ENVIRONMENTAL AUDIT REPORT

Sri Siddhartha Academy Of Higher Education

Agalakote, B.H. Road, Tumkur - 572 107

Audited by

Er. Ramesh Kumar B N

Chief Environmental officer (R)

Karnataka State Pollution Control Board

Chairman

Prakruthi Institute of Environmental Studies

2nd Floor, No.93, 7th Cross, Lower Palace Orchards, Bengaluru – 560003

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EXECUTIVE SUMMARY

Sustainability is not only spoken in various levels but also practiced by industries, organizations and educational institutes to optimize their resource utilization and make them environment friendly. Hence sustainability is the need of the hour for our country to provide our future generation a clean and safe environment. Educational institutions must play an active role in creating and modeling solution for such environmental problems. Green audit is one such concept or principle introduced to make the educational institutes environmentally sustainable. Through green audit one gets a direction as how to improve the condition of environment within the system. Green audit can be a useful tool for a college to determine how and where they are consuming more of energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volumeof waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the implementation of mitigation measures is a win-win situation for the college, the learners and the planet. It can also create health consciousness and promote environmental awareness, values and ethics. Itprovides staff and students better understanding of green impact on campus. Green auditing promotes financial savings through reduction of resource use. It gives an opportunity for the development of ownership, personal and social responsibility to the students and teachers.

In **Sri Siddhartha Academy of Higher Education**, the audit process involved initial interviews with management to clarify policies, activities, records and the co-operation of staff and student in the implementation of mitigation measures. This was followed by staff and student interviews, collection of data through the questionnaire, review of records, observation of practices and observable outcomes. In addition, the approach ensured that the management and staff are active

participants in the green auditing process in the college.

The baseline data prepared for the **Sri Siddhartha Academy of Higher Education** will be a useful tool for campus greening, resource management, planning of future projects, and a document for implementation of sustainable development of the institution. Existing data will allow the college to compare its programs and operations with those of peer institutions, identify areas in need of improvement, and prioritize the implementation of future projects. We expect that the management will be committed to implement the green audit recommendations.

CHAPTER 1. INTRODUCTION

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. 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 college 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.

1.1 OBJECTIVES OF GREEN AUDIT

The Green Audit of an institution is becoming a paramount important these days for self-assessment of the institution, which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep the environment clean since its inception. But the auditing of this non-scholastic effort of the college has not been documented. 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 aim objectives of this green audit are to assess the environmental quality and the management strategies being implemented in **Sri Siddhartha Academy of Higher Education**

The specific objectives are:

1. To assess the source and quantity and of the water in the **Sri Siddhartha Academy of Higher Education**
2. To know and monitor the energy consumption pattern in the campus.
3. To quantify the liquid and solid waste generation and management plans in the campus.
4. To assess the carbon foot print of the Campus
5. To impart environment management plans to the campus and college

1.2 BENEFITS OF GREEN AUDIT TO AN EDUCATIONAL INSTITUTE:

1. There are many advantages of green audit to an Educational Institute:
2. It would help to protect the environment in and around the campus.
3. Recognize the cost saving methods through waste minimization and energy conservation.
4. Find out the prevailing and forthcoming complications.
5. Empower the organization to frame a better environmental performance.
6. It portrays good image of institution through its clean and green campus.

1.3 NAAC CRITERIA VII ENVIRONMENTAL CONSCIOUSNESS:

Sri Siddhartha Academy of Higher Education (declared as Deemed to be University under Section 3 of the UGC Act, 1956)Tumakuru, was established vide MHRD GOI No. F.9-31/2006-U.3 (A) dated: 30/05/2008 of Govt. of India. Sri Siddhartha Medical College and Sri Siddhartha Dental College have been functioning as constituent colleges of Sri Siddhartha Academy of Higher Education since 01/06/2008.Further as per Govt. of India notification vide No. F.9-31/2006-U.3(A) Dtd. 16/12/2008, the UGC in exercise of the powers conferred by Section 3 of the UGC Act, 1956, included

Sri Siddhartha Institute of Technology, Maraluru, Tumakuru, as an off-campus constituent teaching unit of Sri Siddhartha Academy of Higher Education, Tumakuru with effect from 06/03/2009.

Universities are playing a key role in development of human resources worldwide. Higher education institutes campus run various activities with aim to percolate the knowledge along with practical dimension among the society. Likewise different technological problems higher education institutes also try to give solution for issues related to environment. Different types of evolutionary methods are used to assess the problem concerning environment. It includes Environmental Impact Assessment (EIA), Social Impact Assessment (SIA), Carbon Footprint Mapping, Green audit etc.

National Assessment and Accreditation Council (NAAC) which is a self-governing organization that declares the institutions as Grade according to the scores assigned at the time of accreditation of the institution. Green Audit has become mandatory procedure for educational institutes under Criterion VII of NAAC. The intention of green audit is to upgrade the environmental condition inside and around the institution. It is performed by considering environmental parameters like water and wastewater accounting, energy conservation, waste management, air, noise monitoring etc. for making the institutions more eco-friendly.

Students are the major strength of any academic institution. Practicing green actions in any educational institution will inculcate the good habit of caring natural resources in students. Many environmental activities like Plantation and Nurturing saplings and trees, Cleanliness drives, Bird watching camps, No vehicle day, Rain water harvesting, etc. will make the students good citizen of the country. Through Green Audit, higher educational institutions can ensure that they contribute towards the reduction of Global warming through Carbon Footprint reduction measures.

राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission

Certificate of Accreditation

The Executive Committee of the
National Assessment and Accreditation Council
on the recommendation of the duly appointed
Peer Team is pleased to declare the
Sri Siddhartha Academy of Higher Education
(Deemed to be University u/s 3 of the UGC Act, 1956)
Agalakote, Dist. Tumkur, Karnataka as
Accredited
with CGPA of 3.01 on four point scale
at A grade
valid up to November 15, 2020

This is subject to the result of the WP No. 142 of 2006 of the Hon'ble Supreme Court of India

Date : November 16, 2015

Director

EC/71/A&A/10.1

CHAPTER 2. Sri Siddhartha Academy Of Higher Education

2.1 ABOUT SRI SIDDHARTHA ACADEMY OF HIGHER EDUCATION

Sri Siddhartha Academy of Higher Education, (declared as Deemed to be University under Section 3 of the UGC Act, 1956) Tumakuru, was established vide MHRD GOI No. F.9-31/2006-U.3 (A) dated: 30/05/2008 of Govt. of India. Sri Siddhartha Medical College and Sri Siddhartha Dental College have been functioning as constituent colleges of Sri Siddhartha Academy of Higher Education since 01/06/2008.

Further, as per Govt. of India notification vide No. F.9-31/2006-U.3(A) Dtd. 16/12/2008, the UGC in exercise of the powers conferred by Section 3 of the UGC Act, 1956, included Sri Siddhartha Institute of Technology (SSIT), Maraluru, Tumakuru, as an off-campus constituent teaching unit of Sri Siddhartha Academy of Higher Education, Tumakuru with effect from 06/03/2009.

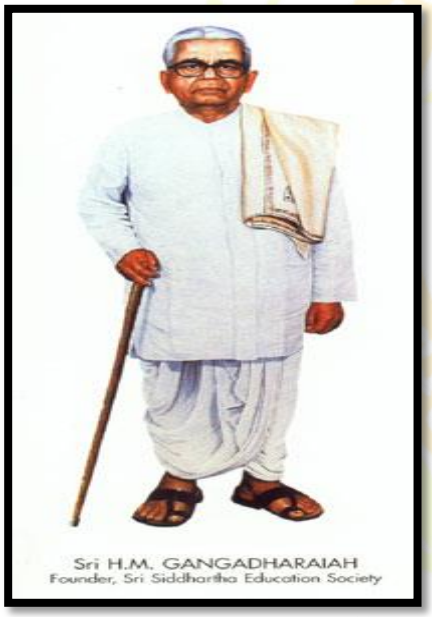
Sri Siddhartha Academy of Higher Education (SSAHE) is a collegiate private 'Deemed to be University' in Karnataka, India. It was established on 30-5-2008 as per Section 3 of UGC Act 1956to improve the quality of technical education in southern Karnataka. The university is named after Sri Siddhartha (Gautama Buddha). It is in Agalakote, Tumakuru.

SSAHE has three colleges affiliated to it with an intake capacity of over 790 undergraduate students and 180 postgraduate students. The SSIT Campus, Tumakuru campus of SSAHE, offers BE,M.Tech, MCA and Ph. D programs. The university encompasses technical fields which offers 09 undergraduate and 10 postgraduate courses. There are more than 100 Ph.D candidates.

Sri Siddhartha Institute of Technology had a TEQIP Center and is affiliated to SSAHE and is offering post graduate courses. It has many departments recognized as research centers which are spread across its affiliated institutions in Tumakuru,

Karnataka. One of its affiliated college, Sri Siddhartha Institute of Technology, is recognized by the World Bank for getting assistance in setting up State-of-the-Art Laboratories, campus facilities, and research centers under the TEQIP (Technical Education Quality Improvement Programme (Phase I & II), a Government of India initiative). The university has signed MoUs with multinational corporations to improve the industry interactions for students and the teachers. SSAHE is a member of the Association of Indian Universities.

2.2 SPONSORING SOCIETY / FOUNDERS



SRI SIDDHARTHA EDUCATION SOCIETY (SSES) was founded by ShikshanaBhishma late. Sri. H. M Gangadharaiah also the Founder Secretary of the society, with the blessings of saint and seer, the father of "Bhoodan movement" Sri. VinobhaBhave in 1959, has made a leap in the field of education. The Society which started as a residential school in a village near Tumkur then established several Nursery, Primary and High Schools including Pali schools in the later years. It further expanded its domain to Technical, Medical and Dental Education. Today the total number of institutions run by the Society crosses 85 with a total students strength of more than 16000 and staff strength 1800. The main objective of the society is to "REACH THE

UNREACHED" in the field of Education.

