6 CLEAN WATER AND SANITATION

Introduction

In line with the Sustainable Development Goal "Clean Water and Sanitation," Sharda University is fully committed to providing access to essential water, sanitation, and hygiene services both on campus and within the community. With a population of around 17,500+ people involved in diverse activities across 63 acres, the University aims to foster the holistic development of students as responsible future citizens. A key priority in this mission is the effective management of water and sanitation to promote a healthy future

All academic blocks, hostels, and hospitals at Sharda University are equipped with RO systems and proper sanitation facilities. Strict hygiene practices are followed in the hostels, dining areas, and the university hospital. The University has also taken significant steps to integrate green practices into its academic and non-academic operations. In laboratories, green practices are implemented, including the collection and safe disposal of chemical and biochemical waste through certified waste agencies. Labs are outfitted with fume hoods and glove boxes to ensure safe handling of hazardous materials.

Sharda University's Waste Management Policy ensures the segregation of solid waste into biodegradable (wet), non-biodegradable (dry), and hazardous categories. Wet waste is processed into compost, while dry waste is further segregated into recyclable and non-recyclable materials for proper disposal. An on-campus compost plant processes food and wet waste. The University also has a rainwater harvesting system in place to support water reduction, recycling, and reuse. Its sewage treatment plant (STP) with a 400 KLD capacity and effluent treatment plant (ETP) with a 30 KLD capacity ensure that treated water is reused for horticulture and flushing systems, while sludge is repurposed as manure.

Biomedical waste is managed in compliance with statutory regulations, and hazardous chemicals and radioactive materials are handled following due protocols. The University implements a reduce, recycle, and reuse policy for water, employing sprinkler and drip irrigation systems where feasible. An automated water spray vehicle controls dust across the campus, and battery-operated vehicles facilitate eco-friendly transportation. The campus has also been declared a "No-Noise Zone". Initiatives like reusing paper and planting over 4,500 trees have significantly improved air quality and reduced pollution. Student-led organizations, including NSS and the Eco-Task Force, actively participate in green practices to protect the environment.

To further enhance sustainability, the University has banned smoking and open burning on campus. A mandatory three-credit course on green practices, focusing on the conservation of natural resources and environmental protection, is part of the curriculum. Additionally, the Community Connect course raises awareness on issues such as pollution and its mitigation within the local community. Large-scale tree planting has noticeably lowered campus temperatures, and rainwater harvesting, structured waste management, and other conservation efforts have contributed to a cleaner, greener campus with reduced operational costs. The active participation of students in these environmental efforts bodes well for a future of improved sanitation, water quality, and sustainability.

Fig. 1: Labs Equipped with Fume Hood

Fig. 2: Sanitation/House Keeping facilities

Fig. 3: Ros at Campus

RO System Installed in Buildings/Blocks

RO PLANTS IN CAMPUS			
S.No	**Building Name**	**R O Tank Capacity**	**Remark's**
1	Block-02	2000 Ltr.	
2	Dental bldg.	1500 Ltr.	
3	Medical bldg.	1500 Ltr.	
4	Block-04	2000+1000 Ltr.	
5	Mandela hostel	2000 Ltr.	
6	Jawahar hostel	1500 Ltr.	
7	Kasturba hostel	1000 Ltr.	
8	Block-45	1000 Ltr.	
9	Vardhman hostel	1000 Ltr.	
10	Indira hostel	2000 Ltr.	
11	Hospital (R O water)	2000 Ltr.	
12	Hospital (Dialysis)	1000 Ltr.	
13	Hospital (Dialysis)	500 Ltr	

Inspection Frequency of RO System

Sharda University

Maintenance Dept. R O Water Supply

S.No	Date	Building Name	Monoblock pump	High pressure pump	Product water	Reject water	T D S	Remark's
1	16/07/2023	Block 02	01 kg	7 kg	1800	4200	69	ok
2	17/07/2023	Block 02	1 kg	7 kg	1800	4200	68	ok
3	18/07/2023	Block 02	1 kg	7 kg	1800	4300	69	ok
4	19/07/2023	Block 02	1 kg	7 kg	1800	4300	69	ok
5	20/07/2023	Block 02	1 kg	7 kg	1800	4300	69	ok
6	21/07/2023	Block 02	1 kg	7 kg	1800	4300	69	ok
7	22/07/2023	Block 02	1 kg	7 kg	1900	4200	68	ok
8	23/07/2023	Block 02	1 kg	7 kg	1900	4200	69	ok
9	24/07/2023	Block 02	1 kg	7 kg	1900	4200	69	ok
10	25/07/2023	Block 02	1 kg	7 kg	1900	4300	68	ok
11	26/07/2023	Block 02	1 kg	7 kg	1900	4200	66	ok
12	27/07/2023	Block 02	1 kg	7 kg	1900	4200	65	ok
13	29/07/2023	Block 02	1 kg	7 kg	1900	4300	65	ok
14		ABSENT				ABSENT		
15								

Supervisor Signature

29/7/2023

Manager Signature

Fig. 4

Food Hygiene Data and Inspection Frequency in Mess along with Photograph

WASHROOMS - ACADEMIC BLOCK & HOSTEL											
S. No.	Academic Block	Floor	Common washrooms		Attached Washrooms		Total		Staff WR	Divyangjan	Total
			Male	Female	Male	Female	Male	Female			
1	Block 1	6	12	12	0	0	12	12	5	1	30
2	Block 2	9	18	18	0	0	18	18	12	1	49
3	Block 3	6	11	11	0	0	11	11	7	1	30
4	Block 4	9	18	18	0	0	18	18	36	2	74
5	Block 7	9	18	18	0	0	18	18	5	5	46
6	Block 21 SDS	7	14	14	0	0	14	14	12	1	41
7	Block 22 SMSR	7	23	22	0	0	23	22	26	1	72
8	Block 45	6	12	12	0	0	12	12	3	2	29
9	Block 41		0	0	0	0	0	0	0	0	0
Total			**126**	**125**	**0**	**0**	**126**	**125**	**106**	**14**	**371**
10	Mandela Hostel (Girls)	12	0	0	0	504	0	504	0	0	504
11	Sarojini Hostel	8	0	8	0	0	0	8	0	0	8
12	Kasturba Hostel	8	0	8	0	0	0	8	0	0	8
13	Mother Teresa Hostel	2	0	6	0	0	0	6	0	0	6
14	Indra Hostel	12	0	14	0	0	0	14	0	0	14
9	Mandela Hostel (Boys)	12	0	0	247	0	247	0	0	0	0
15	Vivekanand Hostel	8	16	0	0	0	16	0	0	0	0
16	Tagore Hostel	8	16	0	0	0	16	0	0	0	0
17	Jawahar Hostel	7	0	0	110	0	110	0	0	0	0
18	Vardhman Hostel	4	31		0	0	31	0	4	0	4
Total			**63**	**36**	**357**	**504**	**420**	**540**	**4**	**0**	**964**
Grand Total			**189**	**161**	**357**	**504**	**546**	**665**	**110**	**14**	**1335**

