

Final Report for Fondation Eagle: FF 0706

Key information

- a) Donor name: Fondation Eagle
- b) Name of Charity and Project: WellBoring (GB-CHC-1142295) - Build 10 new wells
- c) Fondation Eagle reference number: FF 0706
- d) Date of grant accepted: 6th December 2023
- e) Amount: GBP 64910
- f) Number of beneficiaries: 13317
- g) Name and exact location and number of beneficiaries of the project:

School Name	GPS Location	Beneficiaries
Bumadeya	0.09277, 33.98397	1579
Bubango	0.104165, 33.99119	1920
Budubusi	0.13248, 33.99054	970
Makunda	0.087319, 34.02261	1223
Mukhombola	0.081356, 34.02868	1095
Nandekere	0.11749, 33.99187	1392
Nanjomi	0.092784, 34.03685	1290
Rugunga	0.07272, 33.99115	1470
St. Augustine Namalo	0.147577, 34.07682	1030
St Andrews Mundere	0.14107, 34.0155	1348
		13317

- h) Period of Project: December 2023 to February 2024.
- i) Conversion rate, date, and amount in local currency: Average actual conversion rate 1 GBP:194 KSh, (December 2023 – January 2024) = KSh 12'592'540. Budget conversion rate: 1 GBP:180 KSh.
- j) Detailed budgets and actual expenditure comparison: Please see the following pages.
- k) Over/underspend: While for the previous project with Fondation Eagle WellBoring funded an overspend of GBP 790, this project has resulted in an underspend of GBP 1196, against total budget. Please see the following pages for more details.
- l) Details of progress of the project, achievements, challenges, changes, differences etc, including photographs:

Table of Contents

Summary	1
Financial breakdown	2
Budget/actual expenditure comparison	2
Learning from experience	7
How we achieved this project	8
Previous water access	8
Drilling experience and mobilisation	8
Water quality analysis	12
Water quality analysis laboratory results from Bumadeya Primary School	13
Water quality analysis laboratory results from Bubango Primary School	14
Water quality analysis laboratory results from Budubusi Primary School	15
Water quality analysis laboratory results from Makunda Primary School	16
Water quality analysis laboratory results from Mukhombola Primary School	17
Water quality analysis laboratory results from Nandekere Primary School	18
Water quality analysis laboratory results from Nanjomi Primary School	19
Water quality analysis laboratory results from Rugunga Primary School	20
Water quality analysis laboratory results from St. Augustine Namalo Primary School	21
Water quality analysis laboratory results from St Andrews Mundere Primary School	22
External confirmation	23
Contact details for WellBoring	24

Summary

Fondation Eagle provided funding to allow WellBoring to develop borewells that provide safe water to a further ten schools, and their local communities: in Busia County, Bunyala Sub County, Kenya.

The project is now complete. External confirmation of schools and completion of wells from an independent body, The Ministry of Education, is included at page 23 of this report.

With this project, the Fondation has helped to provide clean, safe water to approximately 13500 people that were in desperate need. The ten schools were:

- Bumadeya
- Bubango
- Budubusi
- Makunda
- Mukhombola
- Nandekere
- Nanjomi
- Rugunga
- St. Augustine Namalo
- St Andrews Mundere

We can confirm that the funds were used correctly and for the purpose they were allocated.

In the original application were two other schools - Nabutswi and Bulema which were substituted with two new schools - St Augustine Namalo and St Andrews Mundere. We were granted permission to make this change by email on 8th February 2024.

On the following page is a detailed financial report including a breakdown of the expenditure, at the actual exchange rate achieved.

The water quality at each of the wells was checked by the appropriate authorities and found to be good.

Financial breakdown

In summary, the Fondation provided a grant of GBP 64910 and the final total costs attributable to the project were GBP 63714.

WellBoring will be happy to return this underspend, of GBP 1196, to Fondation Eagle or, with your permission, retain this funding for use in any future project undertaken with you.

The detailed budget that was initially provided in our grant application is summarised in the table below. The budget was put together using an exchange rate of 1 GB Pound to 180 Kenyan Shillings. The average actual conversion rate experienced was 1 GBP:194 KSh, (December 2023 – January 2024).

Budget/actual expenditure comparison

The following table summarises the actual costs compared to the budget. The actual costs shown in the table are incurred in Kenyan Shillings. Therefore, because of the improved exchange rate, relative to the budgeted rate, some costs were expected to be reduced.

