GREEN AUDIT REPORT

2024-2025

WOXSEN UNIVERSITY

Assessed By: Global Management Certification Services Pvt. Ltd.

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INTRODUCTION:

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyze environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. Green audit is a valuable means for a university to determine how and where they are using the most energy or water or other resources; the University can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students with a better understanding of green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus, it is impessrative that the University evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead to sustainable development and at the same time reduce the sizable amount of atmospheric CO2 from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of the Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

OBJECTIVES:

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The University has been putting efforts to keep our environment clean since its inception. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize the framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

- To map the Geographical Location of the University
- To document the floral and fauna! diversity of the University
- To record the meteorological parameter of university
- To document the ambient environmental condition of weather, air, water and noise of the University
- To document the waste disposal system
- To estimate the Energy requirements of the University
- To report on the expenditure on green initiatives during the last five years

METHODOLOGY:

The purpose of the green audit of WOXSEN University is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

ABOUT THE UNIVERSITY:

Woxsen was established in 2014 by Praveen K Pula, with a vision 'To build an institution of excellence in higher learning led through disruption, develop a multi-cultural yet inclusive cohort of global professionals and contribute towards societal welfare'. The institution is backed by 4 core pillars of applied learning, academic excellence, global outlook and diversity-inclusivity.

Woxsen gained the reputed University status in 2020 and has been successfully accredited by NBA, AICTE, COA & The Bar Council of India alongside having international memberships with AACSB, AMBA, AMDISA, EFMD, RRBM, PRME, GRLI and GBSN.

Pinakin Educational Trust works as the sponsoring and managing body of Woxsen University.

Woxsen was pioneered with the Business school and has exponentially expanded into 6 additional schools - Arts & Design instituted in 2016, Architecture & Planning in 2019, Technology in 2020, Liberal Arts & Humanities and Law in 2022, with School of Sciences in2023. It offers UG, PG and Doctoral programs with Executive Education and Certification courses.

Woxsen University has been consistently ranked in top positions by the Times. Outlook, B-School, IIRF, BusinessWorld, PRME and other prestigious bodies, including achieving the highest level of 5 in the Global Positive Impact Rating for its positive social impact and sustainability endeavors and being declared as a Principles for Responsible Management Education Champion 2023.

With prime focus on internationalization, the university has l 10+ international partners spread across more than 40+ countries offering opportunities for student & faculty exchange, research collaboration, lecture series, global forums, corporate projects, dual degrees, progressive studies, centers of excellence and many more.

Embracing the entrepreneurial spirit, Woxsen has set up the Trade Tower, an incubation Centre that induces, guides, refines and funds potential in-house startups.

ACHIEVEMENTS OF THE UNIVERSITY

2014

- Woxsen School of Business established with PGDM & PGPXP(Executive) Programs
- Acquired Accreditation by AICTE, Govt. of India.
- Launched 'Woxsen Trade Tower' - Business Incubation and Investment Centre to Encourage Entrepreneurship Amongst Students.

2015

- Launched Centre for Executive Education and Consulting (CEEC), bringing both Nationally Acclaimed and International Faculty from Harvard, Oxford, Wharton & Purdue, to name a few.
- Launched innovative and tailor-made - Custom and Open Programs.
- Acquired Global Immersion Partnerships with Nanyang Technological University, Singapore (QS World University Rank 11) & Mannheim Business School, Germany (FT Global Rank 27).

2016

- Ranked TOP 25th B-School by ASIA Inc.
- Member of AMDISA, the only association that networks management development institutions across South Asian Nations
- Established Woxsen School of Arts & Design, 4 Year B. Des Degree and Global Immersion Partnership with Nanyang Technological University, Singapore.
- Successfully Launched 'Ormeal Foods', a Well-Structured business idea by Woxsen Students, through Woxsen Trade Tower.

2017

- Youngest B-School to be conferred With Prestigious memberships by the two largest global accreditation bodies in business education - AACSB (USA) and AMBA (UK).

2019

- Forayed into disruptive technology with the launch of PGDM-Business Analytics, Artificial Intelligence & Machine Learning program.
- Acquired the Accreditation by NBA, Govt. of India (PGDM 2019-2021).
- Ranked 3rd All India Top Private Design School by IIRF, Education Post.
- Ranked 4th Top Private B-School in the entire South Region by Business World.
- Ranked 11th All India Top B-School by IIRF, Education Post.
- Launched Artificial Intelligence (AI) & Robotics Lab on Campus.
- Established Woxsen School of Architecture & Planning with COA approved 5-Year B. Arch Degree

2020

- Woxsen University was established. One of the First Private Universities in Telangana State
- Ranked 2nd Top Emerging BBA College in India by Outlook

Green Audit Report, WOU

- Ranked 2nd Top Private Design Institute in India by IIRF, Education Post
- Ranked 4th Top Private B-School in South Region, India by Business World
- Ranked 8th Top B-School in India by IIRF, Education Post
- Ranked 8th National Impact, Top 50 Private Universities in India by IIRF, Education Post
- Ranked 15th Top Private B-School for Executive MBA in India by Business World
- Ranked 16th Top Private B-School in India by Business World
- World Woxsen Forges Global Partnership with 12+ World's Leading Universities for International Exchange Program

2021

- Ranked 4th Top Private University in India by Times B-School Ranking
- Ranked 14th Top 100 B-Schools in India by Times B-School Ranking
- Launch of "Bloomberg Finance Lab"
- Launch of First Edition of #AIKP2021 International Conference
- Launch of India's largest Learning Centre - Vithal Gandhi Centre (Central Library)
- Launch of International Standard "Mega Sports Complex"
- Acquired New International Memberships by RRBM, PRME, and GRLI

2022

- Highest Level 5 – Pioneering Schools in Positive Impact Rating
- Debuted in Dalal Street Journal's list of Top B-School beyond IIMS
- Rank 16 All India Top Pvt. B-Schools, BusinessWorld 2022
- Successfully completed Woxsen-Monmouth Elevate Program
- Reached the mark of 90+ Global Partner Universities
- Launched 50+ Centers of Excellence
- Launched 200+ Fellowship & Chair Professorships

2023

- Woxsen' s MBA program is EFMD Global Accredited, putting it in the league of Top 1% of B-Schools worldwide to get this recognition
- Rank 12 in All India Top 100 B-Schools, Times B-School Ranking 2023
- All India Rank 2 among the Top Pvt. Design Schools of India, IIRF Best Design Colleges Ranking 2023
- Received The Most Coveted Campus Transformation Award 2023 by Coursera
- Featured 2 Years in a row in Dalal Street Journal's list of Top B-School beyond IIMS

- Exceeded the mark of 120+ Global Partner Universities
- Launched ICC Standard Cricket Ground
- Acquired New International Membership by ISCN
- Honored with Student's Choice Award 2022-23 by Career Guide
- Inauguration of Asia's most exquisite Indoor Sports Stadium, SportX by World Badminton Champion, PV. Sindhu
- Acquired International Membership of Business Graduates Association (BGA)
- MBA Program is Ranked by QS Business Masters' World Rankings, 2024 standing alongside some of the most revered institutions in India and other global counterparts
- MBA (Business Analytics) ranked Top 101+ globally, 13th in Asia, and 3rd in India by QS Business Masters World Ranking 2024
- MBA (Financial Services) ranked Top 151+ Worldwide, 14th in Asia, 2nd in India by QS Business Masters World Ranking 2024
- MBA (General) ranked Top 151+ Worldwide, 27th in Asia, 17th in India by QS Business Masters World Ranking 2024
- Ranked 15th in Top Pvt. B-Schools category by Business World
- Inauguration of Moot Court by Narasimha Reddy, Chairman - Bar Council of Telangana

2024

- Ranked #11, Top Private B-schools in India, Business World Ranking 2024
- Ranked #20, Top B-Schools in India, Business World Ranking 2024
- Selected as PRME champion, among 47 Business Schools Globally
- School of Business recognized among India’s Best Business Schools Beyond IIMs in the January 2024 issue of Dalal Street Investment Journal
- Ranked 12 in All India Top Pvt. B-Schools by IIRF
- Ranked 11 in All India Top 100 B-Schools by Times B-School Ranking
- Ranked 2 in All India Top Private Design Institute by IIRF, Education Post
- MBA (Business Analytics) ranked Top 101+ globally, 09th in Asia, and 2nd in India by QS Business Masters World Ranking 2024
- MBA (Financial Services) ranked Top 151+ Worldwide, 13th in Asia, 01 in India by QS Business Masters World Ranking 2024
- MBA (General) ranked Top 151+ Worldwide, 19th in Asia, 07th in India by QS Business Masters World Ranking 2024
- Rank #8 All India Top 50 State Private Universities, Outlook I Care University Rankings 2024
- Rank #6 Best Business School Rankings (Asia Pacific), Bloomberg 2024 - 2025
- Rank #3 Best Business School Rankings (India), Bloomberg 2024 - 2025
- Launch of R.A.C.E, Asia's Finest Sports Excellence at Woxsen University

- #3 All India Top 30 Pvt. Institutes, B.Arch., School of Architecture & Planning, Outlook I Care Rankings, 2024
- #3 All India Top 25 Pvt. Institutes, B. Des (Hons.) Fashion Design, School of Arts & Design, Outlook I Care Rankings, 2024
- #12 All India Top 130 Institutes, BBA, School of Business, Outlook I Care Rankings, 2024
- #20 All India Top 160 Pvt. Institutes, B. Tech, School of Technology, Outlook I Care Rankings, 2024
- Prestigious 3-Palme Recognition by Ed universal for School of Business

Besides quality academia, the sprawling 200-acre campus complements holistic development with its world-class infrastructure, unmatched facilities, fully equipped labs, international sports arena and expansive library.

With I00% placement track-record in its flagship programs, Woxsen is a name to reckon with amongst recruiters representing leading corporates.

The institution's strength lies in its history & ethos: rejecting the status quo, redefining" learning methodologies and shaping real-world professionals. Woxsen is all set to revolutionize the educational realm of India for the better!

VISION & MISSION VISION STATEMENT:

OUR VISION

- To build an institution of excellence in higher learning led through disruption, develop a multi-cultural yet inclusive cohort of global professionals and contribute towards societal welfare.

OUR MISSION

- To innovate & transform the conventional educational processes through the application of knowledge, research and industry feedback to further scale up community benefits

GREEN AUDITING:

The University has adopted the 'Green Campus' system for environmental conservation and sustainability. There are three main pillars i.e. zero environmental footprint, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO2 emission, energy and water use, while creating an atmosphere where students can learn and be healthy.

SUSTAINABILITY POLICY

PURPOSE:

To reaffirm Woxsen University's commitment to prioritize the well-being and protection of environment within and beyond the campus by being mindful of its activities and taking up initiatives that contribute to environmental welfare and minimizing any detrimental impact, carbon footprint, global warming and exploitation of resources.

This policy will outline the university's sustainability objectives and implementation.

OBJECTIVES:

The university would adhere to its commitment to support and execute the following sustainability objectives:

EDUCATION AND CULTURE:

- Educate all stakeholders of the university about sustainable practices and promote eco-literacy by ensuring active participation of the university community in sustainable initiatives.
- Integrate sustainability learning as a part of the academic course curriculum.
- Establish clubs and Centers of Excellence dedicated towards the promotion, initiation and implementation of sustainable practices.
- Raise awareness among university residents about the university's environmental impact, activities and contribution of the individual, university and community.

ENERGY AND WATER:

- Taking measures to promote resource efficiency and minimize usage of limited natural resources like water, energy and petroleum products by insisting on conservation, reduction of waste and adoption of power-efficient, water-efficient and petroleum-free practices, while focusing on the use of renewable sources such as solar energy.
- To foster zero waste concepts (rethink, reduce, reuse, recycle) to minimize use of natural resources, minimize waste and adopt efficient waste disposal practices.

Carbon Emissions and Transport:

- Reduce carbon footprint associated with energy, water, travel and waste by taking appropriate methods and aiming at a carbon neutral campus by 2026 and net zero campus by 2030.
- Restrict use of emission producing vehicles on campus beyond the main gate parking and alternatively using E-vehicles, cycles, skateboards or walking.

Construction and Infrastructure:

- Architecturally structure and construct buildings that are in line with green building concept that promote daylight savings, minimal paint usage (to reduce the negative environmental effects of paint such as toxic emission of chemicals and volatile organic compounds (VOCs)) and maximize space utility.
- To plan extensive landscaping within and around every building.

Procurement:

- To focus on sustainable procurement practices that support the purchase of sustainable goods and services from responsible contractors, vendors and suppliers.
- To invest in machinery or methods that would complement sustainability goals.

Food:

- To reduce kitchen wastage by monitoring ingredient usage and preparing food as per demand on a continuous basis rather than single bulk preparation.
- To encourage consumers to minimize wastage via awareness campaigns.
- To convert food waste into compost that may be used to fertilize the campus flora.

Waste Management:

- Waste prevention is a first step, following proper and efficient waste management by adopting the best practices; to reduce, reuse, recycle or safely segregate and dispose of produced waste, while ensuring compliance with all legal requirements.

Greenery:

- To create a verdant environment with extensive landscaping that is well-maintained and spread across the campus, while adopting efficient irrigation techniques.

IMPLEMENTATION:

This policy is communicated to all employees in an appropriate and meaningful manner. Woxsen has appropriate systems and processes in place to ensure compliance with the policy and with statutory provisions, including the processing of grievances for redressal.

Compliance will be regularly monitored and evaluated by the Ethics and Sustainability Committee (ESC). The initiatives taken up under sustainability will be reviewed by the management every quarter.

SUSTAINABILITY REPORT

1. **Overview**

Woxsen University is dedicated to promoting environmental sustainability and implementing eco-conscious practices across its campus. The university continues to invest in sustainable construction, innovative solutions for energy conservation, and educational initiatives that foster environmental responsibility.

2. **Eco-Friendly Building Practices**

As part of its commitment to sustainability, Woxsen University has adopted several environmentally conscious measures during the construction and maintenance of its campus buildings:

- **Cement-Based Paints:**
  - Woxsen University has opted to use cement-based paints, such as Birla White Cement, instead of conventional organic paints. Organic paints often release significant emissions during manufacturing and application, negatively impacting the environment. Cement-based paints provide an eco-friendlier alternative, aligning with the university's commitment to sustainability.

- **Heat-Resistant Coatings:**
  - The application of heat-resistant coatings on building surfaces reduces internal temperatures, thereby lowering the dependence on HVAC systems. This contributes to significant power savings and a reduction in carbon emissions.

3. Educational and Awareness Initiatives

Woxsen University places a strong emphasis on raising awareness about environmental sustainability among students, faculty, and the broader community through various initiatives:

- **Seminars and Webinars:**
  - Experts and thought leaders are invited to conduct sessions on sustainable practices, green technologies, and environmental challenges.

- **Photo Gallery of Sustainability:**
  - Visual displays capture the university's green initiatives and promote eco-conscious behaviour among the campus community.

- **Poster Presentations:**
  - Students are encouraged to participate in poster presentations focusing on environmental sustainability, innovative solutions, and conservation strategies.

4. **Energy and Emission Reduction Measures**

In addition to its sustainable building materials, Woxsen University has adopted various measures to reduce its environmental footprint:

- Heat-resistant coatings that decrease the reliance on HVAC systems, leading to a reduction in energy consumption and emissions.
- The use of cement-based paints for eco-friendly building maintenance.

