

Rain Water harvesting Structure and utilisation in the campus:

The area of the roof of the building is about 3879 sq. mts. As the average annual rainfall in Bengaluru is about 859mm, volume of water collected per annum is estimated to be about 33,08,000 litres.

This water is fed into three underground pits, each of volume of about 3,559.8 litres for recharging of ground water table. Total volume of water collected by 3 pits of 4 feet diameter and 10 feet depth is 10,679 litres.

Scanned photos are made available in the attachment. Pits are located close to the bore-well point. Because of this arrangement, water table has risen as evidenced by the fact that earlier the underground water was available at a depth of 360 feet, but after recharging the water is available at a depth of 180 feet.

Volume of water collected annually is calculated as under :

Plinth area: **3,879 sq mts**

Average annual rainfall **859mm**

No of pits: 3 measuring 4 feet in diameter and 10 feet in depth.

Average rainfall in Bengaluru is 859mm =85.9cm. That is equal to 0.859mts.

➤ To calculate the volume of rainfall collected annually:

$$\begin{aligned}\text{Volume of water collected annually} &= 3879 \times 0.859 \text{m}^3 \\ &= 3308 \times 10^6 \text{cc} \\ &= 3308 \times 10^3 \text{litres}\end{aligned}$$

Therefore volume of water collected annually = **33,08,000 litres.**

➤ To calculate the volume of water collected in the pit:

Diameter is 4 feet. Hence radius is 2feet of 2X12 inches or 2X12X2.54cms

Depth of the pit is 10 feet. 10X12X2.54cms

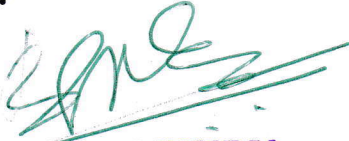
Volume of each pit = $\pi r^2 h$

$$= \frac{22}{7} \times (24 \times 2.54)^2 \times 120 \times 2.54$$

$$= 33,59,832 \text{ cc/1000}$$

$$= 3559.8 \text{ litres}$$

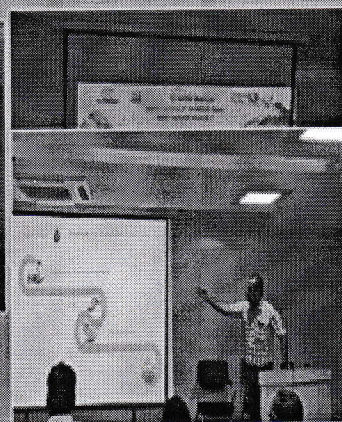
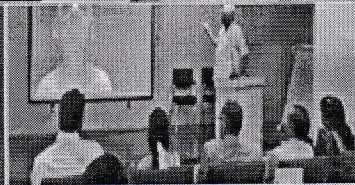
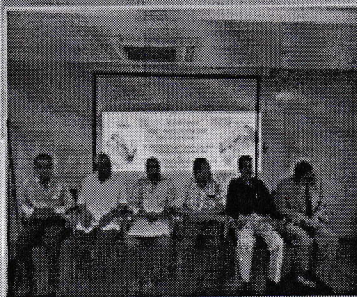
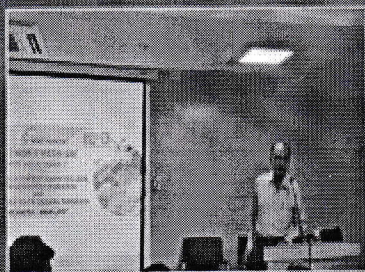
- Total water collected by 3 pits
3559.8 X 3 = 10,679.4 litres.



**PRINCIPAL
SINDHI COLLEGE
#33/2B Kempapura, Hebbal,
Bengaluru - 560 024.**

World water day

World water day 2017 conducted on 22/3/2017 by Akshayapatra Foundation and Karnataka Rajya Vignana Parishath in association with Sindhi College. A very informative and an useful program was conducted by Akshayapatra Foundation and Karnataka Rajya Vignana Parishath. The program began by Professor Pallavi, Principal, PU Sindhi college welcoming the guests and honoring them. This was followed by a speech from Prof.M.Nagraj, retired professor from Government College. He emphasized the importance of water saving and said that our future generations will not have a drop of water if water saving practices are not adopted. The second speaker was Mr.Balaji, Process engineer from Akshayapatra Foundation. He spoke about waste water treatment and how it should be implemented. He also emphasized on the water woes of various districts of Karnataka and other places and stressed that recycling waste water would solve the water woes. The last speaker for the day was Dr.Prakash Rao, Former Secretary, Karnataka Medical Association. He spoke about water borne diseases and the importance of saving and maintaining clean water. He spoke about the importance of water for human health, he stressed that water is an elixir for human health. The entire program was presided by Mr.Ravindranath Siriwara, President, Karnataka Rajya Vignana Parishath. The concluding remarks were made by Dr. B S Srikanta, Principal, Sindhi College of Commerce. He stressed on the importance of protecting the existing trees and growing new trees by quoting that the worth of 50 year old tree is Rs.50 lakhs by taking into account the amount of oxygen that the tree releases into the atmosphere and the other uses. He also explained how the forest help in bringing rain in the area.