Not included in the original budget were UK based administration costs. The Board of Trustees recognised that the charity's founder was investing a lot of his time supporting and reporting for the organisation, at considerable personal expense. The Board took the decision to provide a relatively small payment to Mr Linacre in compensation for his time. An element of this payment has been allocated to this project.

Budget Line Items	Budget total values in GBP	Actual total costs in GBP	Overspend / (underspend) total costs in GBP
Drilling personnel	8361	7921	(440)
Management/Professional fees	3916	3684	(232)
Drill supplies	11389	10789	(600)
Well supplies	13839	14614	775
Well pad	435	412	(23)
Other direct costs	12930	12253	(677)
Contingency	5087	3528	(1559)
Total	55957	53202	(2755)
Value Added Tax	8953	8512	(441)
Total in Kenya	64910	61714	(3196)
UK based administration costs	0	2000	2000
Project Total	64910	63714	(1196)

The following table addresses the significant overspends and (underspends).

Budget Line Items	Overspend / (underspend) as a percentage	Reason for overspend / underspend
Well supplies	6%	The overspend was due to the purchase of extra steel casings for 2 schools
Contingency	(31%)	Some of the contingency budget was used as a result of drilling and having to abandon Nabutswi Primary School, as well as for the extra hydrogeological investigations for Bulema Primary School.

On the following pages are tables that provide the details of both the budget and the actual costs incurred at each of the schools. In most cases the actual costs reflect the budget because total actual costs are allocated retrospectively.

Detailed budget versus actual costs table

	Budget per well (K.Sh.)	Budubusi	Bumadeya	Makunda	Mukhombola
Director of projects	30,000	30,000	30,000	30,000	30,000
Project Coordinator (PIU)	22,100	22,100	22,100	22,100	22,100
Chief Driller	20,400	20,400	20,400	20,400	20,400
Driller/Welders/driver (4)	72,000	72,000	72,000	72,000	72,000
Office receptionist	6,006	6,006	6,006	6,006	6,006
<u>Personnel</u>	150,506	150,506	150,506	150,506	150,506
Accounting services	10,000	10,000	10,000	10,000	10,000
Groundwater testing/soil resistivity	60,000	60,480	60,480	60,480	60,480
<u>Management/Professional fees</u>	70,000	70,480	70,480	70,480	70,480
Drilling foam	13,000	13,000	13,000	13,000	13,000
Hydraulic Oil for Rig	15,000	15,000	15,000	15,000	15,000
Hammer/compressor oil	25,000	25,000	25,000	25,000	25,000
Diesel for Compressor use	123,500	123,500	123,500	123,500	123,500
Diesel Rig use (drilling) & Mud pump	28,500	28,500	28,500	28,500	28,500
Service Casing					
<u>Drilling Supplies</u>	205,000	205,000	205,000	205,000	205,000
PVC Casing	142,800	143,750	143,750	143,750	281,750
Bleach	560	560	560	560	560
Hand pump & accessories	105,750	105,750	105,750	105,750	105,750
<u>Well Supplies</u>	249,110	250,060	250,060	250,060	388,060
Cement	5,600	5,600	5,600	5,600	5,600
Wire Mesh (reinforcement)	1,950	1,950	1,950	1,950	1,950
Binding Wire	280	280	280	280	280
<u>Well Pad</u>	7,830	7,830	7,830	7,830	7,830
Office rental (1/5 space)/utility	8,540	8,540	8,540	8,540	8,540
email & phones	2,520	2,520	2,520	2,520	2,520
Equipment and supply mobilization	84,000	84,000	84,000	84,000	84,000
Support truck fuel to sites	10,000	10,000	10,000	10,000	10,000
Water Quality Analysis	10,080	10,080	10,080	10,080	10,080
Drillers' accommodation	50,000	50,000	50,000	50,000	50,000
Rig Depreciation	57,600	57,600	57,600	57,600	57,600
Annual Maintenance spares pack	10,000	10,000	10,000	10,000	10,000
<u>Other direct costs</u>	232,740	232,740	232,740	232,740	232,740
Contingency 10%	91,567				
Sub Total Direct Costs	1,007,233	916,136	916,136	916,136	1,054,136
VAT 16%	161,157	146,582	146,582	146,582	168,662
Grand Totals	1,168,390	1,063,553	1,063,553	1,063,553	1,222,798