Sri Siddhartha Education society has grown to be the hub of higher education with excellent teaching facilities and highly qualified and experienced teaching faculty. With diversified professional courses, the range of subjects is wide and giving a good choice to the students seeking admission here. It also provides health care facilities in the rural region of Karnataka comprising the Tumkur, Chitradurga districts and the rural area of Northwest Bangalore Rural and Urban Districts.

Leadership always plays a vital role in this process and was carefully nurtured. The Society is fortunate enough to have two illustrious sons of the founder who are equally zealous and committed to the founder's goals. Late.Dr. G. Shivaprasad, an eminent Ophthalmologist, the Founder Chancellor of SSAHE and Dr.G.Parameshwara a reputed Agriculture Scientist, is the Hon'ble Chancellor of Sri Siddhartha Academy of Higher Education.

Late. Dr. G Shivaprasad, eminent ophthalmologist, the Founder Chancellor of Sri Siddhartha Academy of Higher Education, He shouldered the responsibility to steer all the institutions of the society along the lines envisaged by his father. He was an authority on Buddha and his philosophy, excellent orator and a great teacher, also the Director of Sri Siddhartha Medical College (SSMC); one of the well-known medical colleges in Karnataka. SSES have shown remarkable growth and progress under the stewardship of Dr. G. Shivaprasad who carrying forwarded the noble traditions of his illustrious father H.M. Gangadharaiah. Having obtained MBBS and MS from BMC and Minto Ophthalmic Hospital, he had a brief spell of Govt. service at district hospital Tumkur and Chitradurga.

He worked as a teaching faculty in Dept. of Ophthalmology, SSMC. Steeped up in spirituality and noble traditions of Buddhist Philosophy, Dr. G. Shivaprasad had a vision and mission to give not only sight for the blind but also insight and foresight of knowledge and wisdom to students and society at large. Spirit of sacrifice and service

has been his creed. He had actively participated in many blindness relief eye camps.

He has also actively involved in the programs of IMA Tumkur, to provide medico social relief to rural poor. Dissertation Work :Occular, Manifestation of Leprosy. Positions held : Secretary, SSES. Director, SSMC Prof. & HOD, SSMC. Awards and Accolades Rajiv Gandhi National Award in the year 1995. Memberships: Member, All India Opthalmic Society. Member, Opthalmic Society, Karnataka. Served as a Senate Member at Bangalore University. Publications of Books: Preaching of BUDDHA. Paper Presented: National Opthalmic Conference, Chennai. Besides, he has held many other important positions of prominent committees and Associations in various capacities.

Dr. G. Parameshwara M.Sc.(Agri), Ph.D(Australia)

Chancellor, SSAHE

Dr. Parameshwara, born on 6th August 1951, Father ShikshanaBhishma Late Sri.H.M. Gangadharaiah, Ex-MLC and Late Smt. Gangamalamma. He did his B.Sc (Agri) Graduation on 1975 and Post GraduationM.Sc (Agri) on 1978 at University of Agricultural Sciences (UAS) Bangalore, Karnataka and obtained Doctor of Philosophy from Waite Agricultural Research Institute, University of Adelaide, Australia on 1984.

As an educationist Dr.GParameshwara overseas the Deemed University of Medical, Dental and Engineering College and many Schools which are part and parcel of Siddhartha Group of Institutions in Tumakuru, that has provided affordable, quality education to lakhs of Poor, rural students. Member, Australian Society of Plant Physiology, Member, Indian Society of Plant Physiology, Member, Indian Society of Agricultural Sciences. Dr. G. Parameshwara is a highly educated agricultural scientist with Ph.D from Australia. An all-rounder, he was an active sportsman. He has also won many scholarships during his studies.

Dr. G. Parameshwara hails from a family committed to Gandhian ideals. When Late

Prime Minister Sri. Rajiv Gandhi Visited Tumkur, he found immense potential in Dr.G. Parameshwara and brought him into active politics. He was first appointed as the Joint Secretary of the KPCC.Smt. Sonia Gandhi recognized Dr.Parameshwara's capabilities and appointed him as prestigious Special Invitee to the Congress Working Committee. He also served as a KPCC, President for the longest period and also as Chairman of the KPCC Campaign Committee, as its Vice President and as a General Secretary earlier.He has been elected to the Assembly five times. He represented Madhugiri Assembly Constituency in the year 1989,1999 and 2004 and after delimitation, Koratagere Assembly Constituency in 2008.He was MLC (2016-2017). Presently he is Member of Legislative Assembly in 2018 from Koratagere Constituency. He has built a broad base of supporters from across dalits, major communities, backward castes and minorities.

Dr.G Parameshwara has earlier served as Minister for Sericulture (1993-94), as Minister for Higher Education, Medical Education, Science and Technology, Information and Publicity (1999-2004) and as Minister for Home (2015-2017) and leader of the House of Karnataka Legislative Council. He was Deputy Chief Minister of Karnataka and Minister of Home Affairs and (2018-19). He was instrumental in establishing the Tumkur University.

2.3 HONORARY APPOINTMENTS

- Former Member, Board of Regent, University of Agriculture Science, Bangalore
- Secretary, Sri Siddhartha Education Trust, Siddharthanagar, Tumkur
- Ex-Chairman, Karnataka Science & Technology Board, Tumkur
- Former Member, Karnataka Library Authority
- Former Member, Committee on Open University
- Former Member, Price Fixation Committee on Agriculture.

2.4 APPOINTMENTS AND FELLOWSHIPS

- Deputy Chief Minister of Karnataka
- Home Minister of Karnataka
- Leader of the House of Karnataka Legislative Council.
- President, KPCC
- President, Karnataka Athletics Association
- Member, Board of Regent, University of Agriculture Science, Bangalore
- Secretary, Sri Siddhartha Education Society.
- Chairman, Karnataka Science & Technology Board, Tumkur
- Member, Karnataka Library Authority
- Member, Committee on Open University
- Member, Price Fixation Committee on Agriculture
- Member, Australian Society of Plant Physiology
- Member, Indian Society of Plant Physiology
- Member, Indian Society of Agricultural Science
- Fellow of the Indian Institute of Agricultural Technologists
- Fellow of the Indian Society of Technical Education

2.5 AWARDS

- Karnataka Game Changer Award 2017.(U. K. Karnataka Business Chamber)
- National Unity Award in 1993.
- Distinguished Leadership Award.

2.6 MISSION

- **Providing a congenial ambience for learning and creativity in young minds.**
- **Providing high quality medical education and prepare the student to be citizens of the world, proficient in their respective field and to respond to the needs of the society in which they live.**
- **Providing research and public service activities relevant to the needs of the society.**
- **To train the student to be morally responsible to the community and serve humanity to their utmost ability.**
- **Promoting own capacity to manage and develop the institution as possible.**

2.7 VISION

- **Entrancing Education to reach the unreached.**

2.8 MOTTO

- Sabbe Loko Hitatthaya (Let all be Happy and Prosperous)

2.9 GOALS

- Providing high quality medical graduates not only competent in their respective fields but are also motivated to serve humanity at large.
- Producing research papers in all fields of medical sciences, worthy of being published by National & International Journals.
- Providing all facilities for the pursuit of medical knowledge, relevant to the needs of contemporary society.
- Implementing public services beneficial to and relevant with the needs of the community at large, nationally and internationally.

2.10 Educational Objectives

- To provide for instruction in training in such branches of learning as it may deem fit.
- To provide for research and for the advancement of and dissemination of knowledge.
- To undertake extra mural studies, extension programs and field outreach activities to contribute to the development of Society.
- To do all such other acts and things as may be necessary or desirable to further the objectives of the institute.

2.11 Board of Management of SSAHE

Sl. No.	Name	Designation & Address	Position
1.	Dr. P. Balakrishna Shetty	Vice-chancellor SSAHE, Tumakuru-572107	Chairperson
2.	Dr. A.G. Srinivasamurthy	Principal Sri Siddhartha Medical College Agalakote, B.H. Road, Tumakuru - 572107	Member
3.	Dr. Praveen B Kudva	Principal Sri Siddhartha Dental College Agalakote, B.H. Road, Tumakuru - 572107	Member
4.	Dr. M.S. Raviprakasha	Principal Sri Siddhartha Institute of Technology Maraluru,Tumakuru-572105	Member
5.	Prof. Dr. S Chandrashekar Shetty	No.18 , Housing Board Colony Shanthi Nagar, M.S.Mill Road Gulburga	Nominee of the Chancellor
6.	Dr. K Balaveera Reddy	Former Secretary, UGC No. 258, 4th Cross, Hauz Khas Apartment (SFS) New Delhi – 110 016	Nominee of the Chancellor
7.	Dr.G N Manjunath	Professor & Head Dept. of Pharmacology Sri Siddhartha Medical College Agalakote, B.H. Road, Tumakuru - 572107	Member
8.	Dr. Suhas S	Professor & Head	Member

		Dept. of Oral Medicine Sri Siddhartha Dental College Agalakote, B.H. Road, Tumakuru - 572107	
9.	Dr. Chidananda Murthy M V	Asst. Professor Dept. of Electronics & Comm., Engineering Sri Siddhartha Institute of Technology Maraluru,Tumakuru-572105	Member
10.	Dr. G. S. Anand	Director Sri Siddhartha Medical College Agalakote, B.H. Road, Tumakuru - 572107	Nominee of the Sponsoring Society
11.	Sri. Maruthi D Malay.	No.18 , Housing Board Colony Shanthi Nagar, M.S.Mill Road Gulburga	Nominee of the Sponsoring Society
12.	Dr. R.K. Chauhan	Former Secretary, UGC No. 258, 4th Cross, Hauz Khas Apartment (SFS) New Delhi – 110 016	Nominee of the Sponsoring Society
13.	Dr. M.Z. Kurian	Registrar, Sri Siddhartha Academy of Higher Education , Agalakote, B.H. Road, Tumakuru – 572107	Secretary

2.12 INFRASTRUCTURAL FACILITIES

2.12.1 SRI SIDDHARTHA MEDICAL COLLEGE & HOSPITAL

Sri Siddhartha Medical College (SSMC) & Hospital, Tumkur was established in 1988 under the aegis of the Sri Siddhartha Educational Society, with the aim of developing and nurturing quality medical professionals committed to excellence in healthcare and social welfare. Nestled in a 250-acre green campus, spread over 75,000 sq. mts, the college has today evolved into a renowned hub of higher education and healthcare in India.