5. **Commitment to Environmental Responsibility**

Woxsen University's comprehensive approach to environmental sustainability underscores its dedication to being a responsible and environmentally conscious institution. Through sustainable

practices, educational initiatives, and responsible building strategies, the university continues to be a leader in environmental stewardship.

LAND USE ANALYSIS, WOXSEN University (As on 22.10.2024):

GENERAL OVERVIEW OF THE CONCEPT OF LAND-USE

Land use refers to man's activities and the various uses which are carried on and derived from land. Viewing the earth from space, it is now very crucial in man's activities on natural resource. In situations of rapid changes in land use, observations of the Earth from space give the information of human activities and utilization of the landscape.

Remote sensing and GIS techniques are now providing new tools for advanced land use mapping and planning. The collection of remotely sensed data facilitates the synoptic analyses of earth system, functions, patterning, and change in the local, regional as well as at global scales over time. Satellite imagery particularly is a valuable tool for generating land use map.

METHODOLOGY ADOPTED FOR LAND USE MAPPING

Three types of data that are GPS points, field survey data and Google earth data for Geo referencing, have been used in this study. Land use map of the study area have been prepared using the above three types of data with the help of ArcGis Pro software.

DATA PROCESSING AND ANALYSIS

Land use map preparation is executed through the following steps:

Acquisition of data (Location: 17°38'51.T'N 77°47'55.3"E), Geo-coding and Geo referencing of satellite imageries by extracting the ground control points. Supervised classification was ca1Tied out with the aid of ground truth data collected during field survey. Scanning and digitization of maps and editing of all the Georeferenced maps were done using GIS. Data manipulation and analysis and linking the spatial data with the attribute data for creation of topology was carried out using GIS software. Creation of GIS output in the form of land use map showing various land use have been prepared.

Therefore, an attempt has been made in this study to map land use for WOXSEN University with a view to detecting the land consumption in the built-up land area using both remote sensing and GIS techniques.

GEOGRAPHICAL LOCATION WITH CAMPUS MAP IN SCALE

The University has a sprawling pollution-free campus spread over 200 acres of land in the heart of Telangana. It has an ideal geographical location with proximity to the important cities of the region i.e. Karnataka, Telangana, Maharashtra.

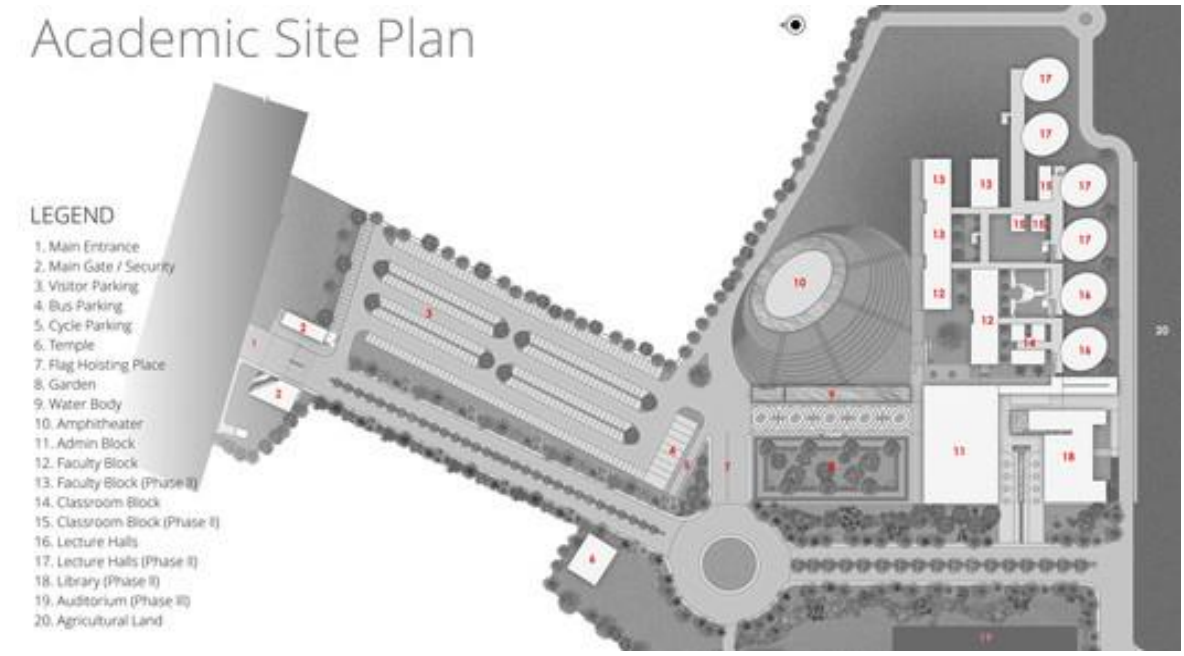
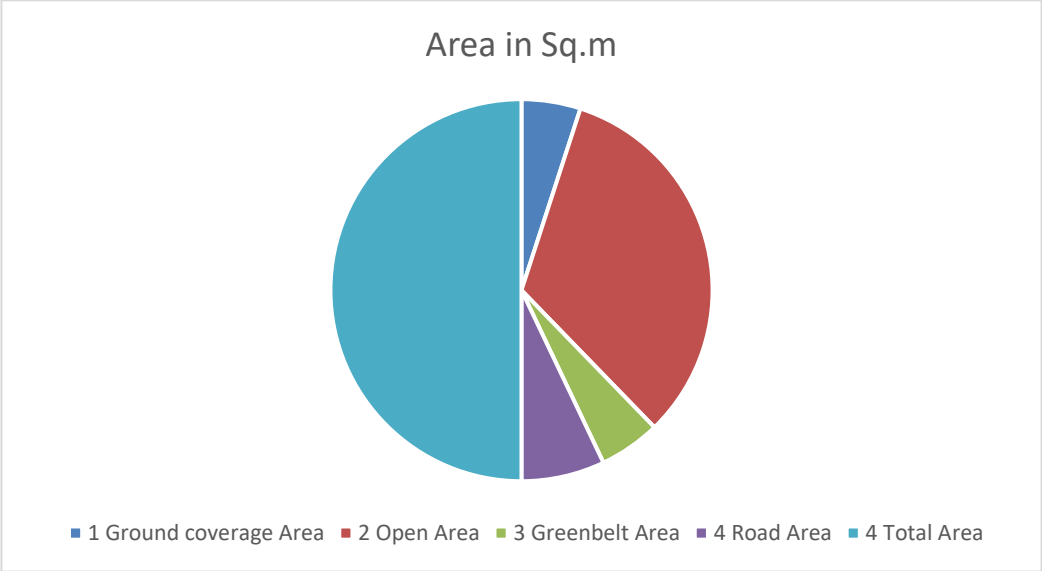


Photo I: Map of University Campus

Photo 2: Aerial View of University Campus Part 2 (Source Google Earth)

LAND USE DATA OF WOXSEN UNIVERSITY, HYDERABAD

S No.	Particular	Area in Sq.m	Area (%)
1	Ground coverage Area	60700.00	10.00
2	Open Area	397534.65	65.49
3	Greenbelt Area	63077.35	10.39
4	Road Area	85716.00	14.12
	Total Area	**607028.00**	**100.00**



The total area of WOXSEN UNIVERSITY is 607028.00 s q m out of which the Road built up area Roads) is 14.12% (i.e. 857166 sq.m) and plantation area is 10.39% (i.e. 63077.35 sq.m)

LAND USE (GROUND COVERAGE and Road AREA) ANALYSIS:

The built-up area of 24.120 consists of the following regions as stated below for land consumption in built up area of WOXSEN University:

The WOXSEN University is densely built up having Administrative Blocks, Central Workshops, Girls Hostels, Principal's Residence, Staff Flats, Gymnasium, University Cafeteria and Boys Hostels, Auditorium, Drawing Hall, Seminar Hall, Tutorial rooms, Computer Labs, Research Labs, Amenities Block, Instruction area, Common facilities, Sports Stadium indoor and outdoor, and Athletic Tracks.

Table: Area occupied by various buildings at WOXSEN University,

S No	Room No	Room type (mention Classroom / Lab/ Toilet, etc.)	Carpet Area in Sqm	Completion of Flooring	Completion of Walls & Painting	Completion of Electrification & Lighting
INSTRUCTION AREA						
1	1008	Laboratory	66	Completed	Completed	Completed
2	110I	Classroom	66	Completed	Completed	Completed
3	1102	Classroom	66	Completed	Completed	Completed
4	1104	Laboratory	66	Completed	Completed	Completed
5	1106	Laboratory	66	Completed	Completed	Completed
6	I107	Laboratory	66	Completed	Completed	Completed
7	1108	Laboratory	66	Completed	Completed	Completed
8	111I	Classroom	66	Completed	Completed	Completed
9	1201	Classroom	66	Completed	Completed	Completed
10	1202	Classroom	66	Completed	Completed	Completed
11	1204	Laboratory	66	Completed	Completed	Completed
12	1205	Laboratory	66	Completed	Completed	Completed
13	1207	Classroom	66	Completed	Completed	Completed
14	1208	Classroom	66	Completed	Completed	Completed
15	1209	Classroom	66	Completed	Completed	Completed
16	1301	Classroom	66	Completed	Completed	Completed
17	1302	Classroom	66	Completed	Completed	Completed
18	1305	Seminar Hall	128.4	Completed	Completed	Completed
19	1308	Classroom	66	Completed	Completed	Completed
20	1310	Classroom	66	Completed	Completed	Completed
21	2002	Laboratory	140	Completed	Completed	Completed
22	2003	Laboratory	105	Completed	Completed	Completed
23	2005	Laboratory	74	Completed	Completed	Completed
24	2006	Laboratory	140	Completed	Completed	Completed
25	2007	Laboratory	74	Completed	Completed	Completed
26	2008	Research Laboratory	225	Completed	Completed	Completed
27	2009	Laboratory	140	Completed	Completed	Completed
28	2011	Workshop	210	Completed	Completed	Completed
29	2101	Classroom	74	Completed	Completed	Completed
30	2102	Laboratory	140	Completed	Completed	Completed

31	2103	Laboratory	74	Completed	Completed	Completed
32	2106	Additional Workshop	112	Completed	Completed	Completed
33	2108	Classroom	74	Completed	Completed	Completed
34	2109	Classroom	120	Completed	Completed	Completed
35	2201	Classroom	74	Completed	Completed	Completed
36	2202	Laboratory	136	Completed	Completed	Completed
37	2203	Classroom	74	Completed	Completed	Completed
38	2205	Laboratory	74	Completed	Completed	Completed
39	2206	Laboratory	135	Completed	Completed	Completed
40	2207	Classroom	74	Completed	Completed	Completed
41	2208	Seminar Hall	232	Completed	Completed	Completed
42	2209	Additional Workshop	200	Completed	Completed	Completed
43	2301	Laboratory	140	Completed	Completed	Completed
44	2302	Classroom	74	Completed	Completed	Completed
45	2303	Classroom	74	Completed	Completed	Completed
46	2307	Seminar Hall	140	Completed	Completed	Completed
47	2308	Laboratory	74	Completed	Completed	Completed
48	2309	Classroom	74	Completed	Completed	Completed
49	2311	Classroom	102	Completed	Completed	Completed
50	2312	Tutorial Room	105	Completed	Completed	Completed
51	3002	Classroom	78	Completed	Completed	Completed
52	3003	Classroom	78	Completed	Completed	Completed
53	3004	Classroom	78	Completed	Completed	Completed
54	3102	Classroom	78	Completed	Completed	Completed
55	3103	Classroom	78	Completed	Completed	Completed
56	3104	Classroom	78	Completed	Completed	Completed
57	3202	Classroom	78	Completed	Completed	Completed
58	3203	Classroom	78	Completed	Completed	Completed
59	3204	Classroom	72	Completed	Completed	Completed
60	3207	Seminar Hall	140	Completed	Completed	Completed
61	3302	Classroom	78	Completed	Completed	Completed
62	3303	Classroom	96	Completed	Completed	Completed
63	3304	Classroom	96	Completed	Completed	Completed
64	3402	Classroom	66	Completed	Completed	Completed

65	3403	Classroom	66	Completed	Completed	Completed
66	3404	Classroom	66	Completed	Completed	Completed
67	4001	Workshop	212	Completed	Completed	Completed
68	5001	Laboratory	96	Completed	Completed	Completed
69	5002	Laboratory	96	Completed	Completed	Completed
70	5101	Seminar Hall	310	Completed	Completed	Completed
71	5104	Laboratory	72	Completed	Completed	Completed
72	5301	Seminar Hall	310	Completed	Completed	Completed
73	5304	Additional Workshop	72	Completed	Completed	Completed
74	5305	Additional Workshop	72	Completed	Completed	Completed
75	7004	Other	20	Completed	Completed	Completed
76	7005	Seminar Hall	120	Completed	Completed	Completed
77	7006	Laboratory	66	Completed	Completed	Completed
78	7007	Laboratory	66	Completed	Completed	Completed
79	7008	Laboratory	66	Completed	Completed	Completed
80	7104	Classroom	66	Completed	Completed	Completed
81	7105	Laboratory	66	Completed	Completed	Completed
82	7106	Laboratory	66	Completed	Completed	Completed
83	7108	Classroom	66	Completed	Completed	Completed
84	7202	Classroom	66	Completed	Completed	Completed
85	7204	Classroom	66	Completed	Completed	Completed
86	7205	Classroom	66	Completed	Completed	Completed
87	7206	Laboratory	66	Completed	Completed	Completed
88	7207	Laboratory	66	Completed	Completed	Completed
89	7208	Classroom	66	Completed	Completed	Completed
90	7302	Classroom	66	Completed	Completed	Completed
91	7304	Classroom	66	Completed	Completed	Completed
92	7305	Classroom	66	Completed	Completed	Completed
93	7306	Laboratory	66	Completed	Completed	Completed
94	7307	Classroom	66	Completed	Completed	Completed
95	7404	Laboratory	66	Completed	Completed	Completed
96	7405	Laboratory	66	Completed	Completed	Completed
97	7406	Tutorial Room	46.7	Completed	Completed	Completed
98	7408	Tutorial Room	46.5	Completed	Completed	Completed

