

***Simplifying
Sewage Treatment and Recycling
with***

Bio-Flocs

Simple, Safe & Clear...



**Reciclar
Technologies Pvt. Ltd.**

406 Sudarshan Complex, Nr. Mithakhali Under
bridge, Mithakhali, Navrangpura,
Ahmedabad - 380 009

@ : info@reciclartpl.com
🌐 : www.reciclartpl.com
☎ : +91 8735085863

About RECICLAR TECHNOLOGIES

- Aim of RECICLAR TECHNOLOGIES is to develop **Low Cost Advanced indigenous products for Sewage, Wastewater and Water Treatment and Recycling**
- RECICLAR TECHNOLOGIES is developing technologies targeted at:
 - **Individual**
 - **Industrial**
 - **Commercial**
 - **Domestic**
 - **Community**
- RECICLAR Technologies is focusing on:
 - **Membrane based Biological treatment like MBR, Bf-MBR and others**
 - **Electrochemical process like Electrocoagulation**
 - **Hybrid process like EC-MBR**
- Business Model adopted by RECICLAR is **Research, Development, Demonstration and Deployment using Distributor and Retailer network**

WHAT makes BIOFLOCS – STP SPECIAL - ?..

- Basically **BIOFLOCS – STP** are membrane Bio Reactors
- **BIOFLOCS – STP** works of principle of bacterial digestion followed by submerged membrane filtration
- On the surface of membranes very fine pores of 0.1 – 0.4 micron are present which aids filtration and also helps to remove even bacteria and pathogens
- **BIOMEM – plus** membranes are of very high strength and are unlikely to break easily

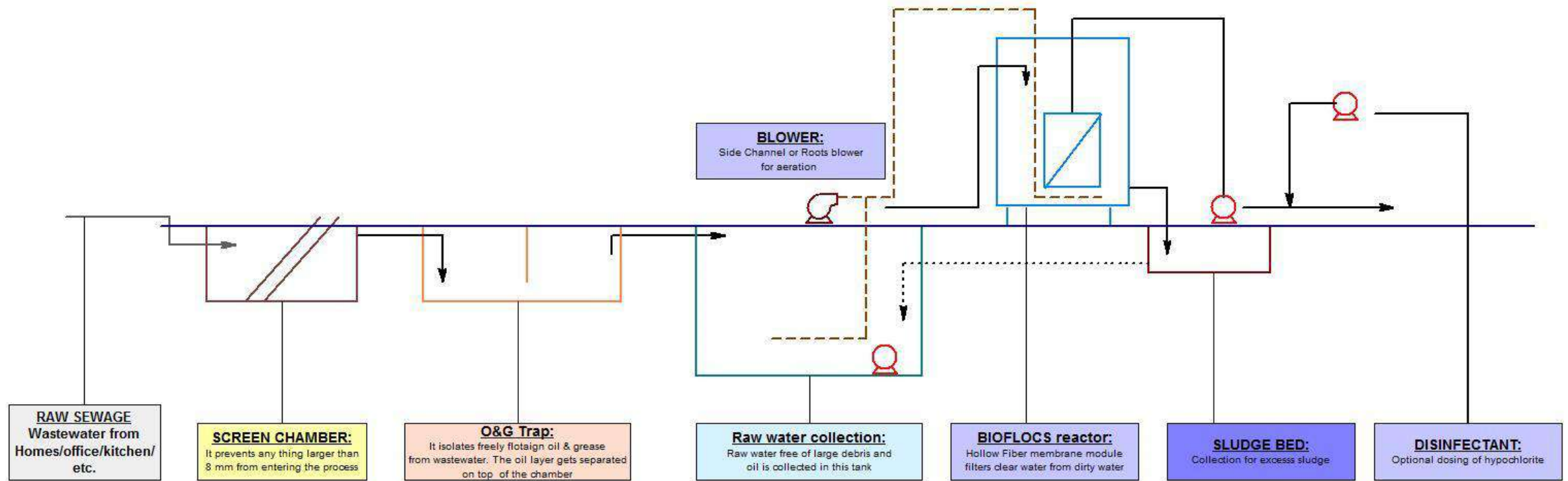


WHAT MAKES BIOFLOCS – STP SPECIAL - ?..

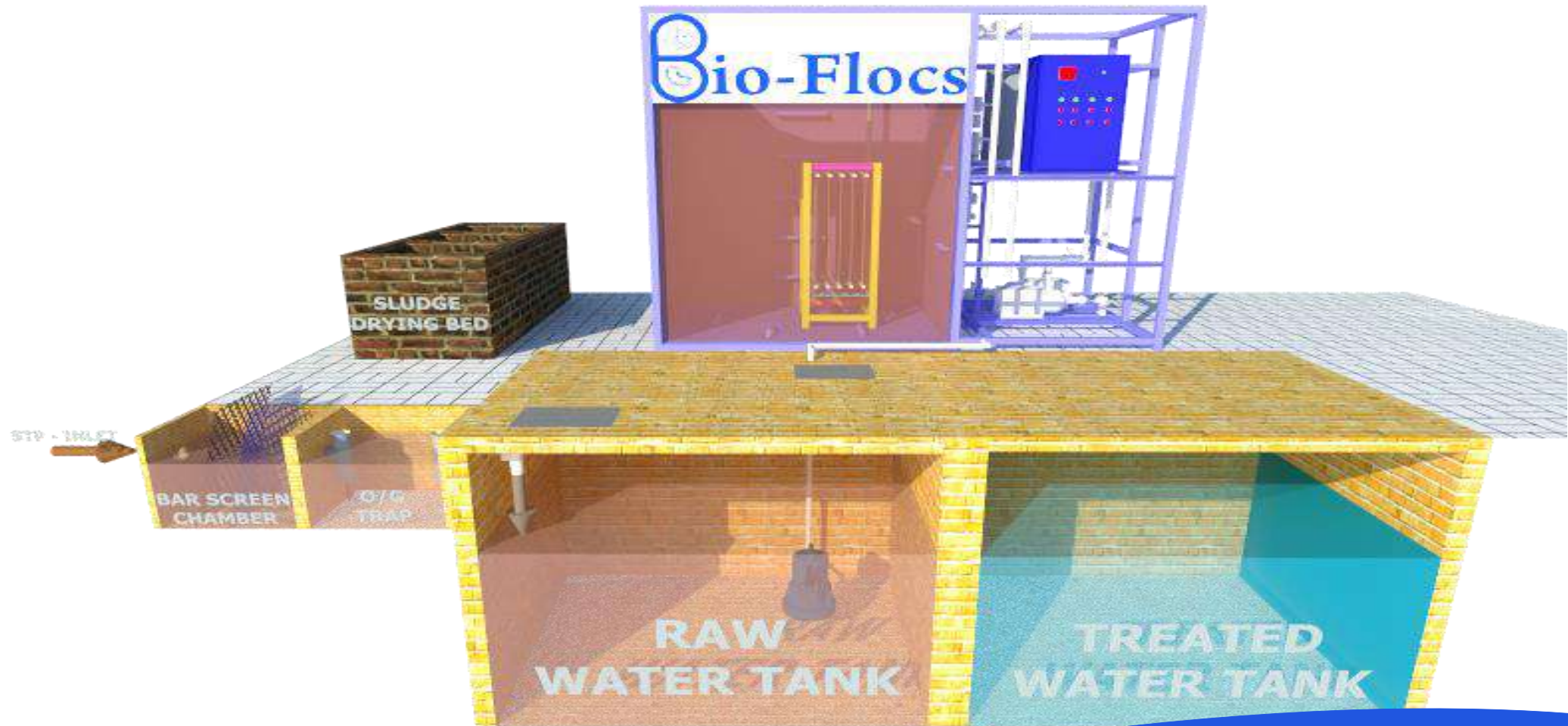
- Mode of filtration is **OUT -> IN**
- Depending upon the daily flow we can increase or decrease the number of membranes

