



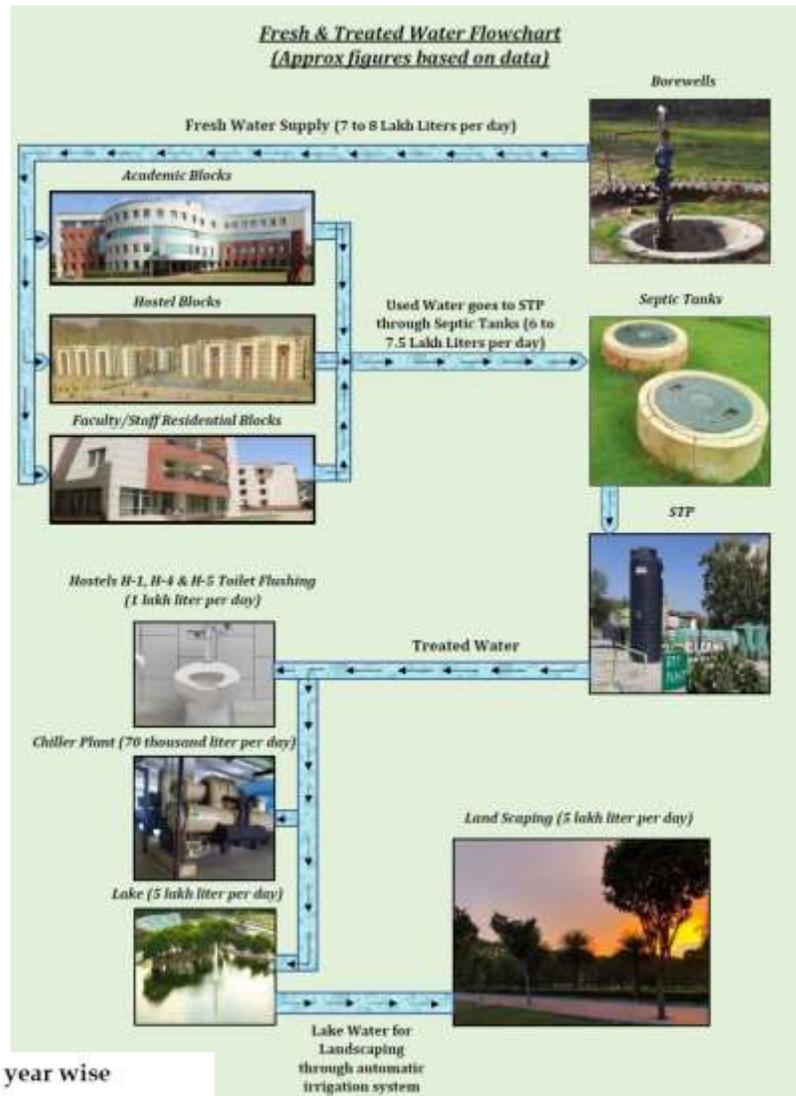
Conserving Water and Preventing Wastage

Water conservation is very important at AUR. The aim is to reduce wastage of water. To this end the following measures are being taken:

- Rain Water harvesting Lake The artificial lake gets treated water from the Sewage Treatment Plant and also all the rain water from terraces of buildings, and other rain water drains comes to this lake. This water is used for horticulture, thus ensuring literally zero wastage of water.

- Water Level Indicators A panel having three indicators denoting the water level is being established at ground level for ease of information to the plumbers for switching pumps On/Off, thus avoiding spillage and waste of water.

- Automated water filling system A Solenoid valve, pressure switch, float switch arrangement is being planned for implementation for automatic water filling system at one of the hostels on trial basis. This system if implemented at all locations will promote zero wastage of water therefore conserving water.



Efficient utilization of treated STP year wise

Amity University STP & ETP 2019 to 2021											
2019				2020				2021			
Lake	Chiller	Flushing	ETP to Lake	Lake	Chiller	Flushing	ETP to Lake	Lake	Chiller	Flushing	ETP to Lake
372354	0	0	17964	395006	0	65225	10955	154195	0	14709	741
587964	0	0	18426	874775	0	70205	11821	171071	0	12057	3790
408967	0		17082	938500	0	33354	5032	295806	842	28052	3709
436200	39933		17966	620066		14853	933	22366	10133	45966	4700

The wastewater generated in the campus is from sewage of labs, residential and canteen facilities, hostels and laundry. The above waste is treated through a Sewage Treatment Plant (STP) and Effluent Treatment Plant (ETP) of 7.5 lakh LPD available in the campus.



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WATER MANAGEMENT

1. Water is supplied in AUR through bore wells. The present requirement of water may increase in the near future. Conservation of this resource will acquire primacy with the increase in infrastructure and personnel.

Water Calculation

2. AUR has five Academic Blocks, one Student Resource Centre, Five Hostel Blocks, Six faculty Blocks, One Staff Quarters Block.

3. There would be approximately 263 families' i.e. around 821 persons plus 2670 students residing in the campus. In the daytime during working hours there would be additional students, plus other faculty staff and workers, possibly an additional strength of 2100 personnel. There is a mess and also other vendors who would require water for their ventures.

4. The standard consumption of water for a family is taken as 135 litres per person per day. Students do not cook; however cooking is done for them in the mess and other places. Thus for all purposes we can assume 135 litres for them. The day scholars and faculty/staff commuting from Jaipur can be safely assumed to consume at least 40 lts per day.

5. The total Lts Per Day (LPD) is thus calculated as follows:

a. Faculty/Staff residing inside the campus: $135 \times 3491 = 4,71,285$ LPD

b. Guards and Other Staff routine duties after working hrs: $50 \times 80 = 4000$ LPD

c. Day Scholars, Faculty & Staff = $2100 \times 40 = 84000$ LPD

d. Chiller Plants Requirement : 60,000 LPD (Minimum)

e. Laundry Requirement (Commercial purposes uses more water than household purposes) 3000 LPD

6. Total 622285 LPD without Horticulture requirement. Horticulture requirement is met through STP and rain harvested water. Chiller plant water requirement is only during the plant operation period. These are only indicative yardsticks.

7. Water is supplied to various buildings through a network of underground sumps and overhead tanks. Water from the bore well is pumped to the underground tanks, from the underground tanks it is pumped to the overhead tanks. There are a total of 34 overhead tanks (both RCC and Sintex) and 08 underground tanks. Plumbers work in shifts to ensure adequate supply to each building.

8. Aquaguard are fitted along with the water coolers for hostels and in the faculty/staff residences. The aquaguards are on AMC and regular servicing is carried out.

11. Conserving Water and Preventing Wastage Water conservation is very important at AUR. The aim is to reduce wastage of water. To this end the following measures are being taken:

- Rain Water harvesting Lake The artificial lake gets treated water from the Sewage Treatment Plant and also all the rain water from terraces of buildings, and other rain water drains comes to this lake. This water is used for horticulture, thus ensuring literally zero wastage of water.

- Water Level Indicators A panel having three indicators denoting the water level is being established at ground level for ease of information to the plumbers for switching pumps On/Off, thus avoiding spillage and waste of water.

- Automated water filling system A Solenoid valve, pressure switch, float switch arrangement is being planned for implementation for automatic water filling system at one of the hostels on trial basis. This system if implemented at all locations will promote zero wastage of water therefore conserving water.

Going Ahead

12. AUR is now a fully residential campus. As the strength of students increases, the demand for water will also increase. While for around 08 months, with normal rainfall, AUR can be self sufficient, during the summer months criticality could occur. It is imperative that methods to conserve water are increased and new explored.

- Ground Water Recharging Ground water recharging had been done at various places. The ground water recharging is planned to be extended to borewell recharging. Two borewells have been identified for the pilot project. As AUR is in a semi bowl shape, water during rains also flows into the campus from the front and rear gates. The aim is to channelize this water to the nearest borewell for recharging through proper filtration.

- Use of STP water in flush system hostels Hostel Blocks are connected with a separate flush line for using the STP water.

- Cooling Tower of Chiller Plant The cooling tower of chiller plants utilize STP water. Thus approx 60,000-70,000 litres of water is being saved in this manner.

- Ground Mapping Ground mapping of AUR periphery has been done by 2 D image resistivity method. Cracks fixtures which could store water have been found. The intent is to recharge these zones so that the water resource is within the campus.



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Water conservation facilities and Watershed management available at Amity University Rajasthan

Mapping of Water Conservation Practices in Amity University Rajasthan



Lake



Sprinkler for Irrigation



Cooling Ducts

AUR campus has an in house sewage treatment plant. (STP). Water treated in the STP is used for cooling ducts, irrigating the campus greens and collection in the lake.



Surface Drain Pipe (Top View)
Roof Top Drain Pipe (inset)



Water Collection Pit



Surface Drain Pipe (Side View)



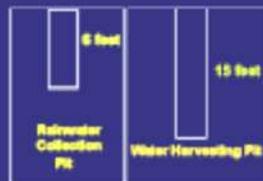
Borewell

On the rooftop of every building there are roof drains for removing water from roof surface (inset). The water from these roof drains and from surface drain pipes all across the campus is taken to rainwater collection pit and from there it gets transferred to water harvesting pit. Approximately 22 lac litres of water has been collected in the last one year of rainfall and recharged into the groundwater.