99	8005	Laboratory	76	Completed	Completed	Completed
100	8011	Laboratory	144	Completed	Completed	Completed
101	8012	Laboratory	144	Completed	Completed	Completed
102	8014	Classroom	70	Completed	Completed	Completed
103	8101	Classroom	96	Completed	Completed	Completed
104	8102	Classroom	96	Completed	Completed	Completed
105	8104	Laboratory	140	Completed	Completed	Completed
106	8110	Classroom	70	Completed	Completed	Completed
107	8111	Classroom	70	Completed	Completed	Completed
108	8112	Classroom	70	Completed	Completed	Completed
109	8114	Classroom	70	Completed	Completed	Completed
110	8115	Laboratory	70	Completed	Completed	Completed
111	8201	Classroom	96	Completed	Completed	Completed
112	8203	Classroom	96	Completed	Completed	Completed
113	8206	Classroom	96	Completed	Completed	Completed
114	8207	Classroom	96	Completed	Completed	Completed
115	8209	Classroom	74	Completed	Completed	Completed
116	8210	Classroom	74	Completed	Completed	Completed
117	8211	Classroom	74	Completed	Completed	Completed
118	8212	Classroom	74	Completed	Completed	Completed
119	8213	Classroom	74	Completed	Completed	Completed
120	8214	Classroom	74	Completed	Completed	Completed
121	8215	Classroom	74	Completed	Completed	Completed
122	8216	Classroom	74	Completed	Completed	Completed
123	8218	Drawing Hall	200	Completed	Completed	Completed
124	8301	Classroom	96	Completed	Completed	Completed
125	8304	Laboratory	144	Completed	Completed	Completed
126	8306	Classroom	70	Completed	Completed	Completed
127	8309	Laboratory	132	Completed	Completed	Completed
128	8310	Laboratory	132	Completed	Completed	Completed
129	8314	Classroom	74	Completed	Completed	Completed
130	8315	Classroom	74	Completed	Completed	Completed
131	8316	Drawing Hall	132	Completed	Completed	Completed
132	8401	Drawing Hall	132	Completed	Completed	Completed

133	8403	Laboratory	132	Completed	Completed	Completed
134	8404	Laboratory	132	Completed	Completed	Completed
135	8405	Seminar Hall	274	Completed	Completed	Completed
136	9003	Classroom	74	Completed	Completed	Completed
137	9004	Classroom	74	Completed	Completed	Completed
138	9005	Classroom	74	Completed	Completed	Completed
139	9012	Computer Laboratory	140	Completed	Completed	Completed
140	9013	Classroom	90	Completed	Completed	Completed
141	9014	Seminar Hall	144.25	Completed	Completed	Completed
142	9101	Classroom	90	Completed	Completed	Completed
143	9102	Classroom	90	Completed	Completed	Completed
144	9103	Classroom	90	Completed	Completed	Completed
145	9104	Classroom	90	Completed	Completed	Completed
146	9111	Tutorial Room	72	Completed	Completed	Completed
147	9112	Classroom	90	Completed	Completed	Completed
148	9201	Classroom	72	Completed	Completed	Completed
149	9202	Tutorial Rooms – PG	33	Completed	Completed	Completed
150	9203	Tutorial Rooms – PG	33	Completed	Completed	Completed
151	10001	Workshop	298	Completed	Completed	Completed
152	11001	Laboratory	150	Completed	Completed	Completed
153	11003	Laboratory	96	Completed	Completed	Completed
154	11004	Laboratory	96	Completed	Completed	Completed
155	11005	Laboratory	96	Completed	Completed	Completed
156	12001	Laboratory	130	Completed	Completed	Completed
157	12002	Laboratory	128	Completed	Completed	Completed
158	12003	Laboratory	128	Completed	Completed	Completed
159	1304/1	Tutorial Rooms – PG	33	Completed	Completed	Completed
160	1304/2	Tutorial Rooms – PG	33	Completed	Completed	Completed
161	1307/1	Tutorial Room	33	Completed	Completed	Completed
162	1307/2	Tutorial Room	33	Completed	Completed	Completed
163	2105/1	Tutorial Rooms – PG	40	Completed	Completed	Completed
164	2105/2	Tutorial Rooms – PG	40	Completed	Completed	Completed
165	2105/3	Tutorial Rooms – PG	40	Completed	Completed	Completed
166	2112/1	Research Laboratory	72	Completed	Completed	Completed

167	2112/2	Additional Workshop	158.96	Completed	Completed	Completed
168	2210/1	Laboratory	96	Completed	Completed	Completed
169	2210/2	Laboratory	114	Completed	Completed	Completed
170	2306/1	Tutorial Rooms – PG	37	Completed	Completed	Completed
171	2306/2	Tutorial Rooms – PG	37	Completed	Completed	Completed
172	2310/1	Tutorial Room	35	Completed	Completed	Completed
173	2310/2	Tutorial Room	35	Completed	Completed	Completed
174	2310/3	Tutorial Room	35	Completed	Completed	Completed
175	3006/2	Laboratory	78	Completed	Completed	Completed
176	3106/1	Laboratory	76	Completed	Completed	Completed
177	3106/2	Laboratory	76	Completed	Completed	Completed
178	3306/1	Laboratory	72	Completed	Completed	Completed
179	3306/2	Laboratory	70	Completed	Completed	Completed
180	3307/l	Laboratory	72	Completed	Completed	Completed
181	3307/2	Laboratory	71.2	Completed	Completed	Completed
182	7102/l	Tutorial Rooms – PG	33	Completed	Completed	Completed
183	7102/2	Tutorial Rooms – PG	33	Completed	Completed	Completed
184	7107/l	Tutorial Rooms – PG	33	Completed	Completed	Completed
185	7107/2	Tutorial Rooms – PG	33	Completed	Completed	Completed
186	7401/1	Tutorial Room	33	Completed	Completed	Completed
187	7401/2	Tutorial Room	33	Completed	Completed	Completed
188	7402/1	Tutorial Room	33	Completed	Completed	Completed
189	7402/2	Tutorial Room	33	Completed	Completed	Completed
190	8005/1	Laboratory	72	Completed	Completed	Completed
191	8005/2	Laboratory	72	Completed	Completed	Completed
192	8108/1	Laboratory	66	Completed	Completed	Completed
193	8108/2	Laboratory	66	Completed	Completed	Completed
194	8109/1	Classroom	66	Completed	Completed	Completed
195	8109/2	Laboratory	66	Completed	Completed	Completed
196	8303/1	Laboratory	72	Completed	Completed	Completed
197	8303/2	Laboratory	72	Completed	Completed	Completed
198	8307/1	Tutorial Room	72	Completed	Completed	Completed
199	8307/2	Tutorial Room	72	Completed	Completed	Completed
200	8308/1	Tutorial Room	74	Completed	Completed	Completed

201	8308/2	Tutorial Room	74	Completed	Completed	Completed
202	83 I3/1	Laboratory	72	Completed	Completed	Completed
203	8313/2	Laboratory	72	Completed	Completed	Completed
204	9109/1	Tutorial Rooms - PG	45	Completed	Completed	Completed
205	9109/2	Tutorial Rooms - PG	45	Completed	Completed	Completed
Total			**17887.01**			
ADMINISTRATIVE AREA						
1	1001	Exam Control Office	142	Completed	Completed	Completed
2	1002	Exam Control Office	70	Completed	Completed	Completed
3	1003	Exam Control Office	142	Completed	Completed	Completed
4	1004	Principal Office	105	Completed	Completed	Completed
5	1005	Admin Office Inclusive	325	Completed	Completed	Completed
6	1006	Housekeeping	35.64	Completed	Completed	Completed
7	1105	Maintenance	70	Completed	Completed	Completed
8	1206	Faculty Room	105	Completed	Completed	Completed
9	1306	Faculty Room	105	Completed	Completed	Completed
10	2001/1	Dean's Room	46	Completed	Completed	Completed
11	2012/1	Director's Room	46	Completed	Completed	Completed
12	2107	HOD (MECH) Room	46	Completed	Completed	Completed
13	2110	Faculty Room	102.22	Completed	Completed	Completed
14	2305	Faculty Room	190	Completed	Completed	Completed
15	2313/1	Faculty Room	102	Completed	Completed	Completed
16	3005	Faculty Room	35	Completed	Completed	Completed
17	3006/1	Faculty Room	35	Completed	Completed	Completed
18	3105	Faculty Room	35	Completed	Completed	Completed
19	3205/1	HOD ROOM	43.05	Completed	Completed	Completed
20	3206	Faculty Room	35	Completed	Completed	Completed
21	3305	Faculty Room	35	Completed	Completed	Completed
22	4002	Faculty Room	88	Completed	Completed	Completed
23	5005	Placement Office	174.9	Completed	Completed	Completed
24	5008	Central Store	30	Completed	Completed	Completed
25	5009	House Keeping	20	Completed	Completed	Completed
26	6002	Pantry for Staff	23.75	Completed	Completed	Completed
27	7001	Faculty Room	74	Completed	Completed	Completed

28	7002	Department Office	49.5	Completed	Completed	Completed
29	7101	Faculty Room	74	Completed	Completed	Completed
30	7201	Faculty Room	74	Completed	Completed	Completed
31	7301	Faculty Room	74	Completed	Completed	Completed
32	7403	Faculty Room	49.2	Completed	Completed	Completed
33	8001	Faculty Room	72	Completed	Completed	Completed
34	8002	HOD ROOM (CONFRENCE/DTP/HOD)	98	Completed	Completed	Completed
35	8l03	Faculty Room	15	Completed	Completed	Completed
36	8l05	Faculty Room	15	Completed	Completed	Completed
37	8202	Faculty Room	15	Completed	Completed	Completed
38	8305/1	Faculty Room	15	Completed	Completed	Completed
39	8305/2	Faculty Room	15	Completed	Completed	Completed
40	8009	HOD, H&S	37	Completed	Completed	Completed
41	8015	Faculty Room	15	Completed	Completed	Completed
42	8l06	Faculty Room	15	Completed	Completed	Completed
43	8l07	Faculty Room	15	Completed	Completed	Completed
44	8208	Faculty Room	15	Completed	Completed	Completed
45	8311	Faculty Room	15	Completed	Completed	Completed
46	8312	Faculty Room	15	Completed	Completed	Completed
47	9001	HOD & Dept. Office.	36	Completed	Completed	Completed
48	9002	Board Room	41.39	Completed	Completed	Completed
49	9006	Faculty Room	36	Completed	Completed	Completed
50	9007	Faculty Room	35	Completed	Completed	Completed
51	9015	Faculty Room	66	Completed	Completed	Completed
52	9016	Security Room	35	Completed	Completed	Completed
53	9105	Faculty Room	35	Completed	Completed	Completed
54	91IO	Faculty Room	35	Completed	Completed	Completed
55	9204	Faculty Room	35	Completed	Completed	Completed
56	10002	Faculty Room	20	Completed	Completed	Completed
57	11002	Faculty Room	20	Completed	Completed	Completed
Total			**3347.65**			
AMENITIES AREA						
1	1007	Gents Toilet	35	Completed	Completed	Completed
2	1103	Ladies Toilet	35	Completed	Completed	Completed

3	1l09	Store Room	48.7	Completed	Completed	Completed
4	1110	Gents Toilet	35	Completed	Completed	Completed
5	1203	Ladies Toilet	35	Completed	Completed	Completed
6	1303	Ladies Toilet	35	Completed	Completed	Completed
7	1309	Gents Toilets	35	Completed	Completed	Completed
8	2304	GENTS TOILET	20	Completed	Completed	Completed
9	2310	LADIES TOILET	15	Completed	Completed	Completed
10	2313/2	FACULTY ROOM TOILET	10	Completed	Completed	Completed
11	2001/2	Dean's Room toilet	10	Completed	Completed	Completed
12	2004	Toilet (Male)	15	Completed	Completed	Completed
13	2010	Toilet (Female)	25	Completed	Completed	Completed
14	2012/2	Director's Room toilet	10	Completed	Completed	Completed
15	2104	Toilet (Male)	34.7	Completed	Completed	Completed
16	2111	Toilet (Female)	34.5	Completed	Completed	Completed
17	2204	Toilet (Male)	34.5	Completed	Completed	Completed
18	3001	Gents toilet	42	Completed	Completed	Completed
19	3005/1	Faculty Room Toilet	14	Completed	Completed	Completed
20	3101	Ladies Toilet	42	Completed	Completed	Completed
21	3201	Gents Toilet	42	Completed	Completed	Completed
22	3205/1	Toilet	14	Completed	Completed	Completed
23	3301	Ladies Toilet	37.7	Completed	Completed	Completed
24	3401	Gents Toilet	42	Completed	Completed	Completed
25	5003	Girls Toilet	35	Completed	Completed	Completed
26	5004	Boys Toilet	35	Completed	Completed	Completed
27	5102	Girls Toilet	35	Completed	Completed	Completed
28	5103	Gents Toilet	35	Completed	Completed	Completed
29	5106	Dining Hall	105	Completed	Completed	Completed
30	5302/1	Sports & Gymnasium	104.5	Completed	Completed	Completed
31	5302/2	Girls Common Room	100	Completed	Completed	Completed
32	5303	First Aid cum Sick Room	66	Completed	Completed	Completed
33	5306	Gents Toilet	35	Completed	Completed	Completed
34	5307	Girls Toilet	35	Completed	Completed	Completed
35	5006	Others	20	Completed	Completed	Completed
36	5007	Stationery Store	20	Completed	Completed	Completed

37	6001	Cafeteria	263.09	Completed	Completed	Completed
38	7003	Gent's Toilet	32	Completed	Completed	Completed
39	7103	Ladies Toilet	32	Completed	Completed	Completed
40	7203	Gent's Toilet	25	Completed	Completed	Completed
41	7303	Ladies Toilet	25	Completed	Completed	Completed
42	7407	Store Room	12.2	Completed	Completed	Completed
43	8003	GENTS TOILETS	45	Completed	Completed	Completed
44	8004	LADIES TOILETS	45	Completed	Completed	Completed
45	8204	GENTS TOILETS	45	Completed	Completed	Completed
46	8205	LADIES TOILETS	20	Completed	Completed	Completed
47	8010	Girls Common Room	102	Completed	Completed	Completed
48	8013	LADIES TOILET	66	Completed	Completed	Completed
49	8113	GENTS TOILET	70	Completed	Completed	Completed
50	8217	LADIES TOILET	66	Completed	Completed	Completed
51	8402	PUMP HOUSE	144.6	Completed	Completed	Completed
52	9008	Central stores	33.75	Completed	Completed	Completed
53	9009	Toilet	23.25	Completed	Completed	Completed
54	9010	Ladies Toilet	30	Completed	Completed	Completed
55	9011	Gents Toilet	30	Completed	Completed	Completed
56	9307	Student activity / GCR	38	Completed	Completed	Completed
57	9106	Girls Toilet	35	Completed	Completed	Completed
58	9107	Boys Toilet	30	Completed	Completed	Completed
59	9301	Boys Common Room	195	Completed	Completed	Completed
60	9303	Student activity / GCR	45	Completed	Completed	Completed
61	9304	Toilet	20	Completed	Completed	Completed
62	9305	Student activity/ GCR	45	Completed	Completed	Completed
63	9306	Toilet	20	Completed	Completed	Completed
64	9302	Auditorium	644.05	Completed	Completed	Completed
65	12004	Toilet	18	Completed	Completed	Completed
66	12005	Toilet	18	Completed	Completed	Completed
Total			**3544.54**			
INSTRUCTION AREA COMMON FACILITIES						
1	5201	Library & Reading Room	1205	Completed	Completed	Completed
2	5105	Computer Centre	134	Completed	Completed	Completed

3	5202	Computer Centre	320	Completed	Completed	Completed
4	5104	Computer Centre	135	Completed	Completed	Completed
5	8406	Language Laboratory	96	Completed	Completed	Completed
6	8007	Language Laboratory	74	Completed	Completed	Completed
7	8008	Language Laboratory	74	Completed	Completed	Completed
8	8006	Language Laboratory	144	Completed	Completed	Completed
9	9108	Library & Reading Room	150	Completed	Completed	Completed
Total			**2332**			