Detailed budget versus actual costs table

	Budget per well (K.Sh.)	Bubango	Namjoli	Rugunga	Nandakere
Director of projects	30,000	30,000	30,000	30,000	30,000
Project Coordinator (PIU)	22,100	22,100	22,100	22,100	22,100
Chief Driller	20,400	20,400	20,400	20,400	20,400
Driller/Welders/driver (4)	72,000	72,000	72,000	72,000	72,000
Office receptionist	6,006	6,006	6,006	6,006	6,006
Personnel	150,506	150,506	150,506	150,506	150,506
Accounting services	10,000	10,000	10,000	10,000	10,000
Groundwater testing/soil resistivity	60,480	60,480	60,480	60,480	60,480
Management/Professional fees	70,480	70,480	70,480	70,480	70,480
Drilling foam	13,000	13,000	13,000	13,000	13,000
Hydraulic Oil for Rig	15,000	15,000	15,000	15,000	15,000
Hammer/compressor oil	25,000	25,000	25,000	25,000	25,000
Diesel for Compressor use	123,500	123,500	123,500	123,500	123,500
Diesel Rig use (drilling) & Mud pump	28,500	28,500	28,500	28,500	28,500
Service Casing					
Drilling Supplies	205,000	205,000	205,000	205,000	205,000
PVC Casing 10-foot lengths (5.0")	142,800	143,750	143,750	143,750	143,750
Bleach	560	560	560	560	560
Hand pump & accessories	105,750	105,750	105,750	105,750	105,750
Well Supplies	249,110	250,060	250,060	250,060	250,060
Cement	5,600	5,600	5,600	5,600	5,600
Wire Mesh (reinforcement)	1,950	1,950	1,950	1,950	1,950
Binding Wire	280	280	280	280	280
Well Pad	7,830	7,830	7,830	7,830	7,830
Office rental (1/5 space)/utility	8,540	8,540	8,540	8,540	8,540
email & phones	2,520	2,520	2,520	2,520	2,520
Equipment and supply mobilization	84,000	84,000	84,000	84,000	84,000
Support truck fuel to sites	10,000	10,000	10,000	10,000	10,000
Water Quality Analysis	10,080	10,080	10,080	10,080	10,080
Drillers' accommodation	50,000	50,000	50,000	50,000	50,000
Rig Depreciation	57,600	57,600	57,600	57,600	57,600
Annual Maintenance spares pack	10,000	10,000	10,000	10,000	10,000
Other direct costs	232,740	232,740	232,740	232,740	232,740
Contingency 10%	91,567				
Sub Total Direct Costs	1,007,233	916,136	916,136	916,136	916,136
VAT 16%	161,157	146,582	146,582	146,582	146,582
Grand Totals	1,168,390	1,063,553	1,063,553	1,063,553	1,063,553

Detailed budget versus actual costs table

	Budget per well (K.Sh.)	Mundere	Namalo	Contingency Average per well
Director of projects	30,000	30,000	30,000	
Project Coordinator (PIU)	22,100	22,100	22,100	
Chief Driller	20,400	20,400	20,400	
Driller/Welders/driver (4)	72,000	72,000	72,000	
Office receptionist	6,006	6,006	6,006	
Personnel	150,506	150,506	150,506	
Accounting services	10,000	10,000	10,000	
Groundwater testing/soil resistivity	60,480	60,480	60,480	
Management/Professional fees	70,480	70,480	70,480	
Drilling foam	13,000	13,000	13,000	
Hydraulic Oil for Rig	15,000	15,000	15,000	
Hammer/compressor oil	25,000	25,000	25,000	
Diesel for Compressor use	123,500	123,500	123,500	
Diesel Rig use (drilling) & Mud pump	28,500	28,500	28,500	
Service Casing				
Drilling Supplies	205,000	205,000	205,000	
PVC Casing 10-foot lengths (5.0")	142,800	143,750	281,750	
Bleach	560	560	560	
Hand pump & accessories	105,750	105,750	105,750	
Well Supplies	249,110	250,060	388,060	
Cement	5,600	5,600	5,600	
Wire Mesh (reinforcement)	1,950	1,950	1,950	
Binding Wire	280	280	280	
Well Pad	7,830	7,830	7,830	
Office rental (1/5 space)/utility	8,540	8,540	8,540	
email & phones	2,520	2,520	2,520	
Equipment and supply mobilization	84,000	84,000	84,000	
Support truck fuel to sites	10,000	10,000	10,000	
Water Quality Analysis	10,080	10,080	10,080	
Drillers' accommodation	50,000	50,000	50,000	
Rig Depreciation	57,600	57,600	57,600	
Annual Maintenance spares pack	10,000	10,000	10,000	
Other direct costs	232,740	232,740	232,740	
Contingency 10%	91,567			68,443
Sub Total Direct Costs	1,007,233	916,136	1,054,136	
VAT 16%	161,157	146,582	168,662	
Grand Totals	1,168,390	1,063,553	1,222,798	