Top View

Water Collection Pit

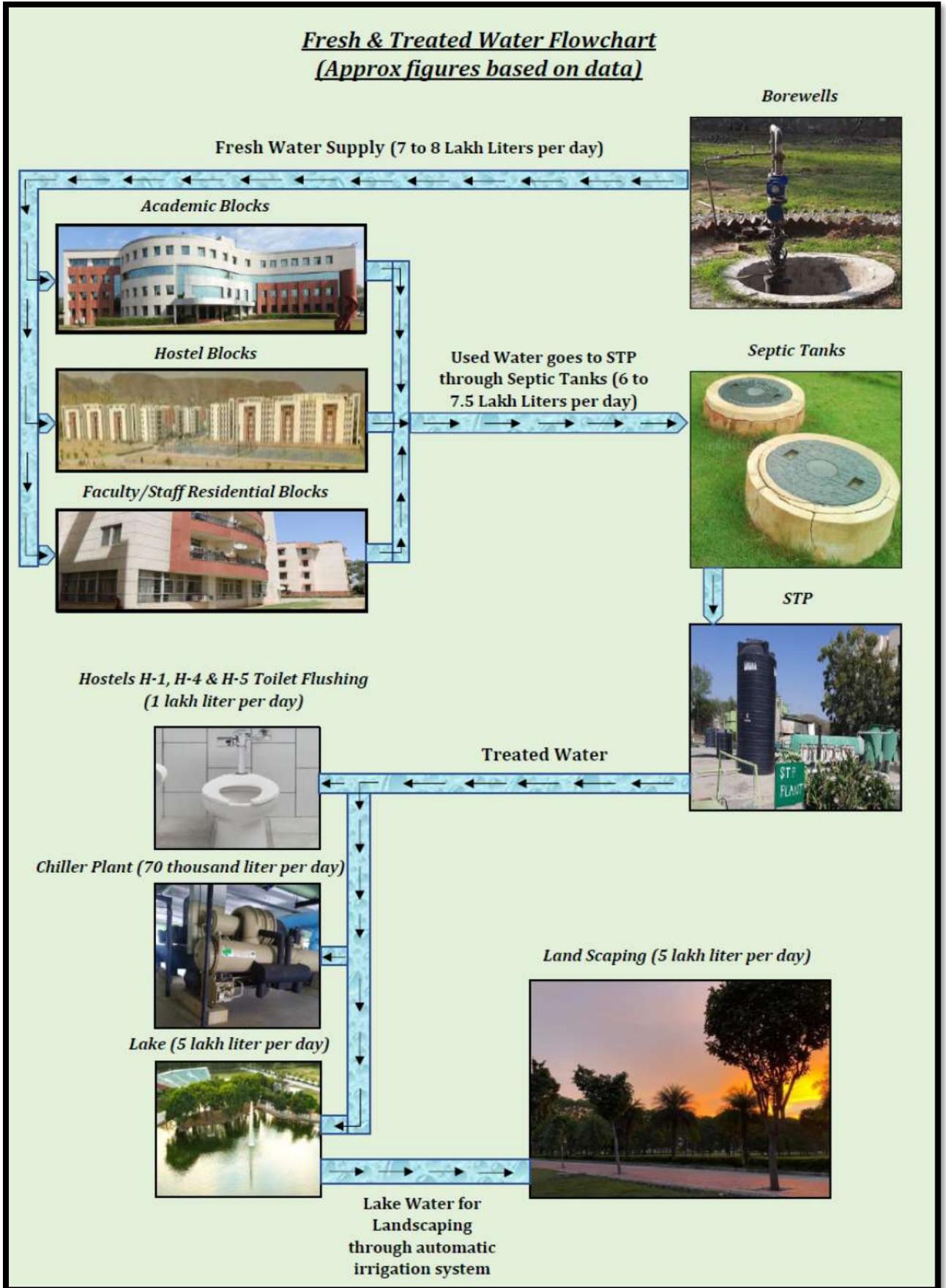


Side View



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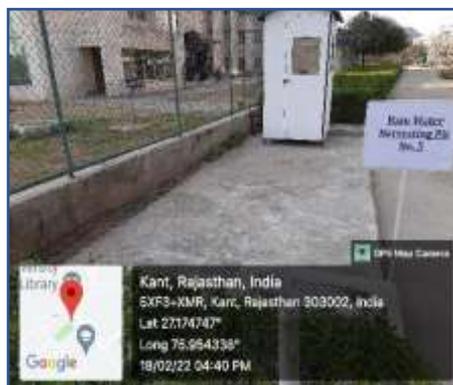


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Rainwater harvesting

- Rainwater harvesting is through lake and through 8 different recharge pits created indifferent areas of the campus to recharge groundwater.
- The rainwater collected in these pits from the roofs of the buildings and use for horticulture.
- One bore well recharge pit has been created near the main gate to harvest rainwater.



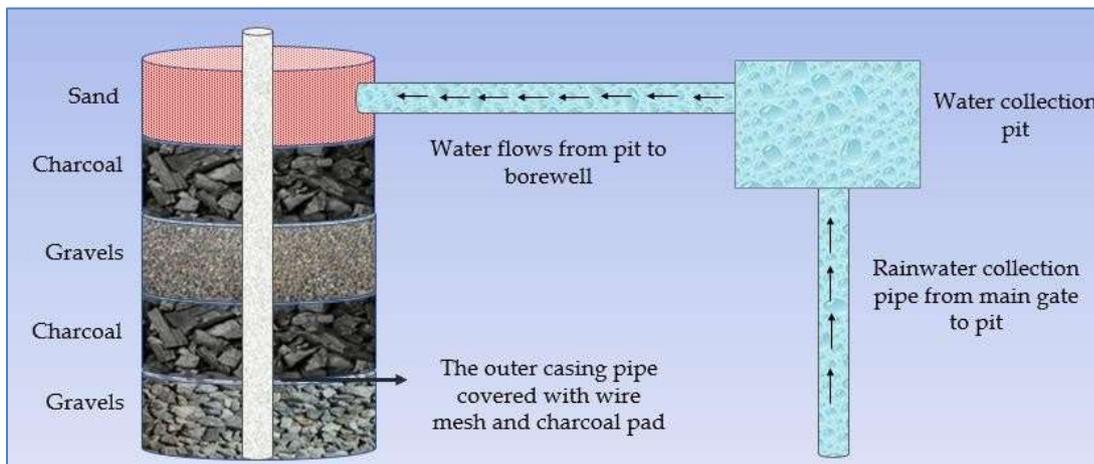
Rain Water Harvesting Through Recharge Pits at Amity University Rajasthan



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- 1. Borewell Recharge:** The purpose of borewell recharge pit is to
- Divert rainwater from low lying areas to prevent flooding
 - Provide a passage for rainwater from terraces of buildings and other structures
 - Channelise the water to a borewell through proper filtering, thus harvesting for future use
 - Recharge of dry borewells to prevent digging of new ones
 - Conservation of water through eco-friendly means
 - Ensures proper utilisation of rainwater which otherwise could stagnate and fester mosquitoes / harmful bacteria



Material & Diagram of Collecting and Recharge pits



Rainwater flows into the recharge pit



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2. Construction of tanks and bunds

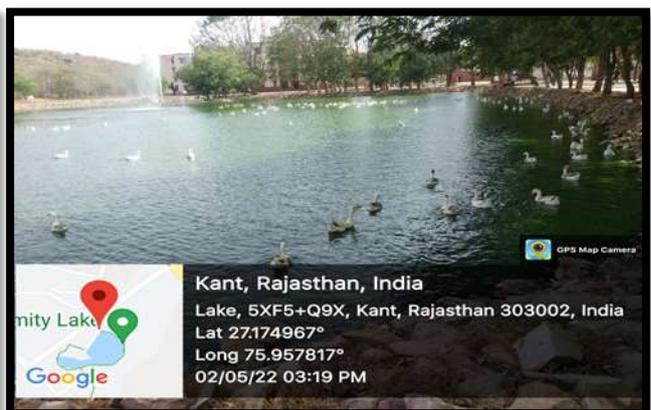
Source of fresh water is through Borewells. Water is stored in underground and overhead. The University has five Academic Blocks, one Student Resource Centre, five Hostel blocks, Six faculty blocks and one Staff quarter block with more than 3500 residents.

- Water is supplied to various buildings through a network of underground sumps and overhead tanks. Water from the borewell is pumped to the underground tanks, from the underground tanks it is pumped to the overhead tanks. There are a total of 34 overhead tanks (both RCC and Sintex) and 08 underground tanks. Plumbers work in shifts to ensure adequate supply to each building.
- Aquaguard are installed in water dispensers. Wastewater is channelled to STP plant and after treatment is utilized for flushing, horticulture and in chiller plants.
- One bore well recharge Tank has been created and other near the rear gate. This will help in collection and harvesting of rain water.