Consolidated Area Statement for Existing & Proposed Courses

Instructional Area	**17887.01 Sqm**
Administrative Area	**3347.65 Sqm**
Amenities Area	**3544.54 Sqm**
Instruction Area Common Facilities	**2332 Sqm**
Circulation Area	**14509.21 Sqm**
Total Area	**41620 Sqm**

S No	Building Name	Area in Sq Mt
1	Administration, Staff Block & Classrooms	5164.15
2	Club house	393.75
3	Hostel Block A	1761.62
4	Hostel Block B	1415.13
5	Hostel Block C	730.35
6	Hostel Block D	680.32
7	Hostel Block E	730.35
8	Hostel Block F	680.32
9	Library	931.2
10	New Academic Block	1958.38
11	Cafeteria	2360.03
12	Academic Lab Block	1433
13	Academic Law Block	3422
14	Indoor Sports Complex	2208.7
15	Hostel Tower-1	1184.76
16	Hostel Tower-2	1184.76
17	Hostel Tower-3	1184.76
18	Hostel Tower-4	1184.76
19	Lecture Hall 4	506.17

20	Football Pavillion	414.3
21	Cricket Pavillion	466.45
Total		**29995.26**

FINDINGS:

WOXSEN University, which was established in the year 2014, has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that about 65% of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

TREE DIVERSITY OF WOXSEN UNIVERSITY, TELANGANA:

WOXSEN University is within the geo-position between latitude L7°38'5 l.?"N and longitude 77°47'55.3"E in WOXSEN University, Telangana, India. It encompasses an area of about 200 Acres. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programs organized by the authority and have become an integral part of the University. The trees of the University have increased the quality of life, not only the University fraternity but also the people around of the University in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many species of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favorite of birds and many insects. Leaf-covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colors. Even individual trees vary their appearance throughout the course of the year as the seasons change. The strength, long lifespan and regal stature of trees give them a monument - like quality. They also remind us of the glorious history of WOXSEN University and our institution in particular. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the University have been found to be bringing down noise and cutting down dust and storms. Thus, the University has been playing a significant role in maintaining the environment of the entire WOXSEN University and its surrounding areas. The following are the tree species with whom we are being attached-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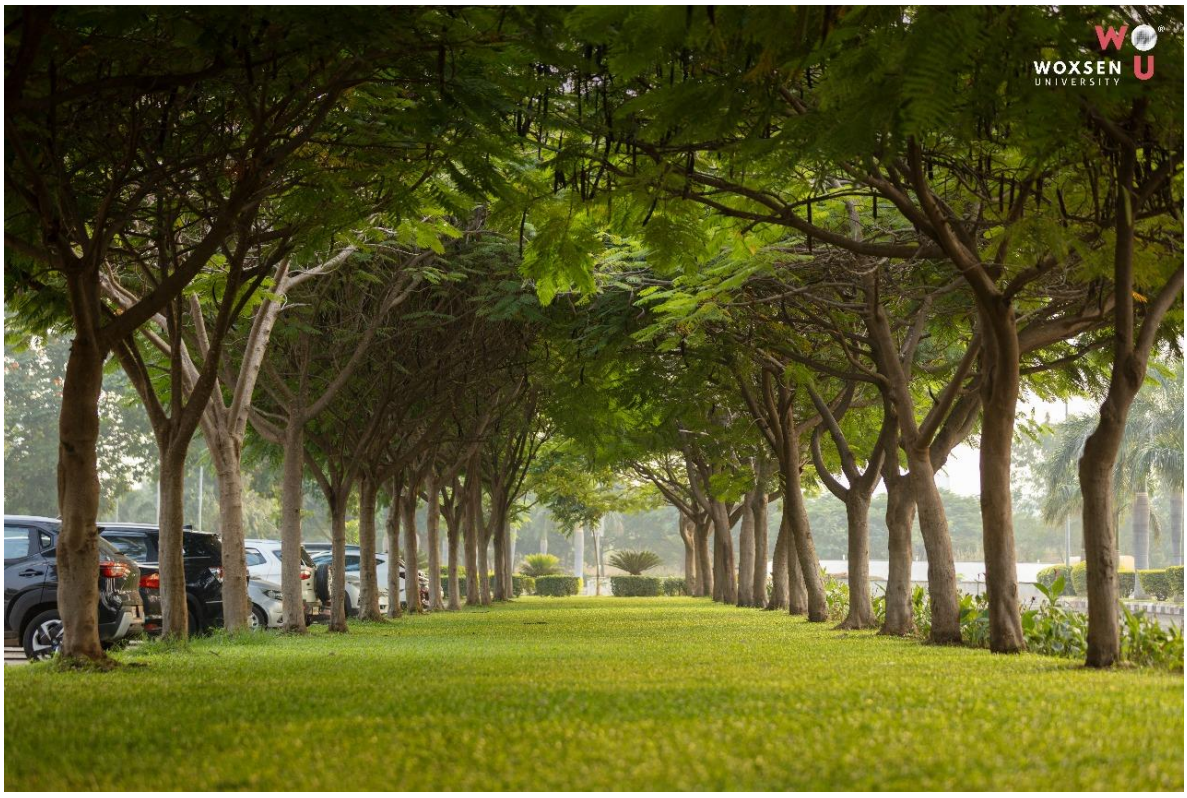
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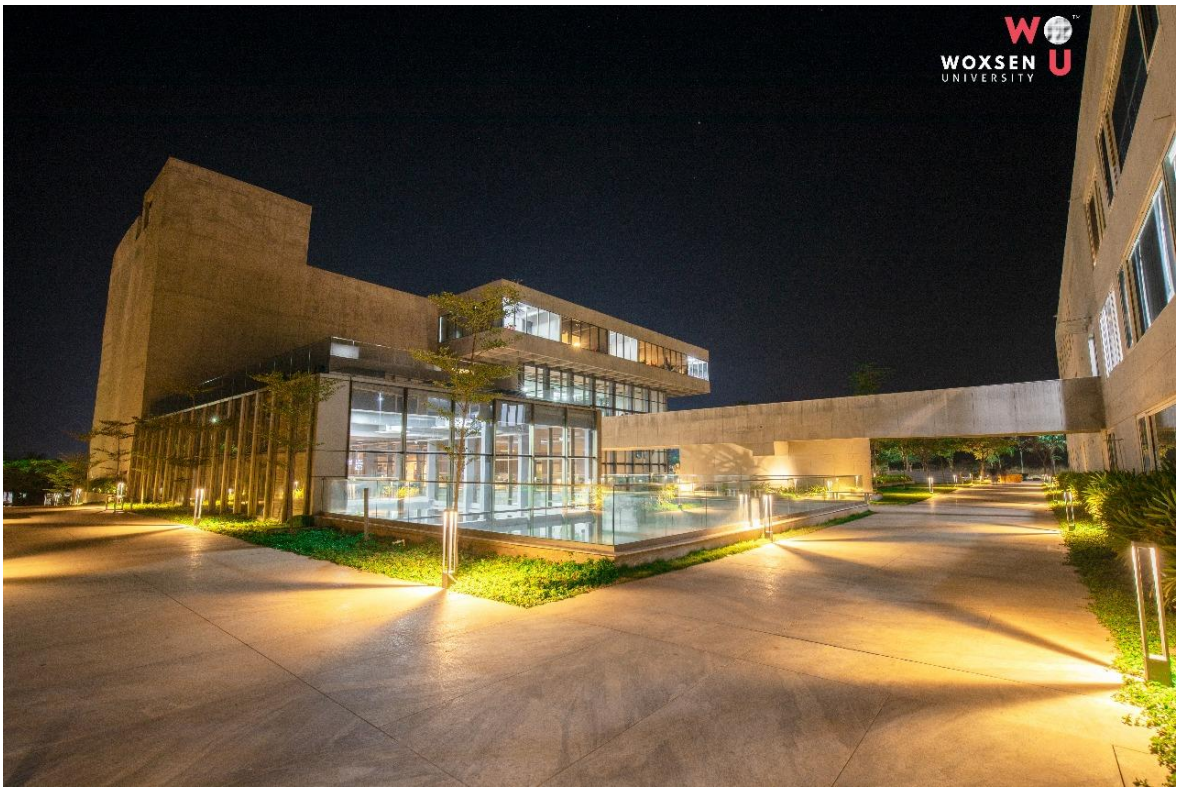
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Table: List of tree species of WOXSEN University, Telangana

S No	Botanical Name	Family	Common Name	Total
1	Mangifera indica	Anacardiace ae	Mango	195
2	Alstonia Scholaris	Apocynaceae	Alstonia	167
3	Tabernaemontana divaricate	Apocynaceae	Crape jasmine	4
4	Araucaria heterophylla	Araucariaceae	Christmas Tree	19
5	Arecaceae	Arecaceae	Palm	93
6	Hyophorbe lagenicaulis	Arecaceae	Bottle Palm	23
7	Roystonea regia	Arecaceae	Cuban royal palm	3
8	Phoenix sylvestris	Arecaceae	Badela Palm	2
9	Terminalia bellirica	Combretaceae	Bahera	49
10	Platycladus orientalis	Cupressaceae	Oriental thuja	67
11	Saraca asoca	Fabaceae	Ashoka	154
12	Dalbergia sissoo	Fabaceae	Sissu *I* Tali	56
13	Vachellia nilotica	Fabaceae	Kikar	19
14	Cassia fistula	Fabaceae	Golden shower tree	13
15	Delonix regia	Fabaceae	Royal Poinciana	3
16	Tamarindus indica	Fabaceae	Tamarind	1
17	Tectona grandis	Lamiaceae	Sagwan	25
18	Punica granatum	Lythraceae	Pomegranate	1
19	Chukrasia velutina	Meliaceae	Chukrasia tabularis	123
20	Azadirachta indica	Meliaceae	Neem	27
21	Melia azedarach	Meliaceae	umbrella tree	21
22	Toona ciliate	Meliaceae	Tun	1
23	Morus alba	Moraceae	White mulberry	27
24	Ficus religiosa	Moraceae	Peepal	17
25	Ficus virens	Moraceae	White Fig	16
26	Ficus elastic	Moraceae	Rubber Plant	7
27	Moringa oleifera	Moringaceae	saujana	2
28	Syzygium cumini	Myrtaceae	Jamun	68

29	Psidium	Myrtaceae	Gauva	54
30	Eucalypts	Myrtaceae	Safeda	26
31	Syzygium aromaticum	Myrtaceae	Clove	3
32	Pongamia Pinata	Papilionaceae	Indian Beech tree	11
33	Phyllanthus emblica	Phyllanthacea e	Gooseberry	19
34	Bambusoideae	Poaceae	Bamboo	2
35	Grevillea robusta	Proteaceae	Silver Oak	58
36	Ziziphus mauritiana	Rhamnaceae	Ber	1O
37	Prunus persica	Rosaceae	Pears	20
38	Pyrus pyrifolia	Rosaceae	Nakh	20
39	Prunus bokharensis	Rosaceae	Aloo Bukhara	8
40	Rosa	*Rosaceae*	Rose	90
41	Citrus limon	Rutaceae	Lemon	23
42	Citrus limetta	Rutaceae	Mausambi	8
43	Murraya koenigii	Rutaceae	Curry Leaf	2
44	Aegle marmelos	Rutaceae	wood apple	1
45	Gmelina arborea	Rutaceae	Beechwood	L
46	Populus	salicaceae	Poplar	35
47	Litchi chinensis	Sapindaceae	Litchi	11
48	Mimusops elengi	Sapotaceae	Maulsari	30
49	Madhuca longifolia	Sapotaceae	Mahua/ Indian Butter Tree	14
50	Manilkara zapota	Sapotaceae	Chiku/Sapodilla	11
51	Vitis Vinifera	Vitaceae	Kismish/Raisins	29
52	Ficus benjamina	Fig family	Faux	427
53	Bugal Bael	.....	Bugal Bae!	49
54	Dakein	.....	Dakein	44
55	Citrus Reticulata	Rutaceae	Kinnow	39
56	Sukhmani	.....	Sukhmani	29
57	Faux Black Kina	.....	Faux Black Kina	22
58	Ficus Benghalensis	Moraceae	Barota	16

59	Badelia Kandia Flower	.....	Badelia Kandia Flower	10
60	Momesia	.....	Momesia	10
61	Rakh Manjan	.....	Rakh Manjan	9
62	Red Faux	.....	Red Faux	8
63	Mimusops	Sapotaceae	Sari	7
64	Flower Faux	.....	Flower Faux	6
65	Needi	.....	Needi	6
66	Ajmohar	.....	Ajmohar	5
67	Green Fax	.....	Green Fax	3
68	Faux (White)	.....	Faux (White)	2
69	Gul Lakkar	.....	Gui Lakkar	1
70	Tarbeni	.....	Tarbeni	1
Total				**2383**

FAUNAL DIVERSITY IN WOXSEN University CAMPUS:

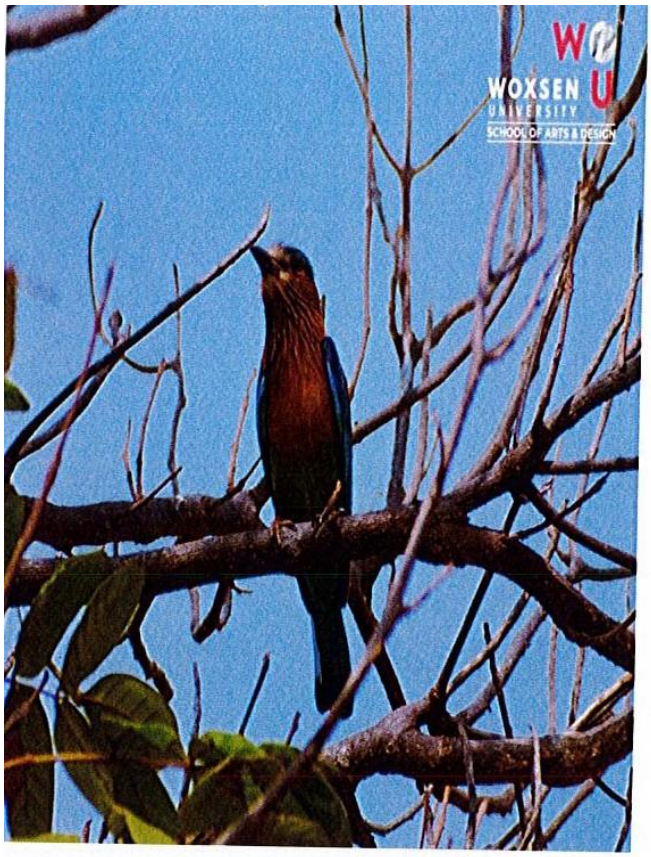
WOXSEN UNIVERSITY is located in District of Sangareddy Indian State of TS. The highest temperature is recorded at 42 C just prior to the onset of monsoon (around May- early June). Summer

Rain is normal, and is principally caused from late June to August by the moisture-laden South-West Monsoon, striking the Himalayan foothills of the north. The climatic condition of the WOXSEN University in particular is very suitable for a wide variedly of flora and fauna to support its rich biodiversity. The fauna! Diversity of WOXSEN University campus has been studied and documented as below:

Table: Common and Scientific names of birds and animals

S No	Common Name	Scientific Name
1.	Common Myna	Acridotheres Tristis
2.	Bank Myna	Acridotheres Ginginianus
3.	House Span-ow	Passer Domesticus
4.	House Crow	Corvus Splendens
5.	Cuckoo	Cuculidae
6.	Snake	Naja Naja
7.	Yellow Wasp	Ropalidia Marginata

