# GREEN AUDIT REPORT 2022-2023 Woxsen University



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# Green Audit Assessment Team

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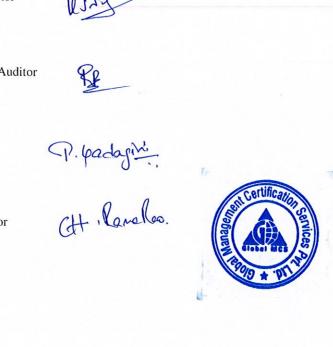
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#### **INTRODUCTION:**

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyse 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 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 imperative 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 for sustainable development and at the same time reduce a sizable amount of atmospheric CO<sub>2</sub> 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 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 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 faunal 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 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 WoxsenUniversity.

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 in 2023. 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 1 l0+ 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, centres of excellence and many more.

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

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 100% 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 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.

#### **GREEN AUDITING:**

The University has adopted the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce  $CO_2$  emission, energy and water use, while creating atmosphere where students can learn and be healthy.

## LAND USE ANALYSIS, WOXSEN University (As on 22.10.2022):

## 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°38'51.7"N 77°47'55.3"E), Geo-coding and Geo referencing of satellite imageries by extracting the ground control points. Supervised classification was carried 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, attempt has been made in this study to map land use for WOXSEN University with a view to detect 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 the proximity to the important cities of the region i.e. Karnataka,, Telangana, Maharastra.



Photo 1: Map of University Campus

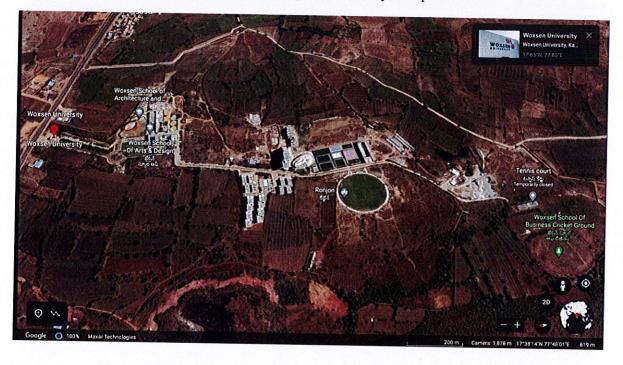
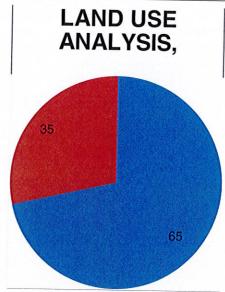


Photo 2: Aerial View of University Campus Part 2 (Source Google Earth)

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 m out of which the built up area (include Roads) is 24% (i.e 146416 m) and plantation area is 10.39% (i.e. 63077.35 m).

## LAND USE (BUILT UP AREA) ANALYSIS:

The built up area of 24% (i.e 146416 m) 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<br>No | Room type (mention Class room / Lab/Toilet, etc.) | Carpet<br>Area in<br>Sqm | Completion of Flooring | Completion of<br>Walls and<br>Painting | Completion of Electrification and Lighting |
|------|------------|---|--------------------------|------------------------|--|--|
|      |            | INS   | TRUCTION                 | NAREA                  |  | 0 8  |
| 1    | 1008       | Laboratory  | 66                       | Completed              | Completed                              | Completed                                  |
| 2    | 1101       | 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    | 1107       | Laboratory  | 66                       | Completed              | Completed                              | Completed                                  |
| 7    | 1108       | Laboratory  | 66                       | Completed              | Completed                              | Completed                                  |
| 8    | 1111       | 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                                  |
| 2.5  | 2007       | Laboratory  | 74                       | Completed              | Completed                              | Completed                                  |
| 6    | 2008       | Research Laboratory                               | 225                      | Completed              | Completed                              | Completed                                  |
| 7    | 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 | 1         |
| 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 |
| 37 | 2203 | Classroom           | 74  | Completed | Completed | Completed |
| 38 | 2205 | Laboratory          | 74  |           | Completed | Completed |
| 39 | 2206 | Laboratory          | 135 | Completed | Completed | Completed |
| 40 | 2207 | Classroom           |     | Completed | Completed | Completed |
| 41 | 2208 | Seminar Hall        | 74  | Completed | Completed | Completed |
| 42 | 2209 |                     | 232 | Completed | Completed | Completed |
| 43 |      | Additional Workshop | 200 | Completed | Completed | Completed |
|    | 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 | 3307/1 | Laboratory          | 72     | Completed | Completed | Completed |
| 181 | 3307/2 | Laboratory          | 71.2   | Completed | Completed | Completed |
| 182 | 7102/1 | Tutorial Rooms – PG | 33     | Completed | Completed | Completed |
| 183 | 7102/2 | Tutorial Rooms – PG | 33     | Completed | Completed | Completed |
| 184 | 7107/1 | 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 | 8313/1 | 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    |           |           | •         |
|     |        | ADM                    | IINISTRATIV | E 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 |
|     |        |                        |             | a         |           |           |
| 1   | 2012/1 | Director's Room        | 46          | Completed | Completed | Completed |