M. RAMIAH & SONS

ENGINEERS & MACHINERY AGENTS

"SRI KRISHNA BUILDINGS", AVENUE ROAD, BANGALORE - 560 002

Phone : 22215952

22216160

Fax : 22212298

E-mail : m.ramiah@yahoo.in
ramsons@ramiahandsons.in

GSTIN : 29AADFM7267L1ZN

Sindhi College
Hebbal
Bangalore

State : Karnataka ,Code : 29

INVOICE NO.

3152

Dt.23.05.2019

Your Order No.

Challan No.

Documents Through :

Mode of Transport :

State Name : Karnataka Code : 29

Our Bank Details :

State Bank of India, Mysore Bank Circle Branch, Bangalore.

Account No. 54051171419 IFSC Code SBIN0040007

Particulars	HSN/SAC	Qty	Rate	Amount
VARUNA Make Submersible Pump 5 HP having SS.Casing for Pump & Motor ,Nyrol Impeller,SS Shaft directly coupled to wet type submersible electric motor suitable for operation 400/440V/50cy/3 Ph as per manf supply SI.No DH-77017	84137010	1 no	29,330.00	
Discount 7.5%			2,199.75	27,130.25
6% CGST				1,627.82
6% SGST				1,627.82
Labour charges for removing & refixing submersible pumpset using jeep mounted with hoist	998519			7,000.00
9% CGST				630.00
9% SGST				630.00
Transportation charges (2 trips)	996793			950.00
				39,595.88
Rs.Thirty nine thousand five hundred & ninety six only				39,596.00

Note : 21 percent interest per annum will be charged on all Invoice not paid within 10 days from the date of Invoice. No. objection or claim chan be allowed unless made within 8 days of date of supply. Our responsibility ceases when the delivery mentioned in this invoice has been affected.

Pre. by Che. by

For M. RAMIAH & SONS

Partner

Branch : A.D.A. Buildings, Opp. Ravindra Kalakshetra, J.C. Road, Bangalore - 560 002. Phone : 22236194 / 41324714

M. RAMIAH & SONS

ENGINEERS & MACHINERY AGENTS

E-mail : ramsonagencies@yahoo.com

Tel : 22215952

22216160

Fax : 22212298

"SRI KRISHNA BUILDINGS" AVENUE ROAD, BANGALORE - 560 002

TIN : 29960070197

C.S.T.No. 0017049-5 Dt. 1-7-57

m/s Binchi College. Kempapura Hebbal Bangalore	INVOICE NO. 4517 dt. 06/03/13
	Your Order No. Mr. Srinivas dt.
	Challan No. 9886039734
	Despatch By MTR/RR/No. One year guarantee Against manufacturer
	Mode of Transport Only
	Documents Through :

Particulars	Quantity	Rate	Amount	
			Rs.	Ps.
Varuna make submersible pump 5HP. having SS casing for pump having 1 impeller SS shaft directly Coupled to well type sub electric motor having SS motor. 1 mt Carrying suitable for operation 100/150y 3ph airway supply			27080	00
Pipe clamps Bore well cover 2 nos			450	00
1 1/2" HDPE pipe 16kg/cm ² Raksha make 12 1/2 ft. 230 mts		33810	7780	00
Jointing Charge for HDPE pipe (1 side SS 1 side CI) Less 7.5%		2535.75	31274	25
450 mm 3 core submersible 6 pin lead cable. 240 mts		92200	22080	00
Nylon rope. 30 mts			2330	00
Party's TIN				
Rs. in Words :				
E.&O.F.				
		TOTAL	81356	05
		VAT 5.5%	4476	59

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Pre. by Che. by

For M. RAMIAH & SONS

Contd 8583084
Partner

Branch : A.D.A. Buildings, Opp. Ravindra Kalakshetra, J.C. Road, Bangalore - 560 002. Phone : 22236194 / 41324714

M. RAMIAH & SONS

ENGINEERS & MACHINERY AGENTS

"SRI KRISHNA BUILDINGS" AVENUE ROAD, BANGALORE - 560 002

Tel : 22215952

22216160

Fax : 22212298

E-mail : ramsonsagencies@yahoo.com

TIN : 29960070197

C.S.T.No. 0017049-5 Dt. 1-7-57

INVOICE NO. 4518

dt. 04/03/12

Your Order No.

dt.