Fig.5

Fig. 6: Mess Photograph-1

Fig. 7: Mess Photograph-2

Mess Menu for Students and Staff

MESS MENU (VARDHMAN HOSTEL) W.E.F 28 APRIL 2024

DAY	BREAK FAST	LUNCH	SNACKS	DINNER
MONDAY	KALA CHANA, MILK DALIA, BREAD BUTTER/ JAM, FRUIT, TEA, MILK	KALI MASOOR DAL , ALOO BUJIA, ROTI, RICE, SALAD, ACHAR,JEERA RAITA	BARGER 1Pcs , TEA, SAUCE	KADHAI PANEER, DAL FRY,RICE , ROTI, SALAD, ACHAR, SUJI HALWA/MOONG DAL HALWA
TUESDAY	ALOO PYAZ PARATHA, DAHI, FRUIT,SAUCE TEA	RAJMA, SEA VEG, ROTI, RICE, BOONDI RAITA, SALAD, ACHAR	DAHI PAPDI, NIMBU PANI	MATAR PULAW, CHHOLE, KASHIFAL, PURI/ROTI, RICE, SALAD, ACHAR, RICE KHEER
WEDNESDAY	AJWAIN PLAIN PRANTHA, ALLOO TAMATAR SUBJI, FRUIT, MILK, TEA	KADI PAKODA, JEERA ALOO, RICE, ROTI, SALAD, ACHAR	ALOO PATTIES/BREAD ROLL.2Pcs, TEA,	MATAR PANEER/PALAK PANEER , MIX DAAL, JEERA RICE, ROTI, BOONDI LADU, SALAD, ACHAR
THURSDAY	PANEER PYAZ PARATHA, DAHI, SAUCE, ACHAR, TEA,FRUIT	ARHAR DAL, SEA VEG(PARWAL/BHINDI) ROTI, RICE, SALAD, ACHAR , JEERA RAITA	BHEL PURI, SAUCE, TEA	DHABA DAL, ALOO MATAR TAMATAR, GHEE ROTI , VEG BIRYANI, SALAD, ACHAR, ICE-CREAM
FRIDAY	BREAD OMELETTE /BREAD BUTTER/JAM, ELAICHI MILK, FRUIT, TEA	ALOO BLACK CHANA/ BLACK CHANA, SEA VEG,RICE, ROTI SALAD, ACHAR,RAITA	SAMOSA 2 Pcs, SAUCE, TEA	LAL MASOOR DAAL, LAUKI KAUFTA/MANCHURIAN, JEERA RICE, GHEE ROTI, SALAD, ACHAR, CUSTURD
SATURDAY	POORI, JALEBI, ALOO - MATAR, MILK,FRUIT	URAD DAL,ALOO SOYABEEN/DUM ALOO ROTI, RICE, VEG RAITA, SALAD, ACHAR	POHA, SAUCE, ROOHAFZA	ARHAR DAL FRY, KATHAL, VEG KHICHDI, PAPAD, ROTI, RICE, SALAD, ACHAR
SUNDAY	CHHOLE BHATURE, VEG. BIRYANI, TAMATAR CHATNI, DAHI,TEA, SALAD, ACHAR		STUFF KULCHA/PAV BHAJI, NIMBU	SHAHI PANEER/ EGG KARI, CHANA DAAL, RICE, SALAD, ACHAR, GHEE ROTI, GULABJAMUN

IMPORTANT NOTES -

SEASONAL VEG- , KUNDRU, LOCKY , MATAR , BEANS , TORI , PARWAL ,BHINDI, GOBHI, PATTA GOBHI,

The Seasonal Veg would be provided depending upon the their availability in the Market

Fruits: Apple, Banana, Guava, Papaya, Orange, WATER MELLON only

*** Salad (Cuc ber + onion + carrot+ lemon)

*** All vegetable mentioned in above menu can be changed as per the availability in market .

28-04-24

Chief Warden-IHA
Sharda University
Greater Noida

Warden/Manag
VARDHAMAN HO
Sharda University

Fig. 8

Food Court, Canteen/Cafeteria, stationery Shop, Laundry and other Facilities

S.No.	Nature of Shop/Facility	Kiosk name	Location
1	Food Court	Mothers Kitchen (South Indian)	Shop No. 4 Hospital
2	Food Court	Nescafe (Starbean)	Near Amul-Central Sector
3	Food Court	Nescafe (Starbean)	Near Gate no. 4
4	Food Court	Café - 47	Near Block 7
5	Food Court	Coca cola (Hideout)	In front of Old staff Qtr
6	Food Court	AmulParlour	Near Sarojini Hostel
7	Food Court	Café - 24 x 7-Anubhav Gupta	Near VivekanandBlock-28
8	Food Court	Sambhojan Foods	Near STP plant Eastern Sector
9	Food Court	Coffee Day Global Ltd	Near STP plant-Eastern Sector
10	Food Court	Vadi Lal Ice Cream & Hello Biryani	Near Block-1
11	Food Court	Freshius Food- Anubhav Gupta	2nd Floor, Sharda Hospital
12	Food Court	Hindustan Food Corner	Shop No. 1 Hospital
13	Food Court	Italian Pizza	Near Gate No 4
14	Canteen/Cafeteria	Lego House	Behind Block 4
15	Canteen/Cafeteria	Amazing Café & Burger (Urban Café)	Ground Floor, Nursing Qtrs
16	Bakery Shop	Frequent Bakes	Shop No. 5 Hospital
17	Bakery Shop	Bake Master	Mandela basement
18	Juice Shop	Juice Corner	Near Nursing Hostel
19	Juice Shop	Shiva Juice Corner	Near Block-1
20	Chemist Shop	Nature Pharma	Gr. floor, Sharda Hospital
21	Chemist Shop	Nature Pharma	Gr. floor Dental Building
22	Stationary/Mobile Shop	Love communication	Near Gate no. 4