SSMC is committed to excellence in healthcare education, research, outreach and inclusivity through discovery, purpose and application. Driven by the objective of moulding top notch medical graduates to be research oriented, service minded and competent in their fields of study, the institute provides excellent facilities for the pursuit and dissemination of knowledge, apart from an extensive array of training programs and field outreach activities that are relevant to the needs of the community and humanity at large.

The Institute is led by a team of highly qualified and experienced faculty members who are specialized in a diversified array of medical disciplines. The overall ethos of the Institute reflects the vision of the parent University by ensuring transformation through the healing power of education and social empowerment.

Sri Siddhartha Medical College has adequate infrastructural facilities as per the AICTE requirements. Stress-free learning classrooms, seminar halls, board rooms, discussion rooms, with modern furniture, OHP, LCD & DLP Projectors, multimedia enabled lecture facilities, and exclusive facilities for tutorial workshops.

Skills lab at SSMC provides a safe environment for students to learn, practice and be observed performing skills in a simulated environment thus mitigating the risks involved in direct patient exposure without adequate preparation and supervision. Designed to accommodate the needs of university undergraduate/Postgraduate medical students facilitating improved patient safety and quality care delivery for entire community.

Sri Siddhartha Medical College has adequate number of ventilated classrooms, Laboratories, Smart Classrooms (ICT enabled), Seminar halls, Computer Labs, Research Centers, HOD cabins, Staff cabins, Common rooms, Rest rooms, Hostels, Central & Department Library and Auditorium.

SSMC Hospital has separate building for OPD and causality with independent departments of Medicine, Surgery, OBG, Ophthalmology, Orthopedics, Paediatrics, ENT, Dermatology, and Radiology.

It is a 970 + bedded hospital, equipped with 12 major operation theaters in addition to minor operation theaters. SSMC is catering the needs of rural population. There are skilled doctors with specially trained nurses to give a healing touch to the patients. The Hospital building houses a post office and a bank to serve the needs of staff, students and the public. A canteen, hospital mess, fruit stall and a phone booth to cater the needs of the public are made available.

2.12.1a SMART CLASS ROOM

A Smart Classroom is a traditional lecture style teaching space that has available technological equipment that can be used to aid and enhance instruction of a course. The smart class room is equipped with the basic technology that will enable to connect laptop to the projector.

Features a smart podium with a touch panel control system, PC and laptop connection, document camera, DVD/VCR Player, projector, and screen and also have an overhear transparency projector.

2.12.1b SKILL LAB

A well-equipped clinical skill lab supports the acquisition, maintenance and enhancement of clinical skills of students in health care profession.

Within this non-threatening environment, patient volunteers, simulated patients. Mannequins and Information technology are employed to provide hands on learning experiences for practice of essential clinical skills.

Skills lab at SSMC provides a safe environment for students to learn, practice and be observed performing skills in a simulated environment thus mitigating the risks

involved in direct patient exposure without adequate preparation and supervision. Designed to accommodate the needs of university Undergraduate/Postgraduate medical students facilitating improved patient safety and quality care delivery for our entire community.

2.12.1c LIBRARY AND INFORMATION SERVICE

The Central Library is spread over in a vast floor space.

The Central Library stocks more than 20,000 books of various subjects in medical and allied health sciences. Reputed journals, both Indian and foreign are available in departmental libraries. The total number of books in the central and departmental library runs over 20,000 titles.

Computerized catalogues of the library holdings as well as a card index are available for the students. Further, there is provision of modern bar code and Online Public Access Catalogue (OPAC) technology to facilitate for user friendly, quick and easy search facility for the students and faculty.

Students are encouraged to avail other facilities like e-mail, internet, CD-ROM browsing & photocopying. Ample and separate reading space has been provided to both the students and faculty along with comfortable seating arrangements. Besides the Central Library all the departments, pre-clinical and clinical have been provided with departmental libraries which are well stocked with standard text books and other works of reference.

2.12.1d SPORTS

Sri Siddhartha Medical College and Hospital has anindoor game facility.

The institute is having indoor fitness center with experienced trainers and coaches.

2.12.1e FACILITIES AVAILABLE IN SSMC & SSDC

2.12.2 SRI SIDDHARTHA DENTAL COLLEGE AND HOSPITAL

Sri Siddhartha Education Society started the Dental College in 1992 at Tumkur – a rural District of Karnataka, with an aim to bring professional Training and advanced treatment facility to door steps of the rural masses.

The college is well equipped and housed in a building measuring 40,000 Sq.ft in an 25 acres, 100 meters away from Sri Siddhartha Medical College. The College has qualified and dedicated staffs that are always ready to help the student in shaping their future.

All the departments have separate undergraduate and Post graduate clinics with separate seminar halls and laboratories. The college has a mobile dental unit van to take care of rural population. The teaching staff and infrastructure are as per the Dental Council norms. The teaching faculty have attended several conferences and presented papers.

2.12.2a DEPARTMENTS

The departments are well equipped and headed by the Senior Professor / Surgeons.

- Oral Medicine & Diagnosis.
- Conservative Dentistry & Endodontics.
- Oral and Maxillofacial Surgery
- Periodontics
- Prosthodontics
- Orthodontics
- Public Health Dentistry
- Oral Pathology & Microbiology

2.12.2b RESEARCH AND ACADEMIC ACHIEVEMENTS

- Oral manifestations in HIV/AIDS patients of Tumkur district - To assess types and prevalence of HIV related oral lesions among HIV infected individuals in Tumkur district and to correlate common oral findings with co-morbidities, gender, age and medication used.
- Developmental Dental Anomalies in Tumkur district population - To identify and document developmental anomalies in the dentition of population from Tumkur district.

2.12.2c SATELLITE DENTAL CLINICS

- Rural Health Centre: Nagavalli, Tumkur rural
- Urban Health Centre: Sri Siddhartha Institute of Technology, Tumkur urban

2.12.2d LIBRARY FACILITIES

The Dental College has got a well-equipped Library apart from the Central Library. The Library is equipped with 2000 volumes of text book. It has a Digital Section to access the e-journals. The Library also subscribes for printed volume of journals in all the specialties to cater for Post Graduate students.

2.12.2e HOSTELS

Hostels are available for both boys and Girls separately with facilities like Water supply, Television and Reading rooms. Both North and South Indian style of vegetarian food is catered.

2.12.2f STUDENT AMENITIES AND FACILITIES

- Lecture halls
- Clinics & wards
- Laboratories
- Auditorium
- Offices
- Library
- Hostels
- Sports
- gymnasium
- Well-equipped Laboratories.

2.12.3 SRI SIDDHARTHA INSTITUTE OF TECHNOLOGY

Sri Siddhartha Institute of Technology (SSIT) is one of the premier institutions started in the year 1979 with Civil & Mechanical Engineering by Sri Siddhartha Education Society (SSES), Tumkur. Since then, it has grown with time. At present, the institution runs 9 under graduate courses in Bachelor of Engineering (BE), in addition it also offers post-graduation programs in Master of Computer Application (MCA) and Master of Technology (M.Tech) with an annual intake of about 976 students. The institution began with the mission of preparing the young generation for "Inner Light, Integration & Prosperity". Today more than three two thousand students are studying in this institution & they are guided by more than 166 by well qualified & experienced faculty members who work to integrate the mission of the college by their teaching & training methods. The college has adopted "Education for Social & Economical Transformations" as its theme & all the programs are focused on this theme. The Institute was one among the 14 premier Technical Institutions in Karnataka State, selected by the World Bank, for the award of financial assistance, Technical Education Quality Improvement Program (TEQIP). to the tune of 10 Crores. This assistance will be was utilized to improve quality of education, to modernize the laboratory facilities and to make the this institution a Center of Excellence. Under

this scheme, initiatives on a large scale have already been taken initiated for providing a congenial ambience for learning. 67 Sri Siddhartha Institute of Technology has taken a leading role to uphold the entrepreneurial activities culture in Tumkur District. The Institute is taking necessary steps to motivate &guide young entrepreneurs, by giving consultancy & supporting services. Department of Industries & Commerce, Govt. of Karnataka has sanctioned Science & Technology Entrepreneurs Park (STEP) to the college in the year 2000 & it has been recognized as one of the best training center in the district by various Govt. agencies & Industries. It is named in the remembrance of our beloved founder Sree. H.M Gangadharaiah, as a Gangadharaiah - Memorial Entrepreneurship Development & Incubation Center (G-MEDIC). Under this scheme SSIT is conducting various skills & entrepreneurship development programmes. In 2003 Govt. of Karnataka has sanctioned IT Incubation center in the name of GMEDIC to the STEP. This center will provide all requisite environment & facilities to the entrepreneurs in the field of IT. The Climatic condition is pleasant & comfortable throughout the year. The Campus is completely pollution free. Tumkur is emerging as a knowledge centre and is home to major industrial and houses premier professional educational institutions. Tumkur is just over an hour's drive from Bangalore Airport by road.

