EXISTING GREEN BUILDING AUDIT REPORT

सह वीर्यम् करवावहै

ideas

Address:

IDEAS – Institute of Design Education & Architectural Studies

Outer Ring Road – Hudkeshwar Road Junction Point, At Post Pipla, Nagpur – 44003

Email id:
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Website
https://www.ideasnagpur.edu.in/

Existing Green Building Audit Conducted and Submitted by

gotmare and associates

Architects, Environmental Architects, Green Building Consultants, Interior Designers, Government Valuers

Plot no. 146,1st floor, Shankar Nagar, Near Dr. Babhulkar Hospital, Nagpur-440010 Maha. India

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Mobile: 9822739072, 895635381

ACKNOWLEDGEMENT

Ar. Manisha Gotmare and their assessment team thanks to the team ideas College, Nagpur for assigning the task of Existing Green Building and Environmental Audit of the college. We appreciate the cooperation got from all the faculties during the audit. Our special thanks to the Principal Prof. Abhay Purohit for his support and encouragement. We are also thankful to the in-house environmental committee of the college.

Ar. Manisha Gotmare

Environmental Architect

Gotmare And Associates

CERTIFICATE

gotmare and associates

ARCHITECTS, INTERIOR DESIGNERS, GOVERNMENT VALUERS

Plot No.146, 1st Floor, Shankar Nagar, Near Medwin Hospital, Nagpur - 440010, M.S. (India)

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Environmental Architects, Green Building Consultants, Green Building & Environmental Auditors, Simulation Experts

GREEN BUILDING AUDIT CERTIFICATE

Project name – ideas-Institute of Design Education & Architecture Studies

Location: Nagpur

This is to certify that the Existing Green Building Audit is done for ideas - Institute of Design Education & Architecture Studies, Nagpur and the team ideas has successfully achieved the Green Building Standards required for sustainable and green building.

However, some strategies will be implemented within 3 months from the date of final report and the declaration for the same is attached in the report.

Note: This is not a green building rating system report or recommendations from any rating system.

Ar. Manisha Gotmare

Environmental Architect, Green Building consultant, Simulation Expert, IGBC AP, GRIHA EB project in 2019

Auditor Email id: manisha.gotmare@gmail.com

Phone no. 9822739072

Date – 18-05-2023

DISCLAIMER

The environmental architect's team has prepared the report of the existing green building and environmental audit of ideas college, Nagpur, on the primary data collected from the different areas of college. All the reasonable care has been taken in its preparation; the details contained in this report have been compiled in good faith based on the information gathered.

Prepared by

Ar. Manisha Gotmare

Environmental Architect

Gotmare And Associates

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EXECUTIVE SUMMARY

In the current context of rapid changes that are taking place in our country, all activities directed towards advancements are required to be addressed with utmost care. In this effort It is also imperative to prepare architects who can contribute to and manage the needs of society with equanimity of mind and an attitude of social responsibility.

IDEAS is rated amongst the top Architecture colleges in the country. Our students top the RTMNU examinations almost every semester. year after year. The college runs B. Arch. undergraduate and M. Arch. post-graduate programs affiliated to RTMNU and recognized by the Council of Architecture.

At IDEAS all faculty are committed to maintaining an academically rich and professionally competent environment by enhancing the creative attitudes as well as technical skills of students. Our teacher mentors play a vital role in the overall development of our students and the institute with the firm belief that in the current era, creativity and innovation are the basis of sustenance. We keep constantly creating new learning opportunities for our students, which the university curriculum cannot otherwise provide.

In a very short span IDEAS have come a long way and have made their impact felt not only in the city. but also, the country. Our students have outperformed professionally in the local and global scenario and in the universities in India and abroad as they pursue their higher education Today, IDEAS is one of the most sought-after institutes for fresh aspiring architecture students. We are sure that the best in infrastructure, a highly qualified faculty, and our motivated group of students coupled with the vibrant environment will continue to drive the growth of IDEAS as a great institution. We firmly believe that we shall be counted amongst the best at the national level in the years to come.

In all our efforts we seek the path of virtue, courage, and wisdom. May we be the catalyst in all our efforts to make better architects and human beings, who can make a positive impact on our society and help build our nation in these ever-changing and challenging times.

MISSION

To generate effective synchronization of academicians, professionals, technocrats, and students to achieve "meaningful architecture" for the development of society.

To sensitize and train the students to develop a sense of commitment, professionalism and inculcate aspiration for continuous update of knowledge to serve the local & global community.

VISION

Establishing a center of excellence in the entire spectrum of Design Education and Application from Product Design to Architecture and from Applied Arts to Fashion Design to serve humanity.

GOALS

The school aims at establishing an Advanced Center of Learning, turning out creative & technical manpower to play a substantial role in nation-building.

The IDEAS- Institute of Design Education and Architecture Studies shall strive to build its image in a way that it acts as a platform of excellent learning at the national level having expertise to mold the students to cater to the needs of the society in various areas of human habitat, technology, leadership, culture, administration while maintaining ethical, moral and social values.

EXISTING GREEN BUILDING AUDIT

Existing Green Building Audit

India's existing building stock presents a great opportunity to reduce primary energy and water demands. By improving the environmental performance of existing buildings, we can take decisive steps towards making our buildings and habitats sustainable. It is important that buildings continuously monitor and improve their performance to transition to a resource efficient economy. Efforts are being taken at the global level to move towards efficiency in the existing buildings, with the motto, "what gets measured gets managed" (www.grihaindia.org)

OBJECTIVES OF THE AUDIT

The key objectives of green building and environmental audit therefore are to:

- Quantify energy, water, and waste consumption. Identify energy saving opportunities resulting in lowered energy bills, less use of fossil fuel-based energy and lower carbon footprint. Determine how well the environmental management systems and equipment are performing.
- Verify compliance with the relevant national, local, or other laws and regulations.
- Minimize human exposure to risks from environmental, health and safety problems.

METHODOLOGY

To perform the existing green building and environmental audit, the methodology included different tools such as

1. **Pre-Audit Stage** includes preparation of questionnaire, data collection.

2. **Audit Stage** includes physical inspection of the campus, observation, and review of the documentation, interviewing key persons and data analysis.

3. **Post -Audit Stage** includes audited areas to summarize the present status of green building and environment management in the campus and recommendations to retrofit to be done by the college authority within specific time.

CAMPUS AREA & COLLEGE BUILDING AREA

	CATEGORIES OF LAND USE	AREA (M^2)
1.	**Landscaped /Plantation Area**	**3998.24 M^2**
2.	**Built Up Area** (Include roads)	**Ground floor built up = 2545.55 sqm.** **First floor built up = 2449.82 sqm.**
3.	**Total Area**	**8164.76 M^2**

Google image of ideas college campus

NAAC GRADING IN ASSESSMENTS

राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

Certificate of Accreditation

The Executive Committee of the
National Assessment and Accreditation Council
is pleased to declare the
Ideas-Institute of Design Education and Architectural Studies
Pipla, Dist. Nagpur, affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,
Maharashtra as
Accredited
with CGPA of 2.85 on four point scale
at B^{++} grade
valid up to August 16, 2026

Date : August 17, 2021

Director

EC(SC)/69/1st Cycle/MHCOGN100766

ENVIRONMENTAL POLICY OF IDEAS COLLEGE

The Institute of Design Education and Architectural Studies. Nagpur {IDEAS} understands its responsibility to protect the environment from the impact of its operations and activities. It endeavors to influence its members and the wider community to minimize their impact through its actions. teaching and research. The Institute is committed to meeting the requirements of all relevant environmental guidance and to continually improving its environmental performance.

Sr. No.	Category	Designation	Name
1	Presiding Officer	Chairperson	Prof. Ajay Thomare, Programme Coordinator (Environmental Architecture)
2	Faculty Members	Member Secretary Member	Prof. Rukhsana Badar (Associate Professor) Prof. Ankita Giripunje (Assistant Professor)
3	Students Nominees	Member	1. Mr. Subhodh Awari 2. Ms. Divyashree Jain 3. Ms. Tanvi Koche 4. Mr. Siddharth Deshbharatar

GREEN INITIATIVES ON THE CAMPUS

Since its inception IDEAS has been conscious about respecting the environment and conserving natural resources. The campus has been designed with a series of courtyards to provide enough light and ventilation to all spaces and the construction uses appropriate materials where possible to minimize the carbon footprint. The courtyards and surrounding areas are landscaped with preference of indigenous plants.

When it comes to water and waste management the institute believes in reducing use and recycling. A DEWAT system has been constructed on site to handle sewage water from toilets and kitchen. The treated water is reused.

Bio-degradable waste from the canteen and falling leaves are recycled through the process of Composting. Compost thus generated is used in the landscaped areas. A rainwater harvesting system has also been initiated to conserve water for reuse.

The campus is self-reliant when it comes to energy needs, generating surplus Solar Power.

An important part of the green initiatives is about spreading Awareness among all the members of the institute and inculcating good habits when it comes to reducing use and recycling.

A Green Audit had been carried out to determine the strengths and lacunas in achieving a green campus.

The **NADEP method** of organic composting has been initiated on the campus using falling leaves from the landscaped areas. The Nadep method of making miracle compost was first invented by a farmer named N.D. Pandharipande (also popularly known as "Nadepkaka") living in Maharashtra (India). The process basically involves placing select layers of different types of compostable materials in a simple, mud-sealed structure designed with brick and mud water. It delivers large amounts of compost with minimum human effort. The first batch of compost was extracted and used on the campus.

The team of Architect and technical experts from Gotmare and Associates are thankful to the in-house team of ideas for cooperation, furnishing required data, and support offered during our visit.

SOCIAL ASPECTS

ACCESSIBILITY AUDITS OF THE BUILDING

Intent: The purpose of an Accessibility Audit is to establish how well a particular environment performs in terms of access and ease of use by a wide range of potential users, including people with disabilities and to recommend improvements, where necessary.

1. **Parking (preferred parking near building entrance, parking specifications for persons with special needs to be addressed).**

Position of Parking for Divyangjan

2. Provide ramp with railing at the entrance of building and various levels at buildings for differently abled person.

RAMP 1
SLOPE 1:16

RAMP 2
SLOPE 1:10

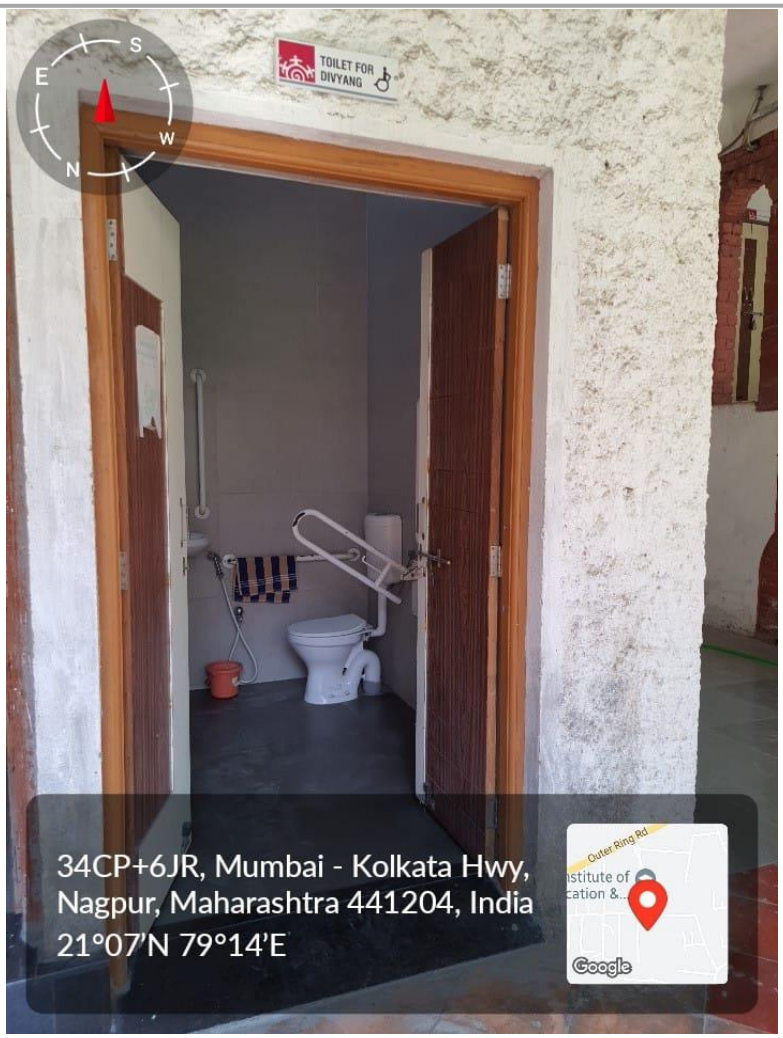
RAMP 3
SLOPE 1:6

Provision Of Ramps at Building Level

1. **Toilet for persons with special needs**.

