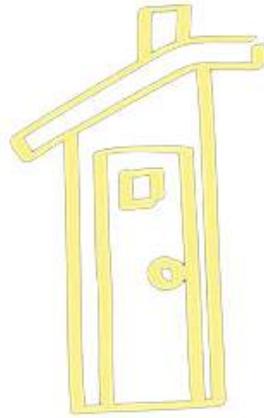


DRINKING WATER

+



SANITATION

+



HYGIENE

ST BAKHITA SCHOOL TOILET BLOCK

Aber | Uganda | Africa

Access to safely managed water and sanitation.





EXECUTIVE SUMMARY

Introduction

This document outlines the vision and plans for the construction of a new latrine block serving the students of the nursery and primary school of St Bakhita in Aber, Uganda.

The objectives of the project are to improve the living conditions of the pupils by giving them access to clean water and sanitation and significantly reduces hygiene-related disease, increasing student attendance and contributing to dignity and gender equality.

The purpose of this booklet is to sensitize and involve international NGOs, philanthropic organizations, public and private institutions, stakeholders in the region and local communities in supporting the initiative.

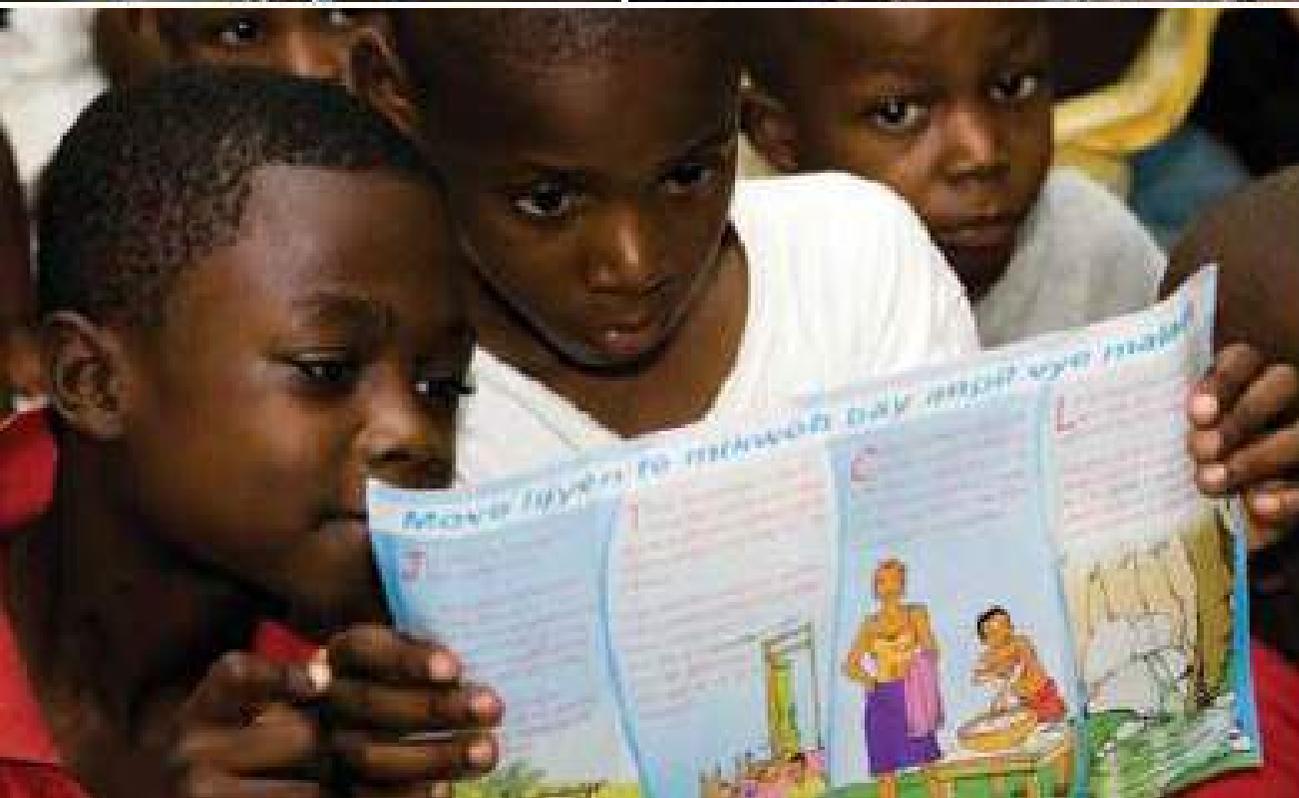


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SITUATION ANALYSIS

Uganda - Africa

Uganda is a landlocked country situated in East Africa, with neighbours Kenya and Tanzania to the East and South, respectively. It also shares a border with Rwanda to the South, the Democratic Republic of Congo (DRC) to the West and South Sudan to the north. It covers an area of 241,038 km².