8.	Butterfly	Danaus Genutia
9.	Common Wood shrike	Tephrodornis Pondicerianus
10.	Pied Myna	Gracupica Contra
11.	Red-Vented Bulbul	Pycnonotus Cafer
12.	Skylark	Aluda Gulgula
13.	Garden Tiger Moth	Arctia Caja
14.	Little Owl	Athene Brama
15.	Oleander Moth	Syntomeida Epilais
16.	Slender Skimmer	Orthetrum Sabina



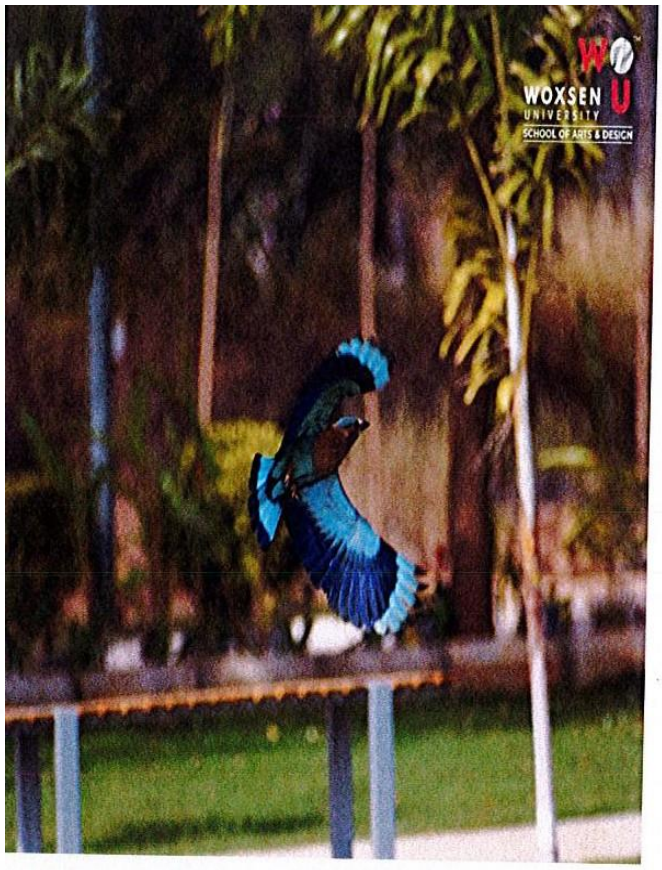


Photo 8: Common Myna (Acridotheres Tristis)

Photo 9: House Sparrow (Passer Domesticus)

Photo 11: House Crow (Corvus Splendens)

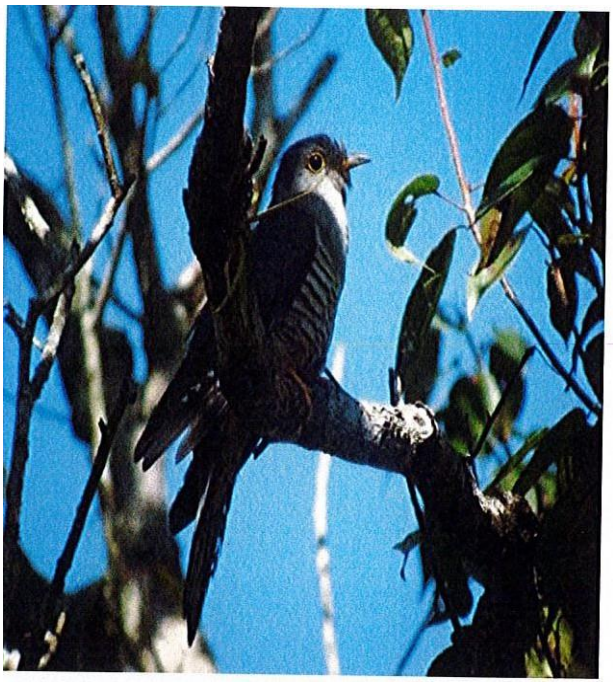


Photo 12: Cuckoo (Cuculidae)

Photo 13: Snake (Naja Naja)

Photo 14: Yellow Wasp (Ropalidia Marginata)

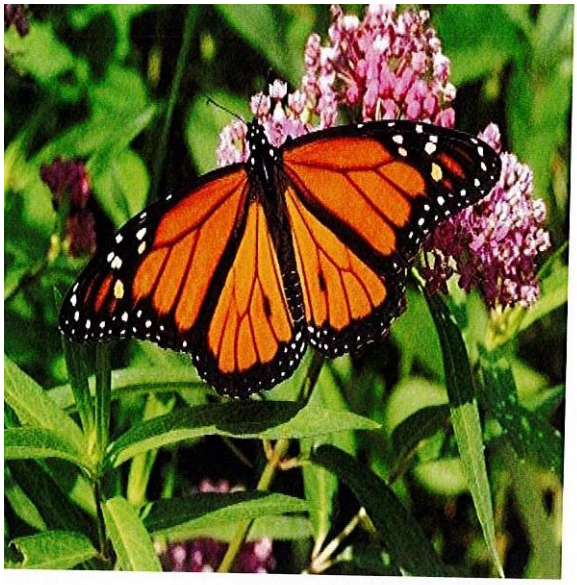


Photo 15: Butter Fly (Danaus Genutia)

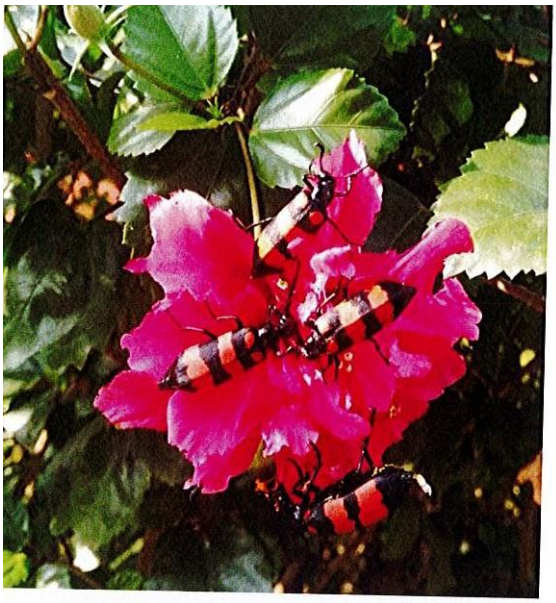


Photo 16: Beetle insect on a hibiscus flower

Photo 17: Common Woodshrike (Tephrodornis Pondicerianus)

Photo 18: Pied Myna (Gracupica Contra)

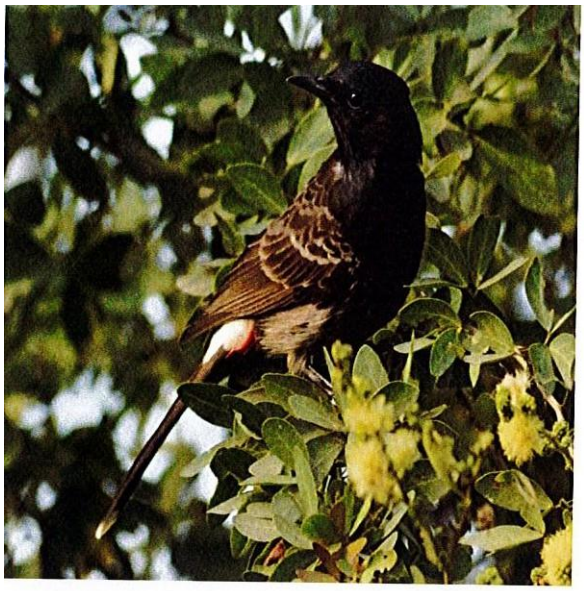


Photo 19: Red-Vented Bulbul (Pycnonotus Cafer)

Photo 20: Skylark (Aluda Gulgula)

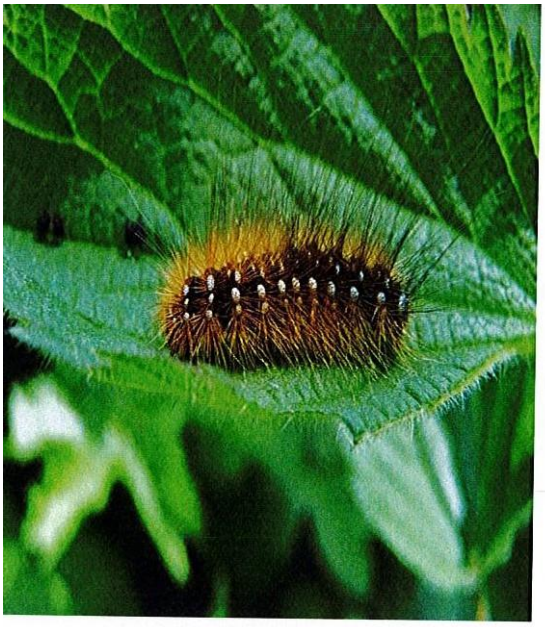


Photo 21: Garden Tiger Moth (Arctia Caja)

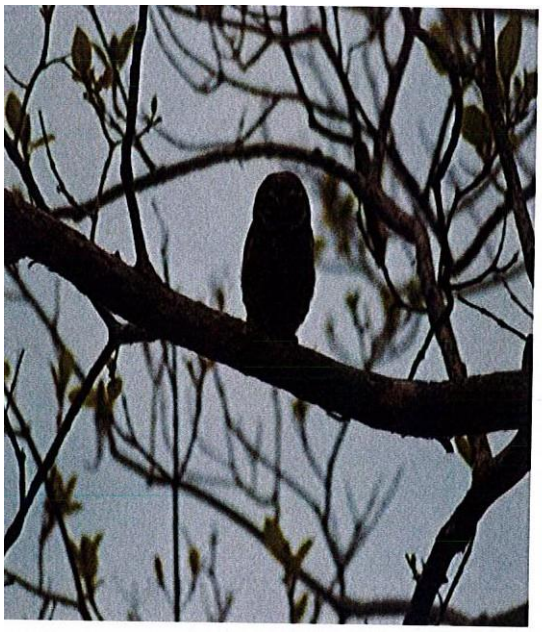
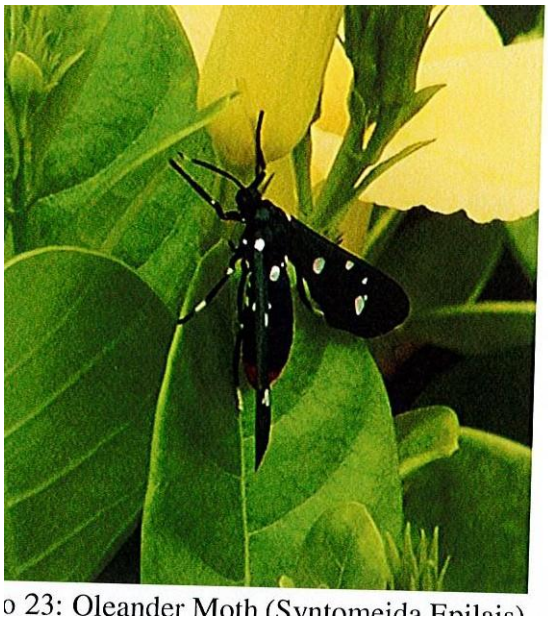
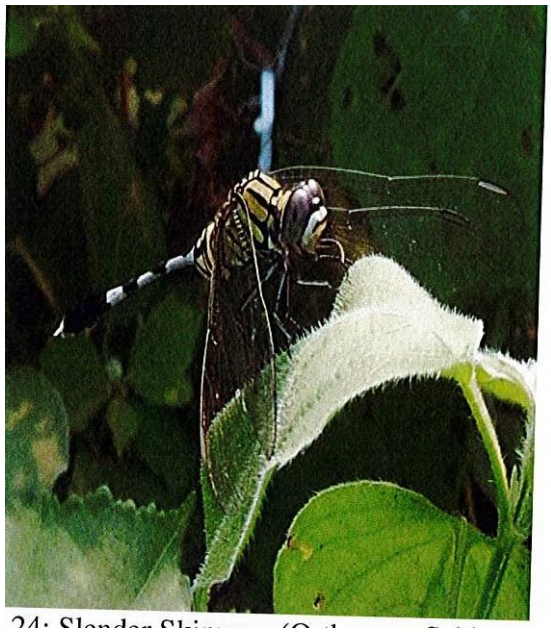


Photo 22: Little Owl (Athene Brama)



o 23: Oleander Moth (Syntomeida Epilais)

Photo 23: Oleander Moth (Syntomeida Epilais)



24: Slender Ski

Photo 24: Slender Skimmer (Orthetrum Sabina)

WEATHER DATA OF WOXSEN UNIVERSITY:

Station: WOXSEN University (INDIA Location:17°38'5 l .7"N 77°47'55.3"E)

In WOXSEN University, the climate is warm and temperate. The summers are much rainier than the winters at WOXSEN University. The average annual temperature in WOXSEN University is 24.3 °C. and the precipitation level is about 770 mm.

The driest month is generally November. There is 4 mm of precipitation in November. The greatest amount of precipitation occurs in July, with an average of 256 mm. With an average of 6°C, June is the warmest month. The lowest average temperatures in the year occur in January, when it is around 13.3 °C. The precipitation varies 252 mm between the driest month and the wettest month. The variation in temperatures throughout the year is 20.3°C.