➤ **Water Harvesting Lake:**

A manmade water-harvesting lake contributing towards conservation of natural resources is located in the heart of Amity University Rajasthan. The artificial lake gets treated water from the Sewage Treatment Plant. Rainwater from terraces of buildings, and other low lying areas also flows to this lake. This water is used for horticulture, thus ensuring literally zero wastage of water. The artificial water harvesting lake created stores treated water for horticulture purposes. The lake water for horticulture is pumped from the lake for auto Irrigation system. It attracts beautiful migratory birds thus enhancing the biodiversity and overall ecosystem of the University campus.

Water Harvesting Lake at Amity University Rajasthan



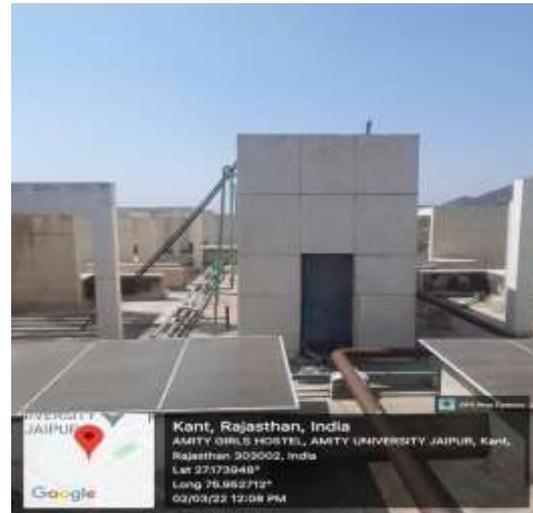


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Underground Tank



Overhead Tank

Wastewater Recycling

- The liquid waste generated in the campus is from sewage of labs, residential and canteen facilities, hostels and laundry. The above waste is treated through a Sewage Treatment Plant (STP) and Effluent Treatment Plant (ETP) of 7.5 lakh LPD available in the campus.
- Water after treatment, is sent to a treated water lake, from where it is used for horticulture through an auto irrigation system. Fountains in the lake ensure proper aeration and as the process of use is dynamic, stagnation does not occur negating bad odor.
- Carp fish are there in the lake which prevents any algae growth by consuming the same, thus keeping the lake clean.
- Treated water is also used for the cooling tower of chiller plants and for the flush system of four hostels.
- The sludge settled in STP is removed and is dried on drying beds and used as manure for the gardens. Therefore, the entire wastewater generated in the campus is treated and reused.



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Certificate of Analysis

Quality Standard	Parameters as desired	
Issued to	Green Wastetech, Sushant Lok-1, Gurgaon	
Kind atn.	Mr.	
Analysis no.	21122701	
Nature of Sample	Waste Water Sample marked Amity Jaipur, STP Outlet	
Sample received on	27 th December 2021	
Report Date	1 st January 2022	
Analysis Dates	27 th December to 1 st January 2022	
Sample Receipt	By Client	
Sample Packaging	Pet Bottle	
Sampling Method	Grab Sampling	

PARAMETER	UNITS	RESULTS	TEST METHOD	INDIAN STANDARD	PUBLIC HEALTH	LAND FOR RECLAMATION
Organics						
Chemical Oxygen Demand	mg/l	16	IS 3025 PART 39	250	—	—
BOD for 03 days at 27°C	mg/l	5.2	IS 3025 PART 44	30	350	100
Physical						
pH	LIQUID LOSS	7.43	IS 3025 PART 11	5.5-9.0	5.5-9.0	5.5-9.0
Total Suspended Solids	mg/l	4.4	IS 3025 PART 17	100	600	200
Total Dissolved Solids	mg/l	523	IS 3025 PART 16	2100	2100	2100
Chemical						
Oil & Grease	mg/l	0.26	IS 3025 PART 39	10	20	10

Remarks: The no. of parameters tested is 06 only. The report is issued subject to the terms & conditions as mentioned over leaf.

Chemist _____ Authorized Signatory _____

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Sewage Treatment Plant (STP) at Amity University Rajasthan

Water Testing Report

Wastewater Recycling

- The wastewater generated in the campus is from sewage of labs, residential and canteen facilities, hostels and laundry. The above waste is treated through a Sewage Treatment Plant (STP) and Effluent Treatment Plant (ETP) of 7.5 lakh LPD available in the campus.
- Water after treatment, is sent to a treated water lake, from where it is used for horticulture through an auto irrigation system. Fountains in the lake ensure proper aeration and as the process of use is dynamic, stagnation does not occur negating bad odor.



Fountain in the lake for manual aeration.



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- Carp fish are there in the lake which prevent any algae blooms by consuming the same, thus keeping the lake Un-eutrophicated.
- Treated water is also used for the cooling tower of chiller plants and for the flush system of four hostels (Hostel-1, 2, 4 & 5).
- The sludge settled in STP is removed and is dried on drying beds and used as manure for the gardens. Therefore, the entire wastewater generated in the campus is treated and reused.
- An average data of treated water through STP and ETP from 2019 to 2021 is mentioned (Table-04).

Efficient utilization of treated STP year wise

Amity University STP & ETP 2019 to 2021												
Treated Water Lake (Ltr.) Per Day Treated Water Chiller (Ltr.) Per Day Treated Water Flushing for Hostel (Ltr.) Per Day ETP Water for Lake (Ltr.) Per Day												
2019				2020				2021				
Lake	Chiller	Flushing	ETP to Lake	Lake	Chiller	Flushing	ETP to Lake	Lake	Chiller	Flushing	ETP to Lake	
572354	0	0	17064	395806	0	65225	10935	134193	0	14709	741	
587964	0	0	18428	374775	0	70285	11821	171071	0	12857	3750	
488967	0		17032	938580	0	33354	5032	295806	8612	29032	8709	
436200	39935		17066	620066		14833	933	22366	10133	45966	4700	
439129	54433	24033	13548	57612	0	12741	0	140645	0	18838	0	
240533	48935	50064	10400	121400	11400	14133	0	44333	0	18033	0	
299935	37900	39200	8967	63774	0	12516	0	128612	0	14419	0	
237033	33161	200129	10700	103322	3290	10838	1290	29354	0	14354	0	
339258	38433	154266	10193	37933	0	22900	1300	101000	0	2110	0	
194709	20129	119516	8870	140032	0	37580	1548	99258	8774	15290	8548	
106233	1700	134833	5161	139333	0	16233	3433	78333	0	22800	5733	
419677	0	80064	5548	135741	0	14709	1161					
Average	465141			292151				140451				



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- Parameters of the treated water has been validated by third party external test periodically



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Certificate of Analysis

Quality Standard		Parameters as desired					
Issued to	-	Green Wastech, Sushant Lok-1, Gurgaon					
Kind attn.	-	Mr.					
Analysis no.	-	21122701					
Nature of Sample	-	Waste Water Sample marked Amity Jaipur, STP Outlet					
Sample received on	-	27 th December 2021					
Report Date	-	1 st January 2022					
Analysis Dates	-	27 th December to 1 st January 2022					
Sample Receipt	-	By Client					
Sample Packing	-	Pet Bottle					
Sampling Method	-	Grab Sampling					
PARAMETER	UNITS	RESULTS	TEST METHOD	LIMIT			
				INLAND SURFACE	PUBLIC SEWER	LAND FOR IRRIGATION	
Organics	Chemical Oxygen Demand	mg/l	16	IS 3025 PART 39	250	--	--
	BOD for 03 days at 27°C	mg/l	5.2	IS 3025 PART 44	30	350	100
Physical	pH	Unit Less	7.43	IS 3025 PART 11	5.5-9.0	5.5-9.0	5.5-9.0
	Total Suspended Solids	mg/l	4.4	IS 3025 PART 17	100	600	200
	Total Dissolved Solids	mg/l	523	IS 3025 PART 18	2100	2100	2100
Chemical	Oil & Grease	mg/l	0.20	IS 3025 PART 39	10	20	10
Remarks: The no. of parameters tested is 06 only. The report is issued subject to the terms & conditions as mentioned over leaf.							
Chemist				Authorized Signatory			





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Test report of waste/treated water by external agency.



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Maintenance of water bodies and distribution system in the campus

- The University has five Academic Blocks, one Student Resource Centre, Five Hostel Blocks, Six faculty Blocks, One Staff Quarters Block.
- AUR has total 13 Nos. of borewell located at various locations.
- All borewells are fitted with water flow meters for measurements of daily water consumption. This helps in monitoring and control of water usage.
- Water from borewell first goes to underground tanks. From underground tanks, water is pumped to overhead tanks of academic/hostel blocks.
- Water coolers with aquaguards are fitted in all the hostels and academic blocks for drinking water.
- There are 50 overhead tanks (both RCC and Sintex) and 08 underground tanks.
- Overhead tanks supply water to all occupants of buildings. All the overhead tanks are fitted with water level indicator and alarming units for ease of information to the plumbers for switching On/off, thus avoiding spillage and wastage of water.
- There are total 10 plumbers of Amity University who will take care of the maintenance work.
- There is a complaint register for all the residents, they write their complaint in the register which will be rectified by these plumbers.