| 13 | 2110   |                                 | 102 22 | 0 1 1     | - Harris Harris Carlo Ca |                     |
|----|--------|---------------------------------|--------|-----------|--|---------------------|
| 1  | 2305   | Troom                           | 102.22 | Completed | Completed  | Completed           |
| 15 |        | ,                               | 190    | Completed | Completed  | Completed           |
| 16 |        | - see any recom                 | 102    | Completed | Completed  | Completed           |
|    |        | Faculty Room                    | 35     | Completed | Completed  | Completed           |
| 17 | 3006/1 |                                 | 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<br>(CONFRENCE/DTP/HOD) | 98     | Completed | Completed  | Completed           |
| 35 | 8103   | Faculty Room                    | 15     | Completed | Completed  | Completed           |
| 36 | 8105   | 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  |                     |
| 42 | 8106   | Faculty Room                    | 15     | Completed | Completed  | Completed           |
| 43 | 8107   | Faculty Room                    | 15     | Completed | Completed  | Completed Completed |

| 44 | 8208   | Faculty Room           | 15         | Completed           | Completed | Complete  |
|----|--------|------------------------|------------|---------------------|-----------|-----------|
| 45 | 8311   | Faculty Room           | 15         | Completed           | Frence    | Complete  |
| 46 | 8312   | Faculty Room           | 15         | Completed           | 1         | Complete  |
| 47 | 9001   | HOD & Dept. Office.    | 36         | Completed           | Completed |           |
| 48 | 9002   | Board Room             | 41.39      | Completed           | Completed | Complete  |
| 49 | 9006   | Faculty Room           | 36         | Completed           | Completed | Complete  |
| 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 | 9110   | Faculty Room           | 35         | 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    | Completed           | Completed | Completed |
|    |        | Al                     | MENITIES A | AREA                |           |           |
| 1  | 1007   | Gents Toilet           | 35         | Completed           | Completed |           |
| 2  | 1103   | Ladies Toilet          | 35         | Completed           | Completed | Completed |
| 3  | 1109   | Store Room             | 48.7       | 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 |
| 8  | 2304   | GENTS TOILET           | 20         | Completed Completed | Completed | Completed |
| 9  | 2310   | LADIES TOILET          | 15         | -                   | Completed | Completed |
| 10 | 2313/2 | FACULTY ROOM TOILET    | 10         | Completed           | Completed | Completed |
| 11 | 2001/2 | Dean's Room toilet     | 10         | Completed           | Completed | Completed |
| 2  | 2004   | Toilet (Male)          |            | Completed           | Completed | Completed |
| 3  | 2010   | Toilet (Female)        | 15         | Completed           | Completed | Completed |
| 4  |        | Director's Room toilet | 25         | Completed           | Completed | Completed |
| 5  |        | Toilet (Male)          | 10         | Completed           | Completed | Completed |
| 6  |        |                        | 34.7       | Completed           | Completed | Completed |
|    | 2111   | Toilet (Female)        | 34.5       | Completed           | Completed | Completed |