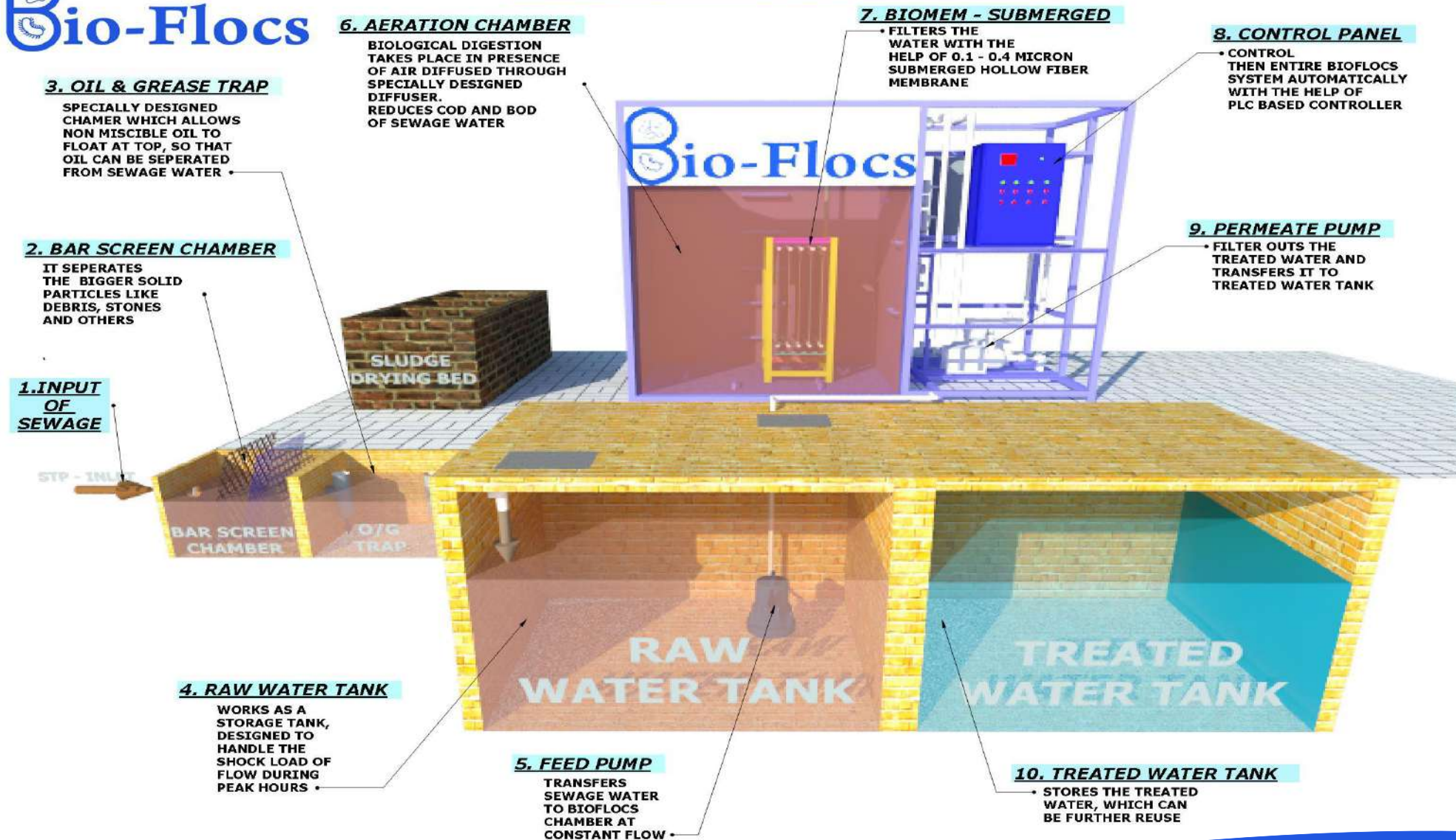


Layout of Typical BIOFLOCS based STP

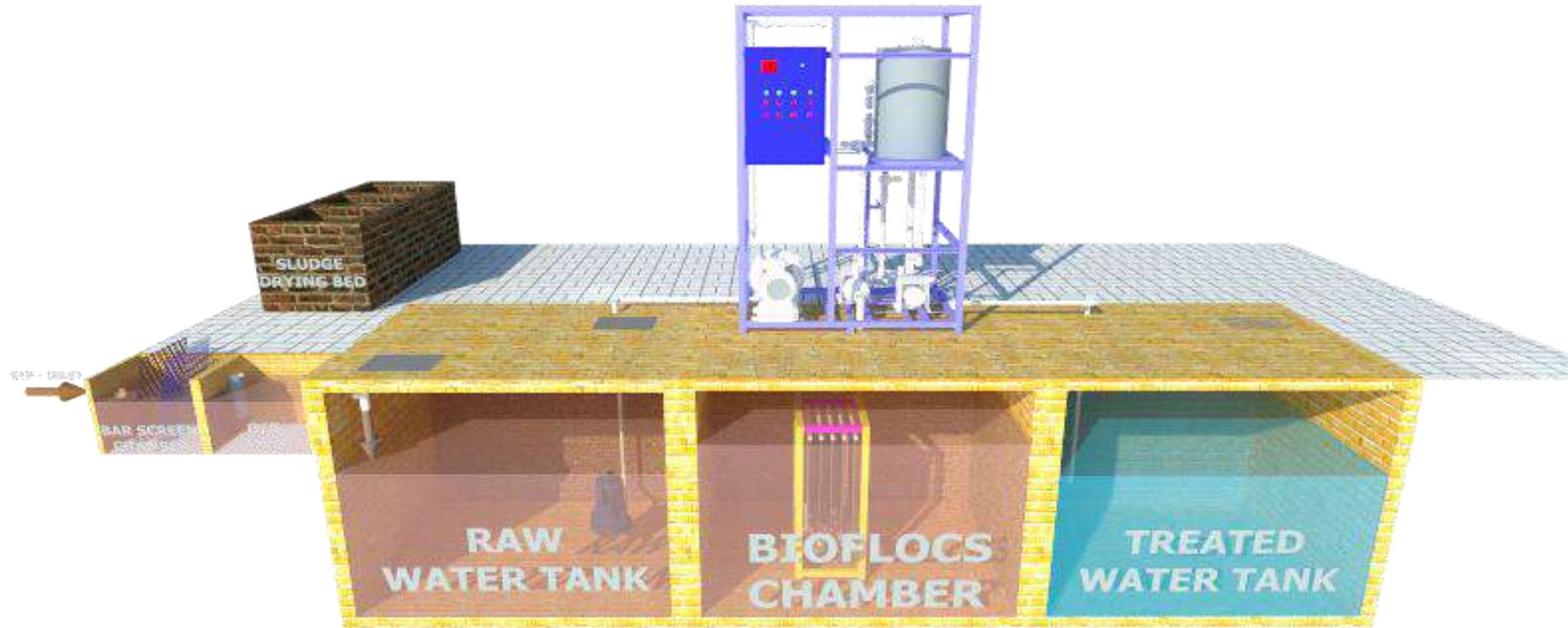


TYPICAL BIOFLOCS – STP PACKAGED PLANT FLOW DIAGRAM





TYPICAL BIOFLOCS – STP CIVIL PLANT FLOW DIAGRAM

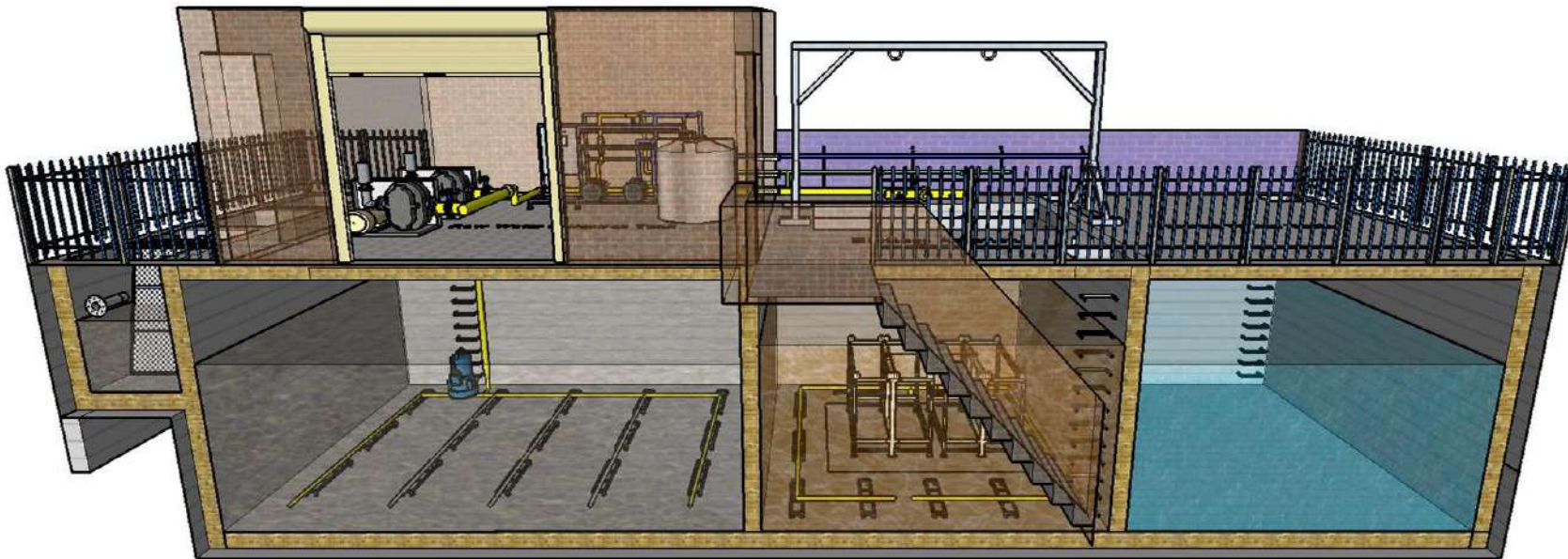


CASE OF 200 KLD STP

BIOFLOCS - STP - 200 KLD - CIVIL BASED PROJECT

Project Description:

- The project is for a resort , wherein the fabrication is of SS 316 material.
- The plant is designed as a single stage aerobic system.
- MBR system helps the result save precious space on the island where its located.
- Thus the technology delivers environmental and economic value at the same time.



CASE OF 200 KLD STP

BIOFLOCS - STP - 200 KLD - CIVIL BASED PROJECT



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Ahmedabad - 380 009

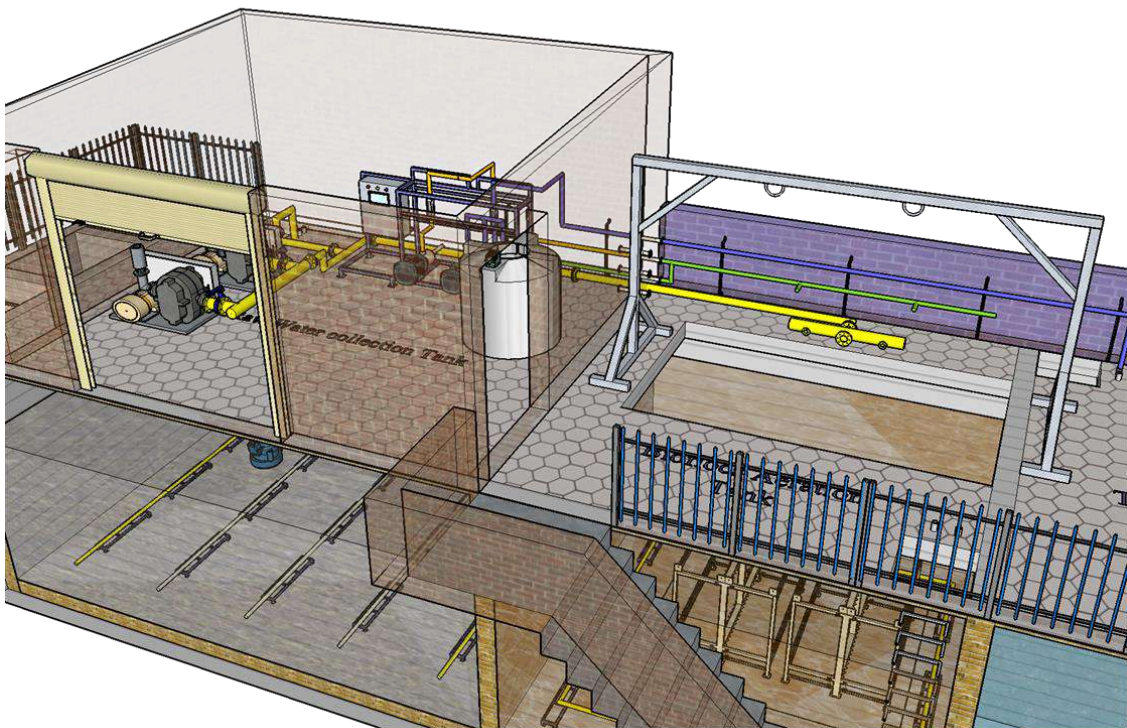


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DESIGNED AND ACTUAL PLANT PICTURES

DESIGNED BY REICLAR TECHNOLOGIES PVT LTD

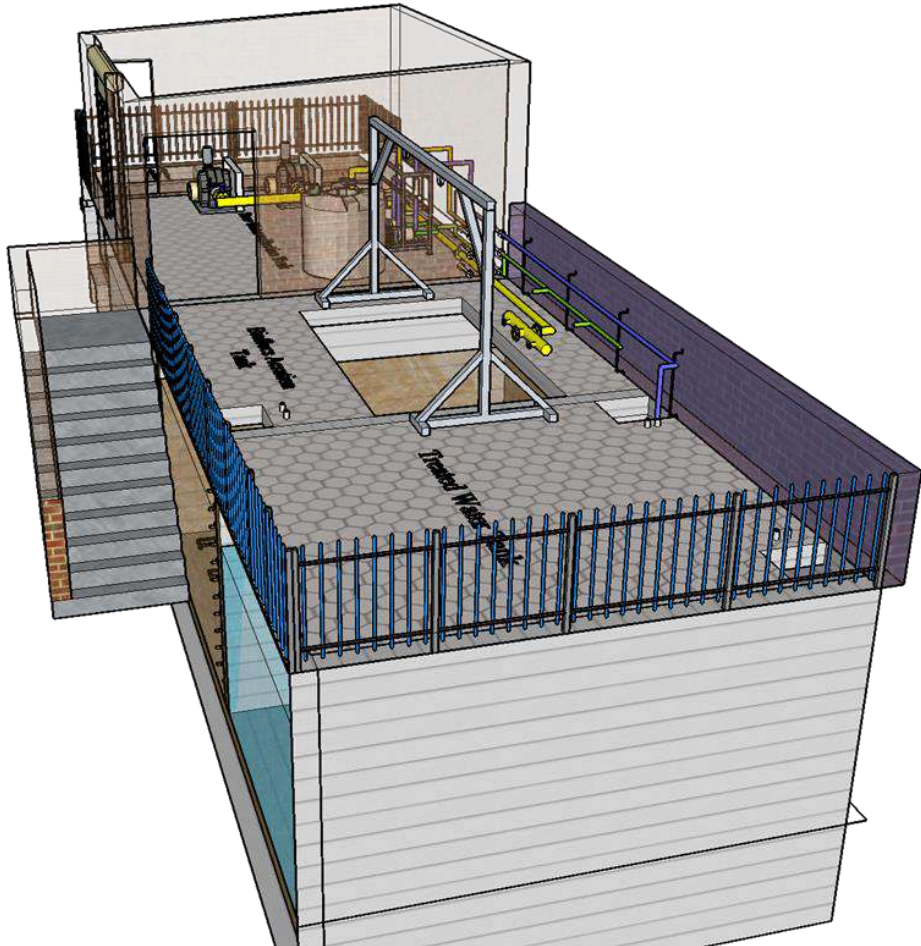


ACTUAL SITE PHOTO



DESIGNED AND ACTUAL PLANT PICTURES

DESIGNED BY REICLAR TECHNOLOGIES PVT LTD

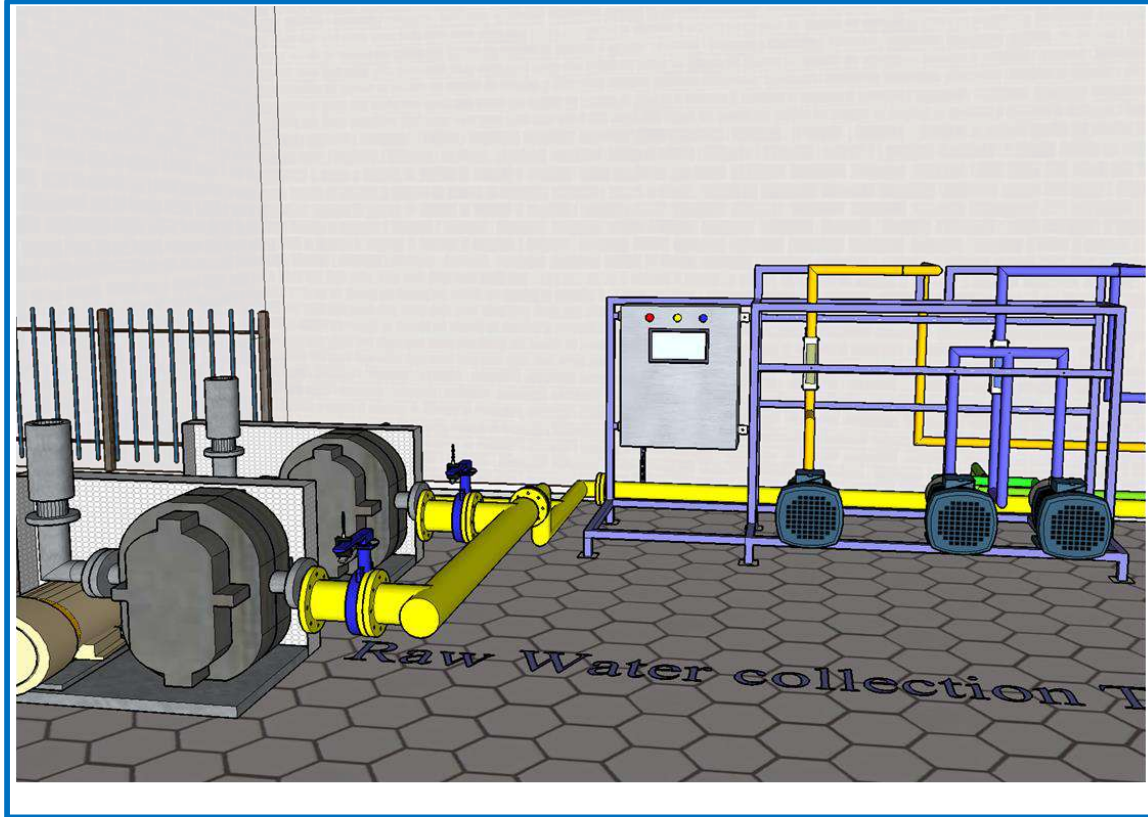


ACTUAL SITE PHOTO



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DESIGNED BY REICLAR TECHNOLOGIES PVT LTD

