincerely,

Edward Ketta
FOR: PRIME MINISTER

Treasury Building, 14th Floor
P. O. Box 74434 - 00200
Harambee Avenue, Nairobi

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Fax: +254 20 221 1205

HNP Collaborators

Institutions and Organizations

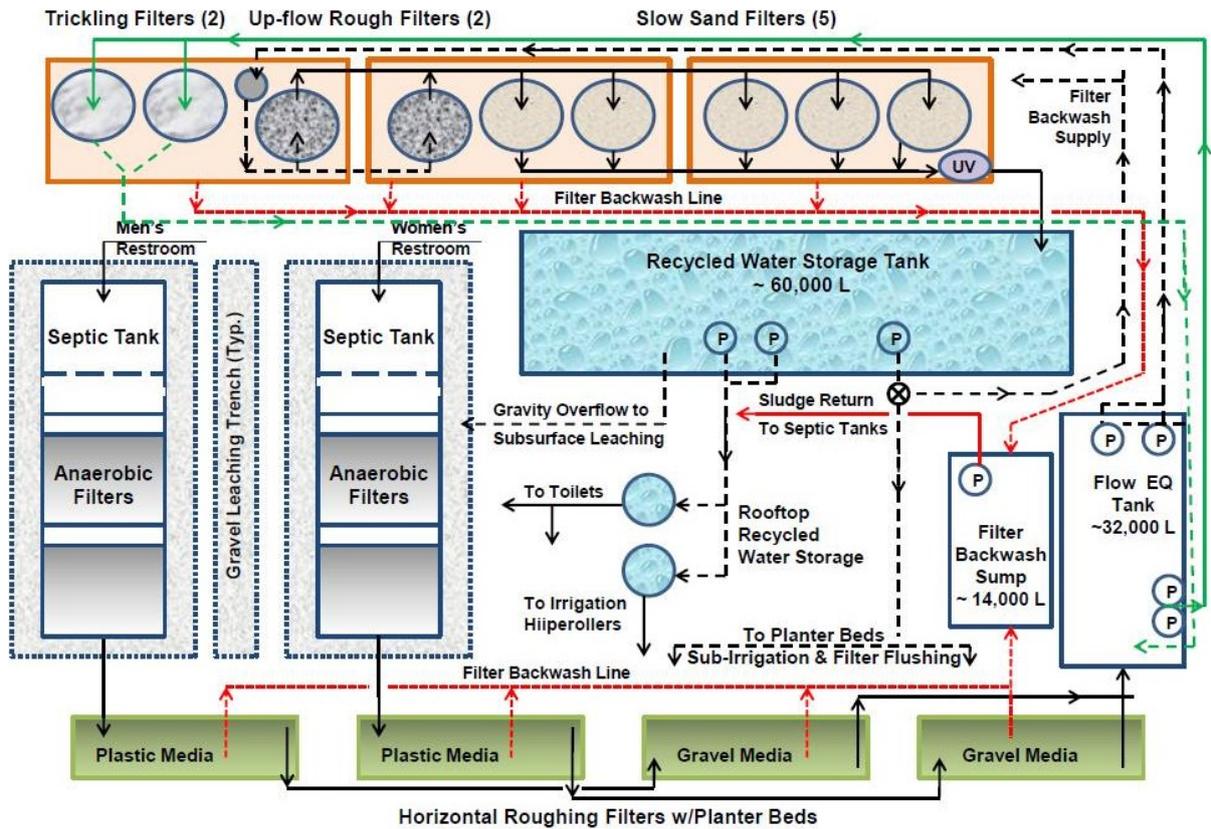
 African Guarantee Fund	 Center for Effective Global Action (CEGA)	 Dan Eidon Place of Tomorrow	 Kenya CIC	 Creative Sensor Technology	 Davis & Shirtliff	 Dormans Coffee	 DSV Air & Sea Ltd
 Leaders Quest	 Mama na Dada	 Melchizedek Hospital	 Mercy Corps	 DTR Consulting Services	 Greenlight Apparel	 Grundfos & The Poul Due Jensen Foundation	 GST International - Elephant Armor
 Royal Danish Embassy Of Nairobi	 Sama Group	 Tegla Lorupe Peace Foundation	 Tunapanda Institute	 Incadence	 Insightformation	 John Todd Ecological Design	 KAO Design Group
 WaterHope	 World Bank	 La Marzocco	 Manz Eng. Ltd. Manz Engineering, Ltd.	 Marker Seven	 Mile Nine		