Position of Toilet for Divyangjan

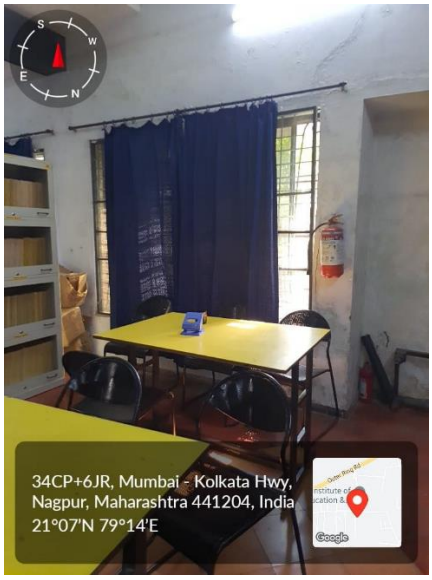
Toilet for Divyangjan



Divyangjan toilet from inside showing grab bar and other details.

FIRE SAFETY AND ELECTRICAL SAFETY OF THE BUILDING

Intent: To prevent fire spread in building during fire accidents.



Photographs showing fire extinguisher cylinder installed at various locations in college campus.

GSTIN : 27AARFV9919N1ZX

TAX INVOICE

Mob. No. 9422101162
9890081567

V. K. ENTERPRISES

SALES & SERVICE OF FIRE FIGHTING EQUIPMENTS

M/S. Principle IDEAS college Nagpur.

GSTIN

Off. : 272, SHANKAR NAGAR, NAGPUR - 440 010
PH. : 2247586, 2247271, FAX No. : 0712 - 2247271

Works : L.G. Floor Shop No.9, Rajat Arcade, Wadi, NAGPUR - 440 023. E-mail : vinayakkewadkar@gmail.com

Invoice No. 877 Dated 8/3/2022
Challan No. 22 Dated 3/3/2022
YOUR ORDER No. Dated

Despatch through
Despatch to
G.R/RR. No. Dt.

Sr. No.	DESCRIPTION	HSN Code	QTY.	RATE	AMOUNT Rs.	P.
1	Refilling of CO_2 type FE 4.5 kg.		2 NOS.	410/-	820	00
2	Refilling of ABC Powder FE 6 kg.		6 NO.	390/-	2340	00
3	Refilling of water CO_2 type FE		1 NO.	180/-	180	00
4	ABC 2 kg FE		3 NO.	290/-	870	00
	Total Amount before Tax				4210	00
	Add : CGST				378	90
	Add : SGST				378	90
	say 4967/- Add : IGST					
	Total Tax Amount					
	Rs. four thousand nine hundred sixty seven Total Amount after Tax				4967	80

Ramesh 8/3/2022

TERMS : (1) Subject to Nagpur Jurisdiction (2) No responsibility is taken for loss in transist (3) Interest @ 20 % per annum will be charged from the date of invoice, if the payment is not received on due date.

Bank Details : V. K. Enterprises	Bank Details : V. K. Enterprises
Bank A/c. : 36905823283	Bank A/c. : 116680057
Bank IFSC : SBIN0014725	Bank IFSC : CBIN0280691

Receipt showing refilling of extinguisher cylinder installed.

ENERGY

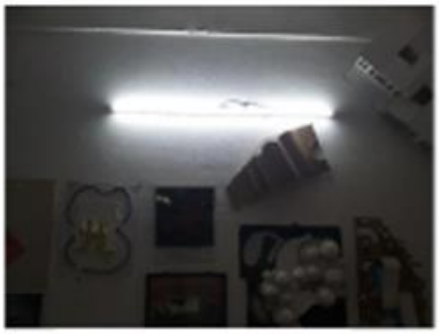
Intent: Building efficiency is key to cutting energy consumption. Improving energy performance in existing buildings

1. Energy Efficiency

Intent: To enable the project to reduce their energy consumption by adoption of energy efficient strategies.

a) **Install energy efficient lighting fixtures** – Light-Emitting Diode (**LED**) tubes and light, 60% of lighting on campus is LED

LED lights in Administration

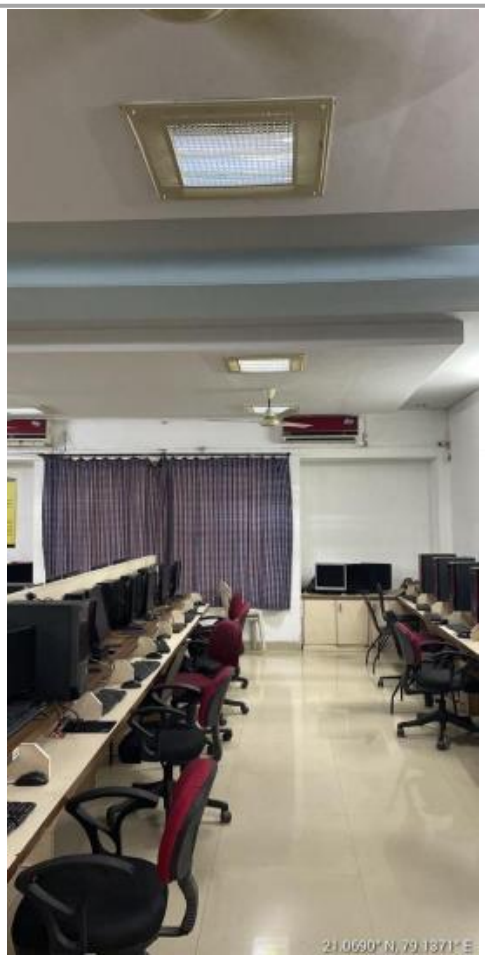

LED lights in Office

LED lights in staffroom

LED lights in Director's Office

LED lights in Principal's Office

LED lights in Computer room



I.D.E.A.S. (2021-22)
Outer Ring Road, Junction Point
Hudkeshwar Bujurg,
Nagpur.

Journal Voucher

No. 515 Dated : 27-Aug-2021

Particulars			Debit	Credit
[illegible]		Dr	9,402.00	
New Ref NEERAJ LIGHT SHOPPEE	9,402.00 Dr			
To NEERAJ LIGHT SHOPPEE				9,402.00
New Ref INV.NO-21-22/1335	9,402.00 Cr			

On Account of :
BEING AMOUNT PAYABLE TO NEERAJ LIGHT SHOPPEE TOWARDS SUPPLY OF ELECT.MATERIAL (20W BATTEN ORIENT/SSK-SRL-9W-MG/LIGHT 100W/ BATTEN/SSK-RDL) AS PER INVOICE ATT

₹ 9,402.00 - ₹ 9,402.00

Authorised Signatory

LED lights in conference room

LIST OF LIGHTS IN CAMPUS 2022									
ROOMS	Tubelights			LED			CFL		
	NOS.	WATTS		NOS.	WATTS		NOS.	WATTS	
STUDIO 1				20	20	400			0
STUDIO 2				12	20	240			0
STUDIO 3				11	20	220			0
STUDI04				13	20	260			0
STUDIO 5				11	20	220			0
STUDIO 6				7	20	140			0
STUDIO 7	12	36	432			0			0
STUDI0 8	24	36	864			0			0
STUDIO 9	13	36	468			0			0
STUDIO 10	15	36	540			0			0
STUDIO 11	12	36	432			0			0
STUDIO 12	13	36	468			0			0
AV ROOM 1	4	36	144	12	9	108			0
AV ROOM 2	4	36	144	4		0			0
AV ROOM 3	2	36	72	2		0			0
AV R00M4	4	36	144	2		0			0
AV ROOM 5	7	36	252			0			0
WORKSHOP	6	36	216			0			0
SURVEY LAB			0	36	20	720			0
			0	18	2	36			0
GIRLS COMMON ROOM	4	36	144			0			0
GIRLS WASHROOM	2	36	72			0			0
BOYS WASHROOM	1	36	36			0			0
FACULTY LOUNGE	7	36	252			0			0
M.ARCH 1	0	36	0	8	12	96			0
M.ARCH 2	0	36	0	12	12	144			0
M.ARCH STUDIO	0	36	0			0			0
Ground floor corridor	7	36	252	11	8	88			0
First floor corridor	21	36	756	0		0			0
STAFFROOM 1	0	36	0	10	18	180			0
STAFFROOM 2	10	36	360			0			0
STAFFROOM 3	7	36	252			0			0
STAFFR00M4	6	36	216			0			0
COMPUTER ROOM	0		0	12	10	120			0
LIBRARY	0	36	0	13	9	117			0
OFFICE	0	36	0	5	20	100	2	9	18
M.K.G.'s CABIN	3	36	108	0		0	2	9	18
A. V. P.'s CABIN	0	36	0	1	20	20	2	36	72
			0	4	7	28			0
U. C.G.'s CABIN	0	36	0	1	20	20	2	36	72
ENTRANCf LOBBY	0	36	0	4	45	180			0
O. A.T.	0	36	0	10	9	90			0
PORCH	4	36	144			0			0
NAAC ROOM			0	12	20	240			0
IST FLOOR WASHROOM			0	6	12	72			0
	188		2334			3839	25		180

TOTAL LIGHTING POWER REQUIREMENT IN WATTS per HR	6353
TOTAL LIGHTING POWER REQUIREMENT MET THROUGH LED IN WATTS per HR	3839
Percentage of lightening met through LED	**60**

LED lights in Auditorium

Duplicate Copy

TAX INVOICE

NEERAJ LIGHT SHOPPEE

UTMA APARTMENT BEHIND, KARAMVEER BOOK DEPO
MAHAL NAGPUR - MAHARASHTRA, MOBILE NO. +91-9146232500
GSTIN : 27BWGPA9207G1ZO
email : neerajlightshoppee@gmail.com

Party Details :
IDEAS COLLEGE

Party E-Mail ID :
Party Mobile No :
GSTIN / UIN :

Invoice No. : NLS/21-22/1335
Dated : 04-08-2021
Place of Supply : Maharashtra (27)
Reverse Charge : N
Salesman Name : PRATIK
GR/RR No. :
Transport :
Vehicle No. :
Station :

S.N.	Description of Goods	HSN/SAC Code	Qty.	Unit	List Price	Disc.		Price	CGST Rate	CGST Amount	SGST Rate	SGST Amount	Amount(₹)
1.	20W BATTEN ORIENT	94054090	20.00	Pcs	160.00	0.00	%	142.86	6.00 %	171.43	6.00 %	171.43	3,200.00
2.	SSK- RDL-9W-HO	8539	10.00	Pcs	65.00	0.00	%	58.04	6.00 %	34.82	6.00 %	34.82	650.00
3.	REVA FLOOD LIGHT 100W	9405	2.00	Pcs	1,858.00	0.00	%	1,651.79	6.00 %	198.21	6.00 %	198.21	3,700.00
4.	20W BATTEN ORIENT	94054090	5.00	Pcs	180.00	0.00	%	160.72	6.00 %	48.21	6.00 %	48.21	900.00
5.	SSK-RDL R-9W-6500K	9405	2.00	Pcs	476.00	0.00	%	425.00	6.00 %	51.00	6.00 %	51.00	952.00
	Grand Total		39.00	Pcs									₹ 9,402.00

HSN/SAC	Tax Rate	Taxable Amt.	CGST Amt.	SGST Amt.	Total Tax
8539	12%	580.36	34.82	34.82	69.64
9405	12%	4,153.58	249.21	249.21	498.42
94054090	12%	3,660.72	219.64	219.64	439.28
Totals		8,394.66	503.67	503.67	1,007.34

26-8-21

RupeesNine Thousand Four Hundred Two Only

Bank Details: CANARA BANK , BADKAS CHOWK- NAGPUR
A/C No. - 100420101232 7 IFSC CODE - CNRB0001084

Terms & Conditions
E.& O.E.
1. Goods once sold will not be taken back.
2. Interest @ 18% p.a. will be charged if the payment is not made with in the stipulated time.
3. Subject to "NAGPUR" Jurisdiction only.
4. CHEQUE BOUNCING CHARGES Rs.600/-

Receiver's Signature :