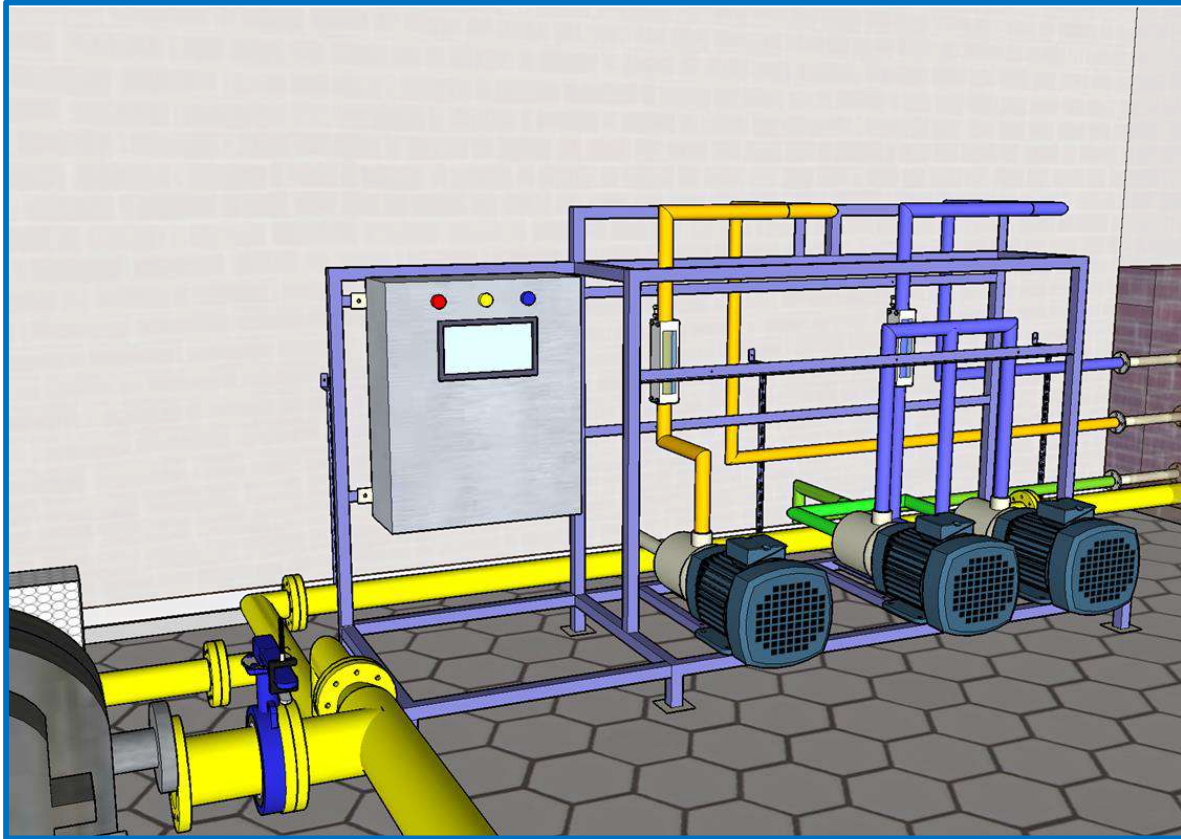


ACTUAL SITE PHOTO



DESIGNED AND ACTUAL PLANT PICTURES

DESIGNED BY REICLAR TECHNOLOGIES PVT LTD



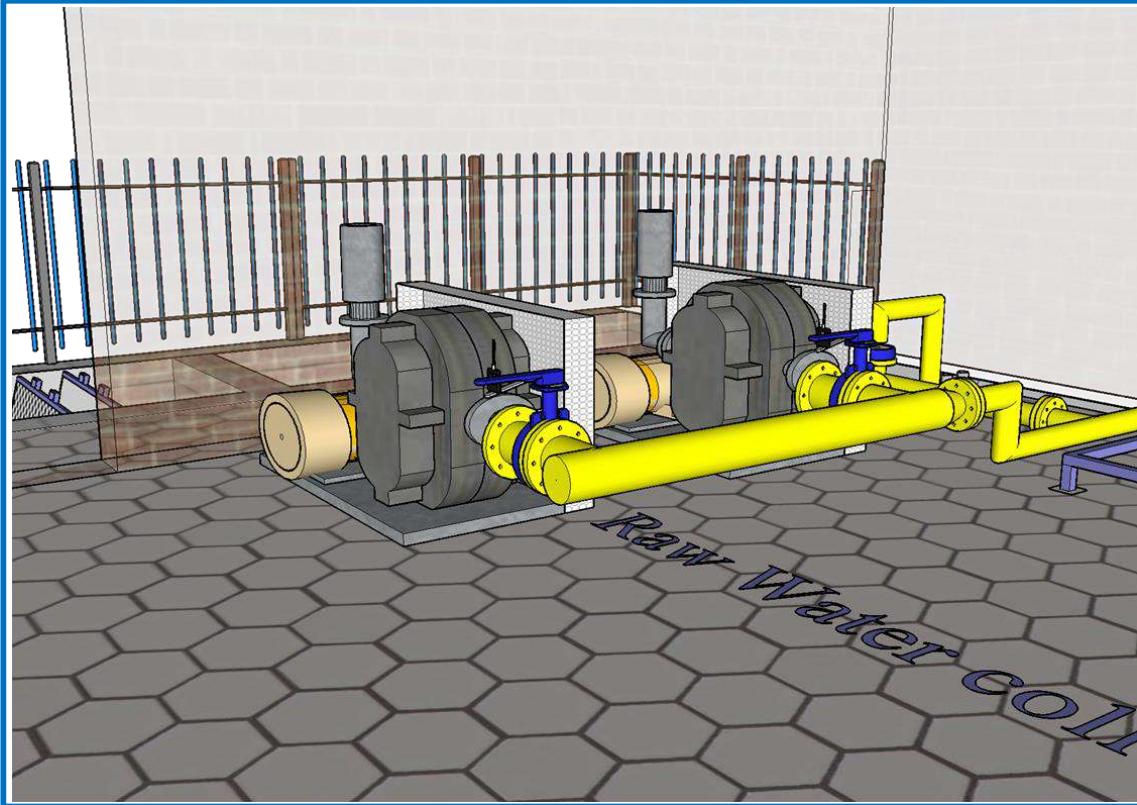
ACTUAL SITE PHOTO



DESIGNED AND ACTUAL PLANT PICTURES

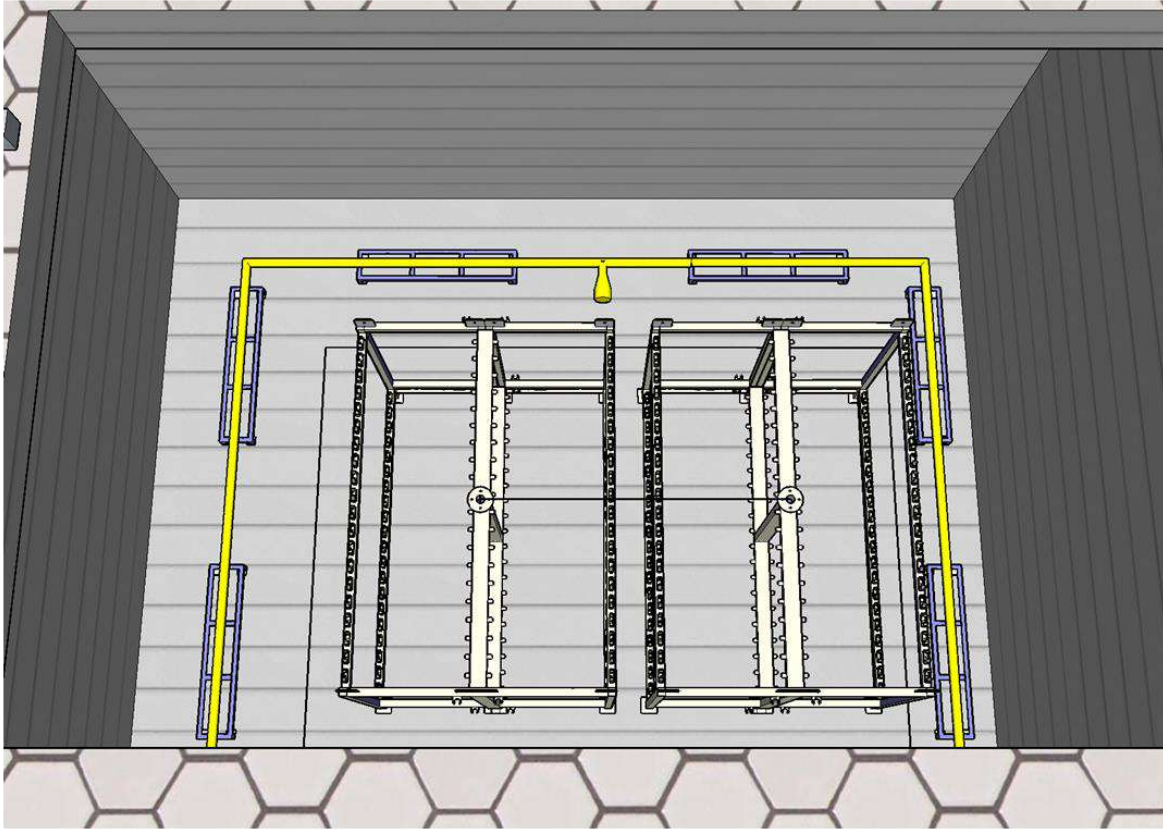
DESIGNED BY REICLAR TECHNOLOGIES PVT LTD