Fig. 9 & 10: Food Court, Canteen/Cafeteria, Stationary Shop, Laundry and Other Facilities

ETP and STP Plant at Campus

MONTHLY SUMMARY OF WET AND DRY WASTE (MUNICIPAL SOLID WASTE MANAGEMENT)								
	WET WASTE			DRY WASTE				
MONTH	Wet Waste (Received)	Wet Waste (After de-wateration)	Compost Formed	Paper	Plastic	Card Board	Others (polythene)	Total Dry
Nov-22	66870	32050	6680	911	3265	4400	3149	11725
Dec-22	67090	33090	6700	1084	1280	2825	3246	8435
Jan-23	63566	33715	6350	500	2925	4430	4430	12285
Feb-23	59635	29455	5950	0	2345	4945	4730	12020
Mar-23	71455	34124	7140	0	3395	4895	3440	11730
Apr-23	68410	32550	6835	0	1605	3845	970	6420
May-23	67117	32680	6700	102	3940	4945	2705	11692
Jun-23	69015	33390	6900	401	6305	5510	4750	16966
Jul-23	71365	32665	7130	0	1475	2540	1285	5300
Aug-23	70150	33850	7000	1240	5090	6170	3020	15520
Sep-23	67150	33690	6710	415	3960	6755	1550	12680
Oct-23	64990	31570	6450	805	3760	7840	3085	15490
Nov-23	63785	31340	6360	1570	3030	6360	2980	13940
Dec-23	44665	23950	4460	960	2190	3930	2380	9460
Jan-24	68520	33190	6800	1275	3480	5425	4015	14195
Feb-24	61735	31740	6170	1400	3505	2290	3370	10565
Mar-24	68070	34470	6804	1400	3055	5305	2245	12005
Apr-24	61735	31260	6170	1305	4505	7975	2330	16115
May-24	44760	23860	4325	1350	4155	2950	1995	10450
Jun-24	45775	23915	4570	0	0	2175	615	2790
Jul-24	47810	24490	4780	600	860	1605	355	3420
TOTAL	2395464	1176501	238998	48860	151828	203834	161284	560048

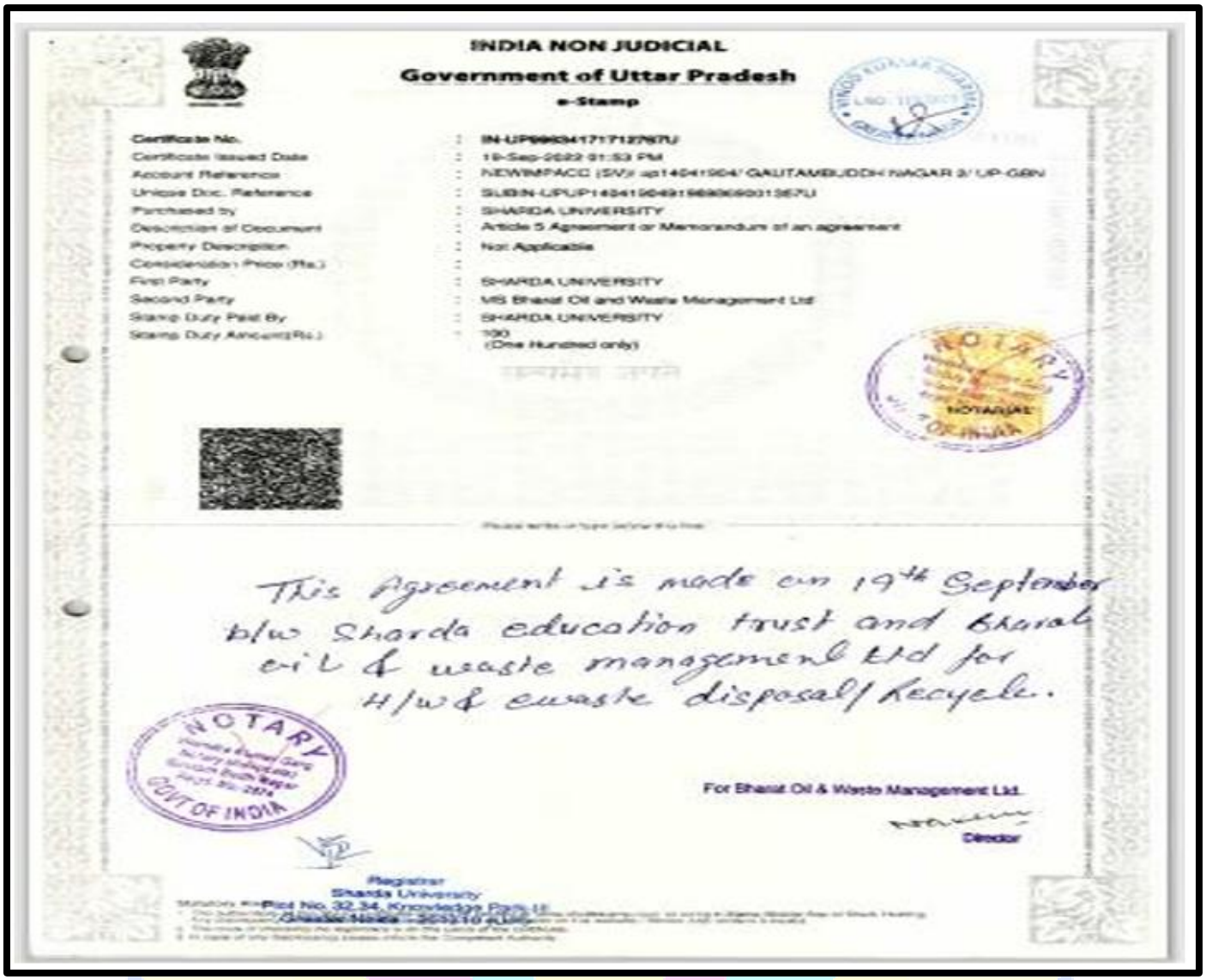
Fig. 11: Effluent Treatment Plant (ETP)

Fig. 12: Sewage Treatment Plant (STP)

Biological and solid waste management practices

University has signed MoU/agreement with various agencies to collect the waste to maintain the hygiene in campus. University has done the installation of new STP.