| 17 | 2204   | Toilet (Male)           | 34.5   | Completed | Completed | Complete  |
|----|--------|-------------------------|--------|-----------|-----------|-----------|
| 18 | 3001   | Gents toilet            | 42     | Completed | Completed | Complete  |
| 19 | 3005/1 | Faculty Room Toilet     | 14     | Completed | Completed | Complete  |
| 20 | 3101   | Ladies Toilet           | 42     | Completed | Completed | Complete  |
| 21 | 3201   | Gents Toilet            | 42     | Completed | Completed | Complete  |
| 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 |           |
| 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 |
| 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   | Sationary 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 |
| 40 | 7203   | Gent's Toilet           | 25     | Completed | Completed | Completed |
| 41 | 7303   | Ladies Toilet           | 25     | Completed | Completed | Completed |
| 42 |        | Store Room              | 12.2   | Completed | Completed | Completed |
| 43 |        | GENTS TOILETS           |        | Completed | Completed | Completed |
| 14 |        | LADIES TOILETS          | 45     | Completed | Completed | Completed |
| 15 |        | GENTS TOILETS           | 45     | Completed | Completed | Completed |
| 6  |        | LADIES TOILETS          | 45     | Completed | Completed | Completed |
| 7  |        | Girls Common Room       | 20     | Completed | Completed | Completed |
| 8  |        |                         | 102    | Completed | Completed | Completed |
|    | 3013 I | LADIES TOILET           | 66     | Completed | Completed | Completed |

|       |  | Total                                | 2332    | Completed   | Completed    | Completed |  |
|-------|--|--------------------------------------|---------|-------------|--------------|-----------|--|
| 9     | The Court and Part of the Court | Library&Reading Room                 | 144     | Completed   | Completed    | Completed |  |
| 8     | 8006   | Language Laboratory                  | 74      | Completed   | Completed    | Completed |  |
| 7     | 8008   | Language Laboratory                  | 74      | Completed   | Completed    | Completed |  |
| 6     | 8007   | Language Laboratory                  | 96      | Completed   | Completed    | Completed |  |
| 5     | 8406   | Language Laboratory                  | 135     | Completed   | Completed    | Completed |  |
| 4     | 5104   | Computer Centre                      | 320     | Completed   | Completed    | Completed |  |
| 3     | 5202   | Computer Centre                      | 134     | Completed   | Completed    | Completed |  |
| 2     | 5105   | Library&Reading Room Computer Centre | 1205    | Completed   | Completed    | Completed |  |
| 1     | 5201   | INSTRUCTION                          |         | IMON FACILI | TIES         |           |  |
|       |  |                                      | 3544.54 |             |              |           |  |
| 15050 | 12003  | Total                                | 18      | Completed   | Completed    | Completed |  |
| 66    | 12004  | Toilet                               | 18      | Completed   | Completed    | Completed |  |
| 65    | 12004  | Auditorium Toilet                    | 644.05  | Completed   | Completed    | Completed |  |
| 64    | 9302   |                                      | 20      | Completed   | Completed    | Completed |  |
| 63    | 9306   | Student activity / GCR Toilet        | 45      | Completed   | Completed    | Completed |  |
| 62    | 9305   |                                      | 20      | Completed   | Completed    | Completed |  |
| 61    | 9304   | Student activity / GCR Toilet        | 45      | Completed   | Completed    | Completed |  |
| 60    | 9303   | Boys Common Room                     | 195     | Completed   | Completed    | Completed |  |
| 59    | 9301   | Boys Toilet                          | 30      | Completed   | Completed    | Completed |  |
| 58    | 9106   | - Tonet                              | 35      | Completed   | Completed    | Complete  |  |
| 57    | 9307   | Stadent delivity / GCR               | 38      | Completed   |              | Complete  |  |
| 55    |  | - Tonet                              | 30      | Completed   |              | Complete  |  |
| 54    | -  | _uares rollet                        | 30      | Complete    | -            | Complete  |  |
| 53    | 7007   |                                      | 23.25   | Complete    | •            | Complete  |  |
| 52    |  | - State Stores                       | 33.75   | Complete    |              | Complete  |  |
| 5     |  | TOM HOUSE                            | 144.6   | Complete    |              | Complete  |  |
| 5     | 021  | - ID IES TOILET                      | 66      | Complete    | -            | Complet   |  |
| 4     | 011  | SERVIS TOILET                        | 70      | Complete    | ed Completed | Complet   |  |