ACTUAL SITE PHOTO

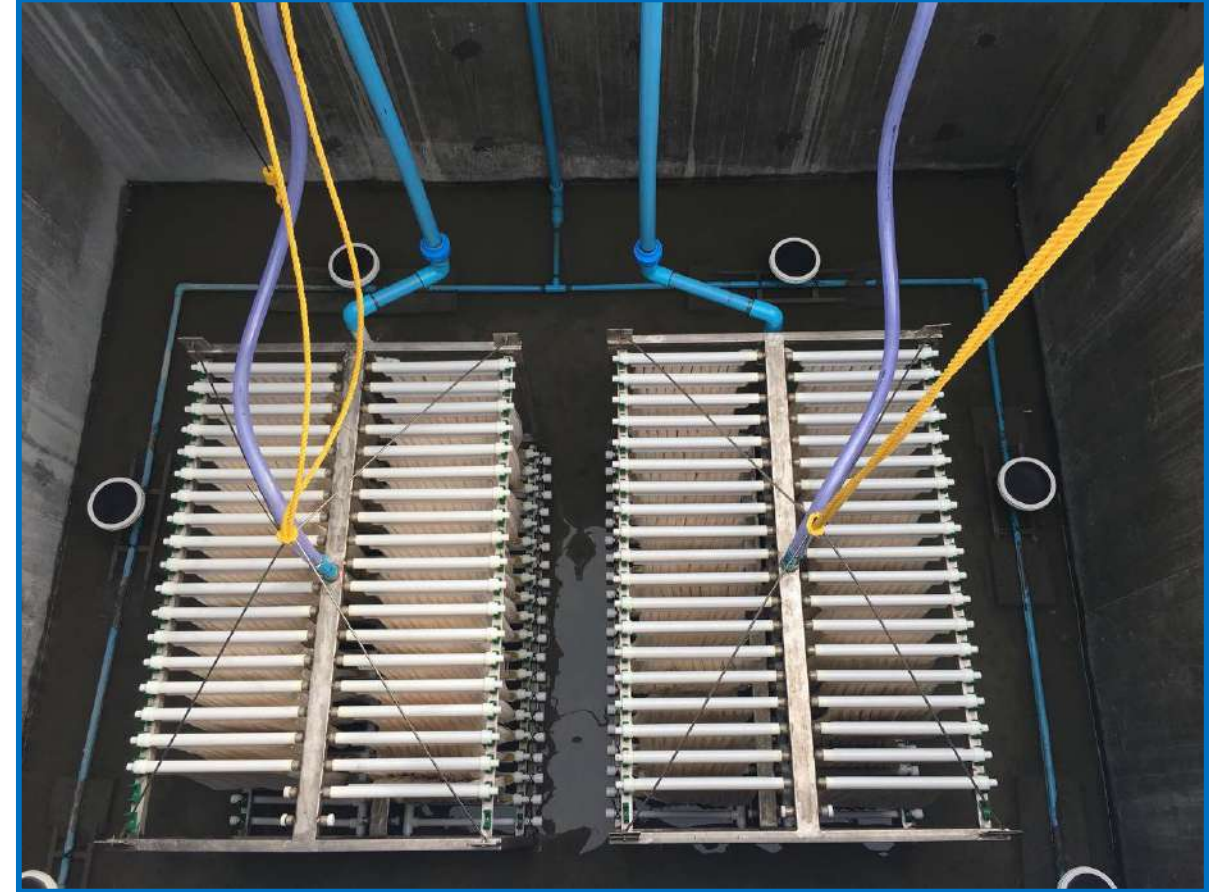


DESIGNED AND ACTUAL PLANT PICTURES

DESIGNED BY REICLAR TECHNOLOGIES PVT LTD

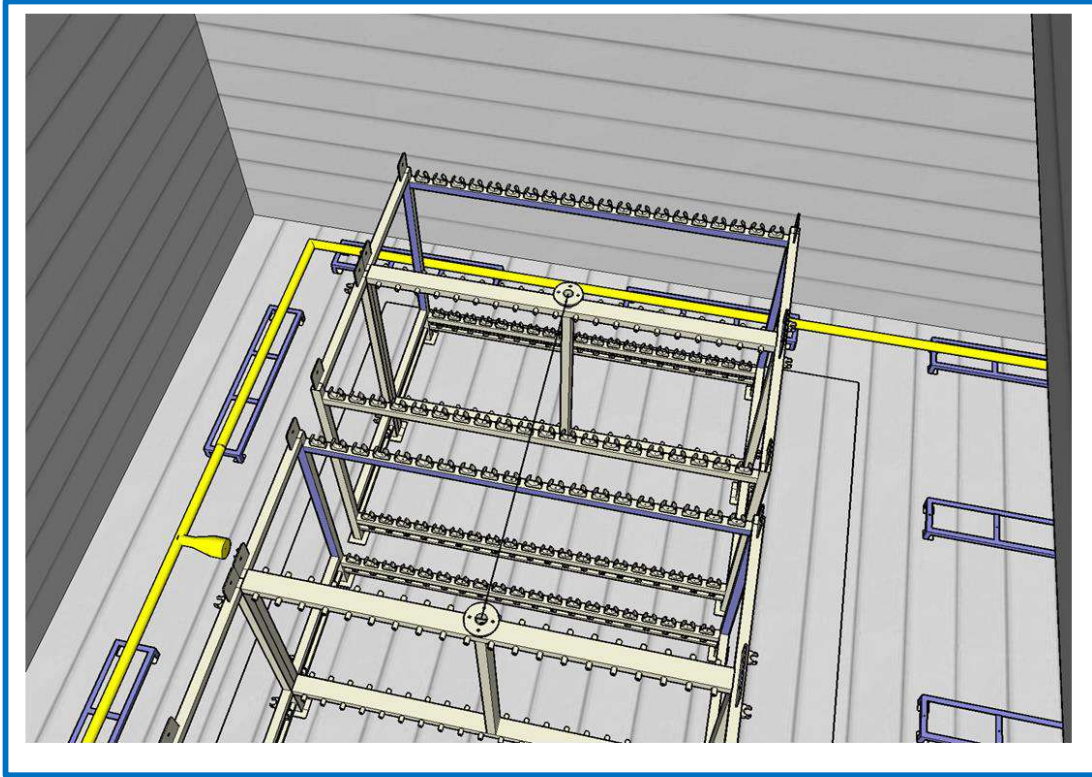


ACTUAL SITE PHOTO



DESIGNED AND ACTUAL PLANT PICTURES

DESIGNED BY REICLAR TECHNOLOGIES PVT LTD



ACTUAL SITE PHOTO



ACTUAL RAW AND TREATED SAMPLE

RAW



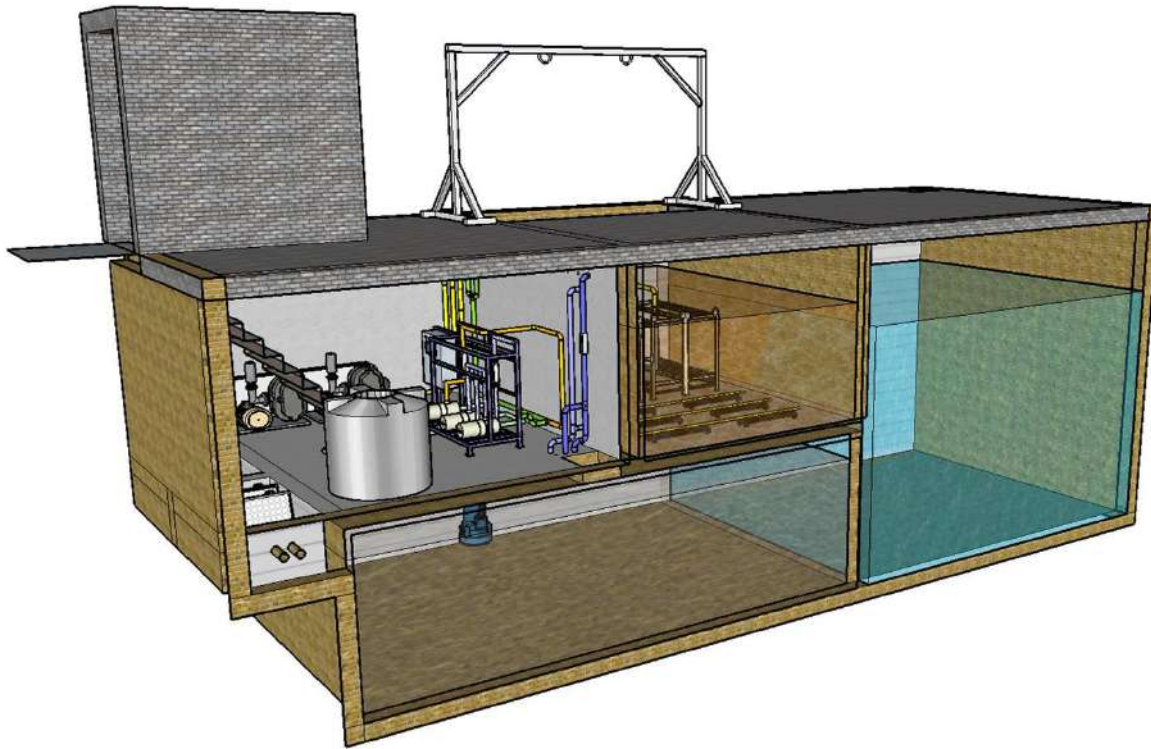
TREATED

TREATED SAMPLE AFTER - BIOFLOCS



CASE OF 200 KLD STP

BIOFLOCS - STP - 200 KLD -UNDERGROUND CIVIL BASED PROJECT



Project Description:

- The project is for a hospital located in Ahmedabad, Gujarat.
- The plant is designed as a single stage aerobic system.
- MBR system helps the result save precious space.
- The plant is designed under severe space constraints.
- Only an MBR technology can deliver results in such conditions.



CONCEPTUAL DESIGN OF 500 KLD PACKAGED BIOFLOCS - STP

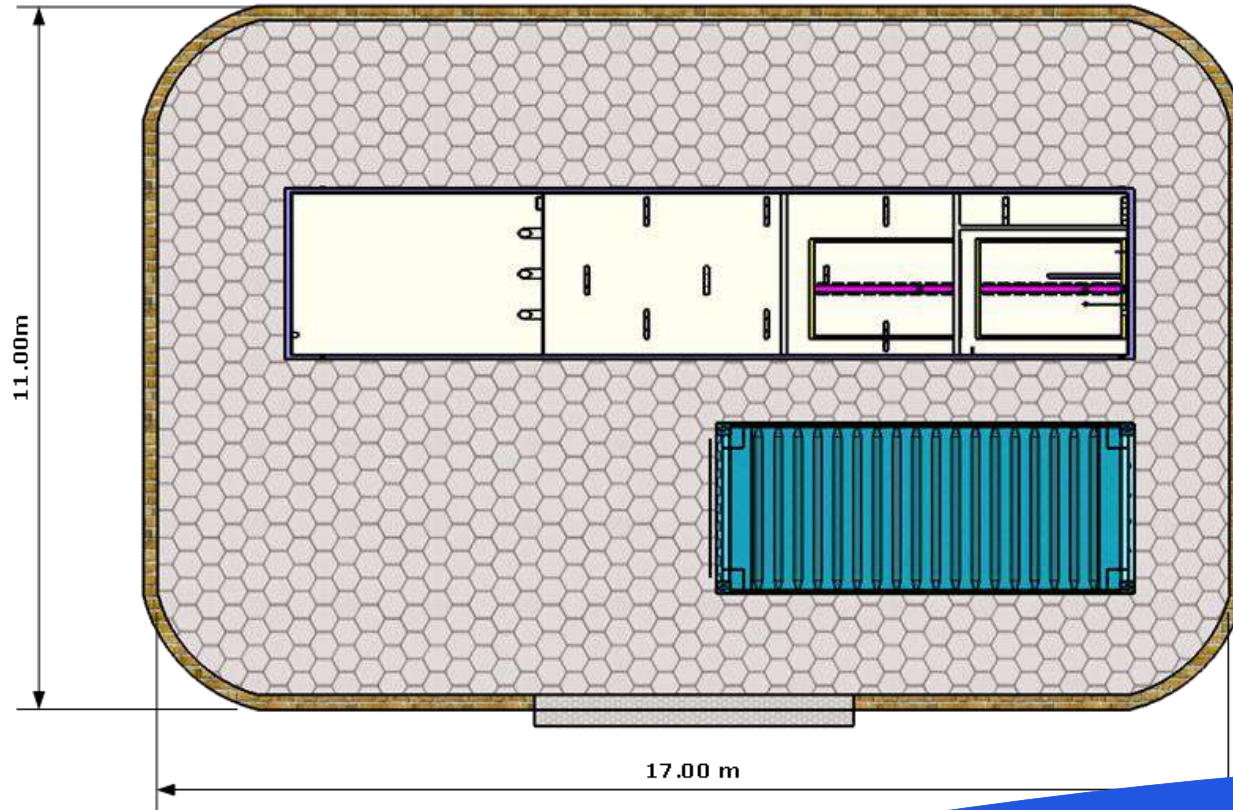
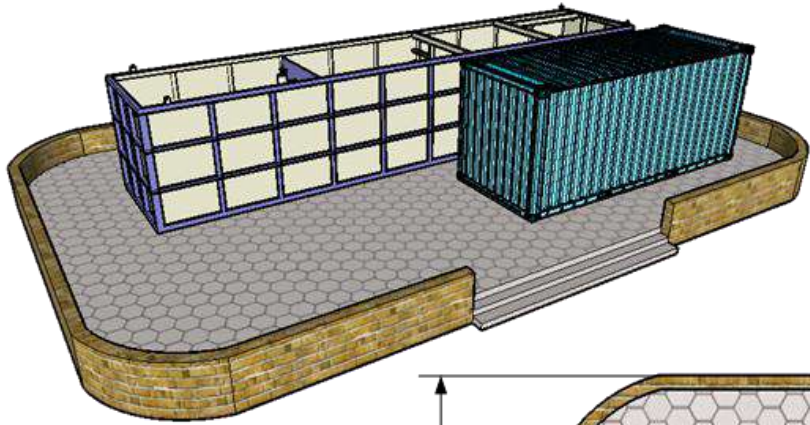


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Tentative space requirement for 500 KLD – Packaged BIOFLCOS - STP



L :	17 m
B :	11 m

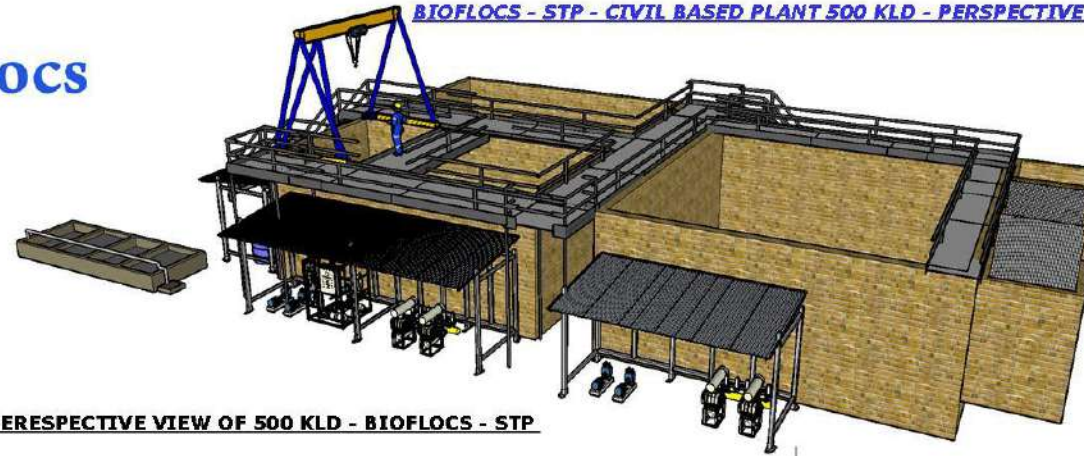


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Ahmedabad - 380 009



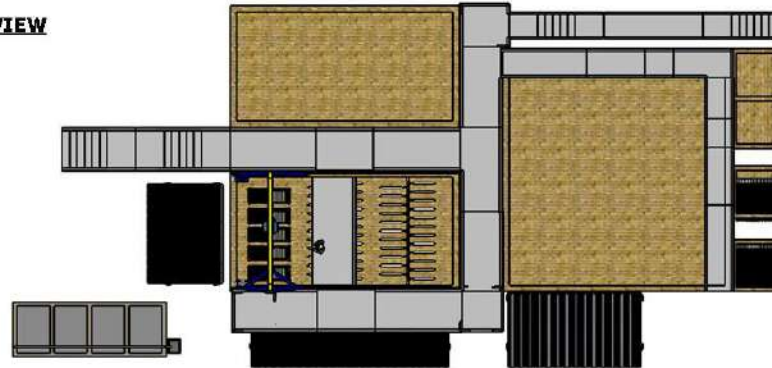
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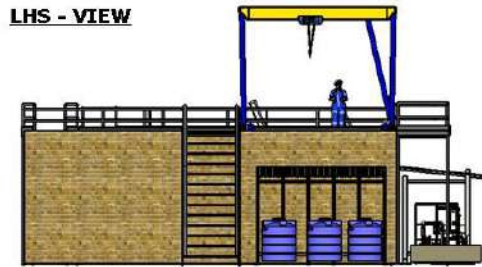