- Campus spread over 45 acres of land.
- More than 45506 sq.mtrs of built up area.
- Well Established Laboratories
- 850+ Computers.
- Library facilities.
- Fully networked Computer labs.
- High-Speed 250 Mbps leased line for internet access.
- Excellent Placement and Training Department.
- Boys and Girls Hostels inside the Campus.
- Lush Green Garden.

The Institute is one among the 14 premier Technical Institutions in Karnataka State, selected by the World. Bank, or the award of financial assistance, Technical Education Quality Improvement Program (TEQIP) to the tune of 10 crores. This assistance will be utilized to improve quality of education, to modernize the laboratory facilities and to make this institution. a Center of Excellence.

2.12.3a LIBRARY

Library is a Geodesic Structure, 100 ft Dia. and 75 ft High. A very rare structure for library, this type of structures is very congenial for study purpose

Features:

- Four Floors of reading area, and
- Five Floors of stack area capacity 90,000 books
- Seating Capacity 450
- Walls do not have to support a roof.
- Form finished conics ensures the building a long life
- Maintenance free - as no Plastering and Painting
- Hot air moves up cold air breezes in thereby providing natural air conditioning
- Water is circulated around the structure to enhance the cooling effect.
- Issue / Lending service - Reprographic facility

- Reference Section - Periodicals & Journals
- Books are stacked-category wise

Library Software

- DEL Plus Library Management Software by DELNET Learning Resources are procured and are accessible to all departments.
- NEWGENLIB Library management software for library management
- SSIT digital repository, Students and staff can access information. ID: http://172.16.28.58/LocalGuru

Digital Library Services

- IEEE Computer Society Digital Library Membership
- IEEE Online Journals
- JCCC - INDEST
- DELNET
- CD/DVD viewing hall
- SSIT Institutional Repository
- Campus Health Services

2.12.3b SPORTS AND CULTURE

One will have sound mind in a sound body. Our philosophy is Student can do better if they have good physical strength. To support the physical activities various facilities have been built. Facilities have been created for Multi gym, Football, Volley Ball, Cricket, Basket Ball and other indoor games. Our students are performing better at University level and have won many medals and citations. We have students coming from all part of our country. To promote our oneness and share our cultural values Institute organizes cultural festival, Kalotsava, every year. Students also participate in University level cultural festivals and brought name and fame to our institute.

2.12.3c SCIENCE AND TECHNOLOGICAL ENTREPRENEURSHIP PARK – STEP

The college has been doing an excellent STEP activity. Prime Minister Rojgar Yojana (PMRY) has been implemented effectively. For the community service done by the college, college has been recognized by "Women Welfare Department", we are adjudged as the best college and has been awarded the National Award "Bharatiya Rastriya Vocational Excellence Award for the contribution towards development of women.

The Grassroots innovation & Augmentation Network Cell (GIAN -CELL) in our institute acts as a nodal centre to upgrade, design & development and commercialize the Grassroots Innovation in Karnataka. As on today more than 30 innovations are documented and evaluated

in the states of Tamilnadu, Kerala and Karnataka.

The bio-mass stove developed by Mechanical Engineering department, can cook 1kg of rice in 20 minutes by using only 100grams of wooden morsels. This has been experimented in few villages and is at the final testing and launching stage as a gift to the society and a boon to the house wives as it emits less radiation, almost nil soot and smoke. It also produces hot water for bathing and distilled water for drinking.

The milking machine invented by a primary school teacher developed by us through technical assistance is one that can milk 20liters of milk in 5minites without any discomfort either to the animal or the man. This will help the small farmers with dairy firms to increase their productivity. This machine can be handled even by women. It is already in the market and the teacher had become an Entrepreneur and received National award from the His Excellency The President of India in 2004. In this context, institute is assisting the rural think tanks (Grassroots Innovators) in conceptualizing their novel ideas, giving technical support for bringing out working models or proto-types and safeguarding their IP through IPR.

2.13 CONSTITUENT COLLEGES AND COURSES OFFERED

Sri Siddhartha Medical College, the affiliated medical college, has an intake of 150 for MBBS and 89 for MD in Microbiology, General Medicine, OBG, Paediatrics, Radiology, General Surgery, ENT, Ophthalmology.

Sri Siddhartha Dental College has 40 BDS undergraduate and 12 MDS postgraduate programmes in Orthodontics, Periodontics, Oral & Maxillofacial Surgery, Pedodontics, Prosthodontiaand Oral Pathology.

Sri Siddhartha Institute of Technology has an intake of 790 for B.Tech and 98 for M.Tech.

POST GRADUATE PROGRAMS offered by SSIT

- Masters of Computer Application.(MCA)
- M.Tech in Digital Electronics(Full Time)
- M.Tech in Computer aided design of strctures.
- M.Tech in Thermal Engineering.
- M.Tech in Product design and manufacturing.
- M.Tech in VLSI and Embedded system.
- M.Tech in Computer science and Engg.
- M.Tech in Computer aided industrial drives.

RESEARCH PROGRAMMES offered by SSIT

- Civil Engineering
- Mechanical Engineering
- Chemistry
- Electronics and Communication Engineering
- Computer Science and Engineering
- Electrical Engineering

2.14 Memorandum of Understanding (MoU)

Status of the MoU's of Sri Siddhartha Academy of Higher Education with other Universities / Institutions / Organizations

Sl No	MoU's with other Universities / Institutions / Organizations
1.	MOKWON University,Daejon, 302-729, Korea
2.	Park's College of Engg., St. Louis State University, US
3.	MoU with Infosys Ltd., for Off Campus Connect Programme
4.	GnanaSamanvaya, Department of Education, Government of Karnataka
5.	MoU – Uganda – Genetics -Muni University, Arua, Uganda
6.	MoU with Health Care Global (HCG), Bangalore
7.	MoU with Karnataka Cancer Society, Bangalore
8.	MoU with YourDOST Health Solutions Pvt Ltd., Bangalore
9.	MoU - Pavlodar State Pedagogical University
10.	MoU - Technical university of Moldova
11.	MoU - Bosch, Bangalore
12.	MoU - North Dakota State University, USA
13.	MoU - Kalpataru Institute of Technology, Tiptur
14.	MoU – Prakruthi Institute of Environmental Studies, Bengaluru

2.15 ACADEMY COMMITTEES:

The following Committees have been constituted to oversee achieving excellence in Academics in SSAHE and also to provide an excellent work and study environment conducive to Pedagogical innovation and Academic Excellence.

1. Anti-Ragging Cell
   University's Policy against the Ragging in accordance with the directors of Hon'ble Supreme Court of India, UGC and other Regulation bodies.
2. Grievance Redressal Committee:
   Mechanism for Students Grievances Redressal:
3. Internal Complaints Committee (ICC)
4. Student Counseling Cell
5. SSAHE Review Committee Purchase Committee
6. Training and placement Cell
7. Transport Committee
8. Selection Committee
9. Internal Quality Assurance Cell (IQAC)
10. Rightto Information (RTI)
11. Hostel Management
    <u>On-Campus Hostel/S Details;</u>
    - Sri Siddhartha Medical College and
    - Sri Siddhartha Dental College

    <u>Off-Campus Hostel/S Details;</u>
    - Sri Siddhartha Institute of Technology

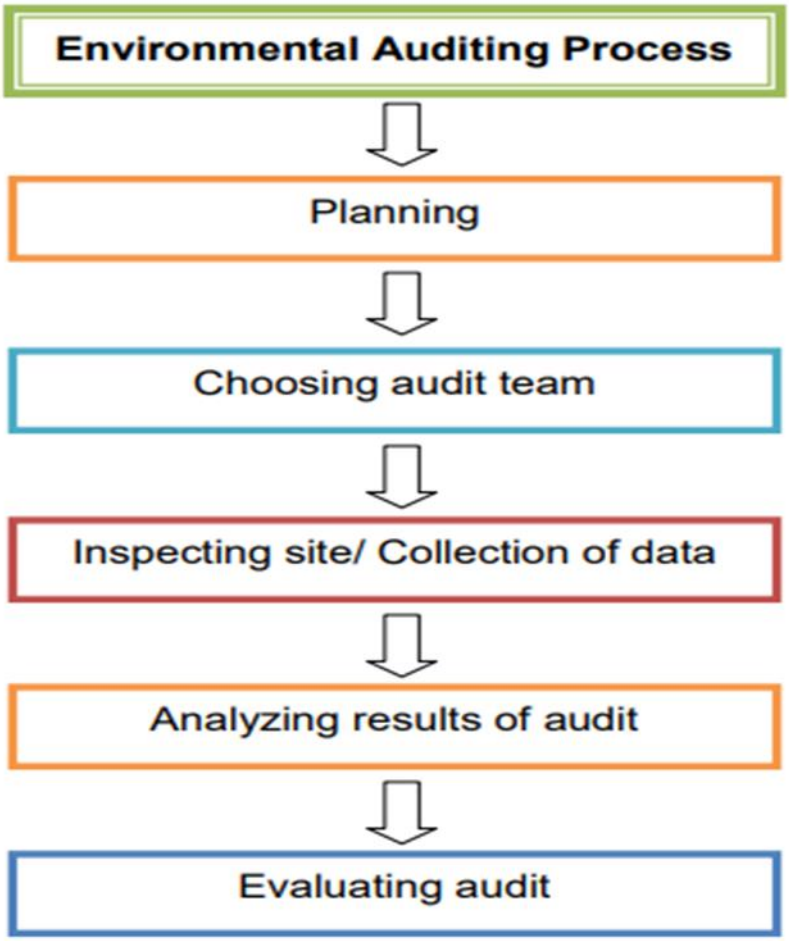
Do's and Dont's

- Persons staying in the Guest House are not entitled to bring in unauthorized guest(s) to stay with them in the Guest House.
- The Guest House closes at 10 PM in winter and 11 PM in summer. Those staying out for the night or coming late should inform the Guest-House-Keeper/Security Guard in advance to avoid any inconvenience.