Uganda is one of the poorest nations in the world; 37.8 percent of the population lives on less than \$1.25 a day. Despite making enormous progress in reducing the countrywide poverty, incidence poverty remains deep-rooted in the

country's rural areas, which are home to 84 percent of Ugandans.

Much of Uganda is open water and swampland, but this is undrinkable. Meanwhile, high demand and poor management lead to shortages of clean groundwater – facilities are under strain in towns and cities, and the springs and wells that rural communities rely on are mostly used up.

Nearly 90 percent of Uganda's 35 million people live in small towns and rural areas, and roughly two thirds of them lack access to safe water.



WASH - WATER SANITATION AND HYGIENE

UNSDG: Goal 6 Clean Water and Sanitation

One component of the Sustainable Development Goals is clean water and sanitation. This includes several sub-components, including water quality, hygiene and access to drinking water. UNICEF's declared strategy is "to achieve universal and equitable access to safe and affordable drinking water for all". More than half of all primary schools in the developing countries with available data do not have adequate water facilities and nearly two thirds lack adequate sanitation. Even where facilities exist, they are often in poor condition.

WASH is the collective term for Water,

Sanitation and Hygiene. Due to their interdependent nature, these three core issues are grouped together to represent a growing sector. For example, without toilets, water sources become contaminated; without clean water, basic hygiene practices are not possible.

WASH in schools significantly reduces hygiene-related disease, increases student attendance and contributes to dignity and gender equality. It also enables children to become agents of change for improving water, sanitation and hygiene practices in their families and communities.



Handwritten text on the wall, possibly in a local language, including the characters "P35" and some illegible symbols.



BENEFICIARIES

School Students

The beneficiaries of this project are the students of the St. Bakhita School aged between 3 to 13.

Water and sanitation-related diseases remain among the major causes of death in children. Proper water and sanitation is a key foundation for achieving the Sustainable Development Goals, including good health and gender equality.

Access to clean water and basic toilets, as well as good hygiene practices, play an important role in education.

Upgrading water and sanitation facilities in schools improve hygiene, increase the attendance and performance of students preventing the spread of diseases and ultimately improve health and economic growth.

Most importantly, when it comes to WASH in schools, clean drinking water, and a safe place to use the bathroom are just as important as teachers, classrooms and books. When these crucial tools aren't readily available, students spend less time learning because of sickness or time spent collecting water.



Roman Catholic Church

CONTEXT

Aber - St Bakhita School

The existing latrines are serving St Bakhita pre-primary and primary school students for a total of 380 pupils, of which 200 are girls. However, the toilets lack basic elements including doors and shutters – that compromise privacy for students.

The pupil-to-latrine stance ratio is not ideal and far from the suggested government ratio of 1 hole every 30 pupils.

Sanitation needs are identified as a key priority – to prevent spread of diseases such as cholera breaking out in crowded school conditions.

The new latrine block will be designed with designated spaces for staff, boys, girls and students with disabilities and will improve privacy for all the users.

With the construction of these new latrines the pupil-to-latrine ratio will improve significantly.

Built with locally available materials, the latrines will be constructed on a site chosen considering wind and sunlight direction and it will be located at a minimum distance of 30 meters from any type of water source.



www.wecare-onlus.org

PARTNER ORGANIZATION

WeCare Onlus

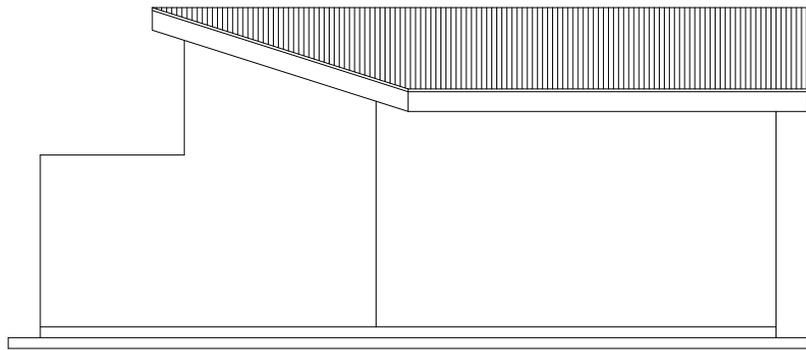
WeCare Onlus is a non-profit that pursues exclusively social solidarity purposes.