Learning from experience

Like previous borehole drilling projects, we faced several challenges that are listed below:

- At St. Augustine Namalo and Mukhombola, we experienced a huge amount of loose falling boulders but with a huge amount of water. This necessitated the use of service casing to help stabilise the borehole. We were subsequently forced to install steel casing instead of the normal pvc casing due to the same boulders that couldn't be contained and were pressing onto the screens of the pvc casings.
- At Makunda Primary, after flushing, the air pressure load returned into the separator, after its return valve failed, thus overpowering the separator, and blowing the air filter out. This forced us to engage PRD technicians to repair it.
- Poor terrain: - The project's sites are within poor marginalised rural areas where access roads to schools are very bad. Heavy rainfall being experienced in the area was also a hindrance factor during mobilisation and work. In one instance, our support truck slid into a trench and took us the better part of a day to dig it out.



The difficulties of digging out the support truck

How we achieved this project

WellBoring collaborated with WellBoring GroundWater in Kenya to implement this project, which focused on providing safe drinking water for 10 primary schools. The project's goal was reached.



Children enjoying water from the newly constructed well at Bubango Primary

Previous water access

None of the chosen schools had access to safe drinking water prior to the project being delivered. In the schools, pupils no longer carry water from their homes in bottles. The schools have started reporting reducing infection of waterborne diseases, improving cleanliness in classrooms and pupils as well as improved hand washing practices.

In all the schools, we introduced “health clubs” which will significantly change attitudes at school and increase self-esteem among pupils. Children were given the vision to influence their families, their communities, and the nation for better health.

Drilling experience and mobilisation

The aim of this project was to provide safe drinking water to students and surrounding villagers at the primary schools, by drilling and constructing bore holes.

In addition, we provided age-appropriate hygiene awareness for students and their family members, along with school leadership and teachers.



Pad construction at Budubusi Primary

Drilling went smoothly without many hitches, except for the few instances where the soil formation was loose and required reinforcement through the use of steel service casings, such as at St Augustine Namalo primary school. In schools such as Mukhombola and Nanjomi we faced serious difficulties with clay boot and water loss.

At Mukhombola school, we experienced a hammer bit breakage which was brought about by the fresh granite formation and high vibration on the drill bit. We had to stop work as we waited to procure a new hammer bit from Nairobi.

At the Nabutswi site, the original hydrogeological investigations suggested that we would find water at 60 meters. We drilled to 80 meters deep and came out dry. Further hydrogeological investigation at this site indicates poor prospects of hitting a good groundwater aquifer.

Following the receipt of the formal report concerning the hydrogeological investigations for Bulema, the hydrologist / geologist recommended drilling to a minimum depth of 150 meters. Drilling to this depth would have required the use of different equipment and the site would not be able to be operated by a hand pump. Therefore, we switched to another site.

Generally, the area around Bunyala is characterised by rough roads which are poorly maintained. This was a major hindrance; more so when there was rainfall. Nonetheless, we managed to mobilise teams to the various sites as scheduled and drilled in accordance with the technical requirements of each site. The sites were all concentrated in Bunyala Sub County. Therefore, navigating between the sites was not too difficult.



Ongoing Pump Installation at the new borehole - Rugunga Primary

The following table summarises information about each of the wells.