PERESPECTIVE VIEW OF 500 KLD - BIOFLOCS - STP

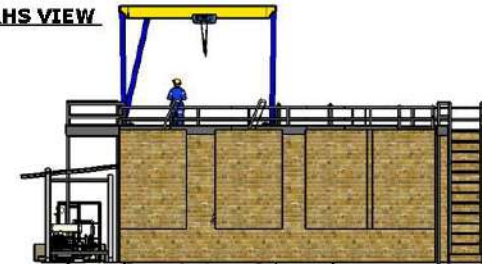
TOP VIEW



LHS - VIEW



RHS VIEW



FRONT VIEW



200 KLD – PACKAGED- CIVIL- BIOFLOCS - STP



CLIENT NAME: Reethi Faru Resort
LOCATION: Male, Maldives

100 KLD – PACKAGED BIOFLOCS - STP



100 KLD – PACKAGED BIOFLOCS - STP



CLIENT NAME: Rolex Rings
LOCATION: Rajkot, Gujarat

105 KLD – PACKAGED- CIVIL- BIOFLOCS - STP



50 KLD – PACKAGED BIOFLOCS - STP



CLIENT NAME: Nilkamal Ltd.
LOCATION: Krishnagiri, Tamil Nadu

50 KLD – PACKAGED- CIVIL- BIOFLOCS - STP



CLIENT NAME: Nilkamal Ltd.
LOCATION: Krishnagiri, Tamil Nadu

40 KLD – PACKAGED BIOFLOCS - STP



40 KLD – CONTAINARIZED PACKAGED BIOFLOCS - STP



40 KLD – PACKAGED BIOFLOCS - STP



CLIENT NAME: Serenity Apartment
LOCATION: Bangalore

40 KLD – PACKAGED- CIVIL- BIOFLOCS - STP



CLIENT NAME: Annapurna Rice Mill
LOCATION: Sambalpur , Odisha

20 KLD – PACKAGED BIOFLOCS - STP



CLIENT NAME: Aauraa home fashion
LOCATION: Karur, Tamil Nadu

20 KLD – PACKAGED BIOFLOCS - STP



20 KLD – PACKAGED BIOFLOCS - STP



CLIENT NAME: Enviowiser

LOCATION: Bengaluru , Karnataka

25 KLD – PACKAGED BIOFLOCS - STP



10 KLD – PACKAGED BIOFLOCS - STP



10 KLD – PACKAGED BIOFLOCS - STP



10 KLD – PACKAGED BIOFLOCS - STP



10 KLD – CONTAINARIZED PACKAGED BIOFLOCS - STP



15 KLD – PACKAGED BIOFLOCS - STP



15 KLD – CONTAINARIZED PACKAGED BIOFLOCS - STP



CLIENT NAME: Hotel The Fern
LOCATION: Somnath , Gujarat

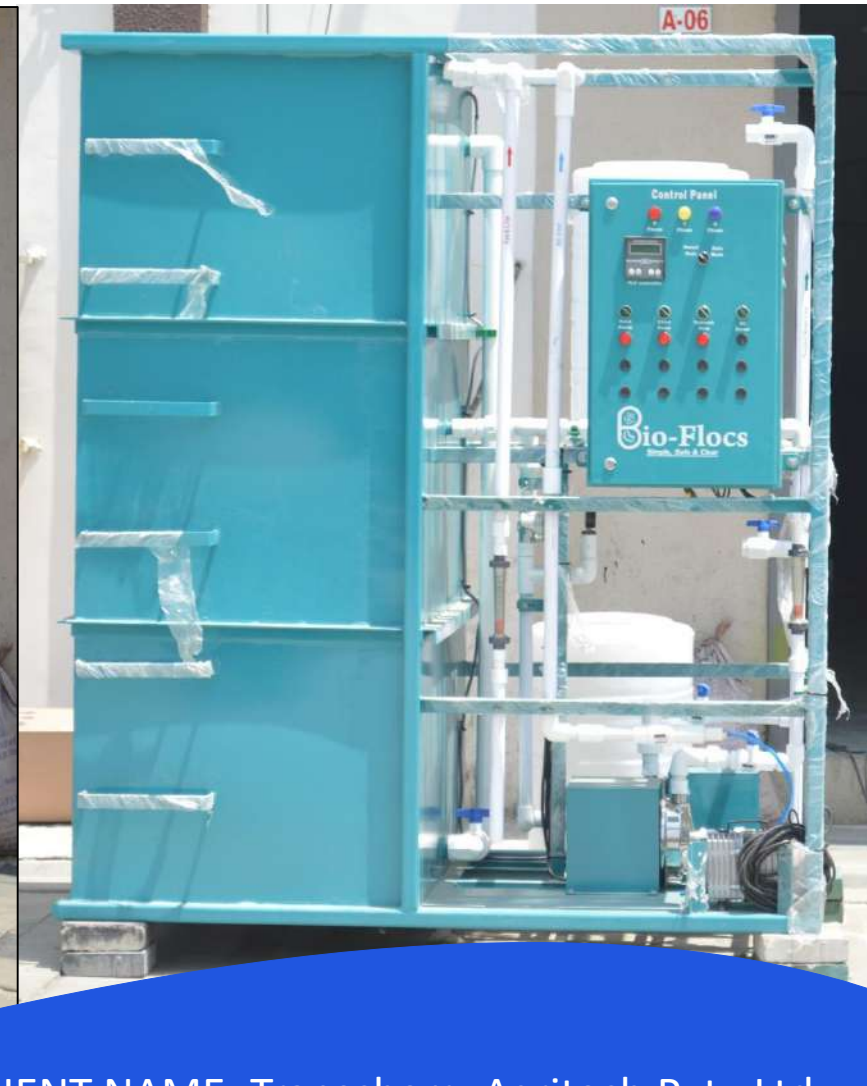
5 KLD – CONTAINARIZED PACKAGED BIOFLOCS - STP



5 KLD – PACKAGED BIOFLOCS - STP



5 KLD – PACKAGED BIOFLOCS - STP



5 KLD – CONTAINARIZED PACKAGED BIOFLOCS - STP



2 KLD – PACKAGED- ECO- BIOFLOCS - ETP



3 KLD – PACKAGED- ECO- BIOFLOCS - STP



2 KLD – PACKAGED- ECO- BIOFLOCS - ETP



4 KLD – PACKAGED- ECO- BIOFLOCS - ETP



2 KLD – PACKAGED- ECO- BIOFLOCS - ETP



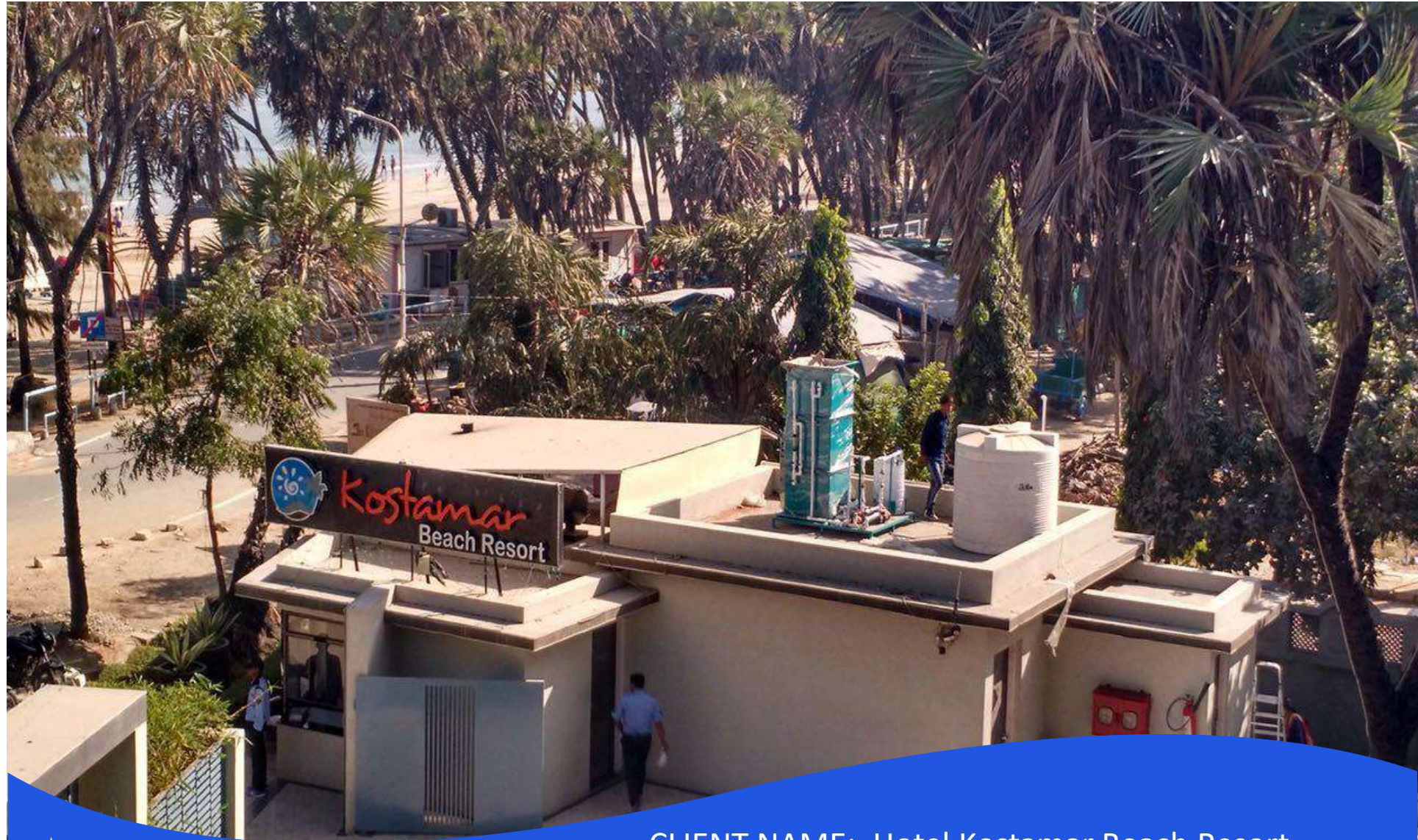
3 KLD – PACKAGED- ECO- BIOFLOCS – CAR WASH- ETP