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Amity University Rajasthan. Borewell reading Logbook																		
Borewell No.	Jan-19			Feb-19			Mar-19			Apr-19			May-19			Jun-19		
	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance
1	28893	32963	4070															
2	7730	8819	1119	8819	10188	1369	10188	12325	2847	12325	15923	1600	15923	18264	18264	18264	18264	18264
3	2065	2731	666	2731	3412	681	3412	4218	806	4218	4819	601	4819	5489	5979	6488	6953	7465
4	12657	15263	2606	15263	17176	1913	17176	19078	1902	19078	21405	2327	21405	23960	2555	23960	24888	928
5	3022	6146	1924	6146	6522	376	6522	7609	1697	7609	8460	851	8460	9310	850	9310	10109	799
6	5275	6395	1120	6395	7221	826	7221	8227	1006	8227	9130	903	9130	10040	903	10040	10904	864
7	8673	9250	577	9250	10817	1557	10817	12316	1499	12316	13676	1360	13676	15076	15255	1579	15255	16241
8	8815	10783	1968	10783	12817	1634	12817	13866	1339	13866	15303	1414	15303	17080	1710	17080	17669	589
9	17479	23158	5679	23158	26103	2945	26103	29195	3092	29195	31867	2672	31867	35007	3140	35007	36646	1639
10	19956	20724	768	20724	23218	2494	23218	25274	2036	25274	27832	2058	27832	29467	1635	29467	30271	804
11	4745	4745	0	4745	4745	0	4745	4745	0	4745	4745	0	4745	4745	0	4745	4745	0
Monthly usage in KL			20057	17745			19271			18259			24026			14236		
daily usage in Litres			647000	633750			621645			608633			725032			474533.3		
Amity University Rajasthan. Borewell reading Logbook																		
Borewell No.	Jul-19			Aug-19			Sep-19			Oct-19			Nov-19			Dec-19		
	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance
1	53092	56698	3606	56698	60853	3755	60853	64955	4140	64955	69274	4789	69274	73663	3586	73663	78144	3561
2	8727	8086	2339	8086	10895	2809	10895	13658	2763	13658	16322	2664	16322	18814	2492	18814	21159	2345
3	16102	17459	1357	17459	19198	1739	19198	21286	2088	21286	23099	2023	23099	24656	1747	24656	27275	2119
4	3763	4631	266	4631	6554	323	6554	7211	627	7211	8198	987	8198	9172	974	9172	9702	530
5	24888	25388	500	25388	27284	1896	27284	29036	1722	29036	30198	1162	30198	31348	1150	31348	32406	1058
6	10109	10846	737	10846	11725	879	11725	12640	915	12640	13678	1038	13678	14659	987	14659	15433	830
7	10904	11822	918	11822	12746	924	12746	13595	849	13595	14416	821	14416	15287	871	15287	16115	828
8	16241	17276	1035	17276	18780	1504	18780	20256	1476	20256	20908	652	20908	22191	1283	22191	23583	1392
9	17669	18064	395	18064	18964	900	18964	19735	771	19735	20582	847	20582	21463	881	21463	22386	923
10	36646	40016	3370	40016	43155	3139	43155	45857	2702	45857	46175	318	46175	47638	1463	47638	50688	3059
11	19356	14047	811	14047	15556	1509	15556	16896	1340	16896	18709	1813	18709	20573	1864	20573	21644	1070
12	8312	9165	853	9165	10208	1047	10208	11043	835	11043	11508	466	11508	12288	780	12288	12865	587
Monthly usage in KL			17109	21322			20737			17110			19336			18825		
daily usage in Litres			551903	687806			691233			551935			644533			607258.1		
Amity University Rajasthan. Borewell reading Logbook																		
Borewell No.	Jan-20			Feb-20			Mar-20			Apr-20			May-20			Jun-20		
	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance
1	79229	79828	3899	79828	83427	5599	83427	86926	2620	86926	90274	3227	90274	90386	622	90386	90824	1884
2	21159	23398	2239	23398	25331	1933	25331	27034	1703	27034	30090	3056	30090	30747	657	30747	32306	1559
3	27775	29782	2007	29782	31156	1374	31156	32646	1490	32646	34553	1907	34553	35146	593	35146	36698	1552
4	3703	10325	623	10325	10728	403	10728	11042	314	11042	11444	402	11444	11612	168	11612	12084	452
5	32406	33184	778	33184	34451	1267	34451	35311	860	35311	35968	657	35968	36259	291	36259	37444	1185
6	15435	16194	759	16194	16859	665	16859	17443	584	17443	18107	664	18107	18271	164	18271	18732	467
7	16115	16966	851	16966	17735	769	17735	18382	647	18382	19334	952	19334	19221	113	19221	19799	578
8	23583	25074	1491	25074	26315	1241	26315	27402	1087	27402	28203	801	28203	28354	151	28354	28921	567
9	23847	26974	3127	26974	28263	1289	28263	29700	1437	29700	29413	483	29413	29745	332	29745	30412	667
10	30688	33374	2686	33374	35286	1912	35286	37352	2066	37352	38435	1083	38435	38896	461	38896	39862	966
11	21644	22812	1168	22812	23728	916	23728	24167	439	24167	24649	482	24649	24842	193	24842	25331	487
12	12845	13327	482	13327	13699	372	13699	14053	355	14053	14393	340	14393	14283	90	14283	14859	576
Monthly usage in KL			18010	16844			12026			13655			4208			10377		
daily usage in Litres			580968	580828			387935			455167			135742			345900		
Amity University Rajasthan. Borewell reading Logbook																		
Borewell No.	Jul-20			Aug-20			Sep-20			Oct-20			Nov-20			Dec-20		
	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance
1	92080	94157	2177	94157	96056	1899	96056	99249	3193	99249	101462	2213	101462	103986	2524	103986	105714	1728
2	32306	33765	1459	33765	35134	1369	35134	36449	1315	36449	37510	1061	37510	38544	1034	38544	39360	816
3	36698	38077	1379	38077	39356	1279	39356	40822	1466	40822	42403	1581	42403	44157	1754	44157	45202	1045
4	12064	12551	487	12551	13033	484	13033	13473	440	13473	13982	509	13982	14374	392	14374	14666	292
5	37444	38528	1084	38528	39655	1127	39655	40712	1055	40712	41575	863	41575	42194	619	42194	42736	542
6	18732	19214	482	19214	19682	468	19682	20203	521	20203	20785	582	20785	21358	573	21358	21648	290
7	19299	20083	784	20083	20242	159	20242	20306	64	20306	20350	44	20350	20885	535	20885	21202	317
8	28021	29652	1631	29652	30433	780	30433	31163	731	31163	31882	719	31882	32691	809	32691	33362	671
9	30412	31054	642	31054	31896	842	31896	32773	877	32773	33660	1087	33660	34550	890	34550	34986	436
10	29602	30411	809	30411	31268	857	31268	32199	931	32199	33121	922	33121	34049	928	34049	34986	937
11	25331	25882	551	25882	26418	536	26418	26918	500	26918	27502	584	27502	28088	586	28088	28598	510
12	14829	15304	475	15304	15744	440	15744	16120	376	16120	16340	220	16340	16340	0	16340	16340	0
Monthly usage in KL			10730	10292			11627			10875			10834			7808		
daily usage in Litres			346129	332000			387567			350806			361133			251871		
Amity University Rajasthan. Borewell reading Logbook																		
Borewell No.	Jan-21			Feb-21			Mar-21			Apr-21			May-21			Jun-21		
	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance	1st Reading	Last Reading	Balance
1	10574	107909	2175	107909	110064	2155	110064	112592	2528	112592	115764	3172	115764	119282	3518	119282	123022	3020
2	38360	40331	971	40331	41308	977	41308	42390	1082	42390	43457	1067	43457	44447	990	44447	45162	715
3	45202	46624	1422	46624	47889	1265	47889	49339	1450	49339	50667	1328	50667	52059	1392	52059	53555	596
4	14666	14915	249	14915	15132	217	15132	15710	578	15710	16244	534	16244	16753	509	16753	17151	416
5	42736	43389	653	43389	44057	668	44057	45221	1164	45221	47392	1171	47392	48705	1313	48705	49705	1000
6	21648	22175	527	22175	22844	669	22844	23021	177	23021	23428	407	23428	23719	291	23719	24044	325
7	21202	21823	621	21823	22445	622	22445	23241	796	23241	24059	818	24059	24942	883	24942	25666	784
8	33562	34209	647	34209	34912	70												



AMITY UNIVERSITY

RAJASTHAN

Amity University Rajasthan (established in 2007) is utilizing underground water for drinking/domestic consumption and irrigation to its green belt, also harvesting rainwater to replenish its borewells at various locations. University strongly believes in environment consciousness and focusses on reutilization of water, established state of art on campus treatment plant to purify used water and produce quality water for irrigation and developed robust infrastructure to maintain waterlines.

The water management of the University is well supported by State Pollution Control Board.

Document in support of Preventing Water System Pollution from

Rajasthan State Pollution Control Board.



Head Office (MUID)
Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302
Phone: 0141-5159600, 5159695 Fax: 0141-5159697



Registered

File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1394-1396

Order No : 2019-2020/MUID/5204

Dispatch Date: 08/07/2019

Unit Id : 56628

M/s Ritnand Balved Education Foundation

E-27, Defence Colony, New Delhi-110024. .

Sub: **Consent to Establish** under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(4) of Air (Prevention & Control of Pollution) Act, 1981.