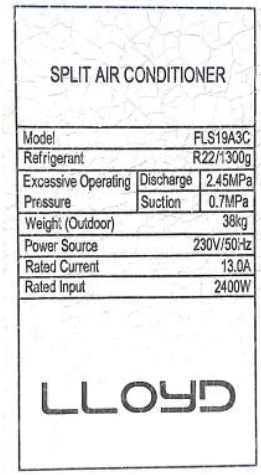
For NEERAJ LIGHT SHOPPEE

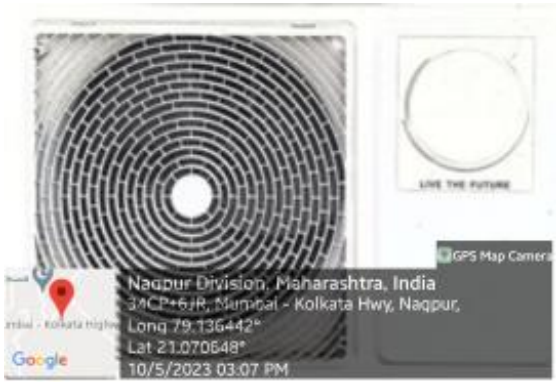
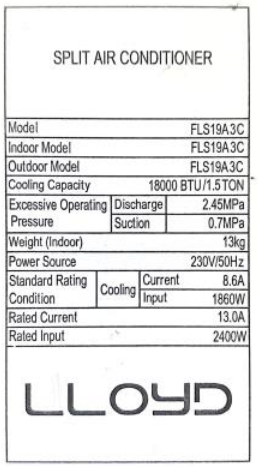
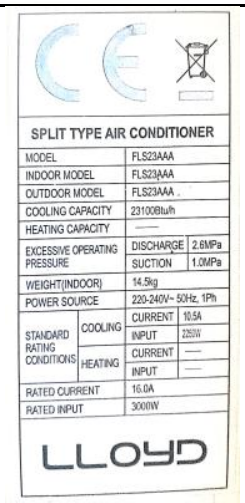
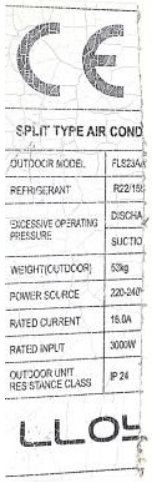
Authorised Signatory

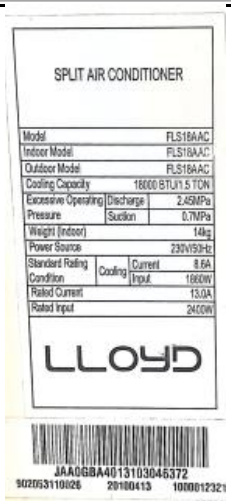
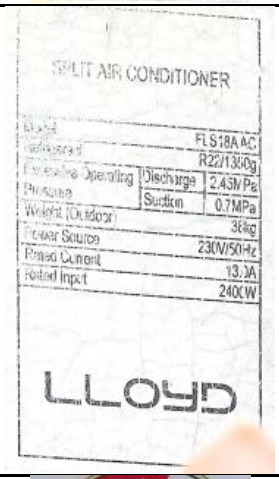
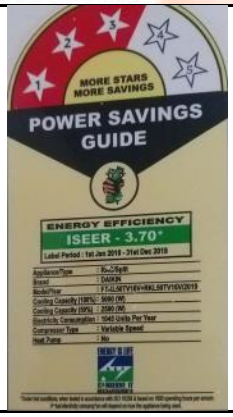
27/8/21

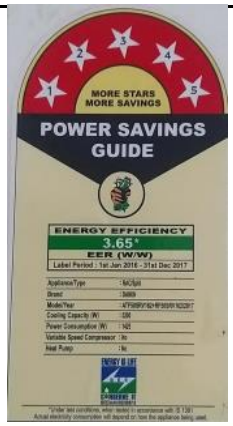
b) Install energy efficient cooling system and appliances- BEE star rated.

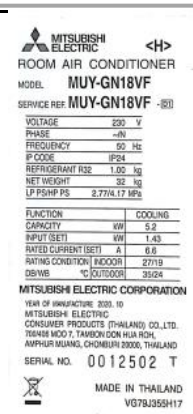
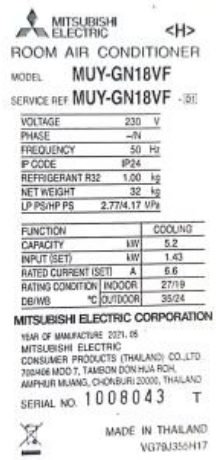
Sr.no	Location of air conditioners installed	No. of Air conditioners installed
1.	Principal's Cabin	1
2.	Director's Cabin	1
3.	Computer Lab	2
4.	G.F. Staff room	2
5.	Auditorium	3
6.	AV rooms	5
7.	NAAC room	2
8.	1st floor Staff room	2
9.	**Total**	**18**

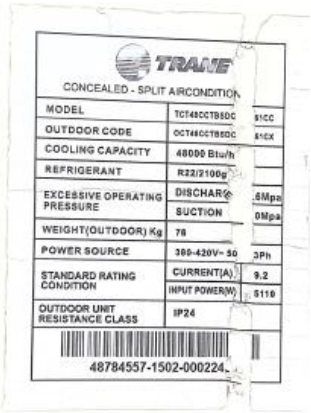
1	Computer Lab		 SPLIT AIR CONDITIONER Model FLS19A3C Refrigerant R22/1300g Excessive Operating Pressure Discharge 2.45MPa Suction 0.7MPa Weight (Outdoor) 38kg Power Source 230V/50Hz Rated Current 13.0A Rated Input 2400W LLOYD

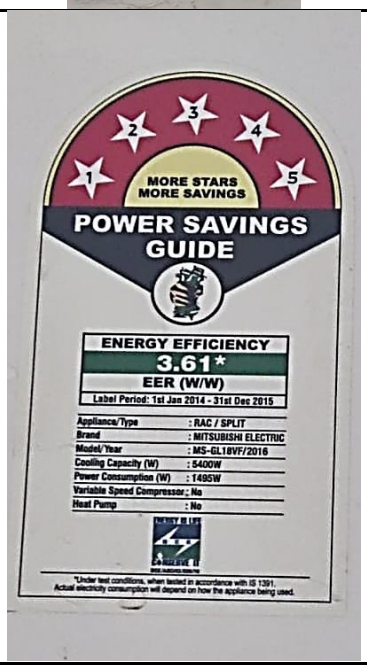
2	Computer Lab		
3a	Principal's office		
3b	Principal's office		

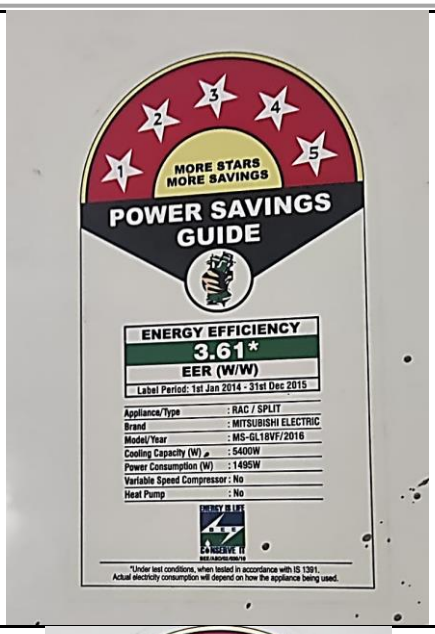
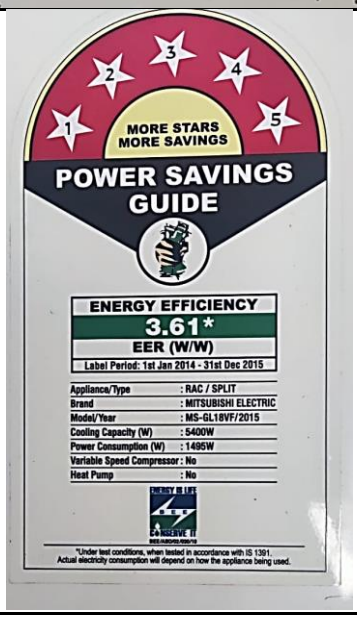
4a	Director's office		
4b	Director's office		
7a	Staff room 1		

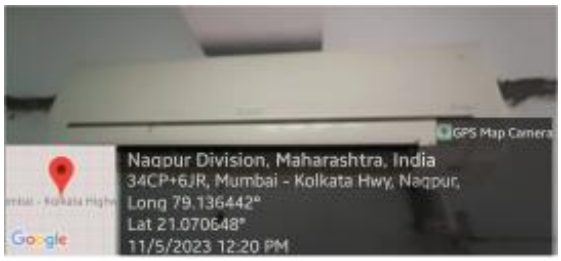
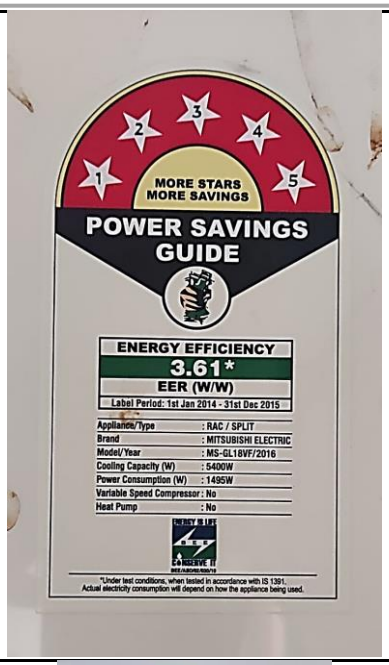
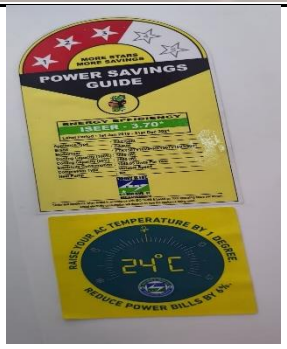
7b	Staff room 1		
8a	Staff room 1		
8b	Staff room 1		

9a	NAAC room		
9b	NAAC room		
10a	NAAC room		
10b	NAAC room		

11a	Auditorium		
11b	Auditorium		
11c	Auditorium		

12a	Lecture Room 1		
12b	Lecture Room 1		
13a	Lecture Room 2		
13b	Lecture Room 2		

14a	Lecture Room 3		
14b	Lecture Room 3		
15a	Lecture Room 4		
15b	Lecture Room 4		
16a	Lecture Room 5		

16b	Lecture Room 5		
17a	Faculty Room 1st floor		
17b	Faculty Room 1st floor		

18a	Faculty Room 1st floor		
18b	Faculty Room 1st floor		

2. Renewable Energy Utilization

Intent: To promote the use of renewable energy technologies and enable energy generation on site.

The Institute generates and uses 100% renewable energy (solar energy) and sends excess energy to the grid.

Important Message

- Consumers can pay online using Net Banking, Credit/Debit cards at https://wss.mahadiscom.in/wss/wss after registration.
- Submit / update your E-mail id and mobile number to Circle office for receiving prompt alerts through SMS.
- Submit / update your PAN and GSTIN to circle office with copies of PAN and GSTIN for verification.
- Special desk is operational for HT Consumers, please contact : htconsumer@mahadiscom.in for any clarification / query or grievance.
- This Electricity Bill should not be use for the address proof and as a proof of property ownership.
- For Any Payment to MSEDCL , ENSURE & INSIST for computerised receipt with unique system generated receipt number. Do not accept handwritten receipts. Pay online to avoid any inconvenience.

CURRENT CONSUMPTION DETAILS

Reading Date	KWH	KVAH	RKVAH (LAG)	RKVAH (LEAD)	KW (MD)	KVA (MD)
Current 30-06-2021	39545.200	40001.000	2618.000	11380.000	8.900	8.920
Previous 31-05-2021	38894.000	39348.800	2602.600	11276.400		
Difference	651.200	652.200	15.400	103.600		
Multiplying Factor	1.000	1.000	1.000	1.000	1.000	1.000
Consumption	149.000	652.000	15.000	104.000	9.000	9.000
LT Metering	0.000	0.000	0.000	0.000	0.000	0.000
Adjustment	0.000	0.000	0.000	0.000		
Assessed Consump	0.000	0.000	0.000	0.000	0.000	0.000
Total Consumption	149.000	652.000	15.000	104.000	9.000	9.000

BILLING DETAILS

Billed Demand (KVA)	12	@ Rs.	415
Assessed P.F.		Avg. P.F.	0.980
Billed P.F.	0.980	L.F.	