School Name	Sub County & GPS Co.	Contact Person	Contact Number	Static water Level	Yield per hour	Challenges
Bumadeya	Bunyala 0.09277, 33.98397	Pascal Ogutu	722212143	4.0 m	7.0 m ³	None
Bubango	Bunyala 0.104165, 33.99119	Stanley Mangeni	727718223	3.2 m	4.0 m ³	None
Budubusi	Bunyala 0.13248, 33.99054	Elizabeth Khabiri	720175260	2.3 m	6.0 m ³	None
Makunda	Bunyala 0.087319, 34.02261	Rose Nangira	725318283	14.3 m	2.0 m ³	Very hard granite, drillable with heavy compressor power.
Mukhombola	Bunyala 0.081356, 34.02868	Benta Musolo	724830978	3.2 m	10.0 m ³	Drilling went smoothly, though with some boulder formations towards the end.
Nandekere	Bunyala 0.11749, 33.99187	Michael Ojiamboi	727718223	12.3 m	5.0 m ³	Drilling through loose formation (running sand)
Nanjomi	Bunyala 0.092784, 34.03685	Bonface Obare	723364449	17.4 m	1.7 m ³	Drilling through loose formation (running sand) and clay
Rugunga	Bunyala 0.07272, 33.99115	Denis Kujaju	720202042	18.1 m	2.5 m ³	None
St. Augustine Namalo	Bunyala 0.147577, 34.07682	Maria Apiyo	710261344	13.5 m	3.0 m ³	Drilling through loose formation composed of sandy soil. We had to use steel service casing.
St Andrews Mundere	Bunyala 0.14107, 34.0155	Michael Juma	734312511	14.8 m	7.0 m ³	None

Water quality analysis

Upon completion of each drilling/casing of the boreholes, the hole was flushed using an air compressor to remove all dirt and cuttings to a clean drinkable position. Water samples collected on a one litre bottle was sent to the government laboratory.

Upon receiving positive results from the government laboratories, we embarked on the pad construction and pump installations. Each well was handed over to the schools.

On the following pages you will find the copies of the laboratory results for each of the schools.



Water quality analysis laboratory results from Bumadeya Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P. O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	285	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Bumadeya Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.48	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	15	15
Turbidity	N.T.U	APHA 2130 B	4.5	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	2370	2500
Chloride	mg L ⁻¹		27	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.07	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.011	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	92	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	210	500
Fluoride	mg L ⁻¹	APHA 4500-F ⁻ C	0.6	1.5
Nitrate	mgNO ₃ ⁻ L ⁻¹	APHA 4500-NO ₃ D	2.6	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	4.4	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	1185	1500

**Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater*

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.

Beryl Akinyi
Laboratory Analyst

Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by

The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

Water quality analysis laboratory results from Bubango Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P. O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	292	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Bubango Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.80	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	2.5	15
Turbidity	N.T.U	APHA 2130 B	2.2	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	1194	2500
Chloride	mg L ⁻¹		11	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.01	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.001	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	46	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	92	500
Fluoride	mg L ⁻¹	APHA 4500-F ⁻ C	0.08	1.5
Nitrate	mgNO ₃ ⁻ L ⁻¹	APHA 4500-NO ₃ D	1.4	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	2.1	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	595	1500

*Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.



Beryl Akinyi
Laboratory Analyst



Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by


The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

Water quality analysis laboratory results from Budubusi Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P. O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	287	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Budubusi Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.47	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	5.0	15
Turbidity	N.T.U	APHA 2130 B	3.6	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	1166	2500
Chloride	mg L ⁻¹		18	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.02	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.004	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	56	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	122	500
Fluoride	mg L ⁻¹	APHA 4500-F ⁻ C	0.1	1.5
Nitrate	mgNO ₃ ⁻ L ⁻¹	APHA 4500-NO ₃ D	1.6	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	3.2	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	583	1500

*Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.



Beryl Akinyi
Laboratory Analyst



Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by

 WATER RESOURCES AUTHORITY
 VICTORIA SOUTH BASIN AREA
 BASIN AREA COORDINATOR
 P. O. BOX 666 - 40100, KISUMU
 TEL: 057 2025493

The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

Water quality analysis laboratory results from Makunda Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P. O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	288	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Makunda Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.47	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	5.0	15
Turbidity	N.T.U	APHA 2130 B	3.1	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	1534	2500
Chloride	mg L ⁻¹		14	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.01	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.002	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	52	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	118	500
Fluoride	mg L ⁻¹	APHA 4500-F ⁻ C	0.09	1.5
Nitrate	mgNO ₃ ⁻ L ⁻¹	APHA 4500-NO ₃ D	1.5	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	2.8	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	767	1500

*Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.