It intends to carry out its activities in the field of social and health care assistance in Italy and abroad, both directly and in collaboration with existing structures, associations and institutions.

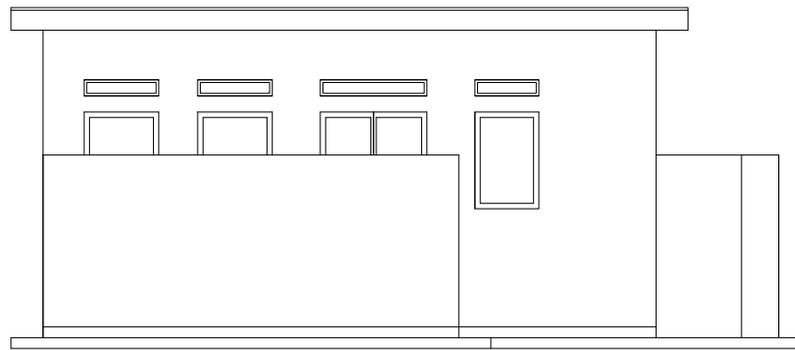
To this end, WeCare Onlus undertakes to carry out its activities by raising public awareness, obtaining funds, supplying equipment, training, direct activities of members or third parties.

For this reason, the organization has decided to devote itself especially to women, children and the elderly, even weaker in need, through the implementation of projects aimed at improving the socio-health condition and training.

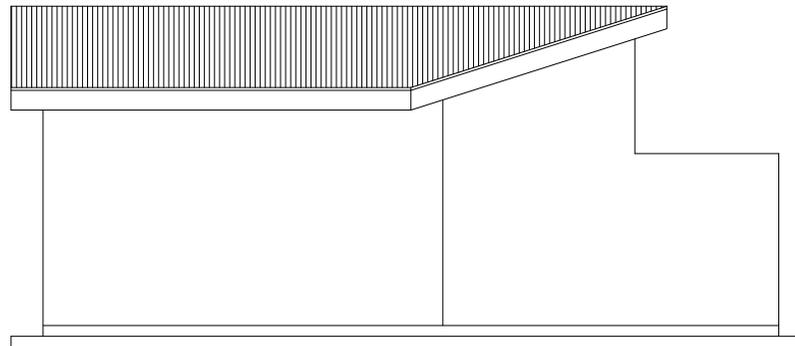
To guarantee the means for professional training, especially for nurses and doctors, and to build structures to start primary and secondary schooling for children otherwise destined for the road and ignorance means betting on the future of regions and peoples looking for a future.