Consumption Type	Units	Rate	Charges Rs.
Industrial	0	00.00	00.00
Residential	0	00.00	00.00
Commercial	149	10.79	1,607.71

E.D. on(Rs)	Rate %	Amount Rs.
0.00	0	0.00
00.00	0	0.00
6,957.23	0	0.00

TOD Zone	Rate	Units	Demand	Charges Rs.
2200 Hrs-0600 Hrs	-01.50	0	2.00	0.00
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs	00.00	0	9.00	0.00
0900 Hrs - 1200 Hrs	00.80	0	3.00	0.00
1800 Hrs-2200 Hrs	01.10	149	3.00	163.90

Amount in Words ONLY

Demand Charges	4,980.00
Wheeling Charge @ 01.38	205.62
Energy Charges	1,607.71
TOD Tariff EC	163.90
FAC @ 00.00 Ps/U	00.00
Electricity Duty (00.00 %)	00.00
other charges	00.00
Tax on Sale @ 19.04 Ps/U	28.37
P.F. Penal Charges/P.F. Inc.	-104.36
Charges For Excess Demand	00.00
Debit Bill Adjustment	2,543.22
TOTAL CURRENT BILL	**9,424.46**
Current Interest 07-07-2021	00.00
Principle Arrears	-98,599.76
Interest Arrears	00.00
Total Bill (Rounded) Rs.	-89,180.00
Delayed Payment Charges Rs.	0.00
Amount Payable26-07-2021 After Amount Rounded to Nearest Rs.(10/-)	**0.00**

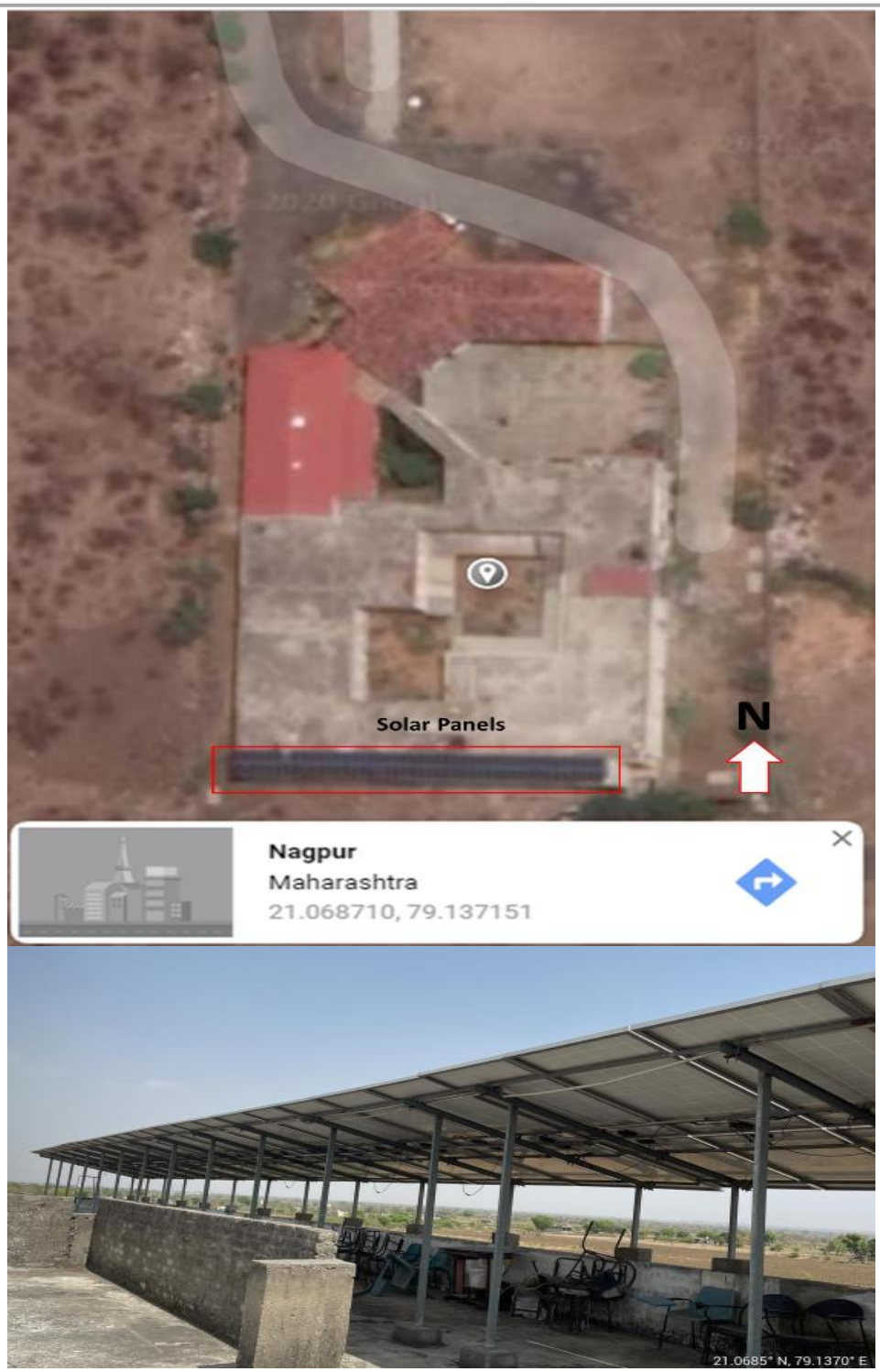
SOLAR TARIFF	IMPORT	EXPORT	GENERATION
	CURRENT PREVIOUS Units	CURRENT PREVIOUS Units	CURRENT PREVIOUS Units

0000 Hrs-0600 Hrs& 2200 Hrs-2400 Hrs	9,766.60	9,447.60	319.00	04.20	04.20	00.00	00.00	00.00	00.00
0600 Hrs-0900 Hrs& 1200 Hrs-1800 Hrs	19,166.40	18,993.20	173.00	44,068.40	42,768.60	1,300.00	1,09,950.00	99,285.00	10,665.00
0900 Hrs - 1200 Hrs	4,967.20	4,959.60	08.00	29,259.20	28,417.60	842.00	00.00	00.00	00.00
1800 Hrs-2200 Hrs	5,645.00	5,493.60	151.00	35.80	33.80	02.00	00.00	00.00	00.00
TOTAL	39,545.20	38,894.00	651.00	73,367.60	71,224.20	2,143.00	1,09,950.00	99,285.00	10,665.00
Offset: 502.00		Prvious Banked: 5,216.00			Current Banked: 6,858.00		Billed: 149.00		

Message:
Rooftop Solar banking credit was passed in Apr-21/May-21 bill with APPC rate 3.94 / Generic rate 2.90 Rs./Kwh applicable for FY 2021-22 instead of APPC rate 3.85 / Generic rate 2.83 Rs./Kwh applicable for FY 2020-21. Adjustments for rate difference of amount Rs. 2543.22 is passed in this bill.
Your mobile number is 94****21 For updation/registration of mobile number use Mahadiscom website or Mobile App or send sms to 9930399303 as follows MREG 410015268721.**
DIGITAL PAYMENT DISCOUNT OF Rs. 0
In case of energy bill paid through NEFT / RTGS, date of amount credited in MSEDCL bank account will be considered as bill payment date.
As per MERC order for Case No 322 of 2019 revised Cheque Bounce charges of Rs. 750 plus GST or Bank charges whichever is higher will be applicable from 01 April 2020.
Message: Rooftop Solar Units:-Export:+00002144,Import:651,Adjusted:+00000502,Bank:+00006858/Prev.Prompt Payment Cr.(Rs.):-68.83/Please refer copy of the bill for details./
As per Income Tax provision vide section 269 ST cash receipt of Rs.2.00 lakhs and above will not be accepted by MSEDCL against any type of Payment.
 # Prev Prompt Payment Credit:-68.83
 # As per MTR order (322/2019) revised tariff for FY 2021-22 is effective from 01.04.2021.
 # Prompt Payment Discount: Rs. 0.00 , if bill is paid on or before 20-07-2021 .

CONDITIONS

1. The total bill amount of the bill may be remitted by a Crossed Demand Draft/Cheque drawn in favor of 'Maharashtra State Electricity Distribution Co. Ltd.' Whenever Security Deposit is demanded separate Cheque/Bank Draft should be sent.
2. The current bill is payable within fifteen days from the date of issue of the bill. Even if there is any discrepency in the bill or any other clarification needed, consumers are requested to pay the billed amount in full provisionally or under protest subject to review and subsequent adjustment, so that payment of delayed payment charges is avoided.
3. This bill is issued subject to the provision of the 'Conditions and Miscellaneous charges for supply of Electrical Energy' of the company.
4. Please quote the Consumer Number on the back of the Cheque. The payment of this bill should be made at Company's office only.
5. If the cheque is sent by post, the same should be posted three clear days in advance of the due date.
6. If paid by Cheque/DD/Pay Order, then the Realization date should be considered as payment date.



Location and photos of solar photovoltaic panels installed on terrace of institute.

WATER EFFICIENCY

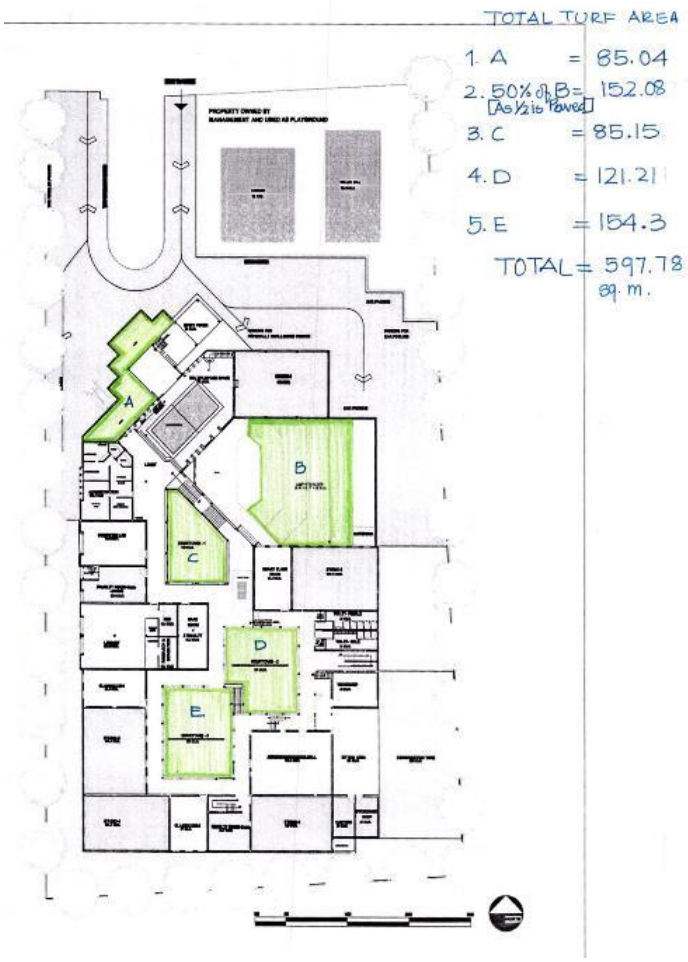
Intent: Reduction in the consumption of potable water supplied by municipal local body through improved practices. It further focusses on implementation of no/low-cost water conservation measures and recycling and reuse of water for overall improvement in the water performance.

1. WATER FOOTPRINT

Intent: To measure water consumption and identify potential areas to optimize water consumption in the project boundary.

a) **Reducing Landscape Water Demand** – Minimizing lawn area and restricting it to 25% of the total landscaped area.