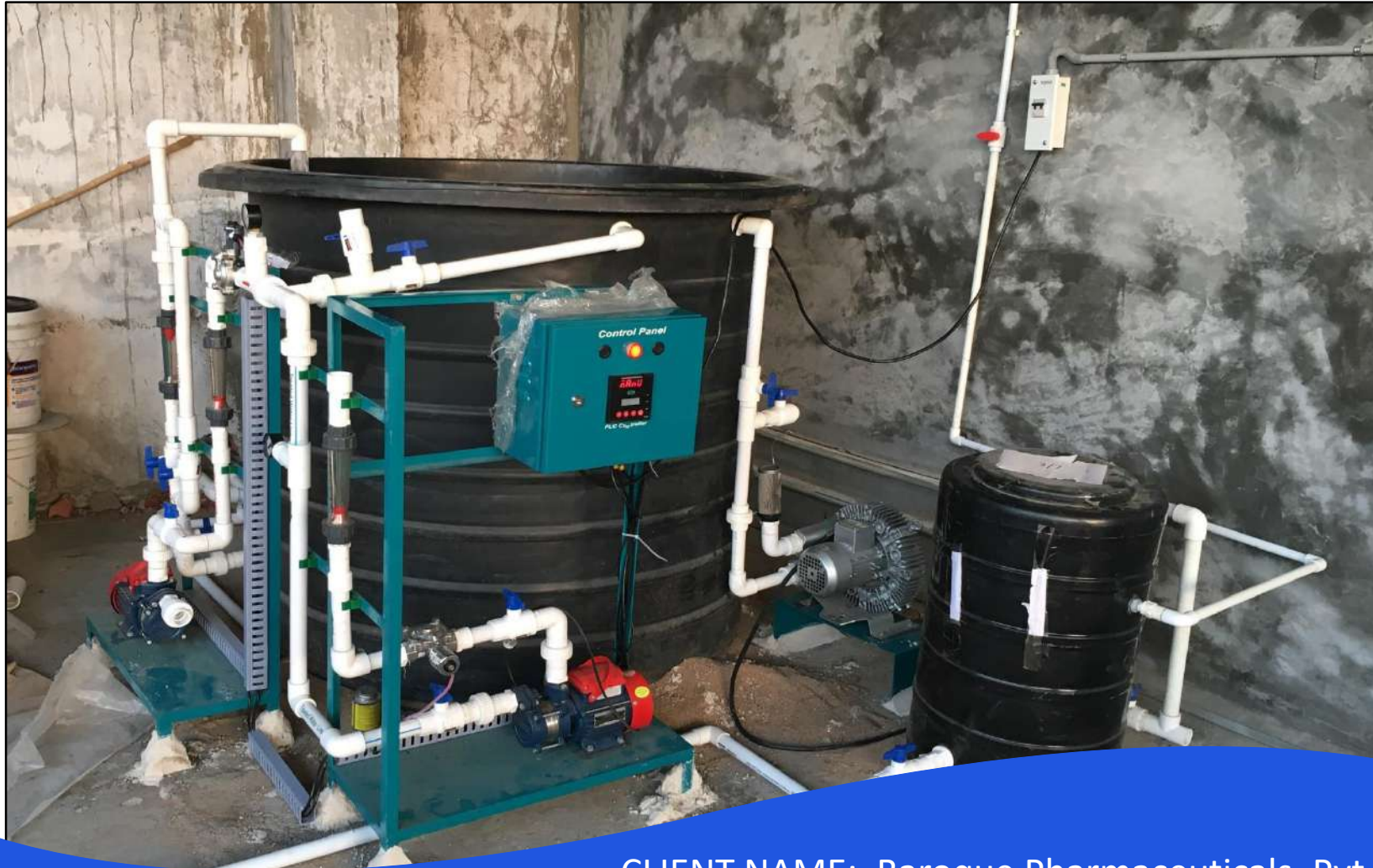
3 KLD – PACKAGED BIOFLOCS - STP



5 KLD – PACKAGED BIOFLOCS - STP



5 KLD – PACKAGED- ECO- BIOFLOCS - STP



5 KLD – PACKAGED- ECO- BIOFLOCS - STP



5 KLD – PACKAGED- ECO- BIOFLOCS – STP



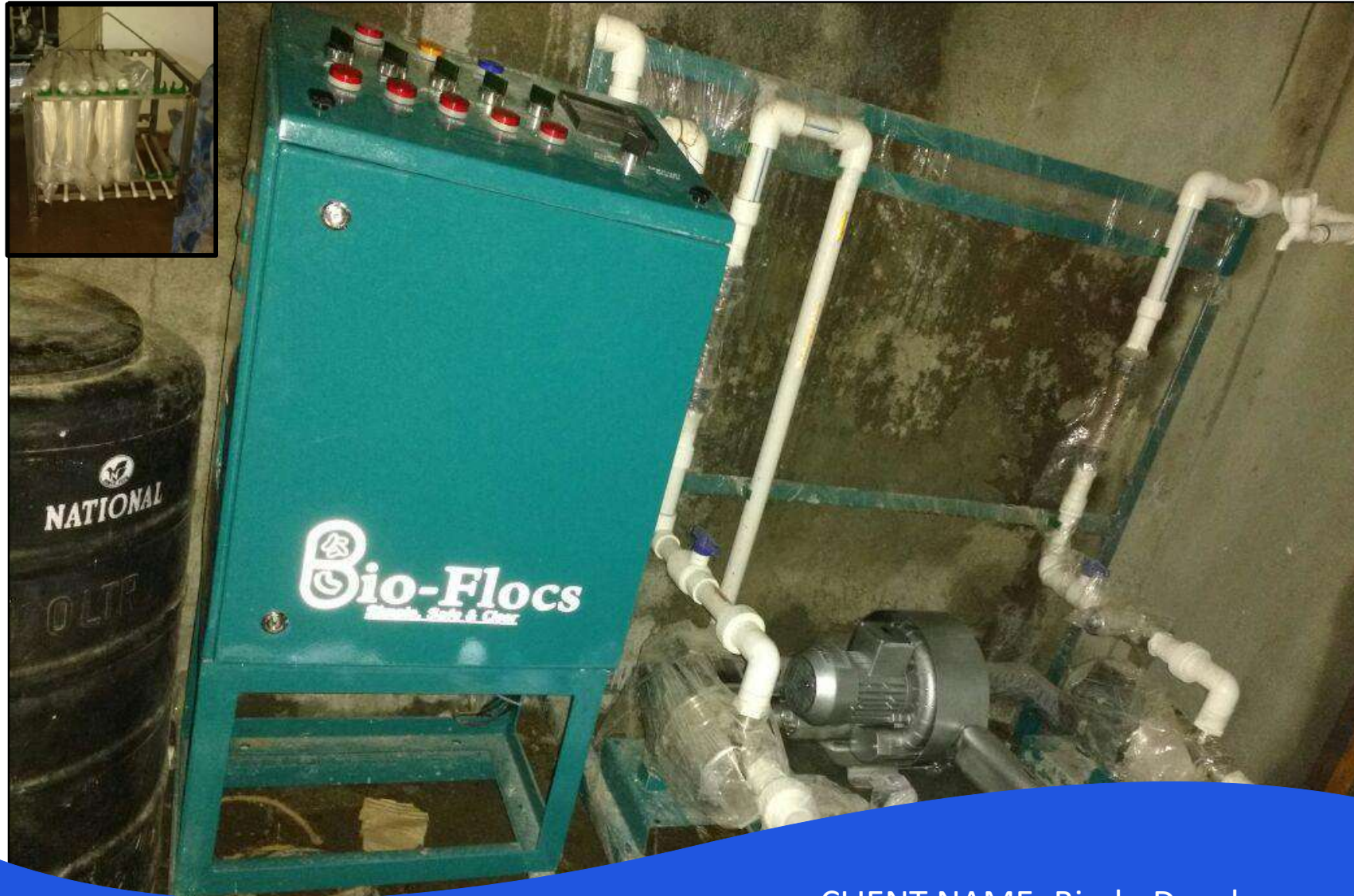
5 KLD – PACKAGED- ECO- BIOFLOCS - STP



5 KLD – PACKAGED- CIVIL- BIOFLOCS - STP



10 KLD – PACKAGED- CIVIL- BIOFLOCS - STP



10 KLD – PACKAGED- ECO- BIOFLOCS - STP



15 KLD – PACKAGED BIOFLOCS - STP



15 KLD – PACKAGED BIOFLOCS - STP



60 KLD – PACKAGED BIOFLOCS - STP




New STP norms – A Challenge to conventional technology


It would be difficult to meet the new STP norms using conventional methods, without making the plants more


BIGGER

Govt Ready for Clean-up Act

ABOUT 40% of the sewage treatment facilities don't meet operating norms 

ONCE NOTIFIED, all new STPs will have to meet the fresh norms

 **EXISTING TREATMENT** plants will get 5 years to achieve them

 **AS PER CPCB**, domestic sewage is responsible for about 80% of water pollution in India

MOST CITIES lack adequate sewage treatment & municipal solid waste processing units

STANDARDS FOR SEWAGE TREATMENT PLANTS

Parameters	Standards for new STPs	Existing general effluent standards
PH	*6.5-9.0	5.5-9.0
Biological Oxygen Demand	10	30
Chemical Oxygen Demand	50	250
TSS	20	100
NH4-N	5	50
N- Total	10	100
Faecal Colliform (MPN/100ml[)	<100	Not specified earlier


*All values in mg/l except for pH and Colliform

Sample Analysis report for various BIOFLOCS –STP -plants



RAW sample

Analysis



Bangalore Analytical Research Center (P). Ltd.
ISO9001:2008,KSPCB

#17/143, 9th main road, 3rd phase,
Peenya, Bangalore-560058,
Tel: 080 41245999 Telefax: 41171185,
e-mail: enquiry@barcindia.com,
Web: www.barcindia.com

Page : 1 of 1

Address of the Customer:
M/s.Solid State Systems Pvt.Ltd.
#38A-1,KIADB Industrial Area
Hoskote,Bangalore-562 114

TEST REPORT

Report No. EHS/2016/08/0180
Date of Receipt 17/08/2016
Date of Analysis 17/08/2016
Date of Completion 23/08/2016
Date of Report 23/08/2016
Job Order No. EHS/2016/08/0180
Sampling Type Grab
Sampling Point Raw water tank
Your Reference Verbal

Sample Particulars STP Raw water

Date of Sampling 17/08/2016
Sample Qty. 2Ltrs+250ml
Sample Marked N.S


Sample Description : Brown coloured liquid having objectionable odor.

Sl. No.	Parameter	Units	Result	Test Method
Chemical Test				
1	pH Value	----	6.7	IS3025(Part-11):1983(Reaff.2012)
2	Colour	Hazen	100.0	IS3025(Part-4):1983
3	Odor	----	Objectionable	IS3025(Part-5):1983
4	Total Suspended Solids	mg/L	1100.0	IS3025(Part-17):1996(Reaff.2012)
5	Biochemical Oxygen Demand,5Days@20°C	mg/L	1280.0	IS3025(Part-44):1993(Reaff.2009)
6	Oil & Grease	mg/L	<1.0(BDL)	IS3025(Part-39):1991(Reaff.2009)
7	Turbidity	NTU	1681.0	IS3025(Part-10):1984(Reaff.2012)
8	Residual Free Chlorine as Cl ₂	mg/L	BDL	IS3025(Part-26):1984(Reaff.2009)
9	Chemical Oxygen Demand as O ₂	mg/L	1800.0	IS3025(Part-58):2006(Reaff.2012)
Microbiological Test				
1	Escherichia coli	MPN/100ml	46	IS1622-1981 RA1996

Note:
1)Sample preserved@2-8°C,2)N.S.Not Specified.
3)BDL:Below Detection Limit.

TREATED sample

Analysis



Bangalore Analytical Research Center (P). Ltd.
ISO9001:2008,KSPCB

#17/143, 9th main road, 3rd phase,
Peenya, Bangalore-560058,
Tel: 080 41245999 Telefax: 41171185,
e-mail: enquiry@barcindia.com,
Web: www.barcindia.com

Page : 1 of 1

Address of the Customer:
M/s.Solid State Systems Pvt.Ltd.
#38A-1,KIADB Industrial Area
Hoskote,Bangalore-562 114

TEST REPORT

Report No. EHS/2016/08/0181
Date of Receipt 17/08/2016
Date of Analysis 17/08/2016
Date of Completion 23/08/2016
Date of Report 23/08/2016
Job Order No. EHS/2016/08/0181
Sampling Type Grab
Sampling Point After Filtration Tank
Your Reference Verbal

Sample Particulars STP Treated water

Date of Sampling 17/08/2016
Sample Qty. 2Ltrs+250ml
Sample Marked N.S


Sample Description : Slightly yellowish coloured liquid having unobjectionable odor.