Fig. 13: Safe Handling of Waste



INDIA NON JUDICIAL

Government of Uttar Pradesh

e-Stamp

Certificate No. : IN-UP[illegible]171712787U

Certificate Issued Date : 19-Sep-2022 01:53 PM

Account Reference : NEWIMPACC (SV)/ up14041904/ GAUTAMBUDDH NAGAR 2/ UP-GBN

Unique Doc. Reference : SUBIN-UPUP14041904191680660013E7U

Purchased by : SHARDA UNIVERSITY

Description of Document : Article 5 Agreement or Memorandum of an agreement

Property Description : Not Applicable

Consideration Price (Rs.) :

First Party : SHARDA UNIVERSITY

Second Party : M/S Bharat Oil and Waste Management Ltd

Stamp Duty Paid By : SHARDA UNIVERSITY

Stamp Duty Amount(Rs.) : 100 (One Hundred only)

NOTARY GOVT OF INDIA

This Agreement is made on 19th September b/w Sharda education trust and Bharat oil & waste management ltd for H/w & ewaste disposal/ Recycle.

NOTARY GOVT OF INDIA

For Bharat Oil & Waste Management Ltd.

Director

Registrar

Sharda University

Fig. 14: Agreement between Sharda University and Waste Management Agency

PAY VIA CHEQUE/NEFT
CASH NOT ACCEPTED

भारतीय गैर न्यायिक

दस रुपये

TEN RUPEES

रु.10

Rs.10

INDIA

INDIA NON JUDICIAL

उत्तर प्रदेश UTTAR PRADESH

62AE 015883

AGREEMENT

NDA-128

This agreement is made and executed at **Meerut** on **Dec 10, 2022** and shall be valid only when endorsed through a SEAL of Synergy Waste Management (P) Ltd.

BY AND BETWEEN

Synergy Waste Management (P) Ltd., having its Registered Office at **517-518, 5th Floor, D-Mall, Rohini West, New Delhi-110085 (CIN No.- U74999DL2005PTC283340)**, hereinafter referred to as "**Service Provider**"), duly represented by its Authorized Signatory.

AND

Name of Health Care Establishment (HCE): **SMS&R & School Of Dental Sciences (Both Constitutions Of Sharda University) (NDA)**, (Hereinafter referred to as WASTE GENERATOR).

1. Constitution: **TRUST**
   Address of the (HCE) : **Plot No.-32-34, Knowledge Park-III, Greater Noida, Gautam Buddha Nagar, Uttar Pradesh-201306**
   Address of the HCE's parent concern (if different from above address) : **-N.A.-**
   Registration Number : _____ (New Hospital / Clinic / Diagnostic Centre) (Registration to be applied)
   Mobile: _____ Landline _____ Email: _____

2. Name of Authorized Person: **TRUSTEE**

3. Authorized representative of Waste Generator: **Dr A.K. Gadpayle**
   Designation: **Medical Superintendent** Mobile: **9560551151** Email: **ms@sharda.ac.in**

RECITALS

Whereas the Service Provider has been duly authorized by **U. P. Pollution Control Board (UPPCB)** under the provisions of BMW Rule 2016 for providing services of the Collection, Transportation, Storage, Treatment, and Disposal of the Bio-Medical Waste.

And whereas the Waste Generator is desirous to outsource the disposal of its Bio- Medical Waste generated by them and have approached the Service Provider for providing its services at its treatment facility located at **Subharti Dental College Campus, Subharti Puram, Nh-58, Delhi- Haridwar By Pass Road, Meerut, Uttar Pradesh-250005**
And both the parties are agreed to enter into this agreement on the terms and conditions narrated hereinafter.
NOW THIS INDENTURE WITNESSETH and it is hereby covenant as follows:

1. Validity of the Agreement

1.1 This agreement shall remain in force for a period of One years (1years) **w.e.f. Jan 01, 2023** to **Dec 31, 2023** (both days inclusive), which may be renewed further with mutual consent of both the parties.

1.2 However, if the WASTE GENERATOR does not initiate the services within 15(fifteen) days from execution of this agreement, then this agreement shall become null & void automatically.

1.3 If the Waste Generator is a New Hospital / Clinic / Diagnostic Centre and the Registration with the Competent Authority is under process then the Validity of this agreement shall be termed as 'Provisional'. If the Waste Generator fails to submit Registration with competent authority within a period of 3 months, then this agreement

Fig. 15: Agreement between Sharda University and Waste Management Agency

भारतीय गैर न्यायिक
एक सौ रुपये
Rs. 100
ONE
HUNDRED RUPEES
रु. 100
भारत INDIA
INDIA NON JUDICIAL
उत्तर प्रदेश UTTAR PRADESH
FD 058534

AGREEMENT

This Agreement for Solid Waste Management Service (compost plant) herein referred as **Agreement** is made at Greater Noida, Uttar Pradesh on this 5th Day of Oct 2019 and is effective from 1st Day of Nov, 2019.