- Total landscape area of the Institute = 4702 sqm
- Total turf area = 597.78 sqm. (13%)

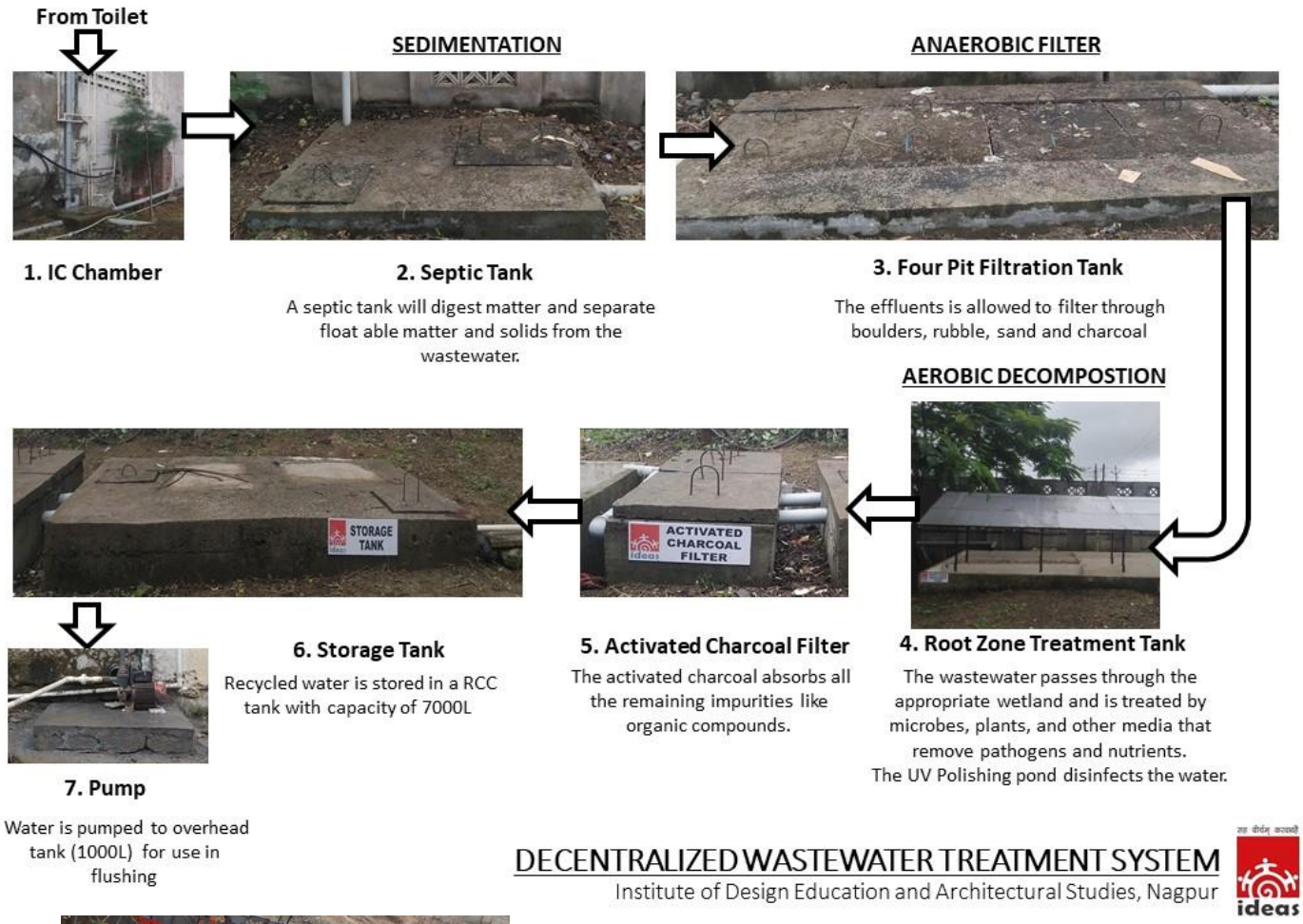


Lawn area inside the campus

Use Of Water-Efficient Irrigation Systems to Reduce the Water Requirement. *Sprinklers at lawn area inside the campus*

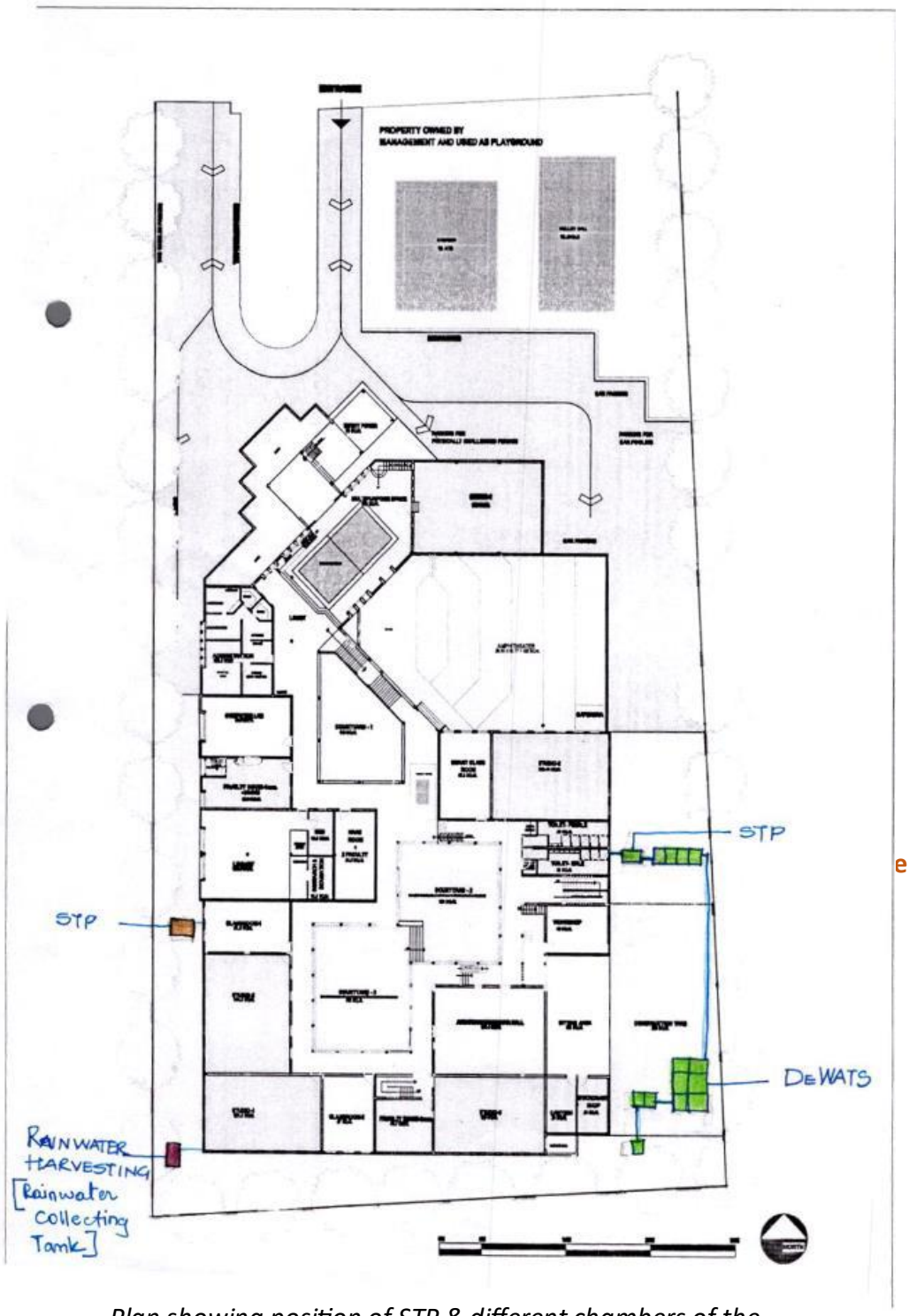
b) Reduction In Building Water Consumption By 30% Below the Base Case Through Water Efficient Fixtures.

c) **Provision Of On-Site Sewage Water Treatment System:** 100 % of grey water treatment on site



Filter and Storage tank

Overhead Storage tank



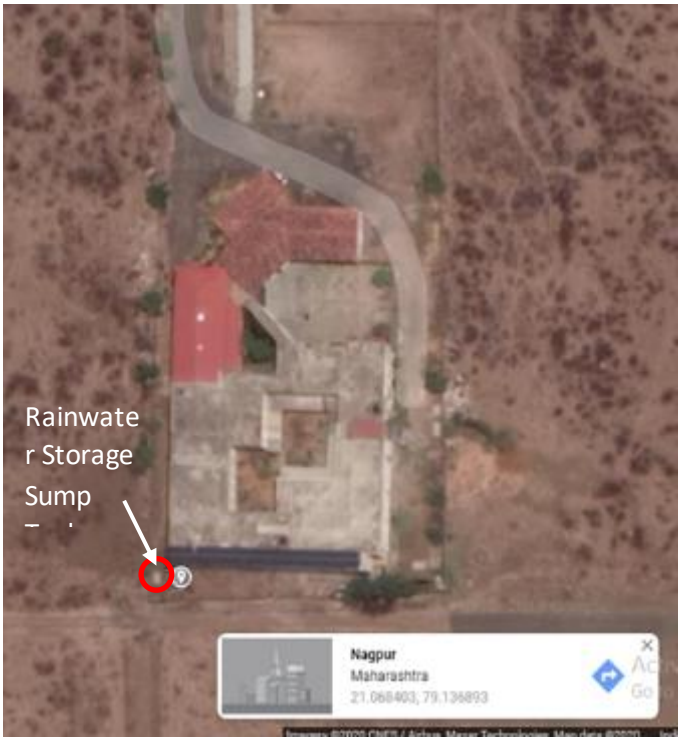
eet 100% of

Plan showing position of STP & different chambers of the DEWAT system

e) Provision Of Rainwater Harvesting System:

- **Only roof rainwater harvesting**.

- Spouts and rainwater pipes allow the rainwater from the terrace to fall into the courtyard where it is soaked into the ground. Benefits derived through this system are: i) tube well recharging and ii) rise in water table. The institute draws water from the tube well for daily use.
-
- At present a sump tank of capacity 4100 liters is constructed at south west corner of the campus to store rainwater for reuse in watering plants and cleaning. The institute has planned to increase the system in phases.



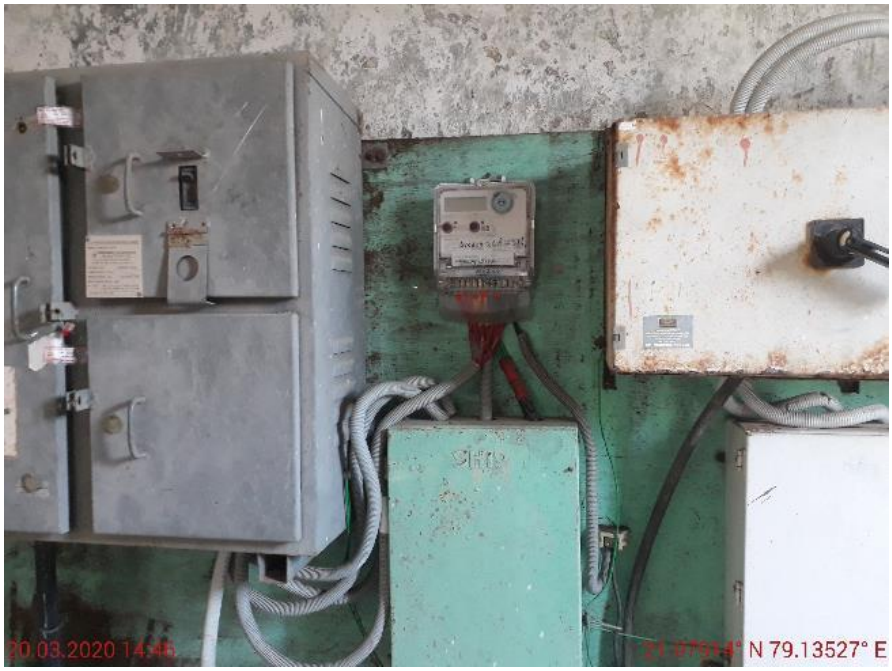
- **100% rainwater harvesting of catchment area.**
- The maximum area around the periphery of the building is softscape i.e 92% and the rest 8% is hardscape(roads) which helps in ground infiltration of ground water.

Plan showing campus softscape in yellow

METERING & MONITORING

Intent : To promote metering of energy and water consumption of the building to monitor and analyze the performance of the habitat

a) Installed energy meter at building level to monitor the energy consumption.



b) Install water meter at building level to monitor the water consumption.

c) Conduct water quality test report as per CPCB /BIS Standards.

The Water Quality Test was carried out in 2020 and is valid for 3 years

TEST REPORT

ANACONLABS

ANACON LABORATORIES PVT. LTD.

ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Organization
Recognized By Ministry of Environment & Forests (MoEF), New Delhi
Accredited By Quality Council of India by - NABET

Test Report No. : ALPL/17032020302 dated 17.03.2020 Page 1 of 1

Issued To : M/s Institute of Design Education & Architectural Studies Nagpur, Hudkeshwar Road, Outer Ring Road, Junction Point, At Post Pipala, Nagpur 440037 **Kind Attention :** Mr. Ravi Atre **Contact No. :** 9423678464	**Sample Inward No.**	2020/W-45/1-1	**Analysis Start**	02.04.2022	
	Inward Date	02.04.2022	**Analysis End**	17.04.2022	
	Reference	Verbal Communication			
	Reference Date	02.04.2022	**Sample Category**	Water	

Sample Name	Sample Particulars / Details	Purpose of Analysis	Quantity Received
Water	RO Water	Drinking	1 L

Sample Collected By	Sampling Location
M/s Institute Of Design Education & Architectural Studies Nagpur	Not Mentioned

Tests Required : Total coliform, pH, Colour, Odour, Turbidity, Total dissolved solids, Sulphate, Nitrate, Chloride, Calcium, Fluoride, Magnesium, Total hardness, Iron.