- The University authorities are not responsible for valuable items kept in the rooms.
- Male visitors/guests are not allowed in the rooms occupied by female guests and vice-versa.
- Alcoholic drinks in the Guest House are strictly prohibited.
- All visitors coming to see a guest staying in the guest house shall have to make entries in the register available with the security guard.
- Cooking is not allowed in the rooms.
- Food/meals, except tea/coffee/cold drinks, are served only in the dinning hall.
- The guests are requested to switch off the lights and fans, close windows and lock their rooms when they go out.
- The Guest House is meant for you. Please help us keep it clean.
- There is always room for improvement. Suggestions/complaints, if any, may be put in the suggestion box outside the office.

CHAPTER 3. METHODOLOGY ADOPTED

The audit process was carried out in three phases. At first, all the secondary data required for the study was collected from various sources, like concerned departments as engineering, hostel, garden etc. A broad reference work was carried out to clear the idea of green auditing. Different case studies and methodologies were studied and the following methodology was adopted for present audit. The methodology of present study is based on onsite visits, the personal observations and questionnaires survey tool. Initially, based on data requirement, sets of questionnaires were prepared. The surveyors then visited all the departments of the university and the questionnaires were filled. The generated data is subsequently gathered and used for further analysis. From the outcome of the overall study, a final report is prepared.



3.1. SURVEY BY QUESTIONNAIRE:

Baseline data for green audit report preparation was collected by questionnaire survey method. Questionnaires prepared to conduct the green audit in the university campus is based on the guidelines, rules, acts and formats prepared by Ministry of Environment, Forest and Climate Change, New Delhi, Central Pollution Control Board and other statutory organizations. Most of the guidelines and formats are based on broad aspects and some of the issues or formats were not applicable for University campus. Therefore, using these guidelines and formats, combinations, modifications and restructuring was done and sets of questionnaires were prepared as solid waste, energy, water, hazardous waste, and e-waste. All the questionnaires comprise of group of modules. The first module is related to the general information of the concerned department, which broadly includes name of the department, month and year, total number of students and employees, visitors of the department, average working days and office timings etc. The next module is related to the present consumption of resources like water, energy, or the handling of solid and hazardous waste. Maintaining records of the handling of solid and hazardous waste is much important in green audit. There are possibilities of loss of resources like water, energy due to improper maintenances and assessment of this kind of probability is necessary in green audit. One separate module is based on the questions related to this aspect. Another module is related to maintaining records, like records of disposal of solid waste, records of solid waste recovery etc. For better convenience of the surveyor, some statistics like, basic energy consumption characteristics for electrical equipment etc. was provided with the questionnaires itself.

ONSITE VISIT AND OBSERVATIONS:

Sri Siddhartha Academy of Higher Education has vast built-up area comprising of various departments, administrative building, teachers and staff quarters, student hostels, guest house, sports complex and health center. All these amenities have different kind of infrastructure as per their requirement. All these buildings were

visited by the surveyors and the present condition is checked with the help of the questionnaires. Personal observations were made during the onsite visit. All the amenities were clubbed in as per their similarities and differences, which makes the survey and further analysis easier.

DATA ANALYSIS AND FINAL REPORT PREPARATION:

A proper analysis and presentation of data produced from work is a vital element. In case of green audit, the filled questionnaires of the survey from each group were tabulated as per their modules, in Excel spreadsheets. The tabulated data is then used for further analysis. For better understanding of the results and to avoid complications, averages and percentages of the tables were calculated. Graphical representation of these results was made to give a quick idea of the status. Interpretation of the overall outcomes was made which incorporates all the primary and secondary data, references and interrelations within. Final report preparation was done using this interpretation.

- In order to meet its objectives, this audit combined physical inspection with a review of relevant documentation and interviews with various stakeholders.
- Review of the Documentation
- For the purpose of this audit the Green Policy of the institute was reviewed.
- Interviews
- Interviews were conducted with the Principal's, Registrar and also faculties and students.
- Physical Inspection and Monitoring of Water, Wastewater, Ambient air Quality and Noise.
- The audit team was in the college to inspect the campus.

3.2. LIST OF STUDENTS AND STAFF INVOLVED IN GREEN AUDITING

Sl,No	Auditing Team	Designation	Position
1.	Dr. M S Raviprakasha	Principal Sri.Siddhartha Institute of Technology, Tumakuru.	Chairman
2.	Dr. T V Mallesh	Professor and Head Department of Civil Engineering, Sri. Siddhartha Institute of Technology, Tumakuru	Convener
3.	Dr. D Rajanaik	Professor Department of Civil Engineering Sri. Siddhartha Institute of Technology, Tumakuru	Member
4.	Mr. J V Praveen	Assistant Professor Department of Civil Engineering Sri Siddhartha Institute of Technology, Tumakuru	Member
5.	Mr. G D Shivaraju	Assistant Professor Department of Civil Engineering Sri Siddhartha Institute of Technology, Tumakuru	Member
6.	Mr. S Usha	Assistant Professor Department of Civil Engineering Sri Siddhartha Institute of Technology, Tumakuru	Member
7.	Ms. Mahalakshmi B A	Student, 7th Semester, Civil Engineering	Student Member
8.	Mr. Lekhan S.S.	Student, 5th Semester, Civil Engineering	Student Member
9.	Mr. Paramathesh	Student, Final year, MBBS	Student Member
10.	Ms. VyshaliKasaravalli	Student, Final year, MBBS	Student Member
11.	Mr. C B Nagaraju	Attender Department of Civil Engineering Sri Siddhartha Institute of Technology, Tumakuru	Helper

CHAPTER 4. GREEN AUDIT

ECO -FRIENDLY CAMPUS & GREEN PRACTICES IN SRI SIDDHARTHA ACADEMY OF HIGHER EDUCATION

4.1. AREAS OF GREEN AUDITING

4.4.1 ENERGY AUDIT

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliances, and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment.

4.4.2 WATER AUDIT

Water audit can be defined as a qualitative and quantitative analysis of water consumption to identify means of reducing, reusing and recycling of water. Water Audit is nothing but an effective measure for minimizing losses, optimizing various uses and thus, enabling considerable conservation of water in irrigation sector, domestic, power and industrial as well. A water audit is a technique or method which makes possible to identify ways of conserving water by determining any inefficiencies in the system of water distribution. The measurement of water losses due to different uses in the system or any utility is essential to implement water conservation measures in such an establishment.

This indicator addresses water consumption, water sources, irrigation, storm water, appliances and fixtures. Aquifer depletion and water contamination are taking place at unprecedented rates. It is therefore essential that any environmentally responsible institution should examine its water use practices.

It is observed that a number of factors like climate, culture, food habits, work and working conditions, level and type of development, and physiology to determine the requirement of water.

4.4.3 BIODIVERSITY AUDIT

All plant and animal species - including humans - are linked together in a complex web of life; we depend upon biodiversity for our survival. Biodiversity is the key to healthy ecosystems and ultimately a healthy planet. It keeps the air and water clean, regulates our climate and provides us food, shelter, clothing, medicine and other useful products. Each part within this complex web diminishes a little when one part weakens or disappears. The trees work hard to keep the air we breathe clean and healthy. Their leaves take in much of the poisonous unwanted carbon dioxide in the air, and replace it with the oxygen we need for healthy living. In this process, the plants with the help of sunlight, water, minerals and the green material called Chlorophyll within the leaves change the carbon- dioxide into food for themselves. When doing this they release oxygen into the air which is vital for all life on earth. The roots of trees dig deep into the earth and hold it together so that the rain and wind cannot wash or blow it away. This is very important as the earth has only a very thin layer (seldom more than one foot) of fertile soil covering it.

4.4.4 BIODEGRADABLE AND HAZARDOUS/BIOMEDICAL WASTE AUDIT

This indicator addresses biodegradable waste from college and hostel canteen, paper waste to hazardous wastes of laboratories and worn-out electric & electronic goods, and plastic wastes. Hazardous materials represent significant risks to human health and ecological integrity and also biomedical waste generated in the hospitals, operation theater, laboratory and diagnostic center. Hazardous wastes are also leached out through the e-waste generated in the campus. They often persist in the environment leaving a legacy of land and water contamination for generations. They also accumulate in the tissues of organisms and become concentrated within food chains, leading to cancer, endocrine disruption, birth defects, and other tragedies. The minimization, safe handling, and ultimate elimination of these materials are essential to the long-term health of the planet.

4.2. LAND AREA STATEMENT

The land under the project is designated for educational activities as per Karnataka Government. No additional burden on land has been created which may adversely affect land use pattern in the area. No natural drain is being obstructed. The University land does not interfere with any forest, wetland, river, lake, mountain, national park & sanctuary etc.