Sl. No.	Parameter	Units	Result	Test Method
Chemical Test				
1	pH Value	----	7.6	IS3025(Part-11):1983(Reaff.2012)
2	Colour	Hazen	5.0	IS3025(Part-4):1983
3	Odor	----	Unobjectionable	IS3025(Part-5):1983
4	Total Suspended Solids	mg/L	<1.0(BDL)	IS3025(Part-17):1996(Reaff.2012)
5	Biochemical Oxygen Demand,5Days@20°C	mg/L	2.0	IS3025(Part-44):1993(Reaff.2009)
6	Oil & Grease	mg/L	<1.0(BDL)	IS3025(Part-39):1991(Reaff.2009)
7	Turbidity	NTU	0.1	IS3025(Part-10):1984(Reaff.2012)
8	Residual Free Chlorine as Cl ₂	mg/L	1.4	IS3025(Part-26):1984(Reaff.2009)
9	Chemical Oxygen Demand as O ₂	mg/L	12.0	IS3025(Part-58):2006(Reaff.2012)
Microbiological Test				
1	Escherichia coli	MPN/100ml	<1	IS1622-1981 RA1996

Note:
1)Sample preserved@2-8°C,2)N.S.Not Specified.
3)BDL:Below Detection Limit,4)<1 Indicates Absent

Client: Solid State Systems Pvt Ltd
Location : Bangalore

RAW sample Analysis




SEPC/Env/Rec/Dec/17-18/171 Date : 20/12/2017

WASTE WATER ANALYSIS REPORT

Name: RECICLAR TECHNOLOGIES PVT. LTD.	
Sample Code : SEPC/Env/Rec/Dec/17-18/171	Sample Received date : 16/12/2017
Sample Description : Sample received by party	Completion Date: 19/12/2017
Sample name : B2 Raw water	Qty: 1 liter
Sample Condition: Sample stored in Polyethylene bottle	Types of sampling: NA
Registered by: Mr. Hitesh Vadher	Verified By: Mr. Nirav Joshi

WASTE WATER ANALYSIS RESULTS

Sr. No.	Parameters	Unit	Result
1	pH	-	7.3
2	Suspended Solids	mg/l	147
3	COD	mg/l	232
4	BOD(3 day at 27 °C)	mg/l	89.5
5	Oil & Grease	mg/l	20.4



Authorized Signatory

- Analysis is subjected to the conditions received at the laboratory
- Report can not be used as evidence anywhere without prior permission
- Sample will not be retained after 1 month

TREATED sample Analysis



SEPC/Env/Rec/Dec/17-18/172 Date : 20/12/2017

WASTE WATER ANALYSIS REPORT

Name: RECICLAR TECHNOLOGIES PVT. LTD.	
Sample Code : SEPC/Env/Rec/Dec/17-18/172	Sample Received date : 16/12/2017
Sample Description : Sample received by party	Completion Date: 19/12/2017
Sample name : B2 Treated water	Qty: 1 liter
Sample Condition: Sample stored in Polyethylene bottle	Types of sampling: NA
Registered by: Mr. Hitesh Vadher	Verified By: Mr. Nirav Joshi

WASTE WATER ANALYSIS RESULTS

Sr. No.	Parameters	Unit	Result
1	pH	-	8.1
2	Suspended Solids	mg/l	30.7
3	COD	mg/l	22.5
4	BOD(3 day at 27 °C)	mg/l	11.0
5	Oil & Grease	mg/l	0.8



Authorized Signatory


- Analysis is subjected to the conditions received at the laboratory
- Report can not be used as evidence anywhere without prior permission
- Sample will not be retained after 1 month

**Client: Rolex Rings
Pvt Ltd
Location : Rajkot**

RAW sample Analysis

TREATED sample Analysis

**Client: Adonie Trinity
Apartments
Location : Bangalore**



National Analytical Laboratories And Research Center
NABL Accredited / ISO 9001:2008 / OHSAS 18001:2007
 No. 1064, 2nd Floor, Rajagopal Nagar Main Road, Near Police Station, 2nd Stage
 Peenya Industrial Area, Bangalore - 560 058 | E - mail - enquiry.nalrc@gmail.com
 Tel : 080 41214555 | Mob : + 91 70901 54555

Format No: NALRC/FF/TF-17
 Name & Address of the Customer
 Date of Sample Collection
 Particulars of sample
 Date of sample Receipt
 Sample ID/Code
 Date of Analysis Started
 Date of completion
 Report No
 Report Date
 Page No


TEST REPORT
M/s Ramesh Adonai Trinity Apartment
 10th "A", 2nd A Cross, Prakruthi Township, 1st Block
 Horamavu-Agara Main Road, Kalyan Nagar Post
 Bangalore-560043
 : 14/10/2017
 : STP Raw water
Sample Qty: 2 Liters, Sampling Type: Grab
Sampling Point: From Raw Water Tank
 : 14/10/2017
 : NALRC/2017/10/W/062
 : 14/10/2017
 : 18/10/2017
 : NALRC/2017/10/189
 : 18/10/2017
 : 1/1

Description: Brownish Coloured liquid having objectionable odour.

Sl. No	Parameters	Unit	Result	Test Method
1	pH Value @ 25°C	---	7.23	IS 3025(P-11) 1983 (RA -2012)
2	Total Suspended Solids	mg/L	560.0	IS 3025(P-17) 1983 (RA -2012)
3	Bio-Chemical Oxygen Demand (3days @ 27°C)	mg/L	360.0	IS 3025(P-44) 1993 (RA -2009)
4	Chemical Oxygen Demand	mg/L	1219.1	IS 3025(P-58) 1988 (RA -2012)
5	Ammonical Nitrogen as N	mg/L	28.6	IS 3025(P-34) 1988 (RA -2009)
6	*Total nitrogen as N	mg/L	62.0	IS 3025(P-34) 1988 (RA -2009)
7	*Faecal Coliform	MPN/100ml	230.0	IS 1622-1981 (RA 1996)

Note: * Parameter is not covered under NABL scope.

***** End of the Report*****



National Analytical Laboratories And Research Center
NABL Accredited / ISO 9001:2008 / OHSAS 18001:2007
 No. 1064, 2nd Floor, Rajagopal Nagar Main Road, Near Police Station, 2nd Stage
 Peenya Industrial Area, Bangalore - 560 058 | E - mail - enquiry.nalrc@gmail.com
 Tel : 080 41214555 | Mob : + 91 70901 54555

Format No: NALRC/FF/TF-17
 Name & Address of the Customer
 Date of Sample Collection
 Particulars of sample
 Date of sample Receipt
 Sample ID/Code
 Date of Analysis Started
 Date of completion
 Report No
 Report Date
 Page No

TEST REPORT
M/s Ramesh Adonai Trinity Apartment
 10th "A", 2nd A Cross, Prakruthi Township, 1st Block
 Horamavu-Agara Main Road, Kalyan Nagar Post
 Bangalore-560043
 : 14/10/2017
 : STP Treated water
Sample Qty: 2 Liters, Sampling Type: Grab
Sampling Point: From Final Treated Tank
 : 14/10/2017
 : NALRC/2017/10/W/061
 : 14/10/2017
 : 18/10/2017
 : NALRC/2017/10/188
 : 18/10/2017
 : 1/1

Description: Colourless liquid having unobjectionable odour.

Sl. No	Parameters	Unit	Result	Standards as per KSPCB	Test Method
1	pH Value @ 25°C	---	7.67	6.5-9.0	IS 3025(P-11) 1983 (RA -2012)
2	Total Suspended Solids	mg/L	< 3.0	20 Max	IS 3025(P-17) 1983 (RA -2012)
3	Bio-Chemical Oxygen Demand (3days @ 27°C)	mg/L	3.0	10 Max	IS 3025(P-44) 1993 (RA -2009)
4	Chemical Oxygen Demand	mg/L	7.5	50 Max	IS 3025(P-58) 1988 (RA -2012)
5	Ammonical Nitrogen as N	mg/L	< 1.0	5 Max	IS 3025(P-34) 1988 (RA -2009)
6	*Total nitrogen as N	mg/L	< 1.0	10 Max	IS 3025(P-34) 1988 (RA -2009)
7	*Faecal Coliform	MPN/100ml	26.0	100 Max	IS 1622-1981 (RA 1996)

Note: * Parameter is not covered under NABL scope.

***** End of the Report*****

RAW sample Analysis

TREATED sample Analysis

Client: Apple Auto
agency – Car wash
Location : Bangalore

NALRC
National Analytical Laboratories And Research Center
NABL Accredited / ISO 9001:2008 / OHSAS 18001:2007
No. 1064, 2nd Floor, Rajagopal Nagar Main Road, Near Police Station, 2nd Stage
Peenya Industrial Area, Bangalore - 560 058 | E - mail : enquiry.nalrc@gmail.com
Tel : 080 41214555 | Mob : +91 70901 54555

Format No: NALRC/FF/TF-17
Name & Address of the Customer : **M/s. Apple Auto**
No. 102/1, B Narayanapura, Outer Ring Road,
Bengaluru-560016

Date of Sample Collection : 11/11/2017
Particulars of sample : ETP Raw water
Sample Qty: 2 Liters, **Sampling Type:** Grab
Sampling Point: From ETP Raw Water Tank

Date of sample Receipt : 11/11/2017
Sample ID/Code : NALRC/2017/11/W/046
Date of Analysis Started : 11/11/2017
Date of completion : 15/11/2017
Report No : NALRC/2017/11/243
Report Date : 15/11/2017
Page No : 1/1

Test Report

Description: Slightly yellowish coloured liquid having objectionable odour.

Sl. No	Parameters	Unit	Result	Test Method
1	pH Value @ 25°C	---	6.86	IS 3025(P-11) 1983 (RA -2012)
2	Total Suspended Solids	mg/L	172.0	IS 3025(P-17) 1983 (RA -2012)
3	Bio-Chemical Oxygen Demand (3days @ 27°C)	mg/L	76.0	IS 3025(P-44) 1993 (RA -2009)
4	Chemical Oxygen Demand	mg/L	312.0	IS 3025(P-58) 1988 (RA -2012)
5	Turbidity	NTU	68.3	IS 3025(P-10) 1983 (RA -2012)
6	Total Dissolved Solids	mg/L	760.0	IS 3025 (P-16)1984 (RA 2012)
7	Oil and Grease	mg/L	8.0	IS 3025(P-39) 1989 (RA-2009)
8	Total Hardness as CaCO ₃	mg/L	312.0	IS 3025 (P-21)2009 (RA 2009)

Note : 1. Sample preserved at 2-8°C.

***** End of the Report* *****

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Peenya Industrial Area, Bangalore - 560 058 | E - mail : enquiry.nalrc@gmail.com
Tel : 080 41214555 | Mob : +91 70901 54555

Format No: NALRC/FF/TF-17
Name & Address of the Customer : **M/s. Apple Auto**
No. 102/1, B Narayanapura, Outer Ring Road,
Bengaluru-560016

Date of Sample Collection : 11/11/2017
Particulars of sample : ETP Treated water
Sample Qty: 2 Liters, **Sampling Type:** Grab
Sampling Point: From Treated Water Tank

Date of sample Receipt : 11/11/2017
Sample ID/Code : NALRC/2017/11/W/047
Date of Analysis Started : 11/11/2017
Date of completion : 15/11/2017
Report No : NALRC/2017/11/244
Report Date : 15/11/2017
Page No : 1/1

Test Report

Description: Colorless liquid having unobjectionable odour.

Sl. No	Parameters	Unit	Result	Test Method
1	pH Value @ 25°C	---	7.79	IS 3025(P-11) 1983 (RA -2012)
2	Total Suspended Solids	mg/L	2.0(BDL)	IS 3025(P-17) 1983 (RA -2012)
3	Bio-Chemical Oxygen Demand (3days @ 27°C)	mg/L	3.0	IS 3025(P-44) 1993 (RA -2009)
4	Chemical Oxygen Demand	mg/L	22.0	IS 3025(P-58) 1988 (RA -2012)
5	Turbidity	NTU	0.2	IS 3025(P-10) 1983 (RA -2012)
6	Total Dissolved Solids	mg/L	410.0	IS 3025 (P-16)1984 (RA 2012)
7	Oil and Grease	mg/L	< 4.0	IS 3025(P-39) 1989 (RA-2009)
8	Total Hardness as CaCO ₃	mg/L	258.0	IS 3025 (P-21)2009 (RA 2009)

Note : 1. Sample preserved at 2-8°C, 2. BDL; Below Detection Limit

***** End of the Report* *****

406 Sudarshan Complex, Nr. Mithakhali Under
bridge, Mithakhali, Navrangpura,
Ahmedabad - 380 009

RAW sample Analysis

TREATED sample Analysis

**Client: Hotel Park
Plaza
Location : Bangalore**

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Peenya Industrial Area, Bangalore - 560 058. | E - mail : enquiry.nalrc@gmail.com
Tel : 080 41214555 | Mob : +91 70901 54555

Format No: NALRC/FF/TF-17
Name & Address of the Customer : **M/s. Park Plaza Hotel**
90-4, Outer Ring Rd, Marathahalli Village,
Marathahalli, Bengaluru-560037

Date of Sample Collection : 09/11/2017
Particulars of sample : STP Inlet water From Ultra filter
Sample Qty: 2 Liters, **Sampling Type:** Grab,
Sampling Point: From STP Inlet water tank

Date of sample Receipt : 09/11/2017
Sample ID/Code : NALRC/2017/11/W/037
Date of Analysis Started : 09/11/2017
Date of completion : 13/11/2017
Report No : NALRC/2017/11/173
Report Date : 14/11/2017
Page No : 1/1

Description: - Slightly grayish coloured liquid having objectionable odor.

Sl. No	Parameters	Unit	Result	Test Method
1	Odour	---	Objectionable	IS 3025 (P-05)1983 (RA 2012)
2	Color	Hazen Units	20	IS 3025 (P-04)1983 (RA 2012)
3	pH Value @ 25°C	---	7.54	IS 3025(P-11) 1983 (RA-2012)
4	Turbidity	NTU	6.2	IS 3025(P-10) 1983 (RA -2012)
5	Total Suspended Solids	mg/L	14.0	IS 3025(P-17) 1984 (RA-2012)
6	Biochemical Oxygen Demand 3 Days@27° C	mg/L	25.0	IS 3025(P-44) 1993 (RA-2009)
7	Chemical Oxygen Demand	mg/L	128.0	IS 3025(P-58) 1988 (RA-2012)
8	*Escherichia Coli	MPN/100ml	Present	IS 1622-1981(RA 1996)

Note: 1. * Parameter is not covered under NABL scope.