Beryl Akinyi
Laboratory Analyst



Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by

 WATER RESOURCES AUTHORITY
 VICTORIA SOUTH BASIN AREA
 BASIN AREA COORDINATOR
 P. O. BOX 666 - 40100, KISUMU
 TEL: 057 2025493

The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

Water quality analysis laboratory results from Mukhombola Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P.O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

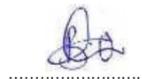
Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	286	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Mukhombola Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.42	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	10	15
Turbidity	N.T.U	APHA 2130 B	5	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	2450	2500
Chloride	mg L ⁻¹		34	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.03	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.008	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	86	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	170	500
Fluoride	mg L ⁻¹	APHA 4500-F C	0.4	1.5
Nitrate	mgNO ₃ L ⁻¹	APHA 4500-NO ₃ D	2.8	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	4.6	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	1225	1500

**Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater*

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.



Beryl Akinyi
Laboratory Analyst



Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by
BASIN AREA COORDINATOR



The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.



Water quality analysis laboratory results from Nandekere Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P.O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	284	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Lake View Nandekere Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.42	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	10	15
Turbidity	N.T.U	APHA 2130 B	5	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	2450	2500
Chloride	mg L ⁻¹		34	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.03	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.008	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	86	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	170	500
Fluoride	mg L ⁻¹	APHA 4500-F ⁻ C	0.4	1.5
Nitrate	mgNO ₃ L ⁻¹	APHA 4500-NO ₃ D	2.8	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	4.6	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	1225	1500

*Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.


Beryl Akinyi
Laboratory Analyst


Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by
BASIN AREA COORDINATOR



The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.



Water quality analysis laboratory results from Nanjomi Primary School



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P.O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	291	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Nanjomi Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.65	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	2.5	15
Turbidity	N.T.U	APHA 2130 B	2.4	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	1313	2500
Chloride	mg L ⁻¹		15	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.01	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.001	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	52	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	109	500
Fluoride	mg L ⁻¹	APHA 4500-F C	0.1	1.5
Nitrate	mgNO ₃ ⁻ L ⁻¹	APHA 4500-NO ₃ D	1.6	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	2.3	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	656	1500

**Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater*

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.


.....

Beryl Akinyi
Laboratory Analyst


.....

Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by
BASIL AREA COORDINATOR


The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

Water quality analysis laboratory results from Rugunga Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P.O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	7/2/2024	Sample No:	289	Year:	2024
Name of Customer:	WELLBORING	Date Received:	5/2/2024		
Address:		Date of Sampling:	2/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Rugunga Primary School, Busia County		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	7.42	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	10	15
Turbidity	N.T.U	APHA 2130 B	5	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	2450	2500
Chloride	mg L ⁻¹		34	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.03	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.008	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	86	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	170	500
Fluoride	mg L ⁻¹	APHA 4500-F ⁻ C	0.4	1.5
Nitrate	mgNO ₃ L ⁻¹	APHA 4500-NO ₃ D	2.8	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	4.6	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	1225	1500

**Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater*

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.



Beryl Akinyi
Laboratory Analyst



Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by


The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.



Water quality analysis laboratory results from St. Augustine Namalo Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P.O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	13/2/2024	Sample No:	302	Year:	2024
Name of Customer:	WELLBORING	Date Received:	12/2/2024		
Address:		Date of Sampling:	12/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	St. Augustine Namalo Primary School		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	6.8	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	5	15
Turbidity	N.T.U	APHA 2130 B	4.3	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	306	2500
Chloride	mg L ⁻¹		15	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.13	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.001	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	80	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	160	500
Fluoride	mg L ⁻¹	APHA 4500-F C	0.01	1.5
Nitrate	mgNO ₃ L ⁻¹	APHA 4500-NO ₃ D	2.8	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	3.5	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	153	1500

**Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater*

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.


.....

Beryl Akinyi
Laboratory Analyst


.....

Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by



The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

Water quality analysis laboratory results from St Andrews Mundere Primary School

FORM F/9/1/3



WATER RESOURCES AUTHORITY

Water Resources Authority
LVSBA Regional Office
P.O. Box 666 - 40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Kisumu Water Quality Laboratory
P.O. Box 666-40100, Kisumu
Tel: 057072025493
Email: kisumuro@gmail.com

Physical-Chemical & Bacteriological Laboratory Results Certificate

Report Issue Date:	13/2/2024	Sample No:	301	Year:	2024
Name of Customer:	WELLBORING	Date Received:	12/2/2024		
Address:		Date of Sampling:	12/2/2024		
Telephone Number:		Type of Sample:	Potable water		
Sample submitted by:	Wellboring	Source of sample:	Mundere Primary School		
Purpose of sampling:	Water Quality Assessment	Received by:	Lavina Dengu		

PARAMETERS	UNIT	ANALYTICAL METHOD	RESULTS	KS EAS 12:2018 STANDARDS (MAX.)
Temperature	°C			-
pH	pH Scale	APHA 4500-H ⁺ B	6.8	6.5-8.5
Colour	mgPt L ⁻¹	APHA 2120 B	5	15
Turbidity	N.T.U	APHA 2130 B	4.3	5
Conductivity (25°C)	µS cm ⁻¹	APHA 2510 B	306	2500
Chloride	mg L ⁻¹		15	250
Iron	mg L ⁻¹	APHA 3500-Fe B	0.13	0.3
Manganese	mg L ⁻¹	APHA 3500-Mn B	0.001	0.1
Total Hardness	mgCaCO ₃ L ⁻¹	APHA 2340 C	80	300
Total Alkalinity	mgCaCO ₃ L ⁻¹	APHA 2320 B	160	500
Fluoride	mg L ⁻¹	APHA 4500-F C	0.01	1.5
Nitrate	mgNO ₃ L ⁻¹	APHA 4500-NO ₃ D	2.8	45
Sulphate	mg L ⁻¹	APHA 4500-SO ₄ ²⁻ E	3.5	400
Total Dissolved Solids	mg L ⁻¹	APHA 2510 A	153	1500

**Maximum limits for treated potable water; **WHO maximum guideline value; APHA: American Public Health Association (2005) - Standard methods for the examination of water & wastewater*

Comments: The water sample performed as shown above. Based on the analyzed parameters water is within the KEBS standards for drinking water.



Beryl Akinyi
Laboratory Analyst



Fanuel Onyango
Water Quality and Pollution Control Officer

Issued by



The results contained herein apply to the particular sample(s) tested, whose sample number and tests carried out are as detailed in these results. The information contained here reflects the laboratory's findings as at the time of analysis and based on the samples submitted by the client.

External confirmation

External confirmation of schools and completion of wells from an independent body, The Ministry of Education, is included below:

REPUBLIC OF KENYA



MINISTRY OF EDUCATION
State Department for Early Learning and Basic Education

Telephone: 020-2682438
Mobile: 0722250193
When replying please quote:
bunyaladeo@gmail.com

SUB COUNTY EDUCATION OFFICE
BUNYALA
P. O. BOX 169
PORT VICTORIA
20TH FEBRUARY, 2024

Ref. No.BUN/EDU/CIR/10/17

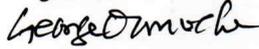
TO
WHOM IT MAY CONCERN

RE: ACKNOWLEDGEMENT OF WELL DRILLING

This is to acknowledge the drilling and successful installation of ten Wells in the following Primary schools to benefit a total of 7777 pupils.

Name of School	Enrolment
1. Bubango primary	- 1150 pupils
2. Mukhobola primary	- 695 pupils
3. Nanjomi primary	- 730 pupils
4. Bumadeya primary	- 955 pupils
5. Lake view Nandekere primary	- 997 pupils
6. Makunda primary	- 690 pupils
7. Budubusi primary	- 620 pupils
8. St. Augustine Namalo primary	- 520 pupils
9. Mundere primary	- 690 pupils
10. Rugunga primary	- 730 pupils

We sincerely express our appreciation for the grants to our schools.

George Owuoché

Sub-County Director of Education
BUNYALA

Contact details for WellBoring

Charity name: WellBoring

Charity registration number: GB-CHC-1142295

Charity registered address: 51 St Mary Street, Chippenham, Wiltshire, SN15 3JW,
United Kingdom

Charity bank details: NatWest Bank plc, Sort Code: 522130. Account: 24302392.
IBAN: GB33NWBK52213024302392

Office hours: 09.00 to 17.00 UK time

Contact email address: trusts@wellboring.com

Contact telephone number: +44 7785 280724