4.2.1 SRI SIDDHARTHA MEDICAL COLLEGE & HOSPITAL AND SRI SIDDHARTHA DENTAL COLLEGE

Sl. No.	PARTICULARS	AREA
1	**Total area**	285 acres
2	College area	26 acres
3	Hospital (including OPD)	46 acres
4	Hostel & residential Complex	24 acres
5	Total Built up area	96 acres
6	Road/Parking	16 acres
7	Green belt area	55 acres
8	Vacant area for future development	60 acres

4.2.2 SRI SIDDHARTHA INSTITUTE OF TECHNOLOGY

Building Configuration	
No of Blocks	30 Blocks
Floors	G + 5 Floors
Canteen	2 No's
Seminar Halls	5 No's
Play Ground	1
Auditorium	1
Hostels	8 No's
Labs	20 No's
Recreational Area	
Total Green belt	40 Acres
Internal Roads	5 Acres, 20 No's
Parks and Open spaces	5 Acres, 20 No's
Total	135 acres

- ✓ Over 33% of the Campus under Green Cover
- ✓ Patches of Original Forest Cover
- ✓ Collection of Local Flora
- ✓ Gardens, Live Hedges, Potted Plants

Various environment friendly factors such as Water, Air & Noise, Land, Parking, Flora &Fauna, Socio Economic, Solid Waste Treatment, Solar Systems contribute in making an eco–friendly campus. We at the Sri Siddhartha Academy of Higher Education (Deemed to be University u/s 3 of the UGC Act, 1956), Tumakuru, Karnataka are taking care of all these above mentioned factors in the following ways;

4.3. WATER REQUIREMENT AND WASTE WATER GENERATION:

4.4.1 SRI SIDDHARTHA MEDICAL COLLEGE & HOSPITAL AND SRI SIDDHARTHA DENTAL COLLEGE

a) Water requirement: The total water requirement for the University is 260 KLD. Water quality of ground as well as surface resources in the area has been studied for assessing the water environment. Quality of water supplied by Heggere Grama Panchyat in the area is potable. Rain Water Harvesting has been provided for recharging the aquifer to compensate withdrawal to some extent.

Total requirement of water in KLD	
Fresh water	200
Recycled water	60
Total	260
Source of water	**Borewells water supply, Treated Sewage Water and Rain water harvesting water**
No of Ponds, BoreWells	**Constructed a pond with a storage capacity of water = 0.16 TMC 8 Borewells working in good condition**
No and capacity of water tanks for storage	**2 No Overhead tank constructed to store the water with a capacity of 5 lacs liters.**
No of Ground water recharge pits	**Natural runoff water is diverted to collect in a artificially constructed pond- capacity: 0.16 TMC**
Strom water management plan	**Natural Rain water is collected in a artificially constructed tank**
1.Whether canteen facility provided for day students etc	Yes
2. Waste water generation in KLD	80 KLD
STP capacity	80 KLD
Technology employed for Treatment and mode of disposal of treated sewage	Activated Sludge Process and used for Gardening after treatment inside the premises.
Scheme of disposal of excess treated water if any	----------

b) Waste Water Generation: About 80 m3/day of wastewater is being generated. Sewage Treatment Plant of 80 KLD has been installed. The treated water is being used for plantation within the premises.

4.4.2 SRI SIDDHARTHA INSTITUTE OF TECHNOLOGY

a) Water requirement: The total water requirement for the institute is 520KLD. Water quality of ground as well as surface resources in the area has been studied for assessing the water environment. Quality of water supplied by Tumkur Municipal Corporation in the area is potable. Rain Water Harvesting has been provided for recharging the aquifer to compensate withdrawal to some extent.

Total requirement of water in KLD	
Fresh water	450
Recycled water	70
Total	520
Source of water	**Borewells, Tumkur Muncipal Corporation water supply, Treated Sewage Water and Rain water harvesting water**
No of Ponds, Bore Wells	**Constructed a pond with a storage capacity of water = 0.16 TMC 6 Borewells working in good condition**
No and capacity of water tanks for storage	**1 No Overhead tank constructed to store the water with a capacity of 5 lacs liters.**
No of Ground water recharge pits	**Natural runoff water is diverted to collect in a artificially constructed pond-capacity: 0.16 TMC**
Strom water management plan	**Natural Rain water is collected in a artificially constructed tank**
1.Whether canteen facility provided for day students etc	Yes
2. Waste water generation in KLD	268 KLD
STP capacity	300 KLD
Technology employed for Treatment and mode of disposal of treated sewage	Activated Sludge Process and used for Gardening after treatment inside the primises.
Scheme of disposal of excess treated water if any	----------

b) Waste Water Generation: About 268 m^3/day of wastewater is being generated. This wastewater is treated and used for gardening purpose. There is no leakages from the pipelines, taps etc.

Roof Top Rain Water: A roof top rain water is collected to minimize the withdrawal from ground water and is used for ground water recharge

4.4. SEWAGE TREATMENT PLANT

4.4.1 SRI SIDDHARTHA MEDICAL COLLEGE & HOSPITAL AND SRI SIDDHARTHA DENTAL COLLEGE

Sewage Treatment Plant of 80 KLD has been installed for treating the wastewaters generated from Sri Siddhartha Medical College & Hospital And Sri Siddhartha Dental College. The Trade effluent generated and management in hospital is by connecting the discharges from the wash basins of OT, Labs and floor wash of OT and Labs are connected to a large container. It is mixed with 1 % Sodium Hypochlorite and retained for a contact period of 20 minutes before the outlet valve is opened to drain out the disinfected liquid waste to the STP of the campus.

The treated water is being used for plantation within the premises. Sewage treatment plant installed in campus is fully functional. Sewage generated by residential establishment, which include household waste, liquid from toilets, bath showers, kitchen & sink flows into it. It caters for treatment of sewage of entire population staying on campus.

Treated water from it is being used for watering of lawns, vegetable, garden, cleaning and washing of roads, vehicles etc.

4.4.2 SRI SIDDHARTHA INSTITUTE OF TECHNOLOGY

Sewage Treatment Plant of 300 K L D has been installed. The treated water is being used for plant at ion within the premises. Sewage treatment plant installed in campus is fully functional. Sewage generated by residential establishment, which include household waste, liquid from toilets, bath showers, kitchen &sink flows into it. It caters for treatment of sewage of entire population staying on campus.

Treated water from it, is being used for watering of lawns, vegetable, garden, cleaning a n d washing of roads, vehicles etc.

Technology employed for Treatment:

Activated Sludge Process (Extended Aeration) is employed for treatment of waste water generated in the campus. There is no scheme of disposal of excess treated water available as there is no extra treated water is left after using it inside the premises for gardening purpose. Also Effluent Treatment Plant (ETP) is installed for treatment for lab wastewater by providing proper disinfection and then connected to STP for further treatment.

Existing water management methods installed in the campus

- Rain water harvesting system has been installed. Roof top water is harvested.
- Water conservation and green awareness campaigns has been conducted
- Rain water collection pits are provided at regular intervals in order to recharge ground water table.
- More greenery has been added consistently in order to improve ground water resource.

SUMMARY:

In the light of ample land area availability with minimal building construction, entire treated water is being reused within the campus, although during peak summer months the demand exceeds the supply and vice versa during the rainy season.

RECYCLE AND REUSE OF TREATED WASTE WATER

In general the STPs are operated at not more than 80% of the designed capacity and at much lower capacity during vacations, lock down etc. The treated waste waters from STP's are utilised for the following activities;

- Gardening and maintaining greenery within the campus. (80 %)
- Dust suppression as and when required. (10%)
- Buses and other vehicles washing within the campus. (10%)

4.5. SOLID WASTE MANAGEMENT

The main producers of Solid waste in campus include, Canteen waste, hostel kitchen waste, Institutional waste, and staff quarters. Most of the Dry waste in campus is stored at a transfer station within the campus. The solid waste generated in the constituent colleges will be mostly waste papers, answer sheets and domestic waste like kitchen waste.

The University makes necessary arrangements for disposal of solid waste. Kitchen waste is taken care by Vermi composting and is controlled process of decomposition used to transform organic material such as kitchen scrap into humus, which is a dark, soil like substance. Vermicomposting is simply composting with earthworm and best kind to use are red worms as these make indoor composting feasible and are very efficient to process organic waste. In the picture verms in compost is seen where kitchen waste likevegetable cutting etcare usedthus resulting in effective and useful waste management. Sprawling lawns and blooming flowers planted in the campus is testimony to use of organic manure generated.

Waste Management	
Quantity of biodegradable waste generation and mode of disposal as per norms	Biodegradable waste of 600 Kgs per day is collected in a mass and allowed for natural Composting in a prescribed area in the campus
Quantity of non-biodegradable waste generation and mode of disposal as per norms	Approx. 500 kgs per day of medical waste generated and collected in a bins for disposal
Quantity of hazardous waste generation and mode of disposal as per norms	Approx. 400 kgs per annum of hazardous waste (used oil, diesel filters, oil filters) routinely collected and handed over to authorized processing recycler.
Quantity of E-waste generation and mode of disposal as per norms	50 kg of E-Waste is collected per annum in E- Waste Bins provided at selected points within the campus and handed over to authorized processing recycler

4.6. BIO-MEDICAL WASTE MANAGEMENT

The institution has obtained the Authorisation from KSPCB under BMW Rules 2016 and has been operating under the provisions of the Rules. The salient features of compliance are listed as below:

- The institute has implemented the colour coding system (Yellow, Red, Blue and white) in each ward to collect the different varieties of waste based on their infection potential, recyclability and safety from injury during handling.
- A collection room has also been functioning to temporarily store the waste bags prior to their lifting by the Common Bio Medical waste handling facility.
- An agreement has been signed with M/S Prajwal BMW Management Systems, a

common facility that collects the Bio-Medical waste from the hospital premises on routine basis.