Between

Vedika Infracon OPC Pvt. Ltd having its registered office at 17/A-4, Kalkaji Extension, New Delhi – 110019 through its Director – Mr Raj Pandey hereinafter referred to as "**Vedika Infracon**" (which expression shall unless it be repugnant to the context or meaning thereof shall deem to mean and include its successors or permitted assignees)of the First Party

And

SHARDA UNIVERSITY having its address at Plot No. 32, 34 Knowledge Park-III, Greater Noida, Gautam Buddha Nagar, Uttar Pradesh 201306 (constituted under an act of State Legislature of Uttar Pradesh (Act 14 of 2009) represented through its - Deputy Registrar (Estate), hereinafter referred to as 'SU' (which expression shall unless it be repugnant to the context or meaning thereof shall deem to mean and include its successors or permitted assignees) of the Second Party

Vedika Infracon OPC Pvt. Ltd. (First Party) and **SHARDA UNIVERSITY (Second Party)** are hereinafter collectively referred to as "**Parties**" and individually as "**Party**"

1/8

For VEDIKA INFRACON OPC PVT. LTD

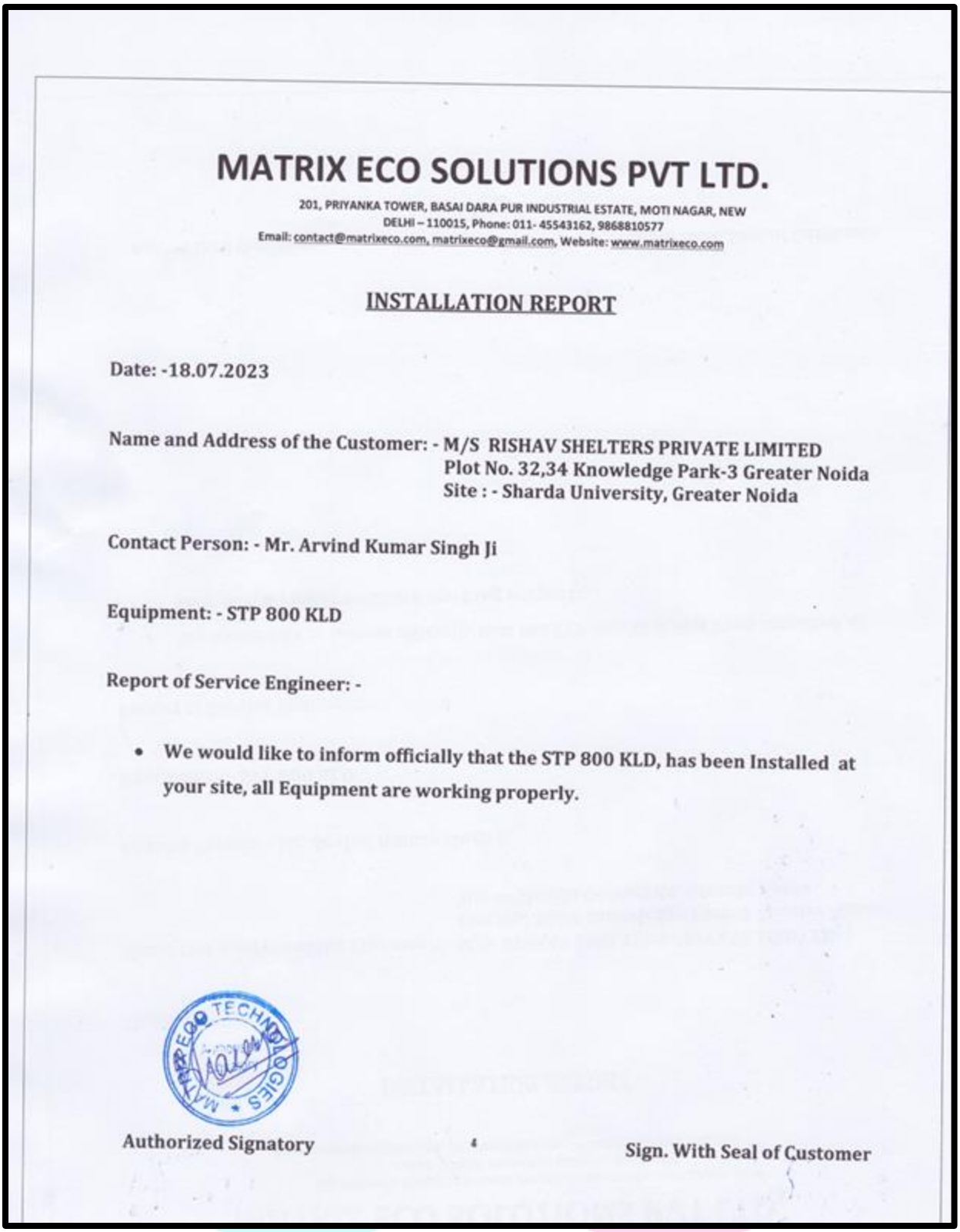
Object and Purpose

Vedika Infracon has approached Sharda University for undertaking the work of installation, commissioning, operation and maintenance of the Organic Waste Composting system ("**System**") of the second party located at Sharda University **Plot No. 32-34, Knowledge Park-III, Greater Noida, U.P-201306.**

Vedika Infracon has vast experience and requisite infrastructure to undertake installation, commissioning, operation and maintenance of such Systems and has expressed its willingness to provide solid waste management (composting) services at Sharda University for 05 (Five) years with effect from 10 Nov 2019 (i.e. 10 Nov 2019 to 09 Nov 2024)

The following terms and condition are mutually agreed by both the parties and enumerated herein bellow:-

Fig. 16: Agreement between Sharda University and Waste Management Agency



MATRIX ECO SOLUTIONS PVT LTD.

201, PRIYANKA TOWER, BASAI DARA PUR INDUSTRIAL ESTATE, MOTI NAGAR, NEW DELHI – 110015, Phone: 011- 45543162, 9868810577
Email: contact@matrixeco.com, matrixeco@gmail.com, Website: www.matrixeco.com

INSTALLATION REPORT

Date: -18.07.2023

Name and Address of the Customer: - M/S RISHAV SHELTERS PRIVATE LIMITED
Plot No. 32,34 Knowledge Park-3 Greater Noida
Site : - Sharda University, Greater Noida

Contact Person: - Mr. Arvind Kumar Singh Ji

Equipment: - STP 800 KLD

Report of Service Engineer: -

- We would like to inform officially that the STP 800 KLD, has been Installed at your site, all Equipment are working properly.