Corporations and Professionals

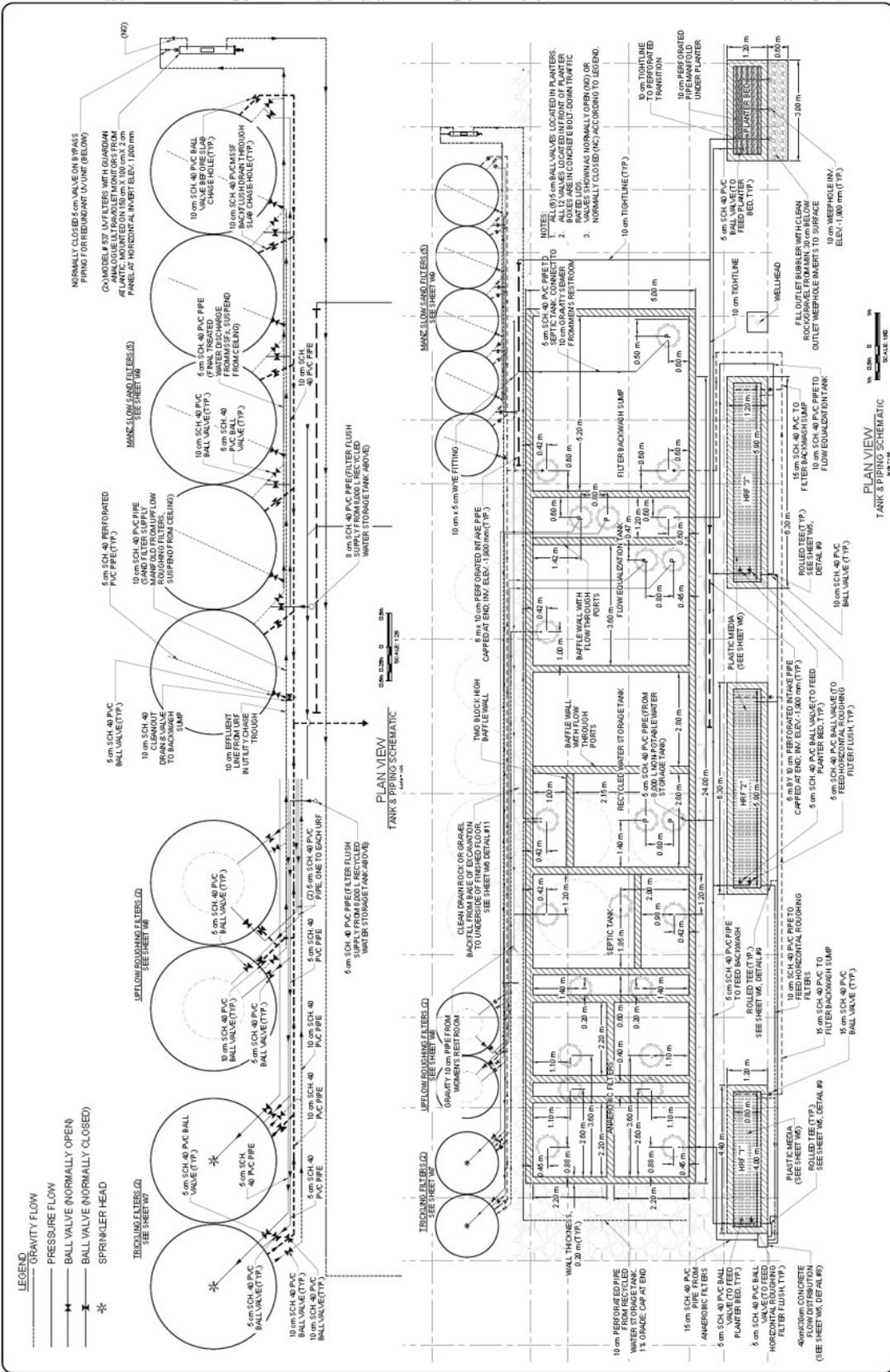
 AV-Huset A/S	 Bruce King Engineering	 Burr Pilger Mayer	 Clean Concrete Technologies	 Procter & Gamble	 Questa Engineering	 Redhorse Constructors	 Salesforce
				 Tetra Pak	 Turner Duckworth	 XIO Water Systems	

Academic Institutions

 Brookhouse School	 South Eastern Kenya University	 University of California, Berkeley	 University of California, Davis
 University of Nairobi			



Kibera – Wastewater Recycling Schematic



HUMAN NEEDS PROJECT
KIBERA
NAIROBI, KENYA

TANK & PIPING SCHEMATIC
WASTEWATER RECYCLE SYSTEM

DATE	11/09/21	BY	MM/AM
NO.	AS NOTED	CHKD.	MM/AM
REV.	06/02/22	APP.	MM/AM
DATE	06/02/22	CHKD.	MM/AM
REV.	02/01/20	APP.	MM/AM

SCALE: 1:50



Five MEL filters in place.



Exterior and interior of MEL filter.



Constructing and installing the MEL filter components.