WEATHER DATA MONTH WISE WOXSEN UNIVERSITY

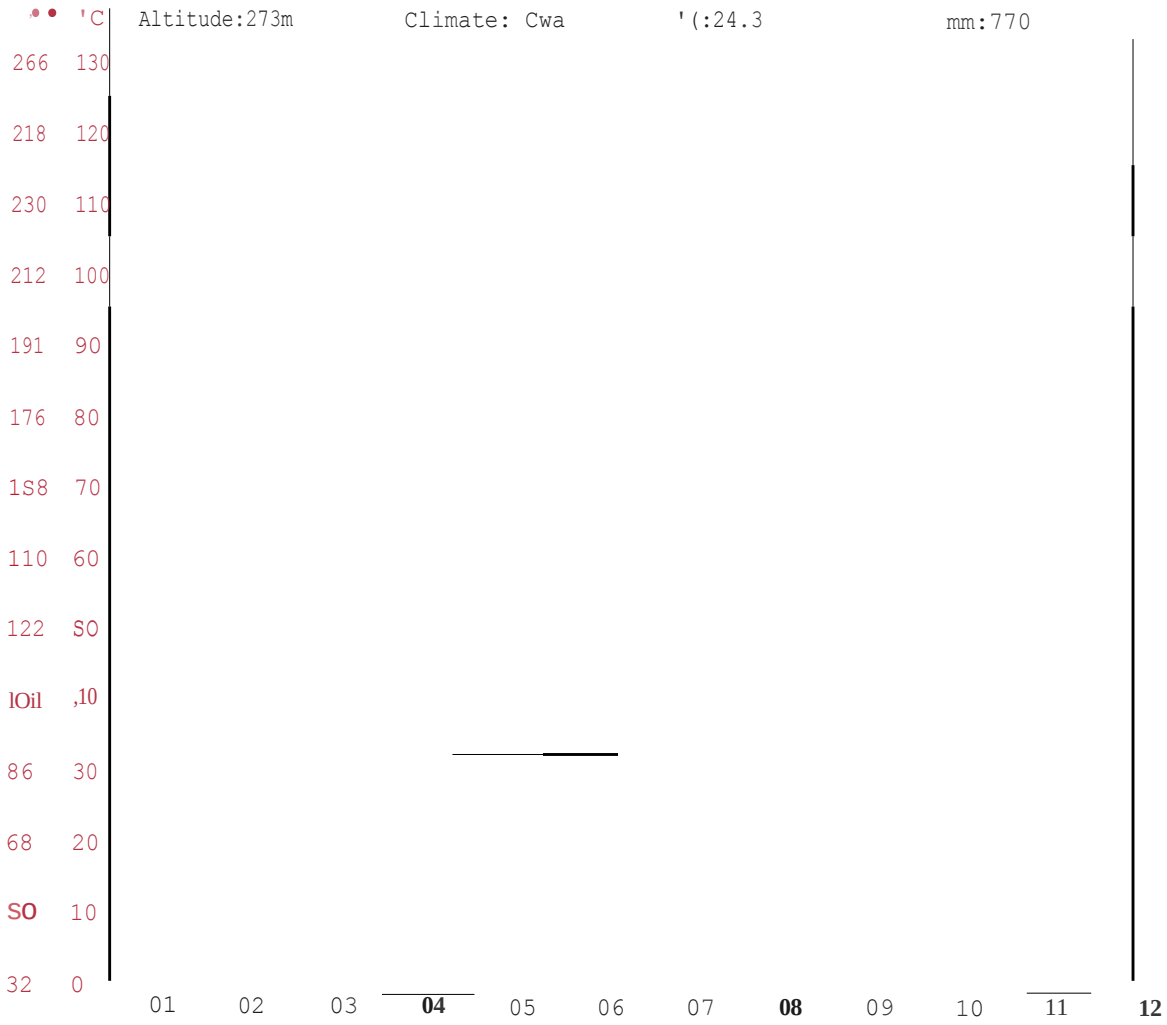
Temperature\Month	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temp. (0C)	13.3	16.2	21.2	27.3	32.3	33.6	30.6	29.5	29	24.9	19.2	14.8
Min. Temp (0C)	6.6	8.9	13.5	19	24.2	26.9	26.2	25.5	23.6	17.2	10.3	6.9
Max. Temp (0C}	20.1	23.6	29	35.7	40.4	40.4	35.1	33.6	34.5	32.7	28.2	22.8
Avg. Temp (°F)	55.9	61.2	70.2	81.1	90.1	92.5	87.1	85.1	84.2	76.8	66.6	58.6
Min. Temp (°F)	43.9	48.0	56.3	66.2	75.6	80.4	79.2	77.9	74.5	63.0	50.5	44.4
Max. Temp{°F)	68.2	74.5	84.2	96.3	104.7	104.7	95.2	92.5	94.1	90.9	82.8	73.0
Precipitation / Rainfall mm)	32	26	26	6	11	37	256	192	132	35	4	13

The likes of an alluvial plain are strong characteristics of the city of WOXSEN University and its surroundings. The city does have a Central location in the plan region. The geographical co-ordinate of WOXSEN University is 17°38'5l.7"N 77°47'55.3"E. The University has an average altitude of 808 feet or 246 meters from the average sea level. The erstwhile land of WOXSEN University was very feasible for peanut cultivation with sand dunes. However, a lot of irrigation and environmental changes have made the land more viable for wheat cultivation.

The climatic conditions bear a strong resemblance with the other cities in the northern part of India. The summers are usually very hot, and the winters are very cold. The summers are prevalent during the months of April to September with June, July, August till mid-September being the hottest months. Winter is prevalent from the month of November till the month of March. There is an onset of Monsoon in September and from mid of September till November one experiences the transitional

weather.

CLIMATE GRAPH MONTH WISE WOXSEN UNIVERSITY



AIR QUALITY IN WOXSEN UNIVERSITY:

The ambient air quality data for WOXSEN University for the last one year shows that there are very less polluted particles in ambient air; AQI for S02 & NOx parameters are within the range of Indian living standards, there are several factors responsible for this cleanliness, calmness and serenity in this area. Firstly, the population which is most responsible for all the problems and hurdles in smooth living is lowest here of all the districts of TS. Secondly, in this area more trees have been planted as compared to other cities. Furthermore, no air polluting industry is established here, not even in a radius of 10 Km of WOXSEN University area. The university is located adjacent to the NH, which might be responsible for heavy density traffic throughout the year and thus might be causing lot of vehicular emissions as well as a lot of dust emissions due to the movement of vehicular traffic. Therefore, the ambient air quality of WOXSEN University Area falls in between moderate to rich quality state. The TS Pollution Control Board is pondering over the

various possibilities to reduce air pollution for the improvement of ambient air quality with respect to AQI is concerned. However, the annual average value of PMI0, SO2, NOx in the ambient air quality of WOXSEN University falls in the range of 50-62 tg/m3, 3-5 µg/m3, I0-12 Lg/m3 for most of the months, as such, the graded response action plan to eradicate the problem

AIR QUALITY DETERMINATION

Satisfactory air quality index (OVERALL=58) in WOXSEN University, TS, India on dated 7th September 2024

Paramete1·	Result (Range)
NO2	25.4 µg/m3, AQI 26 Very Good
NO	10.09 µg/m3, AQI 10 Good
O3	31.49 µg/m3, AQI 31 Good
PM2.s	28.13 µg/m3, AQI 28 Good
PM10	77.2 µg/m3, AQI 79 Sat is factor y
Co	35.0 µg/m3, AQI 18
Humidity	56.0 %
Barometric Pressure	1013 millibar or hPa
Wind Speed	10-15 *mis*
Wind Direction	28.0013 degrees
Sun Rise	06:28AM
Sun Set	05:56 PM
Moonrise	07:05 PM
Moonset	07:31 AM

WATER ANALYSIS REPORT OF WOXSEN UNIVERSITY:

Water quality testing is important because it identifies contaminants and prevents water-borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease.

The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment.

Drinking water indicators:

The following is a list of indicators often measured by situational category:

- Alkalinity
- Color of water
- pH value
- Taste and odor (geosmin, 2-Methylisoborneol (MIB), etc.)
- Dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium)
- Microorganisms such as fecal coliform bacteria (Escherichia coli), Cryptosporidium, and Giardia lamblia; see Bacteriological water analysis
- Dissolved metals and metalloids (lead, mercury, arsenic, etc.)
- Dissolved organics: colored dissolved organic matter (CDOM), dissolved organic carbon (DOC)
- Heavy metals


Aquaguard
GPS Map Camera
Kamkole, Telangana, India
Jqwx+mmw, Kamkole, Telangana 502345, India
Lat 17.646592° Long 77.799296°
05/02/2025 05:22 PM GMT +05:30
Google


SAI MANOHAR ENVIRO
GPS Map Camera
Kamkole, Telangana, India
Jqvx+4mv, Kamkole, Telangana 502345, India
Lat 17.642963° Long 77.798917°
05/02/2025 04:54 PM GMT +05:30
Google


GPS Map Camera
Kamkole, Telangana, India
Jqvw+jjm, Kamkole, Telangana 502345, India
Lat 17.644068° Long 77.796622°
05/02/2025 03:51 PM GMT +05:30
Google

Water Consumption Report

Period: Jun 2022 to May 2023

1. Introduction

Woxsen University is committed to efficient water management and sustainability. As per the **National Building Code (NBC) of India, 2016 & Bureau of Indian Standards** for educational institutions with boarding facilities, the daily water consumption per person is estimated at 135 liters. This report outlines the detailed water consumption breakdown and sewage treatment strategies at the university.

---

2. Daily Water Consumption Breakdown (Per Person)

Activity	Liters per Day	Percentage of Daily Usage
Drinking	5 L	4%
Cooking & Utensils Cleaning	15 L	11%
Bathing	55 L	41%
Washing	20 L	15%
Academic Activities (Cleaning & Gardening)	10 L	7%
Toilet (Sanitation)	30 L	22%
Total Water Consumption	**135 L**	**100%**

(Note: Gardening water is not considered in the breakdown as treated water is used for gardening. If we consider only freshwater consumption, it is approximately 50-60 liters per person per day)

---

3. Total Monthly Water Consumption

Assumptions:

- **Population:** 2,519 (students, faculty, and staff)
- **Average month length:** 30 days

Daily Water Usage for the Entire University:

2,519 people × 135 Liters/person/day = **3,39,065 Liters**

Monthly Water Usage:

3,39,065 Liters/day × 30 days = **1,01,71,950 Liters**

---

4. Sewage Treatment and Recycling Process

Wastewater Generated (Bathing, Washing & Other Activities):

115 Liters/person/day × 2,519 people × 30 days = **86,92,775 Liters/month**

Sewage Treatment Capacity:

- **250 KLD (KILO LITERS PER DAY) ECO STP**

Recycled Water Usage:

- **Gardening (100% of Treated Water):** 86,92,775 Liters/month

---

5. Conclusion

Woxsen University has implemented an efficient water consumption model in alignment with the NBC India, 2016 & Bureau of Indian Standards. The university uses 135 Liters of water per person per day, broken down into various domestic and institutional uses. With its capacity for 100% sewage treatment and the reuse of treated water for non-potable purposes like gardening and flushing, the university is actively promoting water conservation and sustainability.

This water consumption and sewage treatment strategy aligns with Woxsen University's commitment to sustainability and responsible resource management.

Water Consumption Report

Period: Jun 2023 to May 2024

1. Introduction

Woxsen University is committed to efficient water management and sustainability. As per the National Building Code (NBC) of India, 2016 & Bureau of Indian Standards for educational institutions with boarding facilities, the daily water consumption per person is estimated at 135 liters. However, Woxsen University has successfully reduced its freshwater consumption by utilizing treated water for various activities wherever possible. This report outlines the detailed water consumption breakdown and sewage treatment strategies at the university.

---

2. Daily Water Consumption Breakdown (Per Person)

Activity	Liters per Day	Percentage of Daily Usage
Drinking	5 L	4%
Cooking & Utensils Cleaning	15 L	11%
Bathing	55 L	41%
Washing	20 L	15%
Academic Activities (Cleaning & Gardening)	10 L	7%
Toilet (Sanitation)	15 L	11%
Total Water Consumption	120 L	100%

---

3. Total Monthly Water Consumption

Assumptions:

- **Population**: **3,647** (students, faculty, and staff)
- **Average month length**: 30 days

Daily Water Usage for the Entire University:

3,647 people × 120 Liters/person/day = **4,37,640 Liters**

Monthly Water Usage:

4,37,640 Liters/day × 30 days = **1,31,29,200 Liters**

---

4. Sewage Treatment and Recycling Process

Wastewater Generated (Bathing, Washing & Other Activities):

100 Liters/person/day × 3,647 people × 30 days = **1,09,41,000 Liters/month**

Sewage Treatment Capacity:

- **250 KLD (KILO LITERS PER DAY) ECO STP**

Recycled Water Usage:

- **Gardening (75% of Treated Water):** 81,85,750 Liters/month
- **Flushing (25% of Treated Water):** 27,61,250 Liters/month
- **Total Recycled Water Usage:** 1,09,47,000 Liters/month

---

5. Conclusion

Woxsen University has implemented an efficient water consumption model in alignment with the NBC India, 2016 & Bureau of Indian Standards. The university uses **120 Liters of water per person per day**, broken down into various domestic and institutional uses. By effectively utilizing treated water wherever feasible, the university has managed to lower its freshwater consumption. With its capacity for **100% sewage treatment and the reuse of treated water for non-potable purposes like gardening and flushing**, the university is actively promoting water conservation and sustainability.

Water Consumption Report

Period: Jun 2024 to Jan 2025

1. Introduction

Woxsen University is committed to efficient water management and sustainability. As per the National Building Code (NBC) of India, 2016 & Bureau of Indian Standards for educational institutions with boarding facilities, the daily water consumption per person is estimated at 135 liters. However, Woxsen University has successfully reduced its freshwater consumption by utilizing treated water for various activities wherever possible. This report outlines the detailed water consumption breakdown and sewage treatment strategies at the university.

---

2. Daily Water Consumption Breakdown (Per Person)

Activity	Liters per Day	Percentage of Daily Usage
Drinking	5 L	4.3%
Cooking & Utensils Cleaning	15 L	13.0%
Bathing	55 L	47.8%
Washing	20 L	17.4%
Academic Activities (Cleaning & Gardening)	10 L	8.7%
Toilet (Sanitation)	10 L	8.7%
Total Water Consumption	115 L	100%

Note: 35% of treated water is used for flushing. Gardening water is not considered in the breakdown as treated water is used for gardening. If we consider only freshwater consumption, it is approximately 70-80 Liters per person per day.

---

3. Total Monthly Water Consumption

Assumptions:

- **Population**: **4,778** (students, faculty, and staff)
- **Average month length**: 30 days

Daily Water Usage for the Entire University:

4,778 people × 115 Liters/person/day = **5,49,470 Liters**

Monthly Water Usage:
5,49,470 Liters/day × 30 days = **1,64,84,100 Liters**

---

4. Sewage Treatment and Recycling Process

Wastewater Generated (Bathing, Washing & Other Activities):

95 Liters/person/day × 4,778 people × 30 days = **1,36,24,370 Liters/month**

Sewage Treatment Capacity:

- **250 KLD (KILO LITERS PER DAY) ECO STP**
- **300 KLD (KILO LITERS PER DAY) Sintex STP**

- **Total Capacity: 550 KLD (KILO LITERS PER DAY)**

Recycled Water Usage:

- Gardening (65% of Treated Water): 88,55,840 Liters/month
- Flushing (35% of Treated Water): 47,68,530 Liters/month
- Total Recycled Water Usage: 1,36,24,370 Liters/month

---

5. Conclusion

Woxsen University has implemented an efficient water consumption model in alignment with the NBC India, 2016 & Bureau of Indian Standards. The university uses **115 Liters of water per person per day**, broken down into various domestic and institutional uses. By effectively utilizing treated water wherever feasible, the university has managed to lower its freshwater consumption. With its capacity for **100% sewage treatment and the reuse of treated water for non-potable purposes like gardening and flushing**, the university is actively promoting water conservation and sustainability.

This water consumption and sewage treatment strategy aligns with Woxsen University's commitment to sustainability and responsible resource management.

NOISE LEVEL IN THE SURROUNDING OF WOXSEN University:

The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound:

- Loudness and
- Frequency.

Loudness is the strength of the sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about IO dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-0 dB, boiler factories 120 dB, jet planes during take-off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms the hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerant. Loudness is also expressed in Sanes. One sone equals the loudness of 40 dB sound pressure at l 000 Hz. Frequency is defined as the number of vibrations per second. It is denoted as Hertz (Hz).

MATERIALS, STUDY AREA & METHODS

Noise level meter or noise measuring app, Noise test pro (version: 1.0.2), was used to measure the noise level. Noise test pro detect of any noise, music or sound in your surroundings. It will tell you maximum, minimum and average decibels.