Consolidated Area Statement for Existing & Proposed Courses

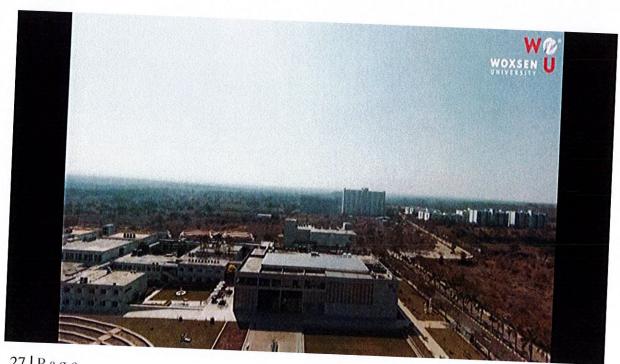
| Total Area                         | 41620 Sqm    |
|------------------------------------|--------------|
|                                    | 14509.21 Sqm |
| Circulation Area                   | 2332 Sqm     |
| Instruction Area Common Facilities |              |
| Amenities Area              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

## 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.

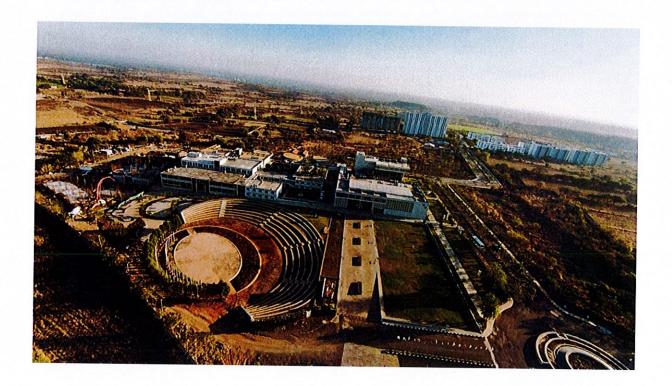
# TREE DIVERSITY OF WOXSEN University, Telangana:

WOXSEN University is within the geo-position between latitude 17°38'51.7"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 organised 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 spices 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 colours. 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 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 found to be bringing down noise and cut 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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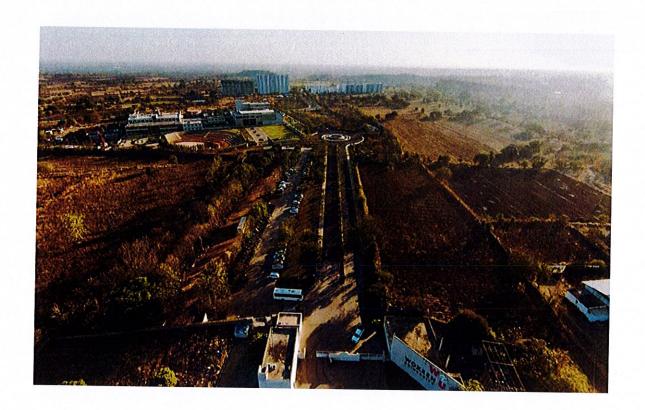






Table: List of tree species of WOXSEN University, Telangana

| S.N<br>o. | Botanical Name             | Family          | Common Name         | To t al |  |
|-----------|----------------------------|-----------------|---------------------|---------|--|
| 1         | Mangifera indica           | Anacardiace a e | Mango               |         |  |
| 2         | Alstonia Scholaris         | Apocynaceae     | Alstonia            | 167     |  |
| 3         | Tabernaemontana divaricata | 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 / 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         |         |  |
| 19        | Chukrasia velutina         | Meliaceae       | Chukrasia tabularis | 123     |  |
| 20        | Azadirachta indica         | Meliaceae       | Neem                | 27      |  |
| 21        | Melia azedarach            | Meliaceae       | umbrella tree       | 21      |  |
| 22        | Toona ciliata              | 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 elastica         | 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<br>aromaticum | Myrtaceae          | Clove                        | 3  |
| 32 | Pongamia Pinata        | Papilionaceae      | Indian Beech tree            | 11 |
| 33 | Phyllanthus emblica    | Phyllanthacea<br>e |                              | 19 |
| 34 | Bambusoideae           | Poaceae            | Bamboo                       | 2  |
| 35 | Grevillea robusta      | Proteaceae         | Silver Oak                   | 58 |
| 36 | Ziziphus mauritiana    | Rhamnaceae         | Ber                          | 10 |
| 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                    | 1  |
| 46 | Populus                | salicaceae         | Poplar                       | 35 |
| 47 | Litchi chinensis       | Sapindaceae        | Litchi                       | 11 |
| 18 | Mimusops elengi        | Sapotaceae         | Maulsari                     | 30 |
| 19 | Madhuca longifolia     | Sapotaceae         | Mahua/ Indian Butter<br>Tree | 14 |
| 50 | Manilkara zapota       | Sapotaceae         | Chiku/Sapodilla              | 11 |
| 51 | Vitis Vinifera         | Vitaceae           | Kismish/Raisins              | 29 |