Ref: Your application(s) for Consent to Establish dated 19/02/2016 and subsequent correspondence.

Sir,

Consent to Establish under the provisions of section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder **is hereby granted** for your **Amity University plant** situated / proposed at **Plot No SP- 1, Kant Kalwad, RIICO Industrial Area, Jaipur Tehsil:Amber District:JAIPUR** . Rajasthan under the provisions of the said Act(s). This consent is granted on the basis of examination of the information furnished by you in consent application(s) and the documents submitted therewith, subject to the following conditions:-

- 1 That this Consent to Establish is valid for a period from **19/02/2016 to 31/01/2021 or date of Commencement of production / commissioning of the project or activities whichever is earlier** .

- 2 That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below.

Particular	Type	Quantity / Capacity
GROSS BUILT UP AREA	Activity	144,075.99 SQ. METER
PLOT AREA	Activity	615,117.40 SQ. METER

- 3 That in case of any increase in capacity or addition / modification / alteration or change in product mix or process or raw material or fuel the project proponent is required to obtain fresh consent to establish.

Page 1 of 7

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Digitally signed by Mahavir Mehta
Date: 2019.07.08 12:46:09 IST
Reason: Self Attested
Location:



Head Office (MUID)
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Order No: 2019-2020/MUID/5204

Dispatch Date: 08/07/2019

Unit id : 56628

- 4 That the control equipment as proposed by the applicant shall be installed before trial operation is started for which prior consent to operate under the provision of the **Water Act and Air Act** shall be obtained. This consent to establish shall not be treated as consent to operate.
- 5 That the quantity of effluent generation and disposal along with mode of disposal for the treated effluent shall be as under:

Type of effluent	Max. effluent generation (KLD)	Quantity of effluent to be recycled (KLD)	Quantity of treated effluent to be disposed (KLD) and mode of disposal
Domestic Sewage	675.000	615.000	60.000 Sludge & Evaporation Loss

- 6 That the sources of air emissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:



Head Office (MUID)
Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302
Phone: 0141-5159600, 5159695 Fax: 0141-5159697

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File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1394-1396

Order No : 2019-2020/MUID/5204

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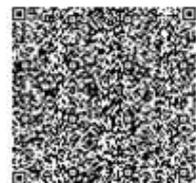
Unit Id : 56628

Sources of Air Emissions	Pollution Control Measures	Prescribed	
		Parameter	Standard
DG Set (1 Nos.)(320KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set (4 Nos.)(600KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set(1 Nos.)(400KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set(1 Nos.)(82.5KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set(2 Nos.)(750KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--

- 7 That the **Amity University plant** will comply with the standards as prescribed vide MOEF notification No. GSR 826(E) dated 16th November, 2009 with respect to National Ambient Air Quality Standards.

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File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1394-1396

Order No: 2019-2020/MUID/5204

Dispatch Date: 08/07/2019

Unit Id : 56628

- 8 That the domestic sewage shall be treated before disposal so as to conform to the standards prescribed by the Board as notified under the Environment (Protection) Act-1986 for disposal **Into Inland Surface Water**. The main parameters for regular monitoring shall be as under.

Parameters	Standards
Total Suspended Solids	Not to exceed 100 mg/l
pH Value	Between 5.5 to 9.0
Oil and Grease	Not to exceed 10 mg/l
Biochemical Oxygen Demand (3 days at 27°C)	Not to exceed 30 mg/l
Chemical Oxygen Demand	Not to exceed 250 mg/l

- 9 That the unit shall obtain all necessary permission from concern authority & district administration, Jaipur related to establish of this institute.
- 10 That the unit shall not abstract ground water without prior permission of CGWA.
- 11 That the industry shall comply with all the guidelines issued from CGWA for ground water abstraction.
- 12 That the industry shall comply with the standards as prescribed vide MOEF notification no. GSR 826(E) dated 16th November, 2009 with respect to National Ambient Air Quality.
- 13 That the P.P. shall install and commission the STP of 750 KLD and ETP of 50 KLD to treat the waste water (675 KLD) generated from all the utilities.
- 14 That the total water consumption for the complete project shall not exceed-1309 KLD (Fresh-694 KLD+ recycled-615 KLD), after full occupancy.
- 15 That the water flow meters shall be provided at all suitable points to measure quantity of daily water consumption, waste water generation, waste water treated and treated waste water recycled and utilized for plantation/gardening purposes. Daily record of the same shall be maintained and to be submitted to the Board.
- 16 That the entire treated sewage shall be utilized within the premises for flushing, landscaping & general washing etc and Zero discharge status shall be maintained outside the premises.
- 17 That the unit shall dispose the sludge of STP in scientific manner.

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File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1394-1396

Order No : 2019-2020/MUID/5204

Dispatch Date: 08/07/2019

Unit Id : 56628

- 18 That the unit shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.
- 19 That this consent to establish is being issued for Proposed project- "Amity University" with plot Area - 615117.40 Sq. meter and Gross Built-up Area - 144075.99 Sq. meter only. For any change in capacity of the services & area, the unit has to seek fresh consent to establish.
- 20 That the treated sewage (615 KLD) shall be recycled within premises for flushing-150 KLD, Landscaping & General Washing-335 KLD and cooling tower-130 KLD within the premises.
- 21 That the unit shall maintain adequate height of stack (minimum 30 meters with each) along with acoustic enclosures on one D.G. Set of 320 KVA, one D.G. set of 400 KVA, four D.G. sets of 600 KVA, two D.G. sets of 750 KVA & one D.G. set of 82.5 KVA.
- 22 That unit shall not allow to install any other air pollution source i.e. Boiler/Hot Water generator etc without prior consent to establish from the Board under the Air Act 1981.
- 23 That unit shall not discharge treated waste water to any natural water flow to any water body and completely utilize within the project.
- 24 That the P.P. shall ensure proper reuse of domestic waste water after adequate treatment.
- 25 That the project cost shall not exceed to Rs. 277.76 Crores. In case of any change in project cost, the project proponent shall have to deposit additional consent fee as per applicable fee notification.
- 26 That the unit shall not allow making any obstacles to any natural water flow i.e. natural nallah/stream carrying rain water to any water body.
- 27 That the unit shall install adequately designed rain water harvesting structure for prevention and recharge of ground water in and around the area.
- 28 That the solid waste generated should be properly collected & segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.
- 29 That energy conservation measures like installation of CFLs/FLs for lighting the areas outside the project should be integral part of the project design and should be in place before project commissioning.
- 30 That used CFLs/FLs should be properly collected and disposed off/sent for re-cycling as per the prevailing rules/guidelines issued by the regulatory authority. Use of solar panels also may be done to the extent possible.
- 31 That adequate measures should be taken to prevent odour problem from STP.
- 32 That this consent to establish shall be subject to compliance of any direction or order passed by Court of Law in the matter.

Page 5 of 7

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Rajasthan State Pollution Control Board
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File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1394-1396

Order No : 2019-2020/MUID/5204

Dispatch Date: 08/07/2019

Unit Id : 56628

- 33 That the P.P. shall provide and maintain the Oil & Grease trap in good condition, so that oil & grease coming with waste water from kitchen/laundry will retained in the trap.
- 34 That the PP shall submit yearly Environmental Audit Statement on or before September of every year.
- 35 The industry shall not use pet coke and F.O. or any other such fuel which is banned by Hon'ble Supreme Court of India or any other Court of Law or Government of Rajasthan.
- 36 That, notwithstanding anything provided hereinabove, the State Board shall have power and reserves its right, as contained under section 27(2) of the Water Act and under section 21(6) of the Air Act to review anyone or all the conditions imposed here in above and to make such variation as it deemed fit for the purpose of compliance of the Water Act and Air Act.
- 37 That the grant of this **Consent to Establish** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ project proponent.
- 38 That the grant of this **Consent to Establish** shall not, in any way, adversely affect or jeopardize the legal proceedings, if any, instituted in the past or that could be instituted against you by the State Board for violation of the provisions of the Act or the Rules made thereunder.

This **Consent to Establish** shall also be subject, beside the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The project proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time, be specified by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Establish** and project proponent / occupier shall be liable for legal action under the the relevant provisions of the said Act(s).

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Sub: (B) Issuance of Consent to Operate(CTO) from Rajasthan State

**Pollution Control Board, 4 Institutional Area, Jhalana Doongari,
Jaipur-302 004**

1. We had also applied online for obtaining Consent to Operate (CTO) to Rajasthan State Pollution Control Board (RSPCB) Jaipur on 13/03/2018 under section 25/26 of the water (Prevention & Control of Pollution) Act, 1974 and under section 21(4) of Air (Prevention & Control of Pollution) Act, 1981,
2. We are in receipt of the sanction to the issue of Consent to Operate (CTO) from Rajasthan State Pollution Control Board 4 Institutional Area, Jhalana Doongari, Jaipur vide their letter order No. 2019-2020/MUID/5203 dated.08.07.2019 (copy enclosed for your reference)



Head Office (MUID)
Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
Phone: 0141-5159600,5159695 Fax: 0141-5159697



Registered

File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1391-1393

Order No : 2019-2020/MUID/5203

Date: 08/07/2019

Unit Id : 56628

M/s Ritnand Balved Education Foundation

E-27, Defence Colony, New Delhi-110024. .