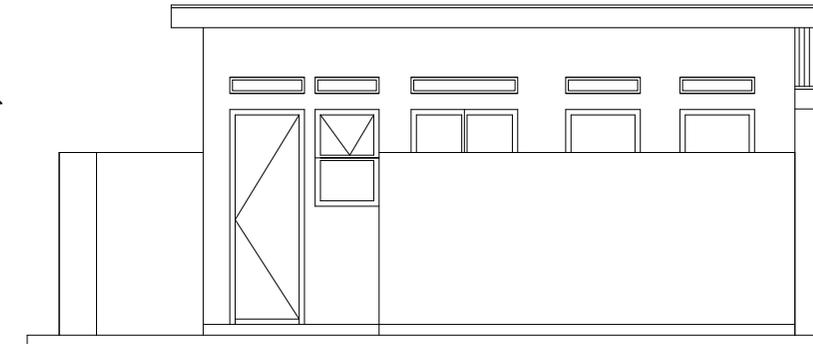
SOUTH ELEVATION.
Scale 1:50



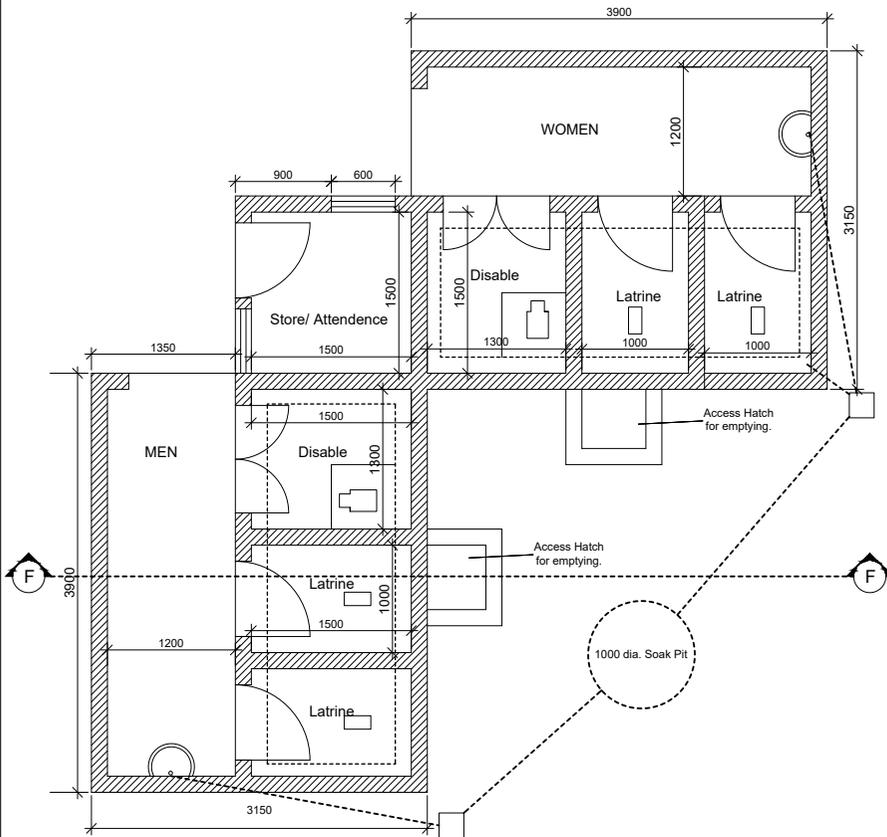
NORTH ELEVATION.
Scale 1:50



EAST ELEVATION.
Scale 1:50



WEST ELEVATION.
Scale 1:50



PLAN.
Scale 1:50

TYPE 1: CONVENTIONAL VIPL FOR PUBLIC.

A: Superstructure.

1. Gauge 30 Corrugated iron sheet roof on 3"x2" timber purlins at 0.6m spacing on 4"x2" timber rafters at 1.5m spacing on 3"x2" timber wall plates secured by hoop irons. .
2. 150mm walls bonded with 1:5 ratio mortar and rendered smooth on both sides with 1:3 ratio mortar.
3. Steel door shutters and frames secured by approved tower bolts
4. 150mm reinforced concrete of 1:2:4
12mm high tensile bars at 150mm each way & BRC 142, 50mm concrete cover and rendered smooth on top with cement screed on 25mm thick 1:3 mortar screed to slope towards the drop holes, 125mmx225mm drop holes and 125mm Ø holes for vent pipes (one for every two stances)
5. 125mm Ø vent pipes fitted through the roof and the cover and sealed with mortar; the top protruding 600mm above the roof and covered with fly screen.
6. Access ramp and land scaping of compacted soil provided as appropriate

B: Substructure.

1. Excavation 2.2m Length x 1.2m widthx4.4m depth. Stabilise bottom of pit by compacting 200mm thick gravel (murrum) or hardcore and cast 150mm thick concrete of 1:2:4/25 reinforced with BRC 142 rendered smooth on top with cement screed on 25mm thick 1:3 mortar.
2. 200mm masonry wall joined with 1:3 mixed mortar with internal dimension of 3m x 1.3m x 4m to protrude 100mm above ground level.
3. Access hatch 0.5x0.6mx1.2m depth adjacent to the pit
4. Murrum backfill properly compacted behind wall as construction progresses