Noise Test
Noise Test 54

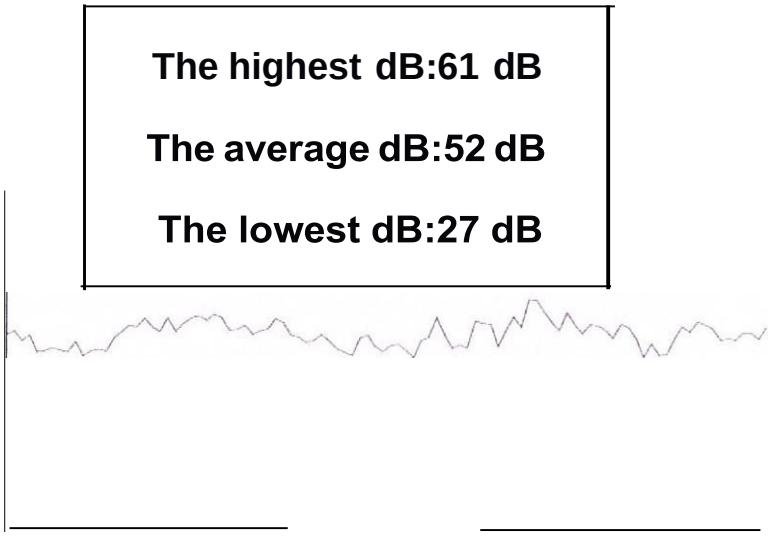


Figure: Noise Measurement by Noise Test Pro App

DESCRIPTION OF THE UNIVERSITY SITE

The site of the WOXSEN University is located at 17.6441845,77.7997978,16.02z.

Below photo shows the satellite image of the University site

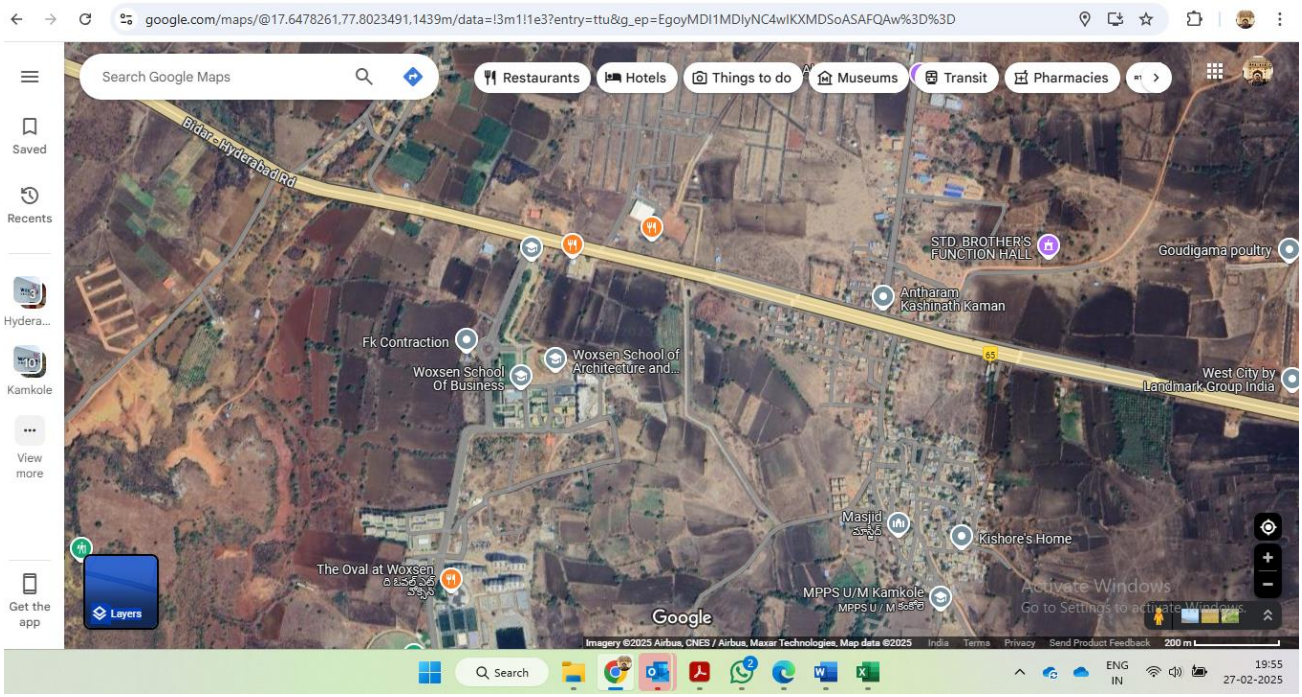


Photo 2: Aerial View of University Campus Part 2 (Source Google Earth)

MEASUREMENT PROCEDURE

The noise level was recorded at the different Important Locations of WOXSEN University. At each spot, the measurements were taken for 60 seconds during daytime (6 AM- 6 PM) and noted down the measurements. Screen shots of the noise measurements were taken immediately on the app at the time of 60th second of each measurement.

RESULTS

The results of the experiments at different places have been tabulated in the following table:

Table 1: Measurements of Noise in and around WOXSEN University:

PLACE	***MEASUREMENTS (Duration ill Sec.)***	***MINIMUM (dBA)***	***Maximum (dBA)***	***AVERAGE (<IBA)***
SOT	60	53	81	76
SOB	60	50	68	56
SOAP	60	59	74	70
SOAD	60	74	90	85

Library	60	51	85	65
SOL	60	57	84	78
Labs	60	45	89	72
SOH	60	50	81	73
Sos	60	66	85	76
VC Office	60	35	77	68
Auditorium	60	53	75	71
Workshop	60	66	90	78
Workshop	60	56	86	69
Ground 1	60	59	90	70
Ground 2	60	56	90	68
Generator Room	60	53	89	75
Gymnasium	60	68	82	76
Faculty Flats	60	35	80	69
Staff Flats	60	49	71	65
Guest House	60	*SO*	77	67
University Front Gate	60	*SO.* 7	78.0	71.0
University Back Gate	60	54	75.9	73.5
Boys Hostel	60	54	68	62
Girls Hostel	60	52	90	68

Source: Data collected by Third Party Lab in the presence of GMCSPL Auditors. After the study, the measurements of noise have been recorded in and outside of WOXSEN University area: Inside the Campus: 35-90 dBA,

Outside the Campus: 54-93 dBA

WASTE DISPOSAL OF WOXSEN University:

Waste disposal are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

The waste from all around the University is separated daily as wet and dry waste in different bags which are

disposed separately. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand; wet waste refers to organic waste such as vegetable peds, left-over food etc. Separation of waste is essential as the amount of waste being generated today causes immense problem. The material was composted and evaluated as a fertilizing material. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.

With smart initiatives like "Think Green Campus Model", waste management is helping University's to achieve a higher level of environmental performance. By reusing or recycling we are contributing to the conservation of natural resources, saving energy, helping to protect the environment, reducing landfill. We will also reduce our impact on the environment by minimizing the carbon emissions associated with both disposing of old products and obtaining new ones. WOXSEN University adopts environment friendly practices and takes necessary actions such as - energy conservation, waste recycling, carbon neutral etc. The biological reusable waste are processed as organic manure for the plants available in the University campus and the other solid waste generated in the University campus is taken to the community bin of WOXSEN University for recycling and disposal.

Wastage Management Report

1. Overview

Woxsen University is committed to sustainable practices and efficient waste management to minimize environmental impact. This report outlines the current waste management practices and future plans for improvement.

2. Current Waste Management Practices

Engagement with Vendor

- Woxsen University partners with **M/s. Mahesh Garbage Collection** (an authorized vendor in Kamkole GP, License No. 24) for waste management.
- The vendor collects various types of waste and converts food and garden waste into vermicompost.

Types and Quantities of Waste Generated

- **Food Waste:** Approximately **900 kg/day**.
- **Garden Waste:** Approximately **50 kg/day**.
- **Paper and Carton Waste:** Approximately **10 kg/day**, generated primarily from academic activities.

Waste Collection and Disposal

- **Food and Garden Waste:** Collected daily by M/s. Mahesh Garbage Collection.
- **Paper and Carton Waste:** Stored and sold to scrap vendors monthly.

---

3. Solid Waste Management Practices

Segregation at Source

- Dustbins across the campus are segregated into categories for **Paper**, **Plastic**, **Food**, and **Toilet Waste** to ensure efficient disposal.

Specific Waste Management Initiatives

- **Paper:**
  - Minimizing usage through digital paperwork and softcopy submissions.
  - Official documents are processed via **DocuSign** for digital signatures.
- **Plastic:**
  - Avoiding single-use plastics in classrooms, hostels, food zones, and labs.
  - Replacing disposables with eco-friendly alternatives, including bamboo plates, wooden spoons, and paper cups.
  - Plans to procure a **plastic-brick making machine** to recycle plastic into reusable bricks.
- **Food:**
  - Encouraging the "Take all you can eat, but eat all you take" approach.
  - Preparing meals incrementally during serving times to minimize waste.
  - Ergonomically designed plates to promote portion control.

    - **Food Waste Tracking:**
        - Waste is weighed after every meal and displayed on an awareness board.
        - Posters around the dining hall encourage responsible consumption.
    - **Future Plan:** Procure a **250 kg/day composter with an in-built shredder** to process biodegradable waste into compost for campus flora.
- **Sanitary Napkins:**
    - Disposal bins are placed in all ladies' washrooms.
    - Plans to procure a **sanitary napkin incinerator** with a capacity of **120 napkins/day**.
- **Other Waste (Metal, Wood, Scrap, Cloth):**
    - Sold to tied-up external vendors for reuse.

Central Waste Management

- An **exclusive waste yard** has been allocated, strategically located to avoid negative impacts on the campus and nearby community.
- **Mini electric garbage vans** operate on a fixed schedule to collect and transport waste to the yard.

---

4. Future Initiatives

Vermicomposting Facility

- Plan to establish an on-campus vermicomposting facility to:
    - Convert food and garden waste into nutrient-rich compost.
    - Reduce dependency on external vendors.
    - Utilize compost for maintaining campus gardens.

Expected Benefits

- Significant reduction in waste sent off-site.
- Cost savings on landscaping and gardening.
- Contribution to a circular economy by utilizing waste efficiently.

---

5. Conclusion

Woxsen University’s proactive approach to waste management demonstrates its commitment to sustainability. Current practices and proposed initiatives, such as the vermicomposting facility, will ensure that waste is managed responsibly while contributing to the university's green initiatives.

Store room.

TRANSPORTATION AT WOXSEN UNIVERSITY:

Being the largest residential campus in the region, WOXSEN University m1111m1zes the transportation of the students & staff. It has a single bus which is used for outdoor transportation. The University provides its students and staff with all the comfort and convenience to help them to achieve their targets. As a result, students and staff will use E- vehicles and bicycles for internal transport. Buses emit approximately 20% less carbon monoxide, 10% as much hydrocarbons, and 75% as much nitrogen oxide per passenger mile as an automobile with a single occupant (Source: Wikipedia).

University Bus Picture:


TS09F
T1725


TS04 FD 3699


STOP
NO ENTRY INTO
WORK AREA
AUTHORIZED PERSONNEL ONLY

ELECTRICAL POWER CONSUMPTION AT WOXSEN UNIVERSITY:

WOXSEN University, being one of the largest University of Telangana, consumes on an daily average 310 kW- hr (units) of electricity which turns out to be 2700000 kW-hr per year only to maintain its volumetric activities throughout the year. The authority keeps on replacing the old filament bulbs, CFL bulbs and tube lights by low energy consuming LED bulbs and LED tubes and bulky high-power consuming fans by energy efficient fans to keep the electricity consumption of the University as low as possible.

In addition to making Environmental Studies a very vital subject in our syllabus, WOXSEN University has gone a step further by putting that theory into practice. The University has gone ahead and signed an MOU with Ms Amplus Venus Pvt Ltd towards putting up a solar power plant with a total planning of 2.4MW in 3 progressive phases. The energy from this solar installation shall help in offsetting the institute's daytime peak electricity demand from the grid. In phase I, WOXSEN University has started work towards erecting solar panels which shall generate 420KVA electricity daily and shall get operational by August 2023. This shall help University in meeting 5-10% of its demand via renewable source of energy and thus moving towards a more reliable and greener option and reducing its carbon footprint.

Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: Phase 1- 5-10% ; Phase 2- 20-30% ; Phase 3- 50-60%

Annual power requirement met by the renewable energy sources (in KWH)

Response: 200000 approx. in phase l; 450000 in phase 2; 1500000 in phase 3

Total annual power requirement (in KWH)

Response: 2700000 approx.

Power Requirements met by renewable energy sources	Total Power Requirement	Renewable energy Source	Renewable energy generated and used	Energy supplied to the grid
200000 KWH/year	2700000 KWH/ Year	Solar	200000 KWH/ year	

Total Annual Lighting Power Requirements= 7,50,000 KWH

Total Lighting Requirements	Percentage Lighting through LED Bulbs	Percentage Lighting through other sources
7,50,000 KWH/Year	84%	

Power Consumption Report

Period: June 2024 to November 2024

1. Introduction

Woxsen University is committed to energy efficiency and sustainability. To optimize power consumption, the university has implemented 100% LED lighting with motion sensors in all corridors and common areas. Additionally, both a 327 kWp and 420 kWp solar setup are fully operational, and a 249 kWp solar setup is currently under commissioning to further enhance energy sustainability.

In alignment with the Government of Telangana norms, solar power setups should not exceed 1 Megawatt per connection. With the current commissioned setups, Woxsen University is reaching this 1-Megawatt limit. The university continues to benefit from the adoption of energy-efficient VRV (Variable Refrigerant Volume) HVAC technology introduced last year, which has yielded significant energy savings.

This report provides a comprehensive breakdown of power usage per person, total monthly consumption, and backup power infrastructure.

2. Monthly Power Consumption Overview

S No	Month	Recorded Units (kWh)
1	Jun-24	258,928
2	Jul-24	368,186
3	Aug-24	524,731
4	Sep-24	585,972
5	Oct-24	618,570
6	Nov-24	512,993
Total Consumption		**2,869,380 kWh**
Average Monthly Consumption		**478,230 kWh**

3. Cooling Systems Overview

Woxsen University continues to integrate energy-efficient VRV HVAC technology into new building designs while retaining existing split units for cost-efficiency. Detailed insights into energy savings and sustainability benefits are documented in the HVAC System Report.

4. Daily Power Consumption Breakdown (Per Person)

- **Total Population:** 4,778
- **Total Consumption:** 2,869,380 kWh
- **Average Monthly Consumption:** 478,230 kWh
- **Average Daily Consumption:** 15,941 kWh
- **Per Person Daily Power Consumption:**

15,941 kWh ÷ 4,778 people = **3.34 kWh (Units) per person per day**

5. Backup Power Supply (DG Set Details)

Woxsen University maintains a robust Diesel Generator (DG) backup system to ensure uninterrupted power supply. The details are as follows:

Allotted Buildings	DG Set Capacity (KVA)
Ladies' Hostels	250 KVA

Gents' Hostels & Sports Facility	500 KVA
Academic Buildings & Cafeteria	1,000 KVA
Total DG Backup Capacity	**1,750 KVA**

These DG sets support critical operations during power outages, ensuring continuity in academic and residential activities.