Sub: **Consent to Operate** under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(4) of Air (Prevention & Control of Pollution) Act, 1981.

Ref: Your application for Consent to Operate dated 13/03/2018 and subsequent correspondence.

Sir,

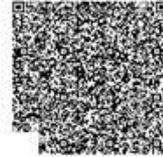
Consent to Operate under the provisions of section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 (hereinafter to be referred as the Water Act) and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981, (hereinafter to be referred as the Air Act) as amended to date and rules & the orders issued thereunder **is hereby granted** for your **Amity University plant** situated at **Plot No SP- 1, Kant Kalwad, RIICO Industrial Area, Jaipur Tehsil:Amber District:JAIPUR**, Rajasthan, subject to the following conditions:-

- 1 That this Consent to Operate is valid for a period from **13/03/2018 to 29/02/2028** .
- 2 That this Consent is granted for manufacturing / producing following products / by products or carrying out the following activities or operation/processes or providing following services with capacities given below.

Particular	Type	Quantity with Unit
GROSS BUILT UP AREA	Activity	144,075.99 SQ. METER
PLOT AREA	Activity	615,117.40 SQ. METER

- 3 That this consent to operate is for existing plant, process & capacity and separate consent to establish/operate is required to be taken for any addition / modification / alteration in process or change in capacity or change in fuel.
- 4 That the quantity of effluent generation along with mode of disposal for the treated effluent shall be as under:

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Date: 2019.07.08 12:45:38 IST
Reason: Self Attested
Location:

Head Office (MUID)
Rajasthan State Pollution Control Board
 4, Institutional Area, Jhalana Doongari, Jaipur-302 004
 Phone: 0141-5159600,5159695 Fax: 0141-5159697

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File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1391-1393

Order No : 2019-2020/MUID/5203

Date: 08/07/2019

Unit Id : 56628

Type of effluent	Max. effluent generation (KLD)	Recycled Qty of Effluent (KLD)	Disposed Qty of effluent (KLD) and mode of disposal
Domestic Sewage	675.000	615.000	60.000 Sludge & Evaporation Loss

- 5 That the sources of air emissions along with pollution control measures and the emission standards for the prescribed parameters shall be as under:

Sources of Air Emissions	Pollution Control Measures	Prescribed	
		Parameter	Standard
DG Set (1 Nos.)(320KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set (1 Nos.)(400KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set (1 Nos.)(82.5KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set (2 Nos.)(750KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--
DG Set (4 Nos.)(600KVA)	ACOUSTIC ENCLOSURE , WITH ADEQUATE STACK HEIGHT	--	--

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Order No : 2019-2020/MUID/5203

Date: 08/07/2019

Unit Id : 56628

- 6 That the domestic sewage shall be treated before disposal so as to conform to the standards prescribed under the Environment (Protection) Act-1986 for disposal **Into Inland Surface Water**. The main parameters for regular monitoring shall be as under.

Parameters	Standards
Total Suspended Solids	Not to exceed 100 mg/l
pH Value	Between 5.5 to 9.0
Oil and Grease	Not to exceed 10 mg/l
Biochemical Oxygen Demand (3 days at 27°C)	Not to exceed 30 mg/l
Chemical Oxygen Demand	Not to exceed 250 mg/l

- 7 That the unit shall obtain all necessary permission from concern authority & district administration, Jaipur related to Operation of this institute.
- 8 That the unit shall not abstract ground water more than 694 KLD without prior permission of CGWA.
- 9 That the industry shall comply with all the guidelines issued from CGWA for ground water abstraction.
- 10 That the industry shall comply with the standards as prescribed vide MOEF notification no. GSR 826(E) dated 16th November, 2009 with respect to National Ambient Air Quality.
- 11 That the P.P. shall install and commission the STP of 750 KLD and ETP of 50 KLD to treat the waste water (675 KLD) generated from all the utilities.
- 12 That the total water consumption for the complete project shall not exceed-1309 KLD (Fresh-694 KLD+ recycled-615 KLD), after full occupancy.
- 13 That the water flow meters shall be provided at all suitable points to measure quantity of daily water consumption, waste water generation, waste water treated and treated waste water recycled and utilized for plantation/gardening purposes. Daily record of the same shall be maintained and to be submitted to the Board.
- 14 That the entire treated sewage shall be utilized within the premises for flushing, landscaping & general washing etc and Zero discharge status shall be maintained outside the premises.
- 15 That the unit shall dispose the sludge of STP in scientific manner.
- 16 That the unit shall ensure compliance of ambient air quality standard in respect of noise as prescribed under Environment (Protection) Act & Rules made therein.

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Rajasthan State Pollution Control Board
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Registered

File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1391-1393

Order No : 2019-2020/MUID/5203

Date: 08/07/2019

Unit Id : 56628

- 17 That this consent to operate is being issued for Proposed project- "Amity University" with plot Area - 615117.40 Sq. meter and Gross Built-up Area - 144075.99 Sq. meter only. For any change in capacity of the services & area, the unit has to seek fresh consent to establish.
- 18 That the treated sewage (615 KLD) shall be recycled within premises for flushing 150 KLD, Landscaping & General Washing-335 KLD and cooling tower-130 KLD within the premises.
- 19 That the unit shall maintain adequate height of stack (minimum 30 meters with each) along with acoustic enclosures on one D.G. Set of 320 KVA, one D.G. set of 400 KVA, four D.G. sets of 600 KVA, two D.G. sets of 750 KVA & one D.G. set of 82.5 KVA.
- 20 That unit shall not allow to install any other air pollution source i.e. Boiler/Hot Water generator etc without prior consent to establish from the Board under the Air Act 1981.
- 21 That unit shall not discharge treated waste water to any natural water flow to any water body and completely utilize within the project.
- 22 That the P.P. shall ensure proper reuse of domestic waste water after adequate treatment.
- 23 That the project cost shall not exceed to Rs. 277.76 Crores. In case of any change in project cost, the project proponent shall have to deposit additional consent fee as per applicable fee notification.
- 24 That the unit shall not allow making any obstacles to any natural water flow i.e. natural nallah/stream carrying rain water to any water body.
- 25 That the unit shall install adequately designed rain water harvesting structure for prevention and recharge of ground water in and around the area.
- 26 That the solid waste generated should be properly collected & segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.
- 27 That energy conservation measures like installation of CFLs/FLs for lighting the areas outside the project should be integral part of the project design and should be in place before project commissioning.
- 28 That used CFLs/FLs should be properly collected and disposed off/sent for re-cycling as per the prevailing rules/guidelines issued by the regulatory authority. Use of solar panels also may be done to the extent possible.
- 29 That adequate measures should be taken to prevent odour problem from STP.
- 30 That this consent to Operate shall be subject to compliance of any direction or order passed by Court of Law in the matter.

Signature Not Verified

Digitally signed by Mahavir Mehta
Date: 2019.07.08 12:45:38 IST
Reason: Self Attested
Location:





Head Office (MUID)
Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
Phone: 0141-5159600,5159695 Fax: 0141-5159697

Registered

File No : F(MUID)/Jaipur(Amber)/17(1)/2015-2016/1391-1393

Order No : 2019-2020/MUID/5203

Date: 08/07/2019

Unit Id : 56628

- 31 That the P.P. shall provide and maintain the Oil & Grease trap in good condition, so that oil & grease coming with waste water from kitchen/laundry will retained in the trap.
- 32 That the PP shall submit yearly Environmental Audit Statement on or before September of every year.
- 33 The industry shall not use pet coke and F.O. or any other such fuel which is banned by Hon'ble Supreme Court of India or any other Court of Law or Government of Rajasthan.
- 34 That, notwithstanding anything provided hereinabove, the State Board shall have power and reserves its right, as contained under section 27(2) of the Water Act and under section 21(6) of the Air Act to review anyone or all the conditions imposed here in above and to make such variation as it deemed fit for the purpose of Air Act & Water Act.
- 35 That the grant of this **Consent to Operate** is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ project proponent.
- 36 That the grant of this **Consent to Operate** shall not, in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be instituted against you by the State Board for violation of the provisions of the Act or the Rules made thereunder.

This **Consent to Operate** shall also be subject, besides the aforesaid specific conditions, to the general conditions given in the enclosed Annexure. The project proponent will comply with the provisions of the **Water Act and Air Act** and to such other conditions as may, from time to time, be specified, by the State Board under the provisions of the aforesaid Act(s). Please note that, non compliance of any of the above stated conditions would tantamount to revocation of **Consent to Operate** and project proponent / occupier shall be liable for legal action under the relevant provisions of the said Act(s).

This bears the approval of the competent authority.

Yours Sincerely

Group Incharge[MUID]

Signature Not Verified

Digitally signed by Mahavir Mehta
Date: 2019.07.08 12:45:38 IST
Reason: Self Attested
Location:





Head Office (MUID)
Rajasthan State Pollution Control Board
4, Institutional Area, Jhalana Doongari, Jaipur-302 004
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Order No : 2019-2020/MUID/5203

Date: 08/07/2019

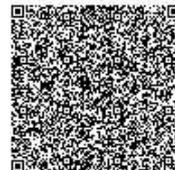
Unit Id : 56628

Copy To:-

- 1 Regional Officer, Regional Office, Rajasthan State Pollution Control Board, Jaipur (N) with requested to inspect the institute and verify the compliance of CTO and forward the detailed inspection report to HO for further action within 6 months
- 2 Master File.