Authorized Signatory

Sign. With Seal of Customer

Fig. 17: Agreement between Sharda University and Waste Management Agency

Fig. 18: Rainwater Harvesting Plants

Rain water harvesting capacities of each pit - 40000 liters

Rain water harvesting Number of pits – 24

Research: University motivate the students to perform research on mitigation of water pollution and improved sanitation devices. Sharda University has signed the MoU with government of India to achieve the National Mission of Clean Ganga. Around 38+ research papers have been published in the area of clean water and sanitation.

Sr. No	Year	Title of paper	Name of the author/s	Name of Journal	ISSN number	Link of particular paper
1	2022-2023	Photocatalytic Degradation of Crystal Violet Dye in Aqueous Solution using ZnFe2O4-Cellulose Nanocomposite Catalyst	Alka Singh, N B Singh, Richa Tomar	Asian Journal of Chemistry	0970-7077	https://asianpubs.org/index.php/ajchem/article/view/356_28
2	2022-2023	Development, performance evaluation, and kinetic studies of microbial fuel cell based auto dripping bioelectrochemical reactor (AutoDriBER) for urine treatment	Smriti Mehrotra, Neeraj Kumar Singh, Anusha Vempaty, Abhilasha Singh Mathuriya	Environmental Technology (United Kingdom)	0959-3330	https://pubmed.ncbi.nlm.nih.gov/36170025/
3	2022-2023	Natural and sustainable filtration of polluted water of River Yamuna for municipal use	Soma Mishra, Pradeep Kumar & Indu Mehrotra	Sustainable Water Resources Management	2363-5037	https://link.springer.com/article/10.1007/s40899-023-00846-x
4	2022-2023	Studies on computational fluid dynamics and flow characteristics of auto-dripping bioelectrochemical reactor (AutoDriBER): A rational basis for e-urinal design	Raj Kumar Saini, Smriti Mehrotra, Ioannis A. Ieropoulos, Abhilasha Singh Mathuriya	International Journal of Energy Research	0363-907X	https://onlinelibrary.wiley.com/doi/10.1002/er.8544
5	2022-2023	Sustainable Development Through Smart Cities: Issues and Challenges	Kusha Kalra, Pradeep Kulshreshtha and Bhanu Tanwar	Indian Journal of Environmental Protection	0253-7141	https://www.e-ijep.co.in/42-9-1108-1115/

6	2022-2023	Evaluation of the Datura peels derived biochar-based Anode for enhancing power output in microbial fuel cell application	Anusha Vempaty, Ankit Kumar, Soumya Pandit, Meenal Gupta, Abhilasha Singh Mathuriya, Dibyajit Lahiri d, Moupriya Nag, Yogesh Kumar, Sanket Joshi, Navin Kumar	Biocatalysis and Agricultural Biotechnology	1878-8181	https://www.sciencedirect.com/science/article/pii/S1878818122002870
7	2022-2023	Recent developments in biohydrogen production from wastewater: A review	Chhotu Ram, Pushpa Rani & Amit Kumar	Biocatalysis and Biotransformation	1024-2422	https://www.tandfonline.com/doi/abs/10.1080/10242422.2023.2181046
8	2022-2023	Production and growth of microalgae in urine and wastewater: A review	Shahida Anusha Siddiqui, Yuan Seng Wu, Trideep Saikia, İlknur Ucak, Maliha Afreen, Mohd Asif Shah & Raphael D. Ayivi	Environmental Chemistry Letters	1610-3653	https://link.springer.com/article/10.1007/s10311-023-01622-1?utm_source=getftr&utm_medium=getftr&utm_campaign=getftr_pilot
9	2022-2023	Investigation on water defluoridation via batch and continuous mode using Ce–Al bimetallic oxide: Adsorption dynamics, electrochemical	Neksumi Musa, Bharat Kumar Allam, Nakshatra Bahadur Singh, Sushmita Banerjee	Environmental Pollution	0269-7491	https://www.sciencedirect.com/science/article/abs/pii/S0269749123006413?via%3Dihub

		and LCA analysis				
10	2022-2023	Strategic development and performance evaluation of functionalized tea waste ash-clay composite as low-cost, high-performance separator in microbial fuel cell	Anusha Vempatya & Abhilasha Singh Mathuriya	Environmental Technology	0959-3330	https://www.tandfonline.com/doi/full/10.1080/09593330.2022.2041103
11	2022-2023	A review on waste valorization, biotechnological utilization, and management of potato	Anamika Chauhan, Fakhar Islam, Ali Imran, Ali Ikram, Tahir Zahoor, Sadaf Khurshid, Mohd Asif Shah	Food Science and Nutrition	2048-7177	https://onlinelibrary.wiley.com/doi/10.1002/fsn3.3546
12	2022-2023	Impact of microalgal cell wall biology on downstream processing and nutrient removal for fuels and value-added products	Karuppaiyan Jothibasu, Iniyakumar Muniraj, Tharunkumar Jayakumar, Bobita Ray, Subburamu Karthikeyan and Suchitra Rakesh	Biochemical Engineering Journal	1369-703X	https://www.sciencedirect.com/science/article/abs/pii/S1369703X22003114#!
13	2022-2023	Biodegradation of Congo Red Using Co-Culture Anode Inoculum in a Microbial Fuel Cell	Kalpana Sharma, Soumya Pandit, Bhim Sen Thapa and Manu Pant	Catalysts	2073-4344	https://www.mdpi.com/2073-4344/12/10/1219
14	2022-2023	Recent Developments on Magnetically Separable Ferrite-Based Nanomaterials	Shreyas Pansambal, Arpita Roy, Hamza Elsayed Ahmed	Journal of Nanomaterials	1687-4110	https://www.hindawi.com/journals/jnm/2022/8560069/

		for Removal of Environmental Pollutants	Mohamed, Rajeshwari Oza, Canh Minh Vu, Abdolrazagh Marzban, Ankush Chauhan, Suresh Ghotekar, HC Murthy			
15	2022-2023	Application of Low-Cost Plant-Derived Carbon Dots as a Sustainable Anode Catalyst in Microbial Fuel Cells for Improved Wastewater Treatment and Power Output	Ankit Kumar , S. Shankara Narayanan , Bhim Sen Thapa , Soumya Pandit , Kumud Pant ,Anoop Kumar Mukhopadhyay and Shaik Gouse Peera	Catalysts	2073-4344	https://www.mdpi.com/2073-4344/12/12/1580
16	2022-2023	Analysis of pyridine-2-carbaldehyde thiosemicarbazone as an anti-biofouling cathodic agent in microbial fuel cell	Soumya Pandit, Sonia Khanna & Abhilasha Singh Mathuriya	Applied Microbiology and Biotechnology	1432-0614	https://link.springer.com/article/10.1007/s00253-022-12273-7
17	2022-2023	Microbial Electrochemical Treatment of Methyl Red Dye Degradation Using Co-Culture Method	Kalpana Sharma, Soumya Pandit, Abhilasha Singh Mathuriya, Piyush Kumar Gupta, Kumud Pant andDipak A. Jadhav 4,*	Water (Switzerland)	2073-4441	https://www.mdpi.com/2073-4441/15/1/56