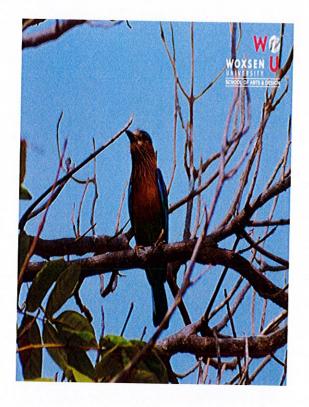
|    | Ficus benjamina          | Fig family            | Faux            | 42  |
|----|--------------------------|-----------------------|-----------------|-----|
| 53 | Bugal Bael               |                       | Bugal Bael      | 49  |
| 54 | Dakein                   |                       | 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<br>Flower | Badelia Kandia Flower |                 | 10  |
| 60 | Momesia                  | .,                    | Momesia         |     |
| 61 | Rakh Manjan              |                       | Rakh Manjan     | 9   |
| 62 | Red Faux                 |                       | Red Faux        |     |
| 63 | Mimusops                 | Sapotaceae            | Sari            | 7   |
| 64 | Flower Faux              |                       | Flower Faux     | 6   |
| 65 | Needi                    |                       | Needi           | 6   |
| 66 | Ajmohar                  |                       | Ajmohar         | 5   |
| 57 | Green Fax                |                       | Green Fax       | 3   |
| 58 | Faux (White)             |                       | Faux (White)    | 2   |
| 59 | Gul Lakkar               |                       | Gul Lakkar      | 1   |
| 0  | Tarbeni                  |                       | Tarbeni         | 1   |
|    |                          | Total                 |                 | 238 |

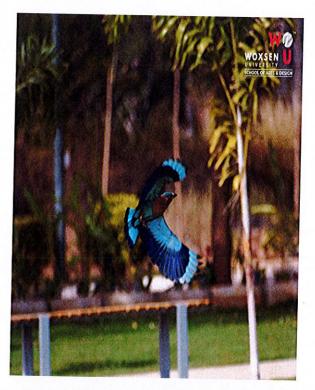
## FAUNAL DIVERSITY IN WOXSEN University CAMPUS:

WOXSEN University is located in District of Sangareddy Indian State of TS. The highest temperature is recorded 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, on 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 faunal 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 Sparrow     | Passer Domesticus             |
| 4.   | House Crow        | Corvus Splendens              |
| 5.   | Cuckoo            | Cuculidae                     |
| 6.   | Sna<br>ke         | Naja Naja                     |
| 7.   | Yellow Wasp       | Ropalidia Marginata           |
| 8.   | Butter Fly        | Danaus Genutia                |
| 9.   | Common Woodshrike | Tephrodornis<br>Pondicerianus |
| 10.  | Pied Myna         | Gracupica Contra              |
| 11.  | Red-Vented Bulbul | Pycnonotus Cafer              |
| 12.  | Skylark           | Aluda Gulgula                 |
| 13.  | Garden Tiger Moth | Arctia Caja                   |
| 4.   | Little Owl        | Athene Brama                  |
| 15.  | Oleander Moth     | Syntomeida Epilais            |
| 16.  | Slender Skimmer   | Orthetrum Sabina              |







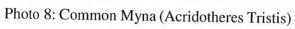




Photo 9: House Sparrow (Passer Domesticus)



Photo 11: House Crow (Corvus Splendens)



Photo 13: Snake (Naja Naja)



Photo 12: Cuckoo (Cuculidae)



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)

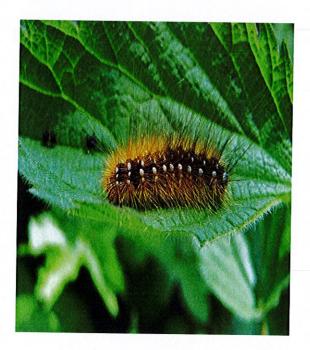


Photo 21: Garden Tiger Moth (Arctia Caja)



Photo 22: Little Owl (Athene Brama)