Group Incharge[MUID]

Signature Not Verified
Digitally signed by Mahavir Mehta
Date: 2019.07.08 12:45:38 IST
Reason: Self Attested
Location:





AMITY UNIVERSITY

RAJASTHAN

Amity University Rajasthan is providing purified drinking water to all the Students, Staff and Visitors. **Water Purifying System** with **zero wastage** of water are installed in all of the academic and residential buildings including Hostels. University has also appointed dedicated staff to monitor water quality and maintenance of machineries, also cross checking its quality by NABL accredited laboratories.





AMITY UNIVERSITY

RAJASTHAN

The University is ever proactive in its responsibility towards environmental awareness. It has been aggressively involved in:- Use of renewable energy & energy conservation Water harvesting - Artificial lake Ground water recharge pits Green Belt Development - Neem Forest, Bamboo cultivation trial Conservation of Campus Flora Sewerage Treatment Plant Lush green lawns. Waste management

All the buildings at Amity University Rajasthan are installed with Wireless Water Level Controller to minimize any wastage of water from the Water Tanks. Borewell recharge Pit is in place to collect Rainwater from low lying areas.



Purpose of Borewell Recharge Pit



- Divert rainwater from low lying areas to prevent flooding
- Provide a passage for rainwater from terraces of buildings and other structures
- Channelise the water to a borewell through proper filtering, thus harvesting for future use
- Recharge of dry borewells to prevent digging of new ones
- Conservation of water through eco friendly means
- Ensures proper utilisation of rainwater which otherwise could stagnate and fester mosquitoes / harmful bacteria

Rainwater flows in recharge pit



The rainwater from low lying areas and terraces diverted to the recharge pit.



AMITY UNIVERSITY

— RAJASTHAN —

Amity University Rajasthan strongly believe in environment consciousness, as we are located in semi-arid part of Indian Thar Desert we have given priority to the xerophytic “Draught Tolerant Plants” while planning green belt. University has well protected these resident plants and added similar quality plants annually to strengthen green campus.

The University has created a beautiful lake using the water harvesting technology. The rain-fed lake is surrounded by trees on one side and has a walking track on the other side. It has multiple fountains that are run in the evening during the summers to aerate the lake water.

There is a huge Neem Forest with walking tracks besides the lake. Most of the plantation within the campus is done keeping in mind the Water Conscious characteristics of the plants. The Watering for the plants are generally done in the evening through water sprinklers using the treated water of the lake.

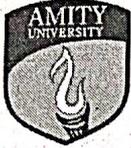


Water Conscious Planting. (Kiker -Acacia sp., Kejri - Prosopis sp. Kadam – Mitragyna sp, Khajur –



Phoenix sp., Neem – Azardirecta sp. Amaltash – Casia sp. Kachnar – Bohenia Sp. Gulmohar – Delonix sp. etc)





AMITY UNIVERSITY

RAJASTHAN

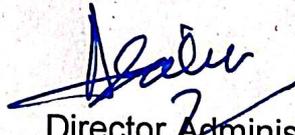
Kant Kalwar,
Jaipur - Delhi NH 11- C
JAIPUR (Raj.) - 303 002
Tel: : 01426 - 405678
Fax: : 01426 - 405679

Water is supplied in AUR through bore wells. All the utilized water is recycled through STP and ETP. Major usage of recycled water is in irrigation of grass/plants through an artificial lake. Other usage of recycled water includes toilet flushing of Hostel buildings and Chiller plant.

Details of last 6 months is as follows: -

Usage of Recycled Water in KL					
Month	Lake for irrigation usage	Hostel Toilet Flushing	Chiller Condensor	ETP water for irrigation	Total recycled water usage
May' 2022	9270	2582	1660	674	14186
Jun' 2022	9194	982	0	106	10282
Jul' 2022	8954	644	677	214	10489
Aug' 2022	11130	1367	1165	411	14073
Sep' 2022	12550	2950	1213	707	17420
Oct' 2022	11056	2350	334	519	14259




Director Administration
10/11



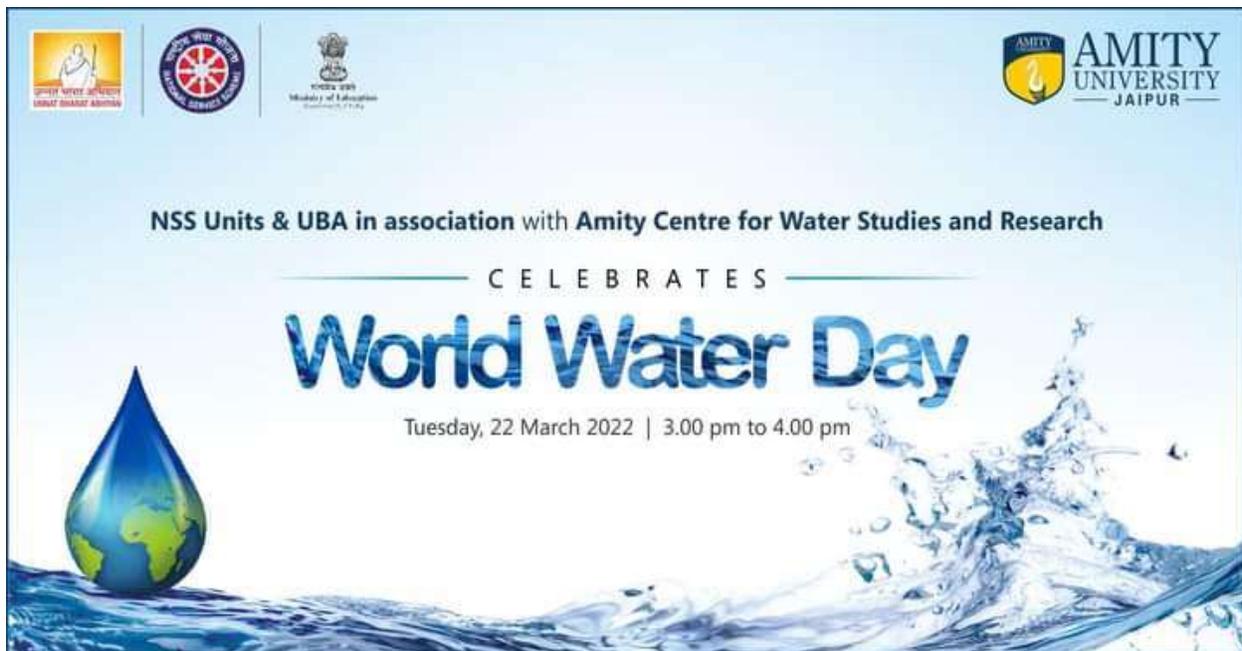
AMITY UNIVERSITY

— RAJASTHAN —

[The Amity Centre for Water Studies and Research](#) has been established with a vision to provide excellence in teaching, research and consultancy in water and water related issues. The centre envisages offering solutions to all water related problems as a consultant organization and to produce highly trained and skilled graduates to deal with the water related issues in a multidisciplinary approach involving a converging approach of science technology and engineering to address local regional, national and global problems related to water availability and sustainable development.

These include among others, new areas of water toxicity due to nanomaterials and other engineered toxic substances Issues arising out from the global warming and climate changes and their intricate relationships with water.

This is the only a dedicated Centre in the western region which envisages on research, teaching and outreach activities in Water sector to address the exclusive challenges being faced by arid to semiarid region.



World Water Day was celebrated to create awareness among the communities on Water Management.



AMITY UNIVERSITY

RAJASTHAN

World Water Day Celebration-2022

22 March 2022

NSS Units and UBA Cell in association with Amity Centre for Water Studies celebrated World Water Day on 22 March 2022 via hybrid mode. Prof Shruti Mathur, AIB, AUR and Coordinator Amity Centre for Water studies and Research delivered a lecture and her talk focused on the how groundwater resources are created by the process of rainfall and percolation of water through the soil highlighting the importance of maintenance of soil structure for proper percolation and retention of rainwater.

After the talk, participants presented posters and slogans followed by quiz competition on water day. The event was attended by more than fifty students from Amity and other universities, some villagers from adopted villages and NSS officers such as Dr. Kaushal Kishore Sharma, Mr. Vinod Sharma, Mr. Rituraj Taye and Ms. Ishani Gogoi. Dr. Manoj Kumar, Coordinator NSS & UBA thanked the speaker and the participants for their active participation in the event.