18	2022-2023	Water Purification by Green Synthesized Nanomaterials	Anindita De, N.B. Singh, Mridula Guin and Sumit Barthwal	Current Pharmaceutical Biotechnology	1873-4316	https://www.eurekaselect.com/article/123174
19	2022-2023	Current Trends on the Efects of Metal Based Nanoparticles on Microbial Ecology	Jyoti Rawat, Vikas Kumar, Priyanca Ahlawat, Lokesh Kumar Tripathi, Richa Tomar, Rohit Kumar, Sunny Dholpuria, Piyush Kumar Gupta	Applied Biochemistry and Biotechnology	0273-2289	https://link.springer.com/article/10.1007/s12010-023-04386-0
20	2022-2023	Microbial Fuel Cell–Based Biosensors and Applications	Anshika Varshney, Lokendra Sharma, Chetan pandit, Piyush Kumar Gupta1, Abhilasha Singh Mathuriya, Soumya Pandit, Dibyajit Lahiri, Moupriya Nag, Vijay Jagdish Upadhye	Applied Biochemistry and Biotechnology	0273-2289	https://link.springer.com/article/10.1007/s12010-023-04397-x
21	2022-2023	Advancements &Challenges of Nanotechnology in Waste Water Treatment	Shashank Sharma, Priyanka Dhingra, Saurabh Jain	Materials Today Proceedings	2214-7853	https://www.sciencedirect.com/science/article/pii/S2214785322063118?via%3Dihub

22	2022-2023	Evaluation of the algal-derived biochar as an anode modifier in microbial fuel cells	Ankit Kumar, Kalpana Sharmaa, Soumya Pandit, Abhilasha Singh Mathuriya, Ram Prasad	Bioresource Technology Reports	2589-014X	https://www.sciencedirect.com/science/article/abs/pii/S2589014X23000853?via%3Dihub
23	2022-2023	Photocatalytic Activity Induced by Metal Nanoparticles Synthesized by Sustainable Approaches: A Comprehensive Review	Prashanth Gopala Krishna , Prabhu Chandra Mishra , Mutthuraju Mahadev Naika , Manoj Gadewar , Prashanth Paduvarahalli Ananthaswamy , Srilatha Rao , Sivadhas Rosejanet Boselin Prabhu , Kalanakoppal Venkatesh Yatish , Holenarasipura Gundurao Nagendra ,	Frontiers in Chemistry	2296-2646	https://pubmed.ncbi.nlm.nih.gov/36118313/
24	2022-2023	Synthesis of Bimetallic Nanoparticles and Applications—An Updated Review	Dahir Sagir Idris and Arpita Roy	Crystals	2073-4352	https://www.mdpi.com/2073-4352/13/4/637
25	2022-2023	Blue energy meets green energy in microbial reverse	Soumya Pandit, Chetan Pandit, Abhilasha	Sustainable energy technologies and Assessments	2213-1396	https://www.sciencedirect.com/science/article/pii/S2213138823002539?dgcid=author

		electrodialysis cells: Recent advancements and prospective	Singh Mathuriya, Dipak A. Jadhav			
26	2022-2023	An Overview of Bacteria-Mediated Heavy Metal Bioremediation Strategies	Rima Roy, Saikat Samanta, Soumya Pandit, Tahseena Naaz, Srijoni Banerjee, Janhvi Mishra Rawat, Kundan Kumar Chaubey & Rudra P. Saha	Applied Biochemistry and Biotechnology	0273-2289	https://link.springer.com/article/10.1007/s12010-023-04614-7
27	2022-2023	Maximization of Energy Recovery from Starch Processing Wastewater byThermophilic Dark Fermentation Coupled with Microbial fuel Cell Technology	Mohit Kumar, Soumya Pandit, Vinay Patel, Namita Khanna, Moupriya Nag, Dibyajit Lahiri, Rina Rani Ray, Alok Prasad Das & Debabrata Das	Geomicrobiology	1521-0529	https://www.tandfonline.com/eprint/57GB4YERRKJSFCDJJIGS/full?target=10.1080/01490451.2023.2209555
28	2022-2023	Nanotechnology-Based Solutions for Anti-Biofouling Applications: An Overview	Somya Sinha, Rohit Kumar, Jigisha Anand, Rhythm Gupta, Akshima Gupta, Kumud Pant, Sushil Dohare, Preeti	ACS Applied Nano Materials	2574-0970	https://pubs.acs.org/doi/10.1021/acsanm.3c01539

			Tiwari, Saravanan Krishnan, Kavindra Kumar Kesari, Piyush Kumar Gupta*			
29	2022-2023	Nano structured silver particles as green catalyst for remediation of methylene blue dye from water	Anindita De, Preeti Jain	International Journal of materials research	2195-8556	https://www.degruyter.com/document/doi/10.1515/ijmr-2021-8644/html
30	2022-2023	Performance Evaluation of Irrigation Canals Using Data Envelopment Analysis for Efficient and Sustainable Irrigation Management in Jharkhand State, India	Jay Nigam, Totakura Bangar Raju, R.K. Pavan Kumar Pannala	Energies	1996-1073	https://www.mdpi.com/1996-1073/16/14/5490
31	2022-2023	Polyol Synthesis of Ag-Doped Copper Oxide Nanoparticles as a Methylene Blue-Degrading Agent	Yogeshwar Baste, Vikram Jadhav, Arpita Roy, Saad Alghamdi, Mohamed Abbas, Jari S. Algethami , Mazen Almehmadi, Mamdouh Allahyani, Devvret Verma, Krishna Kumar Yadav, Byong-Hun Jeon and	Catalysts	2073-4344	https://www.mdpi.com/2073-4344/13/7/1143