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 2		Test Result
				Acceptable Limit	Permissible Limit*	
I	**Biological Testing** **1. Water**					
1	Total coliform	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
II	**Chemical Testing** **1. Water**					
2	pH	-	IS 3025 (Part 11) : 1983	6.5 to 8.5	No relaxation	7.30 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 1983	5	15	BDL (DL – 1)
4	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	BDL (DL-0.1)
6	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	1250
7	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24) : 1986	200	400	97.22
8	Nitrate (as NO_3)	mg/l	APHA Method 23 Edition	45	No relaxation	2.96
9	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	50.02
10	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	88.2
11	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	1.17
12	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	35	100	43.46
13	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) : 2009	200	600	399
	2. Residues in Water					
14	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2004	1.0	No relaxation	0.27

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

REMARKS : As requested by the client, sample was tested for above parameters only. **As per IS 10500 : 2012, for test no. 6, 10, 11,12 & 13 sample exceeds acceptable limit, however, the result is within permissible limit, indicating that with respect to the tested parameter, it can be used for drinking purpose in absence of an alternate source.**

Verified By

Swati Shrivastava, Technical Manager
Kavita Sayagonkar, Technical Manager
Pooja Kalbande, Technical Manager

Authorized Signatory

Dr.(Mrs.) S.D. Gatway
Director Labs

ANACONLABS TEST REPORT ORIGINAL COPY

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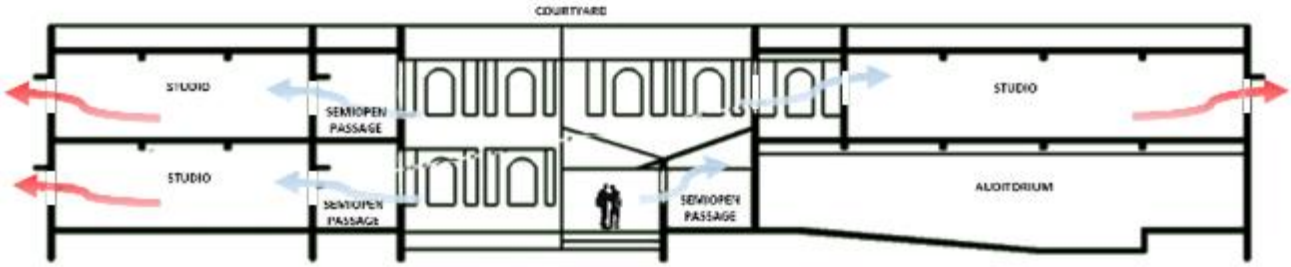
Support Helplines : Technical (9373287475) Email : labngp@anacon.in, Office (8669454450) Email : support@anacon.in,
Accounts Division (9326060081, 9372960079) Email : accounts@anacon.in
You may also visit us at www.anaconlaboratories.com
Branches : Maharashtra | Chhattisgarh | Madhya Pradesh | Jharkhand | Delhi

HUMAN HEALTH & COMFORT

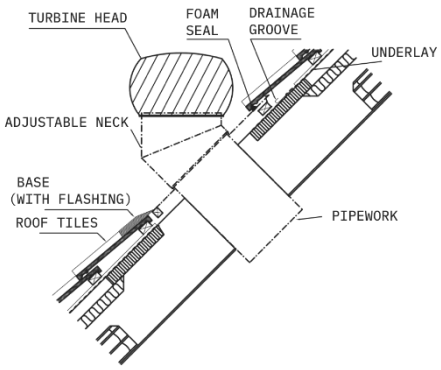
Intent: To ensure that interior spaces of the building meet thermal, visual, and acoustical comfort

a) **Fresh Air Ventilation** – Provide adequate outdoor air ventilation to avoid pollutants affecting indoor air quality. For Naturally Ventilated Spaces Demonstrate that the ratio of openable area to the carpet area is at least 4% in each regularly occupied zone.

The institute has ample light and ventilation since the building is designed to be one room deep at all sections. Each room opens onto a shaded semi-open passage which allows air flow and light to come in. The central courtyards are landscaped. Thus, the air here is cool. It flows into the rooms and replaces the hot air. There are windows on at least two sides to allow cross ventilation. The passages cut glare and allow more shaded light inside the rooms. Tiles roofs have wind driven roof ventilators to remove hot air and bring in cool air through stack effect.



SECTION THROUGH THE BUILDING



Sectional detail of roof with turbine

Turbines on the roof

b) Ensuring Thermal Comfort as Per NBC 2005 Or ASHRAE 55. Indoor Noise Level and Daylight Levels.

- **Ensuring thermal comfort as per NBC 2005 or ASHRAE 55.**
- **Ensure indoor noise level as per NBC norms to enhance comfort level**
- **Ensure adequate daylight levels Ensure artificial lighting Lux level report as per NBC 2005.**

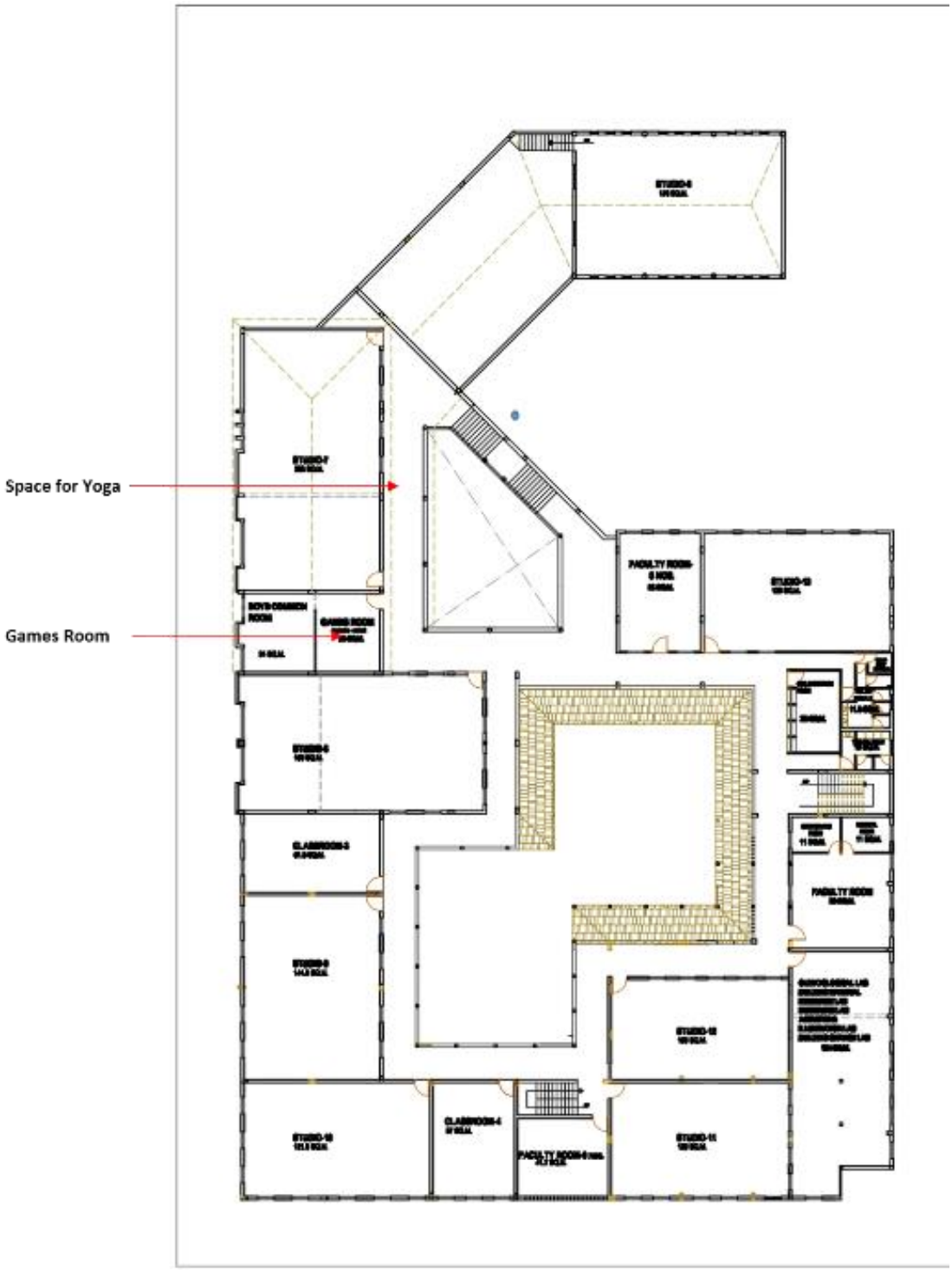
Sr.no	Name of Location (Ground Floor)	Readings observed from the location				
		Temperature (degree centigrade)	Humidity-RH	artificial lighting Lux level	daylight levels Lux level	Indoor noise level (decibel)
1.	Office	**26.6**	58.2	**232**	60	50.8
2.	Principals cabin	**26.9**	50.2	**263**	52	53.8
3.	Computer lab	**26.9**	55.6	**263**	35	43
4.	Staff room	**26.9**	58.6	**289**	56	57.7
5.	Library	**26.4**	50.6	**265**	154	42.1
6.	Classroom 1	**26.8**	58.8	**238**	80	46.8
7.	A. V. Room 2	**24. 7**	56.7	265	33	43
8.	Classroom near foyer	**26**	57.3	235	63	55.7
9.	Auditorium	**23. 6**	50.2	266	30	44

C) Occupant Well-being Facilities Ensure that the project has at least 2 occupant well-being facilities (such as gymnasium, aerobics, yoga, meditation, or any indoor / outdoor games) to cater to at least 10% of building occupants, through the day.

Facilities Available

S No	Facility	No. of Occupants
1	Volleyball Court	12
2	Kabaddi Court	24
3	Badminton Court	4
4	Table Tennis	4
5	Indoor Games- Carom/ Chess	6
6	Space for Yoga / Meditation	25
	Total Participants	**75**

Facilities for Well Being of Occupants - Ground Floor Plan



Facilities for Well Being of Occupants – First Floor Plan

Facilities for Well Being of Occupants

MAINTAINING GOOD IAQ

Intent: To ensure good indoor air quality and quantity (IAQ) for all occupants inside the building

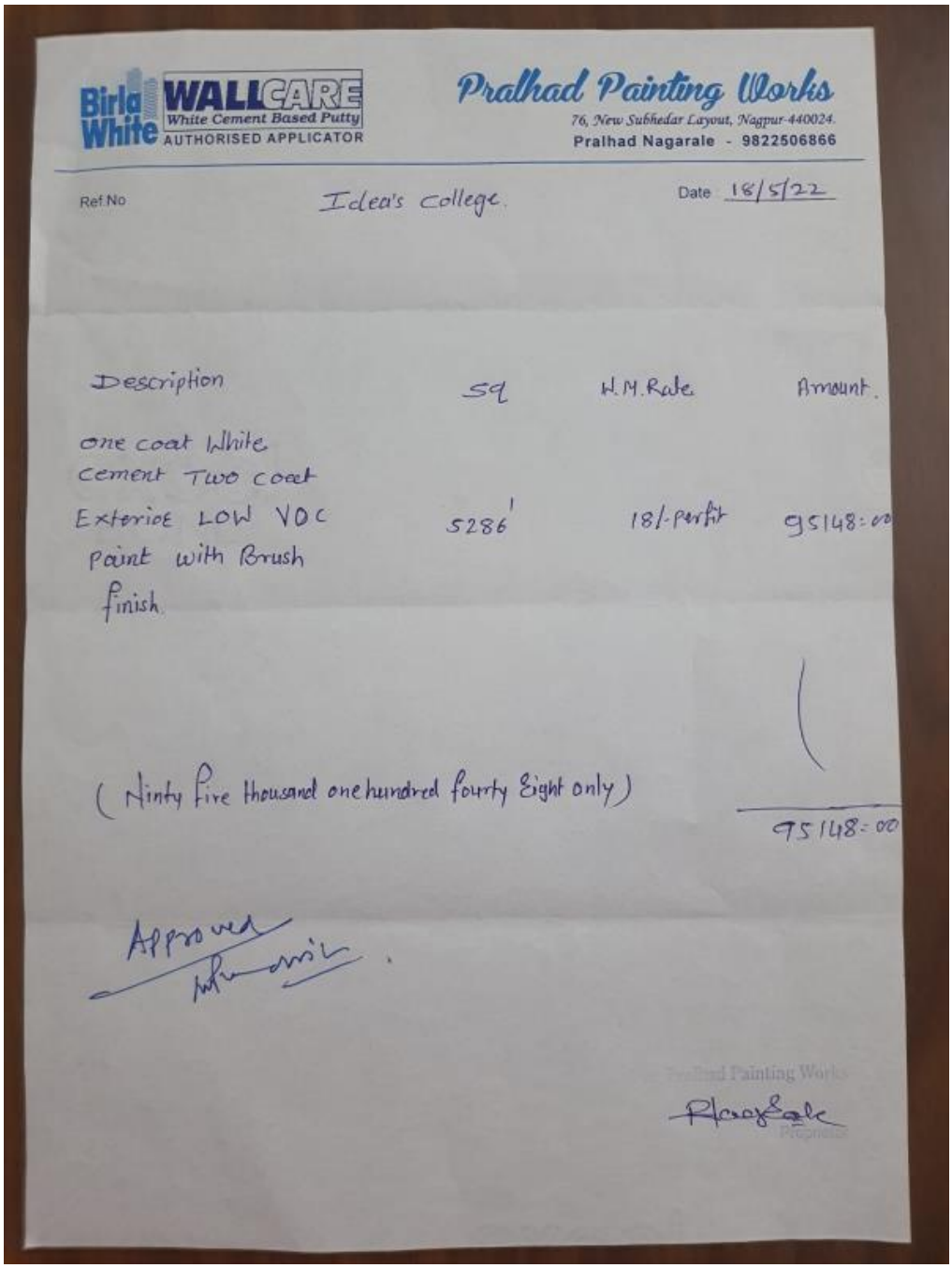
a) **Smoking must be banned/ prohibited within the building premises**.