Photo 23: Oleander Moth (Syntomeida Epilais)



Photo 24: Slender Skimmer (Orthetrum Sabina)

## WEATHER DATA OF WOXSEN University: Station: WOXSEN University

(INDIA Location:17°38'51.7"N 77°47'55.3"E

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

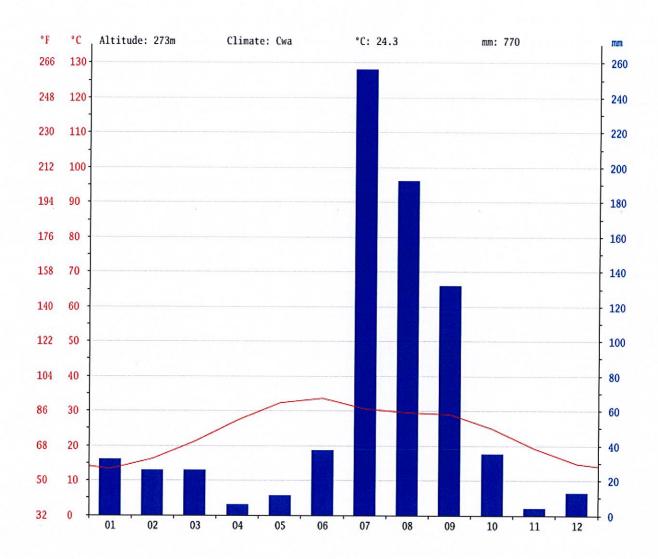
#### WEATHER DATA MONTH WISE WOXSEN University

| Temperature\Mon<br>th                    | Janua<br>ry | Februa<br>ry | Mar<br>ch | Apri<br>l | May  | Jun<br>e  | July | Augu<br>st | Septemb<br>er | Octob | Novemb<br>er | Decemb |
|--|-------------|--------------|-----------|-----------|------|-----------|------|------------|---------------|-------|--------------|--------|
| Avg. Temp. (°C)                          | 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 (°C)                           | 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 (°C)                           | 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. | 104.<br>7 | 95.2 | 92.5       | 94.1          | 90.9  | 82.8         | 73.0   |
| Precipitati<br>o n /<br>Rainfall<br>(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 are 17°38'51.7"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 much 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. The winter is prevalent from the month of November till the month of March. There is 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 AND 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 SO<sub>2</sub> & NO<sub>X</sub> parameters are within the range of Indian living standards, there are a number of factors responsible for this cleanliness, calmness and serenity in this area. Firstly, 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 the air pollution for the improvement of ambient air quality with respect to AQI is concerned. However, the annual average value of PM10, SO2, NOx in the ambient air quality of WOXSEN University falls in the range of 50-62  $\mu$ g/m3, 3-5  $\mu$ g/m3, 10-12  $\mu$ g/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 7<sup>th</sup> September 2022

| Parameter           | Result (Range)               |  |  |
|---------------------|------------------------------|--|--|
| NO <sub>2</sub>     | 25.4 μg/m³, AQI 26 Very Good |  |  |
| NO                  | 10.09 μg/m³, AQI 10 Good     |  |  |
| O <sub>3</sub>      | 31.49 μg/m³, AQI 31 Good     |  |  |
| PM <sub>2.5</sub>   | 28.13 μg/m³, AQI 28 Good     |  |  |
| PM <sub>10</sub>    | 77.2 μg/m³, AQI 79 Satisfact |  |  |
| СО                  | 35.0 μg/m³, AQI 18           |  |  |
| Humidity            | 56.0 %                       |  |  |
| Barometric Pressure | 1013 millibar or hPa         |  |  |
| Wind Speed          | 10-15 m/s                    |  |  |
| Wind Direction      | 28.0013 degrees              |  |  |
| Sun Rise            | 06:28 AM                     |  |  |
| Sun Set             | 05:56 PM                     |  |  |
| Moonrise            | 07:05 PM                     |  |  |
| Moonset             | 07:31 AM                     |  |  |

## WATER ANALYSIS REPORT OF WOXSEN University:

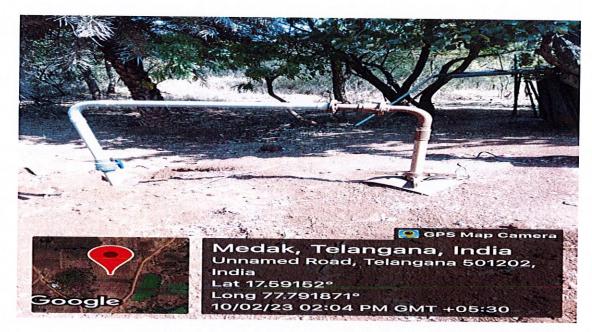
Water quality testing is important because it identifies contaminants and prevents water- borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease.