			Hyun-Kyung Park			
32	2022-2023	Evaluation of Various Physicochemical Properties and Their Seasonal Variation in Wulur Lake of Kashmir Himalayas	Seerat Sultan, Shruti Singh, Rajesh Kumar, Showkat A Malik, Jagvir Singh	Water, Air, & Soil Pollution	0049-6979	https://link.springer.com/article/10.1007/s11270-023-06498-z
33	2022-2023	Effect of plant density and hydraulic retention time on phytoremediation of greywater using water hyacinth and validation of its optimized result using artificial neural network	Rajnikant Prasad, Dayanand Sharma, Ashutosh Kumar Pandey, Kunwar D. Yadav, Sunil Kumar, Hussameldin Ibrahim	Canadian Journal of Chemical Engineering	1939-019X	https://onlinelibrary.wiley.com/doi/full/10.1002/cjce.25027
34	2022-2023	Neodymium-Doped Zinc Oxide Nanoparticles Catalytic Cathode for Enhanced Efficiency of Microbial Desalination Cells	Sunil Chauhan, Shweta Rai, Soumya Pandit, Arpita Roy, Amel Gacem, Gamal A. El-Hiti, Krishna Kumar Yadav, Balasubramani Ravindran, Ji-Kwang Cheon and Byong-Hun Jeon	Catalysts	2073-4344	https://www.mdpi.com/2073-4344/13/8/1164
35	2022-2023	Economic analysis based on saline water treatment using renewable energy system	N. P. G. Bhavani, Kailash Harne, Satendar Singh,	Water Reuse	2709-6106	https://iwaponline.com/jwrd/article/13/2/269/95099/Economic-analysis-based-on-saline-water-treatment

		and microgrid architecture	Ostonokulov Azamat Abdukarimovich, V. Balajie, Bharat Singh, K. Vengatesan and Sachi Nandan Mohanty			
36	2022-2023	Advances in bioelectrochemical systems for bio-products recovery	Neeraj Kumar Singh, Abhilasha Singh Mathuriya, Smriti Mehrotraa , Soumya Pandita , Anoop Singh and Deepak Jadha	Environmental Technology	0959-3330	https://www.tandfonline.com/doi/full/10.1080/09593330.2023.2234676
37	2022-2023	Contamination of heavy metals (Arsenic, Cadmium, Lead) in groundwater and their toxic effects	Shrisha Singhania , Achala Dwivedi , Prashant agrawal,Lalit chandrawanshi, Sudhir Kumar	International Journal of Medical Toxicology & Legal Medicine	0972-0448	https://www.indianjournals.com/ijor.aspx?target=ijor:ijmtlm&volume=26&issue=3and4&article=011

Awareness Programs

Sharda University actively engages with local communities to raise awareness about safe sanitation practices and sustainable water resource management. This community outreach is part of the University's broader commitment to environmental responsibility and public health, aligning with its mission to contribute to societal well-being. Through a series of educational initiatives and hands-on activities, faculty members, staff, and students collaborate with community members to improve understanding and adoption of safe hygiene and water practices.

The University organizes regular campaigns that focus on critical issues such as the importance of clean water, proper sanitation, and hygienic practices. These campaigns often involve workshops, demonstrations, and interactive sessions aimed at educating the community on the need to manage water resources effectively, especially in regions facing water scarcity or contamination. Faculty and students visit local schools, residential areas, and rural communities to provide valuable information on conserving water, preventing waterborne diseases, and maintaining proper sanitation facilities. They emphasize simple yet effective techniques such as rainwater harvesting, safe waste disposal, and proper sewage management.

A key component of these outreach efforts is the distribution of essential sanitation supplies, which includes face masks, liquid soaps, sanitary pads, and other hygiene products. This initiative ensures that community members, especially those from underprivileged backgrounds, have access to basic hygiene necessities, further encouraging the practice of good health and hygiene habits. The University believes that education coupled with tangible support, such as providing sanitation products, creates a lasting impact on community health.

Additionally, within the University’s own operations, greener and safer practices are strictly followed, particularly in laboratories. Sharda University implements stringent protocols for handling hazardous materials and chemical waste, ensuring that lab activities are conducted in an environmentally responsible manner. The use of fume hoods, glove boxes, and proper waste segregation are all part of the institution’s commitment to maintaining safe, eco-friendly laboratories. These practices not only ensure the safety of the campus community but also set a standard for sustainable practices that can be emulated in the broader community.

By bridging academic expertise with community outreach, Sharda University plays a significant role in promoting sustainable sanitation practices and water resource management, contributing to the well-being of both its immediate environment and society at large.

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EVENT COMPLETION REPORT

Please prepare the report signed by the program Secretariat/Program coordinator within 10 days of event completion for record. Reports should be 2-4 pages.

SECTION A: Event Detail

Event title:	**Walk for Water Conservation** **Theme-** "Save water Save life "		
Starting date of event:	23th February 2023	**Duration of Event (in days)**	1DAY
Name of the event organizing School	**SHARDA SCHOOL OF NURSING SCIENCE AND RESEARCH, SHARDA UNIVERSITY**		
Name of the event organizing Department	**DEPARTMENT OF MEDICAL SURGICAL NURSING, SHARDA SCHOOL OF NURSING SCIENCE AND RESEARCH, SHARDA UNIVERSITY**		
Sponsor of the Event (Sharda University in case of internal sponsorship)	NA		
	Convener	Prof. R.SreeRajakumar, Associate Dean , 9646531203, Rs.kumar@sharda.ac.in	

Fig. 19: Awareness Drives

Lab safety awareness

Fig. 20 & 21: Student were guided about safe disposal of lab chemicals

Fig. 22: Students went to villages to make community aware about clean water and sanitation

Fig. 23: Tree plantation drive at Sharda University