No Smoking Sign Located at Entrance.

b) Make use of environment-friendly cleaning and for housekeeping materials

Environmentally friendly products are used for cleaning to avoid toxins that are present in other cleaning products.

c) **Application of Low volatile organic compounds (VOC) paints to maintain good air quality.**



Birla White WALLCARE White Cement Based Putty AUTHORISED APPLICATOR

Pralhad Painting Works
76, New Subhedar Layout, Nagpur-440024.
Pralhad Nagarale - 9822506866

Ref.No Idea's college. Date 18/5/22

Description	Sq	W.M.Rate	Amount.
one coat White cement Two coat Exterice LOW VOC paint with Brush finish	5286'	18/-perfit	95148:00

(Ninty five thousand one hundred fourty Eight only)

95148:00

Approved

Pralhad Painting Works
Proprietor

SOLID WASTE MANAGEMENT

Intent: to promote the occupants to manage the solid waste at site level sustainably.

a) Garbage Segregation, Collection and Disposal

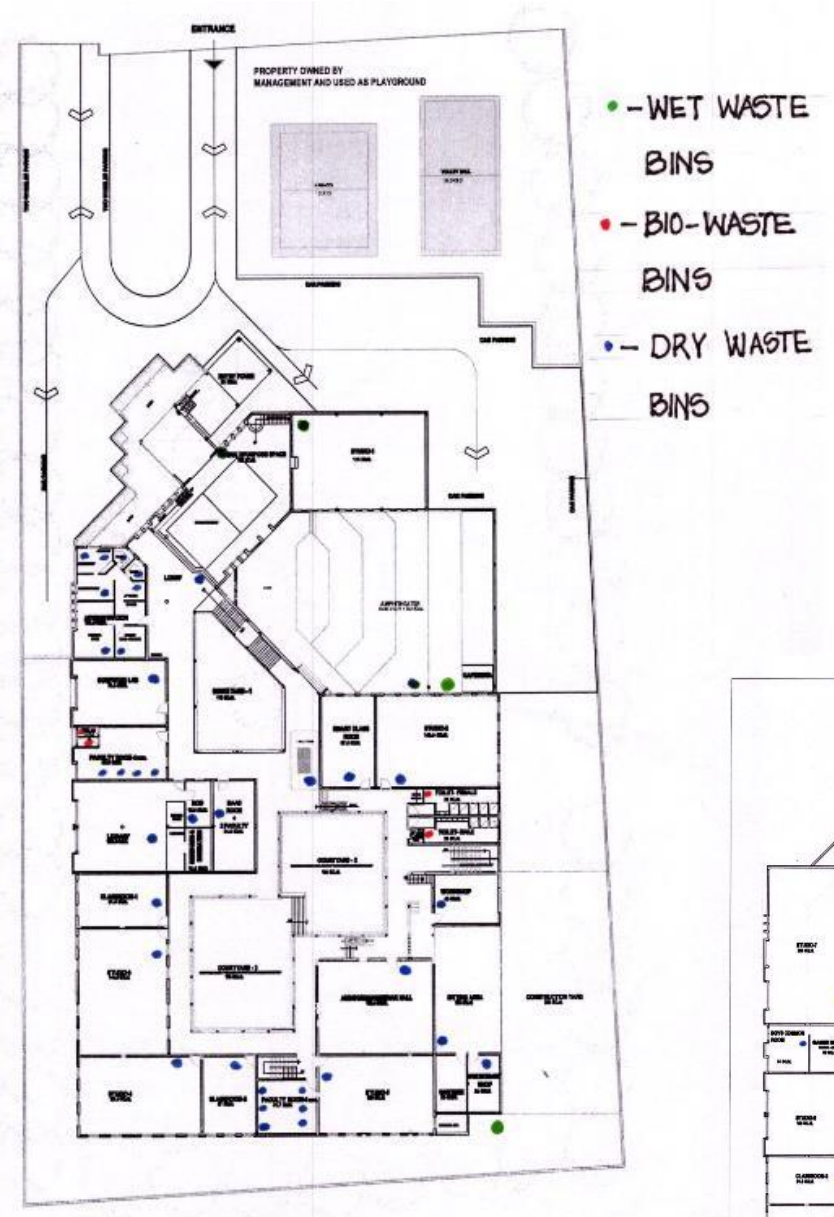
- Wet waste from the kitchen is composted and the manure that it yields is used in landscape areas.
- Dry leaves are composted using Nadep method.
- Dry waste from classrooms, staff rooms and offices are segregated.
- Paper and sheets are sold to identified agencies for recycling.
- Single side paper is used for rough work.
- The rest of dry waste is sent to landfill.
- Sanitary napkins are disposed of in an incinerator.

Dry leaves are composted using the Nadep method in a two chamber pit

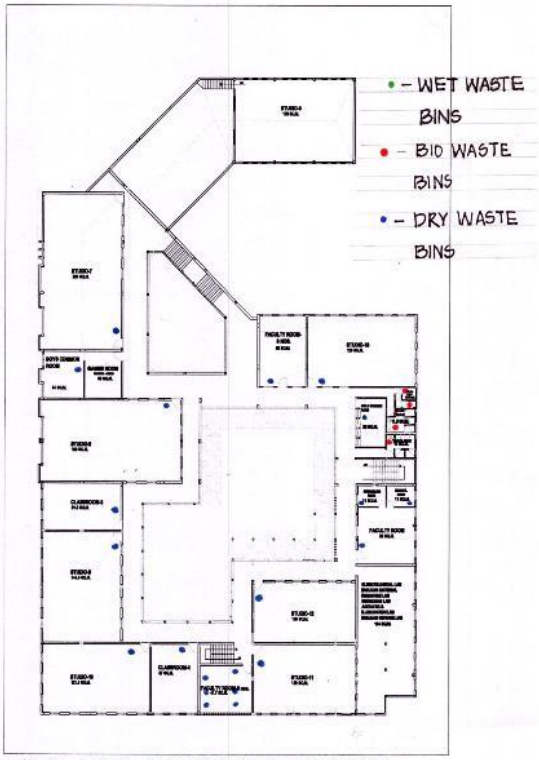
Used Paper Sent For Recycling

An Incinerator At Girl's Toilet

b) Provide (multi-colored dustbins/different garbage chutes) to building occupants to ensure segregation of waste at source



GROUND FLOOR PLAN SHOWING WASTE BINS



Ist FLOOR PLAN SHOWING WASTE BINS

Multi-Coloured Bins At Each Floor To Segregate Waste At Site

c) Treat organic waste on site

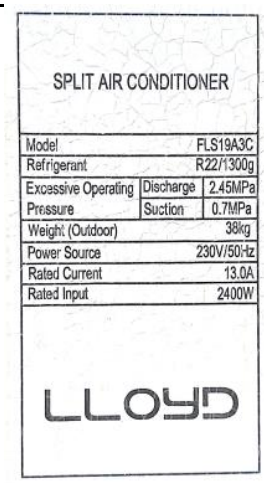
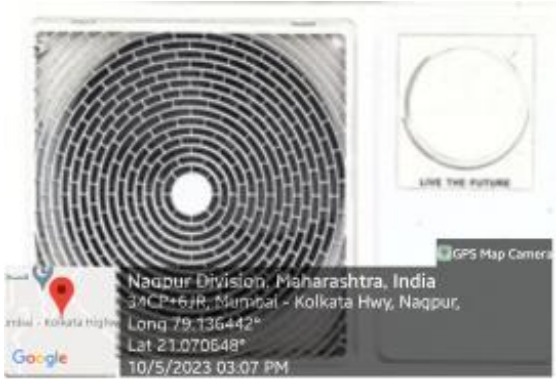
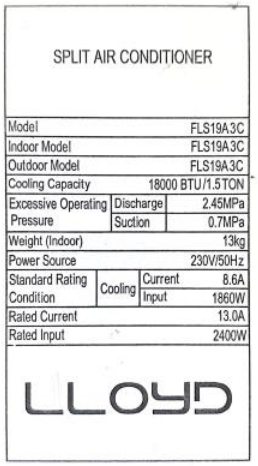
Intent: To promote recycling and reuse of organic waste on site.

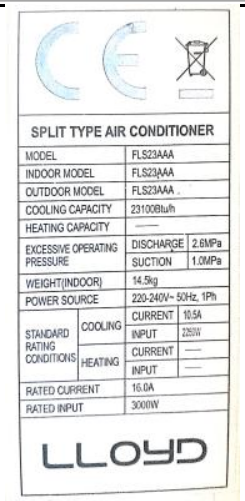
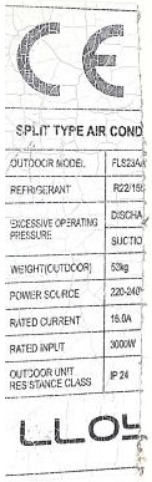
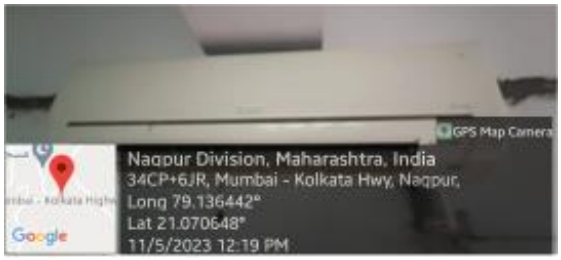
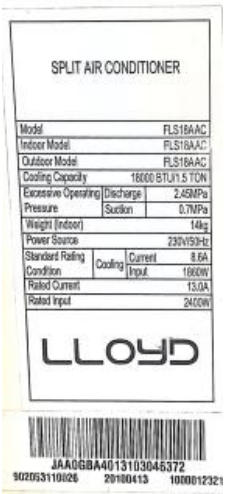
composting pit for organic waste or organic waste composter on site.

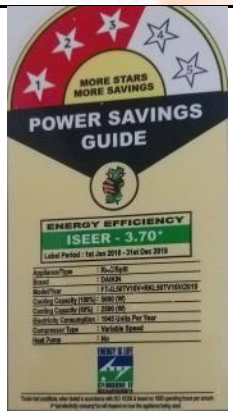
ENVIRONMENTAL AWARENESS

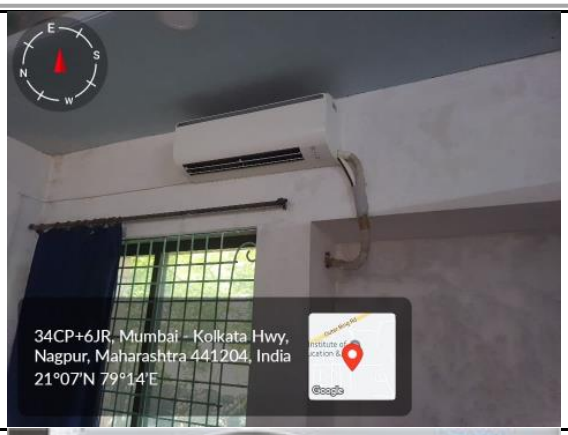
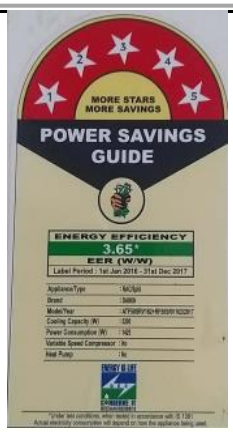
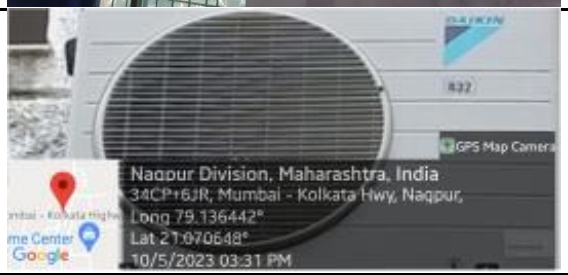
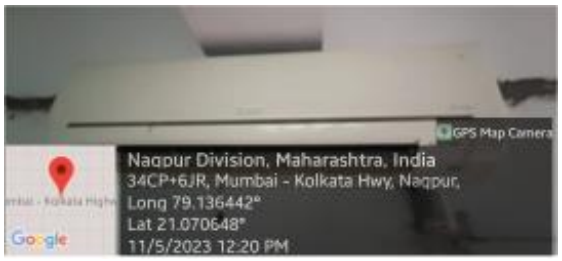
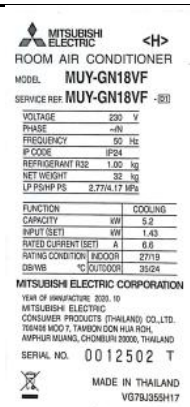
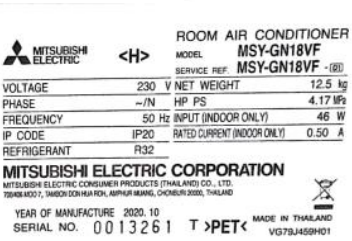
Intent : To increase environmental awareness amongst the building users and visitors.