List of Attendees

S.No. Name Enrolment Number

- 1 Seema Ratnu A21957420003
- 2 Shaina A20349321031
- 3 Srashta Garg A21006920019
- 4 Meghna Nair A210118721019
- 5 Tannu Shekhawat A21957420011
- 6 Urvashi Yadav A21957421006
- 7 Vijay Gaur A20001921015
- 8 Virginia Merlyn Scott A21006921003
- 9 Vishakha Kaushik A21521520012
- 10 Ashley Zothansangi Sailo A210118721006
- 11 Lalani Vipasha A210118721013
- 12 Raj sahu A21806221001
- 13 Siddhika Gupta A21806221004
- 14 Mahima Sharma A20001921025
- 15 Bhagyashree Jhanwar A20001921039
- 16 UTKARSH DUBEY A20001921036
- 17 Khushi Jangid A21806121006

18 Jeet Kumar Singh A20405221137

19 Jyoti yadav A20001921038

20 SHIV NARAYAN MITTAL A20001921017



AMITY UNIVERSITY

— RAJASTHAN —

Amity University Rajasthan is located on foothills of Aravalli Range and comes under semi-arid zone of Indian Thar dessert, so justifiable water use is already in our Strategic plan and since inception we have incorporated the same in our buildings and practices.

We have identified underground on campus water pockets and begin its recharge mechanism by using rainwater simultaneously focusing on smart harvesting for domestic use.

As we are environment conscious, ensured reuse of recycled water instead of keeping dependency on underground water only.

We have aligned our policies and practices with the regional needs, complying with the State and Central Government's policies on conservation of water security.

Some of the major initiatives are listed below...

- Borewell Recharge Pits
- Rainwater Harvesting
- Artificial lake pumping recycled water
- Sewage treatment Plant
- Use of treated water in Hostel Toilets and Irrigation purposes
- Water sprinklers for landscaping
- Water conscious plantings



Mapping of Water Conservation Practices in Amity University Rajasthan



Lake



Sprinkler for Irrigation



Cooling Ducts

AUR campus has an in house sewage treatment plant. (STP). Water treated in the STP is used for cooling ducts, irrigating the campus greens and collection in the lake.



Surface Drain Pipe (Top View)
Roof Top Drain Pipe (inset)



Water Collection Pit

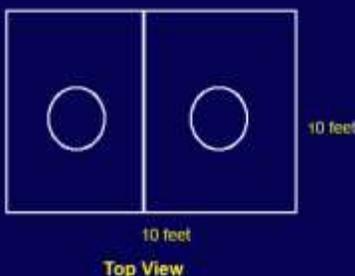


Surface Drain Pipe (Side View)



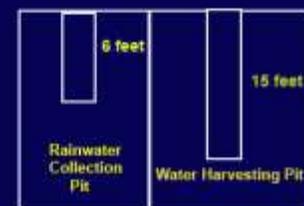
Borewell

On the rooftop of every building there are roof drains for removing water from roof surface (inset). The water from these roof drains and from surface drain pipes all across the campus is taken to rainwater collection pit and from there it gets transferred to water harvesting pit. Approximately 22 lac litres of water has been collected in the last one year of rainfall and recharged into the groundwater.



Top View

Water Collection Pit



Side View

Guidance

Prof.(Dr.) Shruti Mathur , AIB and
Coordinator, Amity Centre for Water
Studies and Research

Dr Pankaj Sharma, ASET and
Co-coordinator, Amity Centre for Water
Studies and Research

Prepared By

Mr Pankaj Giri Goswami
B.Tech Biotech (2020-24)

Acknowledgements

Gp.Capt. (Retd.) Ajoy Mudaliar
Director (Admin)

Mr. Sudarshan Chauhan
Asst. Manager (Admin)

Mr Sanjit Singh
ASCO(Photography)

Amity School of Architecture & Planning, Amity University Rajasthan, visited the temple town of Pushkar on 06.07.2022. The aim of the visit was to study the historical and heritage context of Pushkar with a focus on understanding the various layers of the city and its issues. The architecture students of Amity University Rajasthan explored, documented, analyzed, understand, hold discussions with various local stakeholders and synthesize and propose an architectural intervention relevant to Pushkar and its issues. Thus, taking Pushkar as a Living Lab, an open source of endless learning for the students of architecture.

In the recent visit the faculty and director Prof. Tanaya Verma visited the ghats and the precinct. They also had discussions with Chairman Kamal Pathak, (Adhyaksh) Pushkar Nagar Palika, who shared about the challenges and issues faced by the governing body.

Assistant Engineer, Shri Vishnu Adania, Pushkar Nagar Palika highlighted the various challenges of the prevailing old sewerage treatment system which is stressed due to increase in the tourist population. He also discussed about the stagnant and deteriorate lake water. The water in the Pushkar sarowar is collected due to natural slop from the runoff the adjoining areas. The water is aerated by way of aeration fountains but this not enough for improving the water quality of the lake. The PH values of the water is not suitable for bathing or consumption. The issue of water and its conservation and treatment is taken up by the students in the vertical studio which aims to create a shared experience for the students of Bachelor of Architecture and Bachelor of Interior Design at different levels within the given curriculum during the Odd Semester of the Academic Year 2022- 2023.

Conservation of Lake

Pushkar Lake is surrounded by 52 bathing ghats (a series of steps leading to the lake), where pilgrims throng in large numbers to take a sacred bath, especially around Kartik Poonima (October–November) when the Pushkar Fair is held. A dip in the sacred lake is believed to cleanse sins and cure skin diseases. Over 500 Hindu temples are situated around the lake precincts.

The lake is in semi circular shape with a depth of about 9 to 10 mts. The total storage capacity of the lake is 0.79 million cubic metres (1.03 million cu yd). The quality of the water in the lake is deteriorating severely due to various reasons as mentioned below:

- Untreated sewage inflow • Encroachments
- Washing of clothes
- Unmanaged aquatic flora and fauna
- Cattle population pressure
- Lack of cleanliness
- Water temperature

Morphological features of Pushkar lake

S.No.	Features	Details
1.	Period of Construction	12 th century
2.	Type	Artificial lake
3.	Catchment area, km ²	22
4.	Max depth	9-10 m
5.	Source of Water	Luni river
6.	Main uses of water	Mass bathing, washing clothes, holy rituals
7.	Volume of lake	790000 cu.m

The program shall involve the students of various B.Arch and B.ID batches to take up different design projects in their respective studios and contribute to the overall theme of **“Revitalizing the Sacred Spaces of Rajasthan: A case of Pushkar”**. The Studio will be termed as **VIDHII: Vertical Integrated Design studio & Holistic Interpretation of the Historical context of Pushkar**.

The Vertical Studio VIDHI- Pushkar living labs is designed to bring together policymakers, city governments, residents, and research institutions to collaboratively address local urban problems and architectural intervention for addressing congestion, livability, promote sustainable growth, sanitation or the need for more green cover. The vertical studio gives a platform for review, rethink, and revise urban policy. The studio also focuses on carefully managing and will aim to, design which can attract tourism investment in a sustainable way, involving local communities without damaging the heritage areas.

Objectives of the Study:

- learning by using multi-disciplinary approaches to learn and create knowledge about urban problems - Pushkar Living Lab
- engaging with governments, private actors and policy knowledge institutions to review, select, design, test and fine tune relevant global and local solutions to their needs
- co-creating collaborative spaces for residents to participate in urban planning processes
- work towards helping cities address sustainability and livability by integrating global and local solutions.

Through this we are targeting the United Nations Sustainable Development Goals (SDGs) 6 and SDG 11: The studio also focuses on carefully managing and will aim to, design which can attract tourism investment in a sustainable way, involving local communities without damaging the heritage areas.



अजमेर 08-07-2022

आर्किटेक्चर विद्यार्थियों ने समझी ऐतिहासिक इमारतों की बनावट

अजमेर | जयपुर की एमिटी यूनिवर्सिटी के स्कूल ऑफ आर्किटेक्चर एंड प्लानिंग डिपार्टमेंट के विद्यार्थियों के दल ने पुष्कर भ्रमण कर ऐतिहासिक इमारतों की बनावट और निर्माण के तरीकों को बारीकी से जाना। इस भ्रमण का मुख्य उद्देश्य ऐतिहासिक इमारतों और विरासत को करीब से जानना था। विद्यार्थियों ने पुष्कर की इमारतों, वास्तुकला, हस्तकला, घाटों, मंदिरों आदि को अपने प्रोजेक्ट में शामिल कर भविष्य में धरोहरों को बचाने से जुड़े विषय पर विस्तार से चर्चा की। फैकल्टी मेंबर्स ने लाइव प्रयोगशाला के रूप में पुष्कर की वास्तु व हस्तशिल्प कला, पुष्कर के घाटों व



परिसर का दौरा किया। डायरेक्टर प्रो. तान्या वर्मा ने पुष्कर नगर पालिका अध्यक्ष कमल पाठक से मुलाकात कर पुष्कर की खूबियों को जाना। इंजीनियर विष्णु अदानिया ने सीवरेज की कार्यप्रणाली और आने वाली समस्याओं की जानकारी दी। प्रो. तान्या वर्मा ने बताया कि पुष्कर की ऐतिहासिक इमारतों को

प्रोजेक्ट में शामिल किया गया है। राजस्थान के धार्मिक स्थानों को पुनर्जीवित करने के उद्देश्य से पुष्कर को पायलट प्रोजेक्ट में शामिल कर वर्टिकल स्टूडियो का निर्माण किया जाएगा। इसका मुख्य उद्देश्य विरासत को बगैर नुकसान पहुंचाए पर्यटन स्थल को आकर्षित बनाया जाना है।