6. Sustainability Initiatives

Woxsen University continues to implement several sustainability measures to optimize power consumption:

- **100% LED Lighting & Motion Sensors:** Continued usage of LED Lighting and motion sensors during the building design stage, ensuring ongoing energy savings.
- **Solar Setup:** 327 kWp & 420 kWp Solar Setups are Fully operational & providing significant renewable energy. 249 kWp Solar Setup is Currently under commission to further enhance the renewable energy infrastructure.
- **VRV HVAC Technology:** Continued usage of VRV systems in building designs, ensuring ongoing energy savings.
- **Solar Water Heating Systems:** Solar water heaters have been installed on the rooftops of hostel buildings. These systems provide a sustainable solution for hot water needs throughout the year and contribute to the reduction of the University's carbon footprint.
- **Street Light Shutdown Initiative:** As an additional measure to reduce power consumption, street lighting on campus is shut off daily after 11 PM.

7. Future Plans

To adhere to the Government of Telangana's regulation that limits solar power setups to 1 Megawatt per connection, Woxsen University is planning to secure a second power connection. This additional connection will accommodate up to 1 Megawatt of solar setup for future expansion and new building infrastructure. This initiative demonstrates the university's proactive approach to sustainable energy management and infrastructure development.

8. Conclusion

Woxsen University follows a structured approach to power management and sustainability. With an average monthly power consumption of 478,230 kWh and a per-person daily usage of 3.34 kWh, the university ensures efficient energy utilization. The commissioning of the 249 kWp solar setup will further reinforce Woxsen University's commitment to sustainability and responsible energy management.

Woxsen University Solar Power Generation Details Year 2023 & 2024			
Month	**Power Generation (kWh) in Plant 1**	**Power Generation (kWh) in Plant 2**	**Total Power Generation (kWh)**
Jun-23	8474.78	0	8474.78
Jul-23	31845.33	0	31845.33
Aug-23	42133.69	0	42133.69
Sep-23	34255.58	0	34255.58
Oct-23	47115.09	0	47115.09
Nov-23	33831.45	0	33831.45
Dec-23	37059.47	0	37059.47
Jan-24	38613.88	0	38613.88

Feb-24	42730.09	0	42730.09
Mar-24	46220.03	0	46220.03
Apr-24	43924.13	31838.34	75762.47
May-24	16751.12	60385.52	77136.64
Jun-24	0	51113.85	51113.85
Jul-24	0	40630.62	40630.62
Aug-24	0	45828.66	45828.66
Sep-24	8798.94	41938.44	50737.38
Oct-24	39671.59	27277.76	66949.35
Nov-24	38156.81	26961.29	65118.1
Total	**509582**	**325974**	**835556**

Capital Expenditure Report
(Sustainability Initiatives)

1. Introduction

Woxsen University is committed to sustainability and reducing its carbon footprint through strategic investments in energy-efficient and renewable energy technologies. This report highlights the capital expenditures associated with the university's sustainability initiatives, including renewable energy usage, LED lighting installations, and other green infrastructure projects.

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2. Summary of Capital Expenditure

Sustainability Initiative	Details	Capital Expenditure (INR)
Electric Buggies	Procurement of Yamaha and Aquila electric buggies for campus transport	31,00,000
BOV Bikes & Electric Goods Carrier Auto	Acquisition of Ather 450X bikes and goods carrier autos	11,80,200
Motion Sensors for LED Lights	Installation of motion sensors for energy efficiency	6,19,500
VRV HVAC System Integration	Energy-efficient VRV HVAC system integration for optimized cooling	2,21,87,549
Solar Power Charges	Payment for solar power usage (vendor: M/s. Amplus Athena Energy Pvt Ltd)	37,60,004
Solar Water Heating Systems	Installation of solar water heaters for hostel buildings	20,00,000
Heat Resistant Paint	Application of heat-resistant paint to reduce energy usage	4,49,580
	Total Capital Expenditure	**3,32,94,833**

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3. Detailed Expenditure Breakdown

Electric Buggies

- **Description:** Yamaha and Aquila electric buggies for campus transportation.
- **Benefits:** Reduction in fuel consumption and carbon emissions.
- **Capital Outlay:** INR 31,00,000

EV Bikes & Electric Goods Carrier Autos

- **Description:** Procurement of Ather 450X bikes and electric goods carrier autos.
- **Benefits:** Efficient and eco-friendly transport solutions.
- **Capital Outlay:** INR 11,80,200

Motion Sensors for LED Lights

- **Description:** Installation of motion sensors to improve energy efficiency in lighting.
- **Benefits:** Reduced power consumption.
- **Capital Outlay:** INR 6,19,500

VRV HVAC System Integration

- **Description:** Deployment of energy-efficient VRV HVAC technology.
- **Benefits:** Optimized cooling and reduced energy consumption.
- **Capital Outlay:** INR 2,21,87,549

Solar Power Charges

- **Description:** Charges for solar power generation provided by M/s. Amplus Athena Energy Pvt Ltd
- **Breakdown:** Installed Capacity - 327 kWp & 420 kWp.
- **Tariff Details:** INR 4.50 per unit (Flat Tariff), compared to Present Day Grid Tariff of INR 8.86 per unit, resulting in savings of INR 4.36 per unit.
- **Benefits:** Enhanced renewable energy utilization and reduced grid dependency.
- **Capital Outlay:** INR 37,60,004

Solar Water Heating Systems

- **Description:** Installation of solar water heating systems for hostels.
- **Benefits:** Sustainable solution for hot water requirements and reduced energy consumption.
- **Capital Outlay:** INR 20,00,000

Heat Resistant Paint

- **Description:** Application of heat-resistant paint to reduce heat absorption.
- **Benefits:** Lower energy usage for cooling.
- **Capital Outlay:** INR 4,49,580

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4. Future Plans

Woxsen University remains dedicated to sustainable development. To comply with the Government of Telangana's regulation limiting solar power setups to 1 Megawatt per connection, the university is planning to secure a second power connection. This will support additional solar infrastructure for new building expansions and further reinforce the university's commitment to sustainability.

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5. Conclusion

Woxsen University's capital expenditure on sustainability initiatives underscore its proactive approach to environmental responsibility. With investments in solar power, energy-efficient HVAC systems, and smart lighting solutions, the university continues to lead by example in promoting sustainability and responsible energy management.

Emission Report

Period: Jan 2023 to Dec 2023

1. General Formula for Emission Sources

Emissions (tCO_2e) = Activity Data × Emission Factor

- **Activity Data:** The quantity of fuel used, electricity consumed, distance travelled, etc.
- **Emission Factor:** The amount of CO_2e emitted per unit of activity (varies by fuel type, electricity grid mix, etc.).

2. Total Scope 1 and 2 Emissions (tCO_2e)

Scope 1 Emissions:

Direct emissions from sources owned or controlled by the university (e.g., fuel combustion in vehicles, boilers, or generators).

- **Diesel/Petrol Consumption: 31,269 Liters**
- **LPG Gas Consumption: 72,250 kg (Reduced by 15%)**

Emission Factors:

- **Diesel: 2.68 kg CO_2e per liter**
- **LPG Gas: 3.00 kg CO_2e per kg**

Calculation:

- **Diesel/Petrol: 31,269 liters × 2.68 kg CO_2e/liter = 83,797 kg CO_2e (83.8 tCO_2e)**
- **LPG Gas: 72,250 kg × 3.00 kg CO_2e/kg = 216,750 kg CO_2e (216.8 tCO_2e)**
- **Total Scope 1 Emissions: 83.8 + 216.8 = 300.6 tCO_2e**

Scope 2 Emissions:

Indirect emissions from purchased electricity, steam, heating, and cooling.

- **Electricity Consumption: 4,076,144 kWh**
- **Emission Factor (Telangana Grid): 0.716 kg CO_2/kWh**

Calculation:

- **4,076,144 kWh × 0.716 kg CO_2e/kWh = 2,917,480 kg CO_2e (2917.5 tCO_2e)**

Total Scope 1 + 2 Emissions:

- **300.6 + 2917.5 = 3,218.1 tCO_2e**

3. Scope 3 Emissions (tCO_2e)

Scope 3 includes indirect emissions from activities such as employee commuting, business travel, waste disposal, and supply chain.

Employee Commuting Data:

- **Employees commuting by Car:** 50
- **Employees commuting by Bike:** 130
- **Employees commuting by Coach Bus:** 70
- **Employees commuting by Public Transportation:** 80
- **Total Day Scholars:** 330

Emission Factors (kg CO_2e per km)

Vehicle Type	Fuel Type	Emission Factor (kg CO_2e/km)
Medium Motorcycle (150-500cc)	Petrol	0.10
Car (Small/Compact)	Petrol/Diesel	0.15
Coach Bus (30-40 seats)	Diesel	0.04
City Bus (Public Transport) (40-60 seats, high occupancy)	Diesel	0.045

Calculation:

- **Motorcycle Commuters:** 130 employees × 40 km/day × 200 days × 0.10 kg CO_2e/km = **104,000 kg CO_2e (104 tCO_2e)**
- **Car Commuters:** 50 employees × 40 km/day × 200 days × 0.15 kg CO_2e/km = **60,000 kg CO_2e (60 tCO_2e)**
- **Coach Bus Commuters:** 70 employees × 40 km/day × 200 days × 0.04 kg CO_2e/km = **22,400 kg CO_2e (22.4 tCO_2e)**
- **Public Transport Bus Commuters:** 80 employees × 40 km/day × 200 days × 0.045 kg CO_2e/km = **28,800 kg CO_2e (28.8 tCO_2e)**

Total Scope 3 Emissions: 104 + 60 + 22.4 + 28.8 = **215.2 tCO_2e**

4. Baseline Year: 2020

Woxsen University began recording emissions in 2020, making this the baseline year for tracking progress.

Total Scope 1 & 2 for Baseline Year (2020):

- **Electricity Consumption:** 630,240 kWh
- **Diesel Consumption:** 10,000 liters

Scope 1 Emissions: 10,000 liters × 2.68 kg CO_2e/liter = 26,800 kg CO_2e (26.8 tCO_2e)

Scope 2 Emissions: 630,240 kWh × 0.716 kg CO_2e/kWh = 451,252 kg CO_2e (451.2 tCO_2e)

Total Scope 1 + 2 Emissions for 2020: 26.8 + 451.2 = **478 tCO_2e**

5. Energy Generated from Renewable Sources (kWh):

Woxsen University has installed solar panels; energy generation calculations depend on the installed capacity and efficiency.

(*Refer to the Power Consumption Report for detailed information.*)

6. Water Consumption (m^3):

- **Total Water Consumption:** 437,640 liters
- **Converted to m^3:** 437,640 liters ÷ 1,000 = **437.64 m^3**

7. Energy Consumption (kWh/year):

- **Total Energy Consumption: 4,076,144 kWh**

(For further details, refer to the relevant reports.)

Emission Report

Period: Jan 2024 to Dec 2024

1. General Formula for Emission Sources

Emissions (tCO_2e) = Activity Data × Emission Factor

- **Activity Data:** The quantity of fuel used, electricity consumed, distance travelled, etc.
- **Emission Factor:** The amount of CO_2e emitted per unit of activity (varies by fuel type, electricity grid mix, etc.).

2. Total Scope 1 and 2 Emissions (tCO_2e)

Scope 1 Emissions:

Direct emissions from sources owned or controlled by the university (e.g., fuel combustion in vehicles, boilers, or generators).

- **Diesel/Petrol Consumption: 36,787 Liters**
- **LPG Gas Consumption: 85,000 kg**

Emission Factors:

- **Diesel: 2.68 kg CO_2e per liter**
- **LPG Gas: 3.00 kg CO_2e per kg**

Calculation:

- **Diesel/Petrol: 36,787 liters × 2.68 kg CO_2e/liter = 98,589 kg CO_2e (98.6 tCO_2e)**
- **LPG Gas: 85,000 kg × 3.00 kg CO_2e/kg = 255,000 kg CO_2e (255.0 tCO_2e)**
- **Total Scope 1 Emissions: 98.6 + 255.0 = 353.6 tCO_2e**

Scope 2 Emissions:

Indirect emissions from purchased electricity, steam, heating, and cooling.

- **Electricity Consumption: 5,478,978 kWh**
- **Emission Factor (Telangana Grid): 0.716 kg CO_2/kWh**

Calculation:

- **5,478,978 kWh × 0.716 kg CO_2e/kWh = 3,923,664 kg CO_2e (3923.6 tCO_2e)**

Total Scope 1 + 2 Emissions:

- **353.6 + 3923.6 = 4,277.2 tCO_2e**

3. Scope 3 Emissions (tCO_2e)

Scope 3 includes indirect emissions from activities such as employee commuting, business travel, waste disposal, and supply chain.

Employee Commuting Data:

- **Employees commuting by Car:** 50
- **Employees commuting by Bike:** 150
- **Employees commuting by Coach Bus:** 100
- **Employees commuting by Public Transportation:** 100
- **Total Day Scholars (Staff):** 400

Emission Factors (kg CO_2e per km)

Vehicle Type	Fuel Type	Emission Factor (kg CO_2e/km)
Medium Motorcycle (150-500cc)	Petrol	0.10
Car (Small/Compact)	Petrol/Diesel	0.15
Coach Bus (30-40 seats)	Diesel	0.04
City Bus (Public Transport) (40-60 seats, high occupancy)	Diesel	0.045

Calculation:

- **Motorcycle Commuters:** 150 employees × 40 km/day × 200 days × 0.10 kg CO_2e/km = **120,000 kg CO_2e (120 tCO_2e)**
- **Car Commuters:** 50 employees × 40 km/day × 200 days × 0.15 kg CO_2e/km = **60,000 kg CO_2e (60 tCO_2e)**
- **Coach Bus Commuters:** 100 employees × 40 km/day × 200 days × 0.04 kg CO_2e/km = **32,000 kg CO_2e (32 tCO_2e)**
- **Public Transport Bus Commuters:** 100 employees × 40 km/day × 200 days × 0.045 kg CO_2e/km = **36,000 kg CO_2e (36 tCO_2e)**

Total Scope 3 Emissions: 120 + 60 + 32 + 36 = **248 tCO_2e**

4. Baseline Year: 2020

Woxsen University began recording emissions in 2020, making this the baseline year for tracking progress.

Total Scope 1 & 2 for Baseline Year (2020):

- **Electricity Consumption:** 630,240 kWh
- **Diesel/Petrol Consumption:** 10,000 liters

Scope 1 Emissions: 10,000 liters × 2.68 kg CO_2e/liter = 26,800 kg CO_2e (26.8 tCO_2e)

Scope 2 Emissions: 630,240 kWh × 0.716 kg CO_2e/kWh = 451,252 kg CO_2e (451.2 tCO_2e)

Total Scope 1 + 2 Emissions for 2020: 26.8 + 451.2 = **478 tCO_2e**

5. Energy Generated from Renewable Sources (kWh):

Woxsen University has installed solar panels; energy generation calculations depend on the installed capacity and efficiency.

(*Refer to the Power Consumption Report for detailed information.*)

6. Water Consumption (m^3/Day):

- **Total Water Consumption:** 549,470 liters
- **Converted to m^3:** 549,470 liters ÷ 1,000 = **549.47 m^3**

7. Energy Consumption (kWh/year):

- **Total Energy Consumption: 5,478,978 kWh**

(For further details, refer to the relevant reports.)