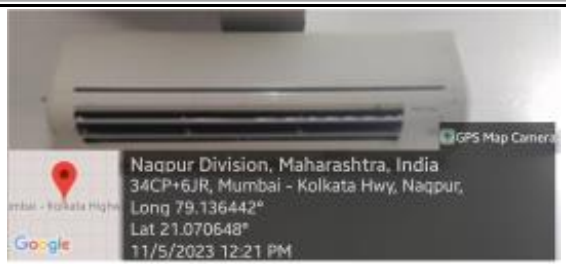
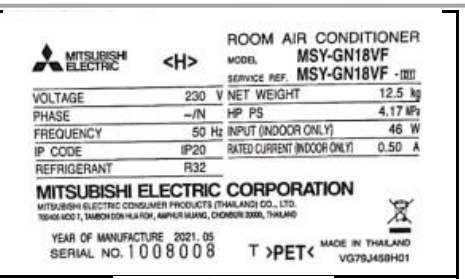
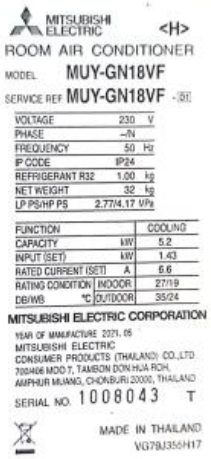
a) HVAC and other cooling equipment in the building are CFC-free, with low ozone depleting potential.

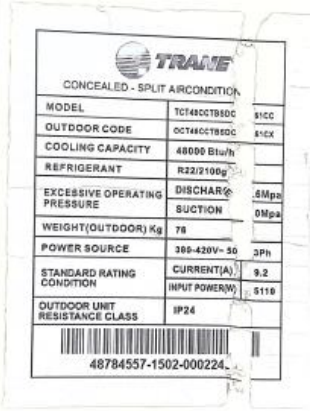
1	Computer Lab		
2	Computer Lab		

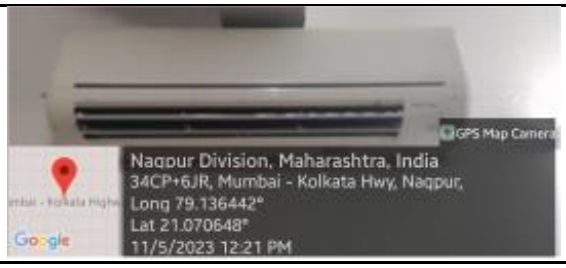
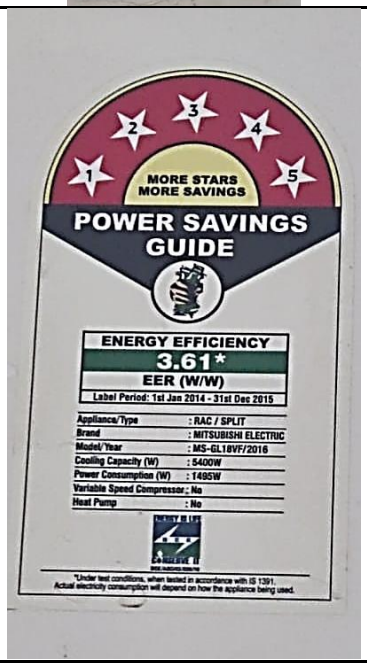
3a	Principal's office		
3b	Principal's office		
4a	Director's office		

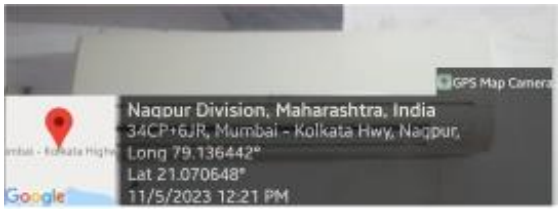
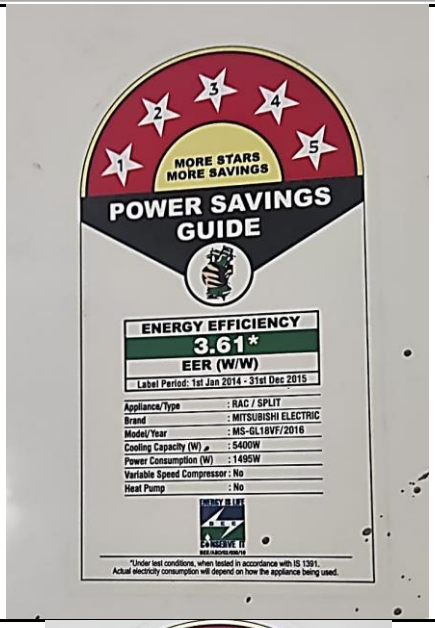
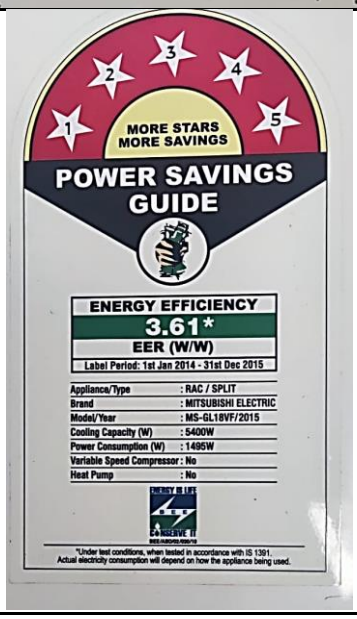
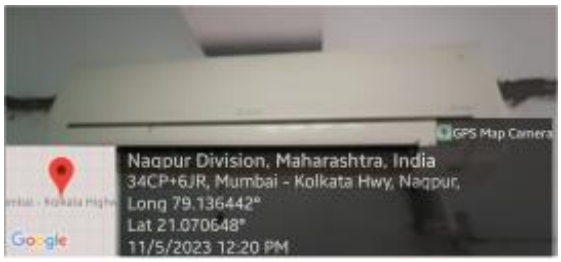
4b	Director's office		
7a	Staff room 1		
7b	Staff room 1		

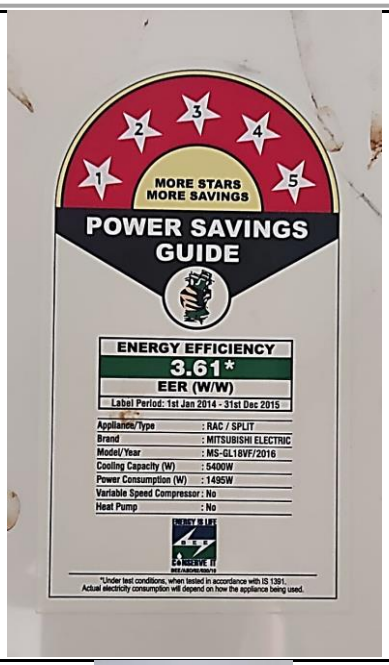
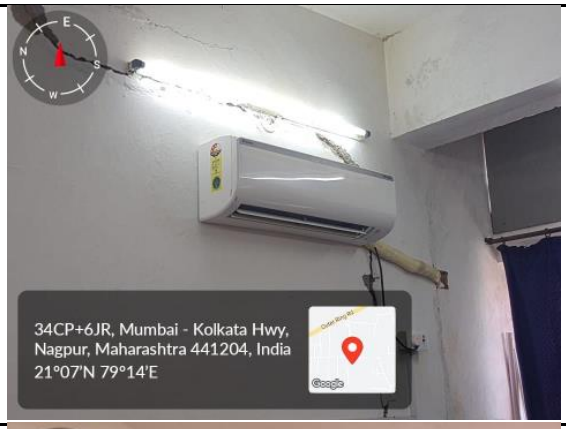
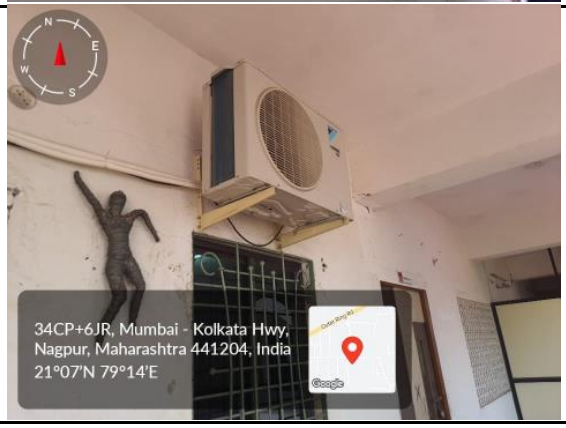
8a	Staff room 1		
8b	Staff room 1		
9a	NAAC room		
9b	NAAC room		

10a	NAAC room		
10b	NAAC room	 	
11a	Auditorium		

11b	Auditorium		
11c	Auditorium		
12a	Lecture Room 1		

12b	Lecture Room 1		
13a	Lecture Room 2		
13b	Lecture Room 2		
14a	Lecture Room 3		

14b	Lecture Room 3		
15a	Lecture Room 4		
15b	Lecture Room 4		
16a	Lecture Room 5		

16b	Lecture Room 5		
17a	Faculty Room 1st floor		
17b	Faculty Room 1st floor		

18a	Faculty Room 1st floor		
18b	Faculty Room 1st floor		

b) Plant native trees on site at the proportion of 1 mature tree per 80sqm of the plot area.

Total area of Institute = 8172 sqm.
No. of trees required @ 1 mature tree per 80sqm = 102 trees
The college has 300 trees.

Photos showing trees on the campus.

DECLARATION

सह वीर्यम् करवावहै
ideas
Swargiya Jagannath Jattewar Shikshan Sanstha , Nagpur
institute of design education & architectural studies , Nagpur
EXISTING GREEN BUILDING AUDIT REPORT 2021-22

DECLARATION

We hereby declare that Institute of Design Education and Architectural Studies (IDEAS) , Nagpur entitled for Existing Green Building Program shall henceforth implement the following strategies by 30th June 2023.

1. Phase out all the ozone depleting potential air conditioners units with eco-friendly refrigerants (R-410A,R-32, R-134A,R-290,R-600A) for air conditioners units.
2. High SRI (Solar reflective index) paints shall be applied on roof paints
3. Ramps shall be made as per standards of NBC 2017

Signature of Principal

Prof. Abhay Purohit

Gotmare And Associates	institute of design education & architectural studies , Nagpur
Name of the Auditor: **Ar. Manisha Gotmare** **Email id : manisha.gotmare@gmail.com** **Date 18/05/2023**	**Name of the official: Prof. Ruksana Badar** **Designation: Associate Professor** **Email id: ruksana.badar@ideasnagpur.edu.in** **Date :18/05/2023** **Signature:**

REFERENCES AND STANDARDS

1. Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India

2. Energy Conservation Building Code (ECBC), 2007, BEE, Government of India

3. Indian Green Building Council (IGBC), India

4. National Ambient Air Quality Standards,2009, Central Pollution Control Board (CPCB), Government of India

5. The Noise (Pollution and Control) Rules, 2000 Government of India

6. Municipal Solid Wastes (Management and Handling) Rules, 2000, Government of India

7. Solid Waste Management Rules, 2015, Government of India

8. E-waste (Management) Rules, 2015, Government of India

9. GRIHA EB GRIHA FOR EXISTING BUILDINGS VERSION 1