****End of the report****

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Peenya Industrial Area, Bangalore - 560 058. | E - mail : enquiry.nalrc@gmail.com
Tel : 080 41214555 | Mob : +91 70901 54555

Format No: NALRC/FF/TF-17
Name & Address of the Customer : **M/s. Park Plaza Hotel**
90-4, Outer Ring Rd, Marathahalli Village,
Marathahalli, Bengaluru-560037

Date of Sample Collection : 16/10/2017
Particulars of sample : STP Outlet water From Ultra filter
Sample Qty: 2 Liters, **Sampling Type:** Grab,
Sampling Point: From STP Outlet water tank

Date of sample Receipt : 09/11/2017
Sample ID/Code : NALRC/2017/11/W/038
Date of Analysis Started : 09/11/2017
Date of completion : 13/11/2017
Report No : NALRC/2017/11/174
Report Date : 14/11/2017
Page No : 1/1

Description: - Slightly yellowish coloured liquid having unobjectionable odor.

Sl. No	Parameters	Unit	Result	Standards as per KSPCB	Test Method
1	Odour	---	Unobjectionable	Unobjectionable	IS 3025 (P-05)1983 (RA 2012)
2	Color	Hazen Units	5.0	---	IS 3025 (P-04)1983 (RA 2012)
3	pH Value @ 25°C	---	7.61	6.0-9.0	IS 3025(P-11) 1983 (RA-2012)
4	Turbidity	NTU	3.5	2 Max	IS 3025(P-10) 1983 (RA-2012)
5	Total Suspended Solids	mg/L	6.0	10 Max	IS 3025(P-17) 1984 (RA-2012)
6	Biochemical Oxygen Demand 3 Days@27° C	mg/L	8.0	10 Max	IS 3025(P-44) 1993 (RA-2009)
7	Chemical Oxygen Demand	mg/L	62.0	NS	IS 3025(P-58) 1988 (RA-2012)
8	*Escherichia Coli	MPN/100ml	Present	Absent	IS 1622-1981 (RA 1996)


Note: 1. * Parameter is not covered under NABL scope. 2. N.S -Not Specified

****End of the report****

RAW sample Analysis

TREATED sample Analysis

Client: Adonie trinity
apartments
Location : Bangalore



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 Tel : 080 41214555 | Mob : +91 70901 54555

Format No: NALRC/FF/TF-17
 Name & Address of the Customer

Date of Sample Collection
 Particulars of sample

of sample Receipt
 Sample ID/Code
 Date of Analysis Started
 Date of completion
 Report No
 Report Date
 Page No

Test Report
M/s. Ramesh Adonai Trinity Apartment
 10th "A", 2nd A Cross, Prakruthi Township, 1st Block
 Horamavu-Agara Main Road, Kalyan Nagar Post
 Bangalore-560043

: 09/11/2017
 : STP Raw water
Sample Qty: 2 Liters, **Sampling Type:** Grab
Sampling Point: From Raw Water Tank


: 09/11/2017
 : NALRC/2017/11/W/035
 : 09/11/2017
 : 13/11/2017
 : NALRC/2017/11/171
 : 14/11/2017
 : 1/1

Description: Slightly yellowish coloured liquid having objectionable odour.

Sl. No	Parameters	Unit	Result	Test Method
1	pH Value @ 25°C	---	7.26	IS 3025(P-11) 1983 (RA -2012)
2	Total Suspended Solids	mg/L	102.0	IS 3025(P-17) 1983 (RA -2012)
3	Bio-Chemical Oxygen Demand (3days @ 27°C)	mg/L	80.0	IS 3025(P-44) 1993 (RA -2009)
4	Chemical Oxygen Demand	mg/L	284.0	IS 3025(P-58) 1988 (RA -2012)
5	Ammonical Nitrogen as N	mg/L	16.8	IS 3025(P-34) 1988 (RA -2009)
6	*Total nitrogen as N	mg/L	26.6	IS 3025(P-34) 1988 (RA -2009)
7	*Faecal Coliform	MPN/100ml	180	IS 1622-1981 (RA 1996)

Note: 1 * Parameter is not covered under NABL scope.

***** End of the Report*****



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 Peenya Industrial Area, Bangalore - 560 058. | E - mail : enquiry.nalrc@gmail.com
 Tel : 080 41214555 | Mob : +91 70901 54555

Format No: NALRC/FF/TF-17
 Name & Address of the Customer

Date of Sample Collection
 Particulars of sample

Date of sample Receipt
 Sample ID/Code
 Date of Analysis Started
 Date of completion
 Report No
 Report Date
 Page No

Test Report
M/s. Ramesh Adonai Trinity Apartment
 10th "A", 2nd A Cross, Prakruthi Township, 1st Block
 Horamavu-Agara Main Road, Kalyan Nagar Post
 Bangalore-560043

: 09/11/2017
 : STP Treated water
Sample Qty: 2 Liters, **Sampling Type:** Grab
Sampling Point: From Final Treated Tank

: 09/11/2017
 : NALRC/2017/11/W/036
 : 09/11/2017
 : 13/11/2017
 : NALRC/2017/11/172
 : 14/11/2017
 : 1/1

Description: Slightly yellowish coloured liquid having unobjectionable odour.

Sl. No	Parameters	Unit	Result	Standards as per KSPCB	Test Method
1	pH Value @ 25°C	---	7.67	6.5-9.0	IS 3025(P-11) 1983 (RA -2012)
2	Total Suspended Solids	mg/L	2.0(BDL)	20 Max	IS 3025(P-17) 1983 (RA -2012)
3	Bio-Chemical Oxygen Demand (3days @ 27°C)	mg/L	4.0	10 Max	IS 3025(P-44) 1993 (RA -2009)
4	Chemical Oxygen Demand	mg/L	43.0	50 Max	IS 3025(P-58) 1988 (RA -2012)
5	Ammonical Nitrogen as N	mg/L	<1.0	5 Max	IS 3025(P-34) 1988 (RA -2009)
6	*Total nitrogen as N	mg/L	2.0	10 Max	IS 3025(P-34) 1988 (RA -2009)
7	*Faecal Coliform	MPN/100ml	20.0	100 Max	IS 1622-1981 (RA 1996)

Note: 1* Parameter is not covered under NABL scope, 2. BDL : Below Detection Limit.

***** End of the Report*****

MEMBRANE BIOREACTOR compared to conventional treatment plants

MEMBRANE BIOREACTOR	Conventional like ASP, MBBR, FAB etc.
Higher concentration of MLSS gives Better treatment in less space	Lower MLSS concentration leads to high foot print of treatment plants
Residence time (HRT) of sewage in reactor is low due to high concentration of bacteria	Reactor have high residence time due to low concentration of bacterial mass, increasing the plant foot print and civil cost
Bacterial removal is very good , nearly 100 %	Bacterial removal is very poor
The plant takes less start-up time compared to MBBR as the bacterial growth is suspended	Attached bacterial growth (as in MBBR, FAB, SAAF) requires longer time and high level of expertise for operation and stabilization
Sludge generation is less due to high biomass concentration	Higher sludge generation
Removal of nutrients like Ammonia, Nitrate and phosphate is good	Removal of nutrients like Ammonia, Nitrate and phosphate is poor
Operating cost of plant is at PAR with a properly functioning conventional technology plant	Operating cost of (sub 100 KL) plant is in the range of Rs. 12 – Rs. 20 per KL depending on the operating condition of plant

Technological comparison with MBR

Parameter	BIOFLOCS	Activated Sludge process	MBBR/FBR	SBR
Treated BOD (mg/litre)	< 10	< 50	< 30	< 10
Sludge Production	Minimal	High	Average	Minimal
Nutrient Removal	High	Low	Low	High
Ease of Flushing reuse	High	Low	Low	High
Compatibility with other Technology	High	Low	Low	Low
Ease of Startup	High	Low	Low	Low
Portability	High	Low	Low	Low
Tertiary treatment requirement	Negligible	Always	Always	Always

POWER OF MEMBRANE PROCESS: NEWater in Singapore

Converting crisis into opportunity

- **NEWater** is the brand name given to **reclaimed water produced by Singapore's Public Utilities Board**. More specifically, it is treated wastewater (sewage) that has been purified using dual-membrane (via microfiltration and reverse osmosis).
- The **water is potable and is consumed by humans**, but is mostly used by industries requiring high purity water.
- Membrane based sewage treatment technology have been tested and applied at NEWater treatment plants.
- **Research have shown that MBR-RO process could produce equivalent or better high grade water (NEWater) and have better resistance to shock loading than the conventional AS-MF/UF-RO from the domestic used water.**

2011 Water Supply Sources



■ Imports - 40%
■ NEWater - 30%
■ Catchments - 20%
■ Desalination - 10%

2060 Water Supply Sources



■ Imports - 0%
■ NEWater - 50%
■ Catchments - 20%
■ Desalination - 30%



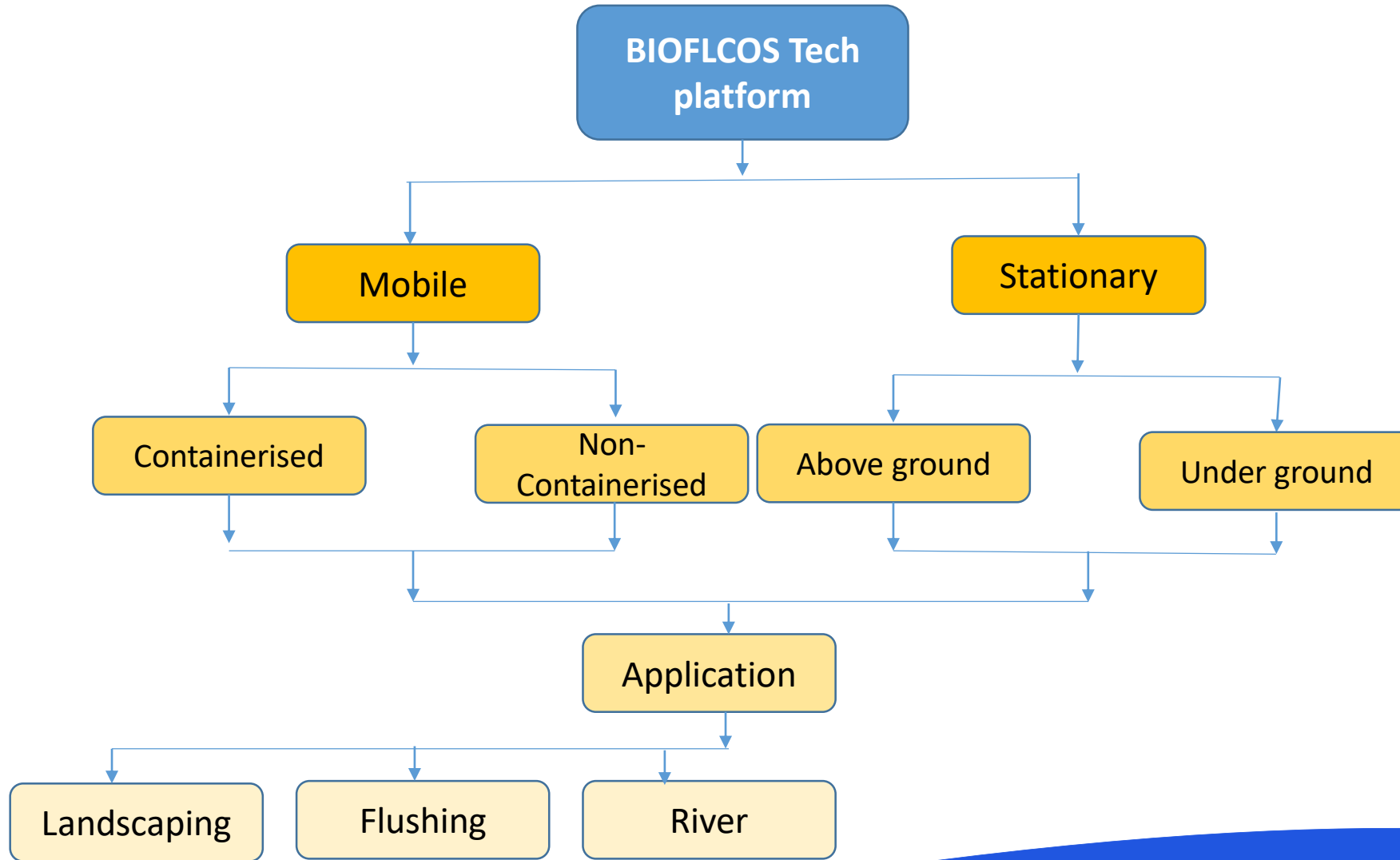
REICLAR PROJECT

PROJECTS LOCATION

- Anand
- Bengaluru
- Bhopal
- DIU
- Delhi
- Hyderabad
- Krishnagiri
- Male
- Nashik
- Rajkot
- Sambalpur
- Sanand
- Silvassa
- Somnath
- Sri Lanka
- Tiruppur
- Thane
- Vadodara
- Vapi



BIOFLOCS Application Tree



BIOFLOCS Users



Hotel



Community



Hospital



Camps



Off Shore



Mobile Toilets

Thank you

 Bio-Flocs

Simple, Safe & Clear...



Reciclar
Technologies Pvt. Ltd.

406 Sudarshan Complex, Nr. Mithakhali Under
bridge, Mithakhali, Navrangpura,
Ahmedabad - 380 009

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