- The hospital generates 3744 kgs/A of Yellow Category wastes (Human Anatomical waste, soild waste, Expired/ Discarded medicines etc), 5304 kgs/A of Red Category wastes (Contaminated Revcycleable waste), 2236 kgs/A of Blue Category wastes (Glase waste, Metalic Body implants) and 2444 kgs/A of White Category wastes (Waste sharps)
- The quantum of Bio-medical waste disposed by the common facility is submitted to KSPCB through the Annual report periodically.

Segregation of Bio - Medical waste @ Sri Siddhartha Medical College & Hospital & Sri Siddhartha Dental College & Hospital

- Segregation of Bio Medical Waste
- Efficient Disposal of Bio-hazardous Waste
- Vermi bins to convert waste into Compost

4.7. ENERGY MANAGEMENT

Energy conservation is an important aspect of campus sustainability which is also linked with carbon foot print of the campus. Energy auditing deals with the conservation and methods to reduce its consumption related to environmental degradation. It is therefore essential that any environmentally responsible institution examine its energy use practices.

The energy consumption and other details of medical and dental colleges are as follows:

ENERGY		
1.	Electricity charges	400 KV
2.	Name of Gas Agency	M/s. Megha Gas Private Ltd.
3.	Number of Generators	04
4.	Cost of generator fuel	-
5.	Total number of CFL bulbs	Nil
6.	Number of LED lights, Incandescent bulbs, fans, AC's, Tube lights, electrical instruments, computers, photocopiers, T.V's.	Led lights – 2525 Fans – 1530 Tube lights – (included in led light) Electrical instruments – 100 Computers – 1200 Photocopies – 10, TVS – 10
7.	Energy generation by solar panels	2.5 MW

The Energy & power details of SSIT are as follows:

ENERGY & POWER DETAILS OF SSIT	
No of Diesel Generators Stand bye used during power failure	5
Total No of CFL bulbs	1800
No of LED lights, incandescent bulbs,Tubelights ceiling fans, AC's, Computers, Photocopiers, TV's	3000 2000 50 50 10 10
Total power requirement/year	10,62,030.26(kWhr)
No of DG set and capacity in KVA for standby power supply	5 no's with 840 KVA 1. 250 KVA 2. 200 KVA 3. 125 KVA 4. 125 KVA 5. 140 KVA
Details of fuel used for DG set- HSD	550 lts /month
Energy conservation plan if any	Ongoing project for 2.5MW solar panels is to be installed in 9 acres of area and proposed date of completion December 2020

4.8. SOLAR PHOTOVOLTAIC ENERGY HARNESSING

The SSAHE 2.5 MW solar power plant was constructed on 6.5 acres of parcel of land available within the campus. It supplies the power to Medical Colleges, Dental College, Nursing College, Engineering College and Hospitals. The plant has helped SSAHE reduce its energy costs as well as bolster its sustainable credentials.

The installed solar system at SSAHE would generate approx. 40,00,000 Units/ kWh of energy per annum, enough to power 100% of Institute's energy needs and will be utilized for the captive energy requirement of Institutes. It will help save approx. 3500 MT of CO_2 emission to environment.

The Plant installed 5,680 Mono Crystalline modules of 430 Wp along with fixed mounting structure and central inverters were used for this ground mounted solar installation covering an area of 6.5 acres.

To harness solar power for its energy needs for SSAHE State's largest Educational institutes announced setting up of a solar power plant with a capacity of 2.5 megawatt in its Campus in Tumkur.

The Institute had invested around ₹ 13.80 crore and will offset carbon dioxide (CO_2) emissions to the tune of over 3500 tonnes annually for the next 25 years.

The power generated from the solar power plant will be synchronized with the captive power plant to cater to the internal energy needs of the SSAHE's Institutes, Hospitals & Engineering College. This solar power initiative is in line with the company's philosophy to adopt environment friendly technologies and lower CO_2 emissions.

The new solar power plant will complement our efforts to adopt environment-friendly technologies and lower the carbon footprint. We are consistently exploring new ways to harness the abundantly available clean resources and implement them in our business operations,"

The 2.5 MW solar power plant will cater to the internal energy consumption of the Hospitals, Institutes by synchronizing with the captive power plant. So while generating clean energy, it will also enhance the safety of the hospitals underneath, from harsh climatic conditions".

Owner	**Sri Siddhartha Academy of Higher Education**
Project Size	2.5 MW DC
Project Type	Captive Power Plant
Location	Agalakote, Tumkur, Karnataka
Connection Type	Grid connected by 11 KV transmission line of length 1.1 km to Heggere Substation, Tumkur
Off taker	BESCOM
Commissioned	10th May 2021
Technical Specifications	
Solar power Plant capacity	2.5 MW
Inverter	Solar Grid Connected Inverter (1250 KW X 2 nos.)
Number Of Modules	5680
Coordinates	Latitude: 13°21'10.0"N Longitude: 77°03'34.7"E
CO2 Savings Per Annum (Approx.)	3500 metric tonnes
Space Coverage	6.5 Acres
Annual Energy Yield	40 million unit

4.9. AIR ENVIRONMENT

- In the University campus during construction in any stage water will be sprinkled

on the soil to avoid dust generation.

- The debris and unused construction debris will be removed immediately for recycling, if any, or for designated land fill
- All vehicles for service activities at the University will be checked for vehicular emission. The agencies will be asked to keep them within prescribed limits. They will also be asked to maintain them properly.
- As discussed earlier there will be no other point source of Air pollution, which are noise free. Chimneys of suitable height have been provided to control the G.L.C. of PM 2.5, PM10, SO2, & NOx levels. Extensive tree plantations have been resorted to for further improving the air environment in general and minimize noise levels.

4.9.1. AIR EMISSIONS AND NOISE LEVELS

The University has installed low noise generators for power backup. The medical college, hospital and dental college are having 6 no's of 250 KW and 5 no's of 250 KW in SSIT. No other point source of emissions like boiler, furnace etc. to run on fossil fuels, have been provided. So, the University does not generate Air & Noise Pollution.

4.9.2. TRAFFIC DENSITY

The students are not allowed to keep their own vehicles in the hostel. The University has its own buses for local students. The layout has been planned to provide adequate space for parking within the campus.

4.9.3. CARBON FOOTPRINT

Burning of fossil fuels (such as petrol, etc) has an impact on the environment through the emission of greenhouse gases into the atmosphere. The most common greenhouse gases are carbon dioxide, water vapour, methane, nitrous oxide and ozone. Of all the greenhouse gases, carbon dioxide is the most prominent greenhouse gas, comprising 402 ppm of the Earth's atmosphere. The release of carbon dioxide gas into the Earth's atmosphere through human activities is commonly known as carbon emissions.. Vehicular emission is the main source of carbon emission in the campus, hence to assess the method of transportation that is practiced in the college is important

Carbon footprint for SSIT	
No of persons using bicycles (Approx.)	52
No of persons using cars (Approx.)	88
No of persons using two wheelers (Approx.)	110
No of persons using other transportations (Approx.)	80
No of visitors per day (Approx.)	500
No of students staying in hostel	1050
No of faculty and staff staying in staff quarters	100

Carbon footprint for SSMC, SSDC	
No of persons using bicycles (Approx.)	100
No of persons using cars (Approx.)	55
No of persons using two wheelers (Approx.)	800
No of persons using other transportations (Approx.)	500
No of visitors per day (Approx.)	-
No of students staying in hostel	1500
No of faculty and staff staying in staff quarters	-

4.10. GREEN AUDIT (ECOLOGY & BIO–DIVERSITY)

Total no of trees with species available in the campus are more than 5500.

4.10.1. FLORA

The campus has a rich collection of trees. Most of the plants have important role in the maintenance of biodiversity and are the good carbon assimilators. Herbal garden and other ornamental gardens were maintained in the campus.

Apart from records of Forest department, field surveys were undertaken to study the vegetation and floral components in the campus. The main species of trees found in the area are:

Kikar (Acacia Arabic), Neem (Azardirachtaindica), Peepal (Ficusreligiosa), Bargad, Mango, Khair, Safedsiris, Kalasiris, Amaltas, Jamun, Anjura, Bahera, Zizyphus, Eucolyptus, Rain tree, Mahagani, Silver oak, Amla, Orange/Moosumbi, Bamboo, Jackfruit, Ashoka tree, Teak, Honge, Sampige, Muttuga, Poisonous Nut, Tamarind, Jungle Trees, Coconut tree, Guava, Flowered plants, Climbers, Herbs and shrubs. Apart from this Vanamahotsav (Tree Plantation) is celebrated every year in the campus in the way of conducting green gradation and green initiatives.

4.10.2. FAUNA

Prolific wild life is not observed in the University campus, as there is no thick forest/ vegetation is noticed in the University Campus.