LIRA

VIP LATRINE

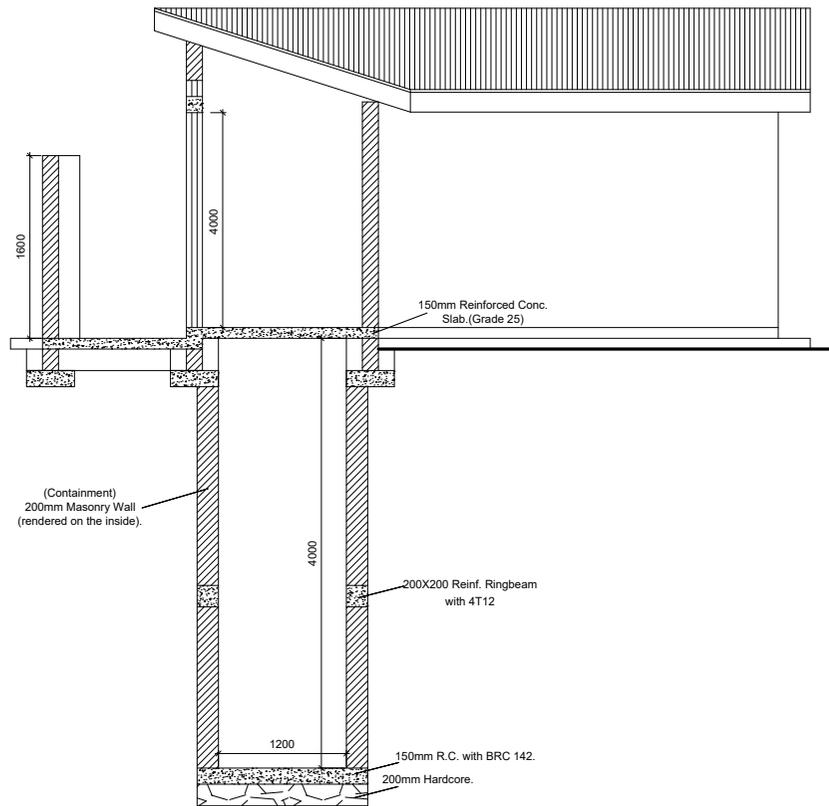
Ventilated Improved Pit Latrine

To properly serve the actual school population, WeCare Onlus aim to fundraise money to support the construction of two new toilette blocks (see attached drawings) equipping the school with a total of 12 new latrines able to serve the entire student population.

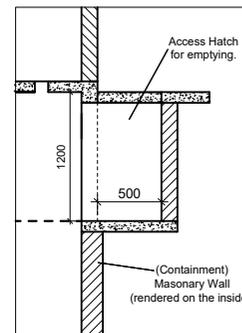
Due of lack of flush water availability inside the school compound, it has been thought to construct a Dry Toilet that operates without water. The Dry Toilet may be a raised pedestal that the user can sit on, or a squat pan that the user squats over.

The VIP technology comprises of a pit, cover slab, privy room and a vent pipe with fly trap/screen. The pit and cover slab forms the sub structure with the privy room and vent forming the superstructure.

The principal mechanism of ventilation in VIP latrines is the action of wind blowing across the top of the vent pipe. The wind creates a strong circulation of air through the superstructure, down through the squat hole, across the pit and up and out of the vent pipe.



SECTION F - F
Scale 1:50



DETAILS AT ACCESS HATCH
Scale 1:50

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4. Murrum backfill properly compacted behind wall as construction progresses

LIRA



Example of dry pit latrines

Suitable for locations where there is a scarcity of water, where the water supply is not always dependable, where the ground is easy to dig and the water table is low.

ITEM	DESCRIPTION	UNIT	QTY	RATE Ushs	AMOUNT Ushs
PROPOSED CONSTRUCTION OF 5-STANCE OF DRAINABLE VIP LATRINE TO BE BUILT AT ST. JOSAPINE BAKITA, ABER CATHOLIC PARISH					
BILL NO. 1					
SUBSTRUCTURE(ALL Provisional)					
EXCAVATION AND EARTHWORK					
A	Excavation oversite average 150mm deep to remove vegetation soil and spread wheredirected on site	Sm	32	2,000	64,000
B	Excavate to reduce level and spread on site	Cm	24	3,000	72,000
C	Excavate trenches for strip foundations not exceeding 1.5m deep from stripped level	Cm	2	5,000	10,000
D	Excavate pit size 2260mm wide x 7500mm long x 1500mm deep minimum for 5-stance of drainable vip latrine not exceeding 1.50M deep from strippedlevel.	Cm	26	15,000	390,000
E	Excavate ditto over 1.50Metres but not exceeding 3.00Metres deepfrom stripped level.	Cm	30	40,000	1,200,000
F	Treat surface of subsoil or fillings and surroundings with approved chemical anti-termites solution: provide ten year guarantee.	Sm	32	1,000	32,000
G	Return, fill in and well ram selected excavated materials around foundations	Cm	20	2,000	40,000
H	Remove surplus excavated material from site	Cm	80	1,500	120,000
Water Disposal					
I	Allow for keeping all excavations free from silt and water	item	1	250,000	250,000
Approved hardcore filling as described:-					
J	230mm thick hardcore bed well compacted and blinded with sand	Sm	9	50,000	450,000
Plain Concrete grade 15 as described in:-					
K	Strip foundations	Cm	7	35,000	245,000
L	100mm thick floor bed	Sm	16	45,000	720,000
M	Ramp	Sm	1	250,000	250,000
Vibrated reinforced concrete grade 25 as described in:-					
N	150mm thick Basement floor slab bed	Sm	37	25,000	925,000
O	100mm thick suspended floor bed	Sm	16	45,000	720,000
P	Ground beam	Cm	1	250,000	250,000
Total Amount Carried Forward					5,738,000