Challan No.

dt.

Despatch By MTR/RR/No.

dt.

Mode of Transport

Documents Through :

Contd

Particulars

Quantity

Rate

Amount
Rs. Ps.

Out door type of panel Board BF
having 20A Contactor Overload
relay Single phasing preventor
VOLT meter. Ammeter Pilot lamps
rewirable fuse Carrier complete
Internal wiring house wired
metal box rewirable for operation
with 1 way 20A copper wire
supply

1 n/c 85830=84

VAT 14.5% 550000

797=50

1 1/2" Short Buss - 1 n/c 125=00

1 1/2" Union - 1 n/c 105=00

1 1/2" x 1" R/Collar - 1 n/c 48=00

1 1/2" R/rippl - 50/- 3 n/c 150=00

1" HOSE R/rippl - 1 n/c 32=00

1 1/2" x 1" R/Buss - SS 1 n/c 245=00

1 1/2" x 1" R/Buss - MS 1 n/c 95=00

Party's TIN

Rs. in Words :

E.&O.E.

VAT 5.5%

795.00

838.72 15

TOTAL

92967.06 19

Contd

92967.06 19

Pre. by Che. by

For M. RAMIAH & SONS

Partner

Branch : A.D.A. Buildings, Opp. Ravindra Kalakshetra, J.C. Road, Bangalore - 560 002. Phone : 22236194 / 41324714

Note : 21 percent interest per annum will be charged on all invoice not paid within 10 days from the date of invoice. No objection or claim can be allowed unless made within 8 days of date of supply. Our responsibility ceases when the delivery mentioned in this invoice has been affected.

M. RAMIAH & SONS

ENGINEERS & MACHINERY AGENTS

"SRI KRISHNA BUILDINGS" AVENUE ROAD, BANGALORE - 560 002

Tel : 22215952

22216160

Fax : 22212298

E-mail : ramsonsagencies@yahoo.com

TIN : 29960070197

C.S.T.No. 0017049-5 Dt. 1-7-57

Contd	INVOICE NO.	4519	dt.	02/03/13
	Your Order No.		dt.	
	Challan No.		dt.	
	Despatch By MTR/RR/No.		dt.	
	Mode of Transport			
	Documents Through :			

Particulars	Quantity	Rate	Amount	
			Rs.	Ps.
1 1/2" Gate valve - BF	1 no	450.00	92967.00	06
1 1/2" nr RV -	1 no	675.00		
		1425.00		
Labour Charge, for erection of submersible pump set upto borewell point only		206.62	1631.62	
Transportation Charges		-	2500.00	
		-	675.00	
			97743.68	
E-Sugara No. 8227903025				

Party's TIN

Rs. in Words :

E.&O.F.

Rs. ninety seven thousand seven hundred and seventy four only

TOTAL

97744.00

Note : 21 percent interest per annum will be charged on all Invoice not paid within 10 days from the date of Invoice. No objection or claim can be allowed unless made within 8 days of date of supply. Our responsibility ceases when the delivery mentioned in this invoice has been affected.

Pie. by Che. by

For M. RAMIAH & SONS

Partner

Branch : A.D.A. Buildings, Opp. Ravindra Kalakshetra, J.C. Road, Bangalore - 560 002. Phone : 22236194 / 41324714



KANNAN BOREWELLS PVT. LTD.

A Prabhukar Initiative

Mobile : 99000 55000 / 99000 44471 / 98801 43111

☎ : 22343536 / 22266448 Telefax : 080-22266448

No. 7, Anand Plaza, Anand Rao Circle,
Bangalore - 560 009

No. 426, Kalyan Nagar Ring Road,
Near Giriya, Bangalore - 560 043.