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



Bore Well - 1



Bore Well - 2





Over Head Tank





R.O Unit

# 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 sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about 10 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 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 tolerate. Loudness is also expressed in sones. One sone equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibration 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

The highest dB:61 dB

The average dB:52 dB

The lowest dB:27 dB

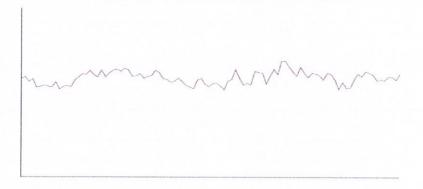


Figure: Noise Measurement by Noise Test Pro App

### **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.

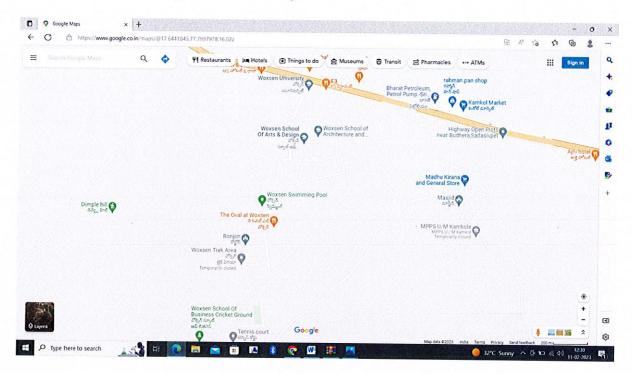


Photo 2: Aerial View of University Campus Part 2 (Source Google Earth)

#### 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 day time (6 AM- 6 PM) and noted down the measurements. Screen shots of the measurements of noise 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<br>(Duration in Sec.) | MINIMUM<br>(dBA) | Maximum<br>(dBA) | AVERAGE<br>(dBA) |  |
|----------------|------------------------------------|------------------|------------------|------------------|--|
| SOT            | 60                                 | 53               | 81               | 76               |  |
| SOB            | 60                                 | 50               | 68               | 56               |  |
| SOAP           | 60                                 | 59               | 74               | 70               |  |
| SOAD           | 60                                 | 74 90            |                  |                  |  |
| Library        | 60                                 |                  |                  | 85               |  |
| SOL            | 60                                 | 57               | 85               | 65               |  |
| Labs           | 60                                 | 45               | 84               | 78               |  |
| SOH            | 60                                 |                  | 89               | 72               |  |
| SOS            | 60                                 | 50               | 81               | 73               |  |
| VC Office      |                                    | 66               | 85               | 76               |  |
|                | 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               |                  |  |
| Generator Room | 60                                 | 53               | 89               | 68               |  |
| Gymnasium      | 60                                 | 68               |                  | 75               |  |
| Faculty Flats  | 60                                 |                  | 82               | 76               |  |
| Staff Flats    |                                    | 35               | 80               | 69               |  |
| ruii i iais    | 60                                 | 49               | 71               | 65               |  |

| Guest House           | 60   | 50       |      |      |
|-----------------------|------|----------|------|------|
| University F          | - 00 | 50       | 77   | 67   |
| University Front Gate | 60   | 50.<br>7 | 78.0 | 71.0 |
| University Back Gate  | 60   | 54       | 75.9 |      |
| Boys Hostel           | 60   |          | 73.9 | 73.5 |
| Girls Hostel          |      | 54       | 68   | 62   |
|                       | 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:

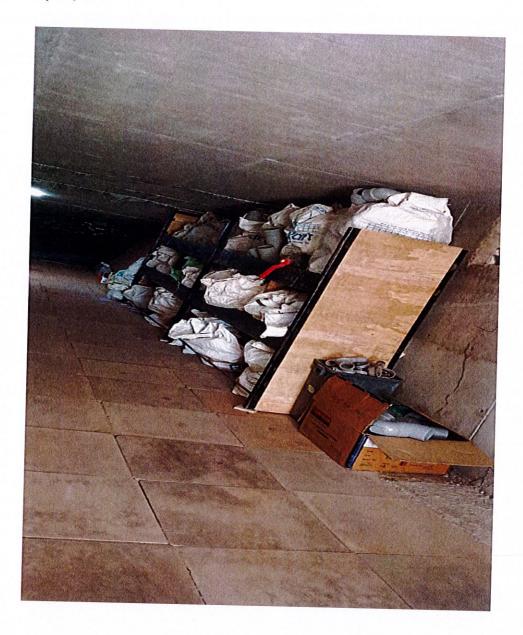
Inside the Campus: 35-90 dBA, Outside the Campus: 54-93 dBA

## 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.

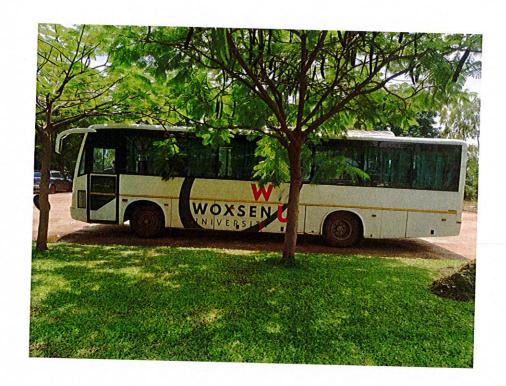


Store room.

## TRANSPORTATION AT WOXSEN University:

Being a largest residential campus in the region, WOXSEN University minimizes the transportation of the students & staff. It has single bus which is used for outdoor transportation. The University is dedicated to provide its students and staff 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 approximate 20% less carbon monoxide, 10% as much hydrocarbons, and 75% as much nitrogen oxides per passenger mile as an automobile with a single occupant (Source: Wikipedia).

## University Bus Picture:



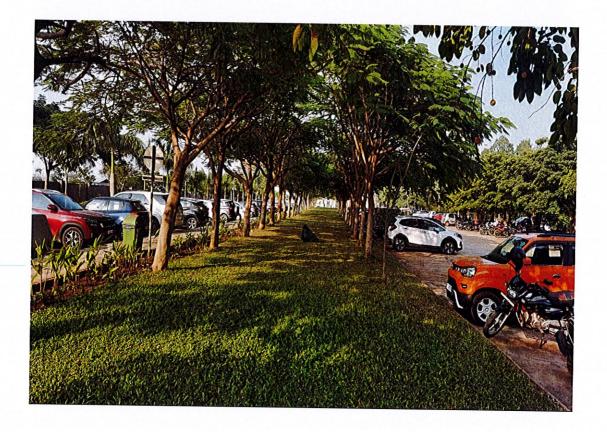














## **ELECTRICAL POWER CONSUMPTION AT WOXSEN University:**

WOXSEN University, being one of the largest Universitys 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 in order 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 off setting the institute's daytime peak electricity demand from the grid. In phase 1, 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 1; 450000 in phase 2; 1500000 in phase 3

Total annual power requirement (in KWH)

Response: 2700000 approx.





| Power  | Total Power             | Renewable        | Renewable                       | Energy                  |
|--|-------------------------|------------------|---------------------------------|-------------------------|
| Requirements met by renewable energy sources | Requiremen<br>ts        | energy<br>Source | energy<br>generated and<br>used | supplied to<br>the grid |
| 200000 KWH/year                              | 2700000<br>KWH/<br>Year | Sol<br>ar        | 200000<br>KWH/<br>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 %                                  |   |  |

## EXPENDITURE ON GREEN INITIATIVES DURING THE LAST TWO YEARS:

| Financi<br>al<br>Year | Tree plantati on (Amoun t in Rs) | Gardening &<br>lawn Work<br>(Tractor<br>Running &<br>Maintenanc<br>e) | Sewerag e<br>Treatme<br>nt Plant | Purcha se<br>of LED's | Total<br>(In<br>Rupee<br>s) |
|-----------------------|----------------------------------|---|----------------------------------|-----------------------|-----------------------------|
| 2022 – 2023           | 1400000                          | 2000000/-   | 17500000/-                       | 1500000/              | 2140000<br>0/-              |
| 2021 – 2022           | 1200000/-                        | 1800000/-   | 750000/-                         | 1250000/-             | 5000000                     |