Inspectio chamber as per Enginee's details: consisting of: 150mm class 25 reinforced concrete bed and cover slab: 150mm(average) benching: 50mm class 7 concrete blinding: 150mm masonry walls: 12mm thick (1:3) cement and sand render to sides of walls and benching: excavation and disposal from site: foam work(cover and frame measured separately)					
F	100mm daimeter PVC vent pipe	Lm	2	27,000	54,000
TOTAL AMOUNT CARRIED TO SUMMARY					1,402,000
MECHANICAL INSTALLATION					
Drainage					
A	PVC Gully Trap	nr	1	10,000	10,000
B	Floor Trap as ARMITAGE SHANKS complete with all accessories	nr	1	13,000	13,000
C	110mm PVC heavy gauge pipework buried in the ground to a fall of 1:60 complete with excavations, bedding, backfilling and all accessories.	m	10	2,600	26,000
D	Soak Pit Size approx. 2500mm on top tapering to 1500mm and depth of 1500mm complete with hardcore and all accessories.	nr	1	200,000	200,000
E	Construct an inspection chamber 500x600mm including: 50mm thick pre-cast concrete cover with 2NO. Mild steel Lifting rings 8mm diameter bar	sum	1	50,000	50,000
F	Supply and fixed metallic hand washing drum 10litres and including its stand and tap	sum	1	100,000	100,000
TOTAL AMOUNT CARRIED TO SUMMARY					399,000
BILL NO 8					
FIVE STANCE DRAINABLE VIP LATRINE					
1 SUBSTRUCTURE					13,198,000
2 EXTERNAL					2,652,000
3 ROOFING					1,366,000
4 DOORS					1,947,000
5 FINISHES					1,402,000
6 MEECHANICAL INSTALLATION					399,000
GRAND TOTAL					20,964,000

TOTAL COST 20.964.000 UGX (5000 €)

COST BREAKDOWN

Bill of Quantities

The construction of a VIP Latrine consists of several parts that can be summarized into the following:

1. Pit cover-slab/ floor is made of 150 mm Reinforced Concrete slab using bamboo/ other wood logs or steel reinforcement. The floor should be smoothly finished and made impervious to water and urine penetration.
2. Walls are built using masonry units locally available (firebricks or CMU) plastered up to 500mm (0.5m) above the ground level.
3. The roof is Corrugated Galvanised Iron sheets over timber rafters and purlins

(size of rafter is 75mm x 100mm and purlins 50mm x 75mm). The roof will be firmly secured to prevent wind damage.

4. The vent-pipe can be a PVC pipe 100mm/150mm diameter.

The top of the vent-pipe will be fitted with a fly-screen and it should extend at least 0.5 meter above the roof.

5. The pit can be lined with dry hammer-dressed stones 1'4" thick to prevent the collapse of the earth. The maximum depth of pit shall not be below 2.5 meters with a 0.3 meter freeboard but will vary depending on the depth of water table and the nature of the soil.



CONCLUSIONS

Community Development

The project's goals are to enhance the provision of adequate safe water, sanitation and hygiene facilities as well as improving the academic performance, school attendance and overall health of the St Bakhita School's students.

Through working holistically with a wide range of partners, including government, civil society and the private sector, WeCare Onlus can leverage the influence at local and international levels in order to drive change and deliver sustainable results.

The positive outcomes generated by the new latrine block will prove the potential of this project to new stakeholders. Thus, these positive outcomes can be helpful in generating additional funding and other resources to scale the intervention and keep improving the living conditions of the students of St Bakhita School.



ST BAKHITA SCHOOL TOILET BLOCK

Aber | Uganda | Africa

Access to safely managed water and sanitation.

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