www.kannanborewells.com / prabhu@kannanborewells.com / info@kannanborewells.com

Name : M/s. Sindhi Collage Kempapura
Address : Bangalore
Phone : 080 23637543/44

ESTIMATE
No. **347**
Date 24-12-12

Sl. No.	Description	TOTAL Depth / Qty	Rate Per Ft.	AMOUNT
1.	6 1/2" Dia Drilling Charges upto 250 Ft.	250	Rs 70	17,500
2.	6 1/2" Dia Drilling Charges 250 to 350 Ft.	100	Rs 80	8,000
3.	6 1/2" Dia Drilling Charges 350 to 450 Ft.	100	Rs 90	9,000
4.	6 1/2" Dia Drilling Charges 450 to 550 Ft.	100	Rs 100	10,000
5.	6 1/2" Dia Drilling Charges 550 to 650 Ft.	100	Rs 120	12,000
6.	6 1/2" Dia Drilling Charges 650 to 750 Ft.	100	Rs 140	14,000
7.	6 1/2" Dia Drilling Charges 750 to 850 Ft.	50	Rs 160	8,000
8.	6 1/2" Dia Drilling Charges 850 to 950 Ft.		Rs.	
9.	6 1/2" Dia Drilling Charges 950 to 1050 Ft.		Rs.	
10.	6 1/2" Dia M.S. Casing Pipe Erection Charges Per Ft.	82	Rs 370	30,340
11.	10" P.V.C. Casing Pipe Erection Charges Per Ft.	80	Rs 335	26,800
12.	5" P. V. C. Casing Pipe Erection Charges Per Ft.		Rs.	
13.	M.S. & P.V.C. Collar 1 No	5	Rs 100	500
14.	M.S. Collar Welding Charger per Joint	5	Rs 200	1,000
15.	Borewells End Cap 1 No	1	Rs 100	100
16.	Borewells End Cap Welding Charges	1	Rs 200	200
17.	Water Injection Charges Per Ft.		Rs.	
18.	Labour Charges Lumpsum		Rs.	300
19.	Transportation Charges Lumpsum		Rs.	200
20.	Vehicle Setting Charges Lumpsum		Rs.	1,500
21.	Flushing Charges Per Ft.		Rs.	
22.	Cashing Pipe Erection & Removing Charges Per Ft.		Rs.	
			Total	Rs 1,39,540
			Advance	Rs 9,800
			Balance	Rs 1,29,740

Prabhu
26/12/12

Total Yield and depth... 800 Feet 2.50% Payment Received (Cash / Cheque No.)

For **KANNAN BOREWELLS PVT. LTD.**

Prabhu
26/12/12
Party's Signature

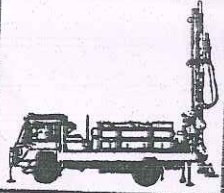
Prabhu
Authorised Signatory



KANNAN BOREWELLS PVT. LTD.

Pioneer Then...

Leader Now ...



Mobile : 99000 55000 / 99000 44471 / 98801 43111
☎ : 22343536 / 22266448 Fax : 080-22266448

No.7, Anand Plaza, Anand Rao Circle,
Bangalore - 560 009

No. 426, Kalyan Nagar Ring Road,
Near Girias, Bangalore - 560 043.

www.kannanborewells.com / prabhu@kannanborewells.com / info@kannanborewells.com

Name Sindhi College.
Address 33/2B Hebbal Kempapura
Bangalore. 29.
Site Address Pl.
Phone No. 22637543, 9886039734

No. 109

Drilling charges for 6½" Dia borewell

	Rs.	Amount
1. Drilling Charges upto 250 Feet.....	Rs.	70 -
6. Cap + NO.	Rs.	100 -00
7. Water Injection Charges Rate per Feet	Rs.	15 -00
8. Labour Charges Lumpsum	Rs.	300 -00
9. Transportation Charges Lumpsum.....	Rs.	300 -00
10. Vehicle Serting Charges	Rs.	1500 -00
11. Flushing Charges	Rs.	-00
12. Incidental Charges if any	Rs.	-00

I/We have read and understood the terms and charges fixed by M/s KANNAN BOREWELLS PVT. LTD. and I/We agree to abide by all the terms and conditions mentioned therein.

I/We request that the well drilling services may be arranged at my lands situated at the address mentioned above.

I/We enclose an advance of Rs. ~~10000~~ 9800/- Ninethousand/EightHund

by cash/cheque No. 861978 dated 15/12/12 drawn on Syndicate
bank

For **KANNAN BOREWELLS PVT. LTD.**

Drilling Date 23-12-2012

Authorised Signatory

CUSTOMER'S SIGNATURE

Date : 15/12/12

Date :

3. The drilling machines are capable of drilling borewells of 6½ inch diameter to a maximum depth of about 400 RFT. subject to the strata being favourable. Orders will be accepted to minimum depth of 150 RFT.
4. All requisitions for the hire of the above plant should be sent to M/s KANNAN BOREWELLS PVT. LTD., BANGALORE. The order of priority shall be decided by the Company Each application should be submitted along with deposit of Rs. 10,000/- (ten thousand per well. This amount will be treated as initial deposit towards the charges for registration of the application with Company, which will be