FAUNAL GROUP	SCIENTIFIC NAMES
SPIDERS	Myrmachneorientalis (Family Salticidae); Nephilaplipes (Family - Nephilidae); Heteropodasp (Family - Sparassidae); Phintellavitatta (Family Salticidae)
MOTHS & BUTTERFLIES	Antheriaassmensis; Bombyxmori; Philosamiaricini; Junoniaatlitesatlites; Commander (Moduzaprocrisprocris); Ethopehimachala; Melanitisledaleda; Paltoporiaparakaparaka; Ypthimabaldus; Acraea terpsicore; Elymnias, hypermnestra, undularis; Mycalesisperseusblasius; Tanaecialepidealepidae; Euploea core
OTHER INSECTS	Scarlet dragonfly; Pantalaflavescens (wandering glider), grasshoppers, microbes
REPTILES	squirrels, mouse, snake, lizard
BIRDS	Acridotherestristis (Common myna); Streptopeliaorientalis (Oriental Turtle Dove); Athene noctua (little owl); Pycnonotuscafer (Red-vented Bulbul), crows, sparrows, peacock
MAMMALS	Monkeys, Dogs, Cats

Figure: Bird Nesting Boxes, Water for Birds and Animals On-Campus & Off-Campus

4.11. GREEN CAMPUS INITIATIVES

4.11.1. USE OF BATTERY OPERATED CARTS (buggy)

- The Management has procured three battery operated carts for the use within the campus to minimize the movement and pollution arising due to fuel driven vehicles with in the campus.
- Although, the steep slopes within the campus are not bicycle friendly, yet majority of the students and staff prefer walking within the campus as the same is quite compact.
- The Hospitals and Colleges being in sensitive zones, the noise levels are kept to the minimum due to noise less battery operated carts and minimal movement of automobiles within the campus.

4.11.2. GREEN BELT DEVELOPMENT

- The premises has created plant nursery that is responsible to create and maintain greenery within the campus.
- The large sized ground along with other green belt is helpful in creating significant lung space within the campus and thus, improved air quality.
- The STP sludge is used as soil conditioner cum manure for maintaining the entire greenery in the campus. Also the treated sewage imparts Nitrates and Phosphates to the plants and hence a healthy growth.

4.11.3. RAIN WATER HARVESTING

- In order to minimize the abstraction of ground waters, maintain the underground water table and control the hardness of the water supplied in the campus, the rain water potential has also been estimated for its tapping.
- As per the scheme the roof top water shall be collected in the underground tanks/ sumps, whereas the water collected from paved and unpaved areas shall pass through grease cum silt trap and clean water shall be either directly used or shall be used for recharging the existing bore wells within the campus as per drawings.
- The storm water that could not be collected is discharged into the SWD systems leading to public drainage system.
- A large portion of rain water is diverted into the existing pond to maintain the levels.

CHAPTER 5. CONCLUSION AND RECOMMENDATIONS

Sri Siddhartha Academy of Higher Education has always taken a green agenda for developing a green campus. Despite being primarily a healthcare institution, it has shown remarkable awareness in maintaining an eco-friendly campus. On visiting the Campus, one can experience the aesthetic and elegant buildings, splendid lawns, spacious sports grounds and lush green environment conducive for teaching-learning process.

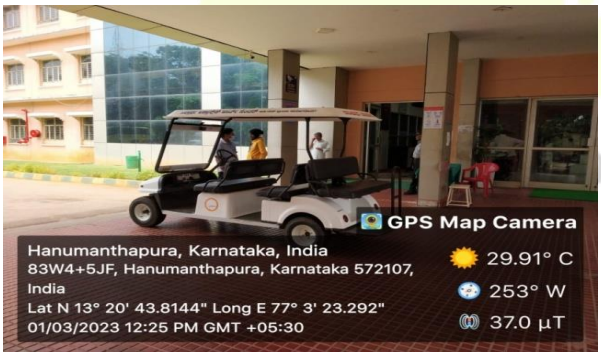
1. THE INSTITUTIONAL INITIATIVES FOR GREENING THE CAMPUS ARE AS FOLLOWS:

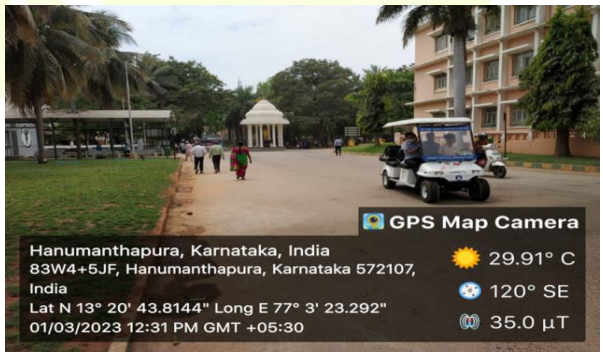
- Restricted entry of automobiles
- Pedestrian Friendly pathways
- Ban on use of Plastic
- Landscaping with trees and plants

2. RESTRICTED ENTRY OF AUTOMOBILES

The college operates a fleet of buses covering each corner of Bengaluru to facilitate the students and staff. The institute encourages the staff and students to use the college transport instead of their own vehicles for safety, security, fuel conservation and to reduce environmental pollution. The college buses are checked for pollution by the authorized agency.

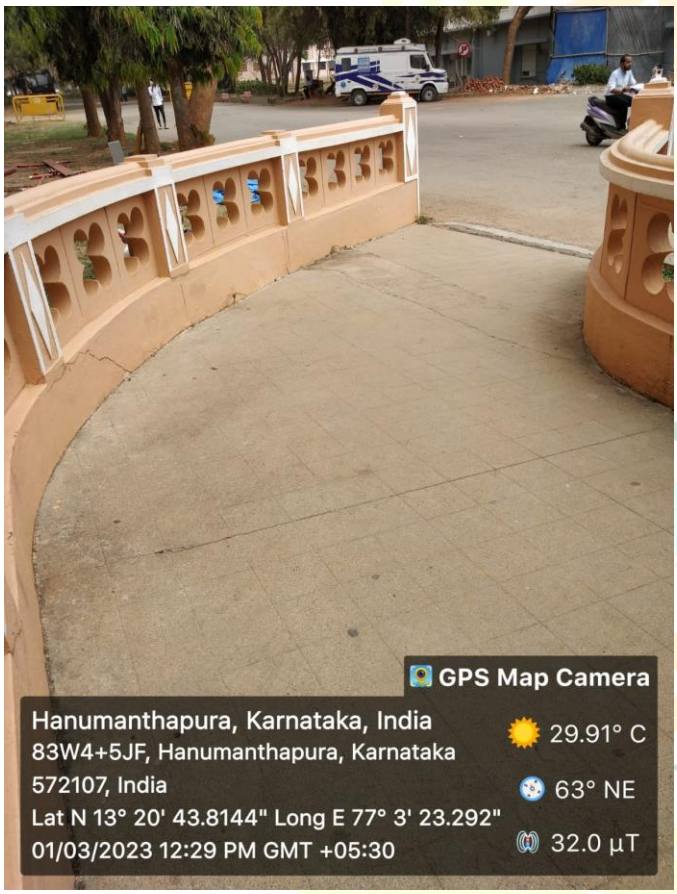
3. THE HOSPITAL AND DENTAL COLLEGE ARE USING ELECTRICAL OPERATED BUGGY'S VEHICALS

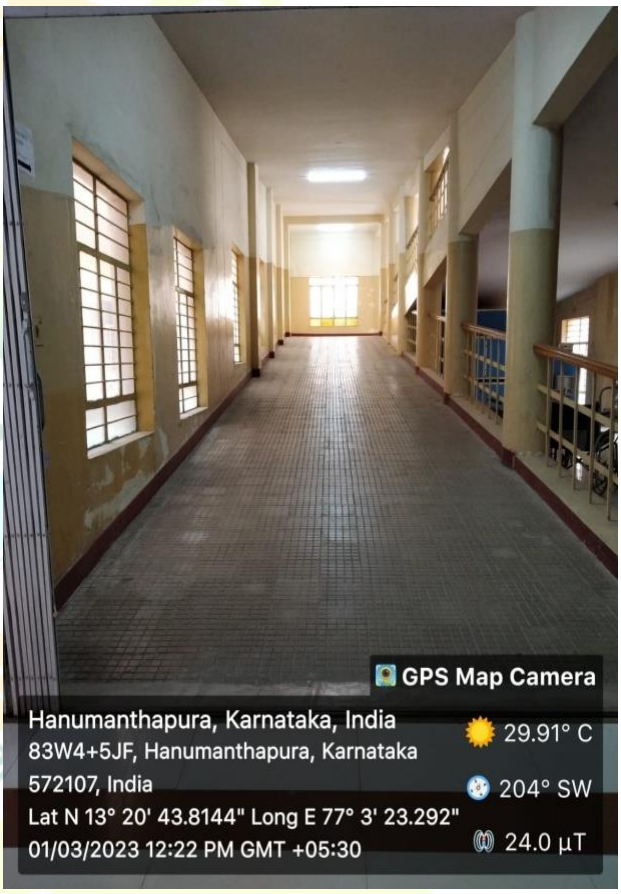




4. PEDESTRIAN FRIENDLY PATHWAYS

Vehicle parking space is provided at the main entrance of the college campus. As the campus is vehicle free with some exceptions, students and staff experience comfort walking through the pedestrian friendly pathways and Ramps. The internal roads are lined with trees and they are properly maintained by the campus maintenance committee.





5. BAN ON USE OF PLASTIC

Single-use plastic items such as plastic bottles, bags, spoons, straws and cups are banned completely and awareness is created among staff and students through orientation and display boards in the premises. To restrict the use of plastic, measures have been taken to replace plastic tea cups and glasses with steel glasses in the canteen.

6. LANDSCAPING WITH TREES AND PLANTS

Landscaping of the college is worth seeing and reflects aesthetic sense. The institute has a canopy of trees and plants to make the environment pollution free to safeguard the health of all the inmates. The lawns and the trees provide shade and beautiful ambience. Utmost care is taken to develop and maintain green landscaping by trained gardeners and supervisor. The construction, maintenance people in the college looks after the development and maintenance of the greenery in the campus. The institute authorities are taking initiatives to make the campus paperless. Internal communication in the campus, through e-mail or e-messages, is driving towards paperless office.

5.1 CONCLUSION AND RECOMMENDATIONS

Green Audit is the most efficient way to identify the strength and weakness of environmental sustainable practices and to find a way to solve problem. Green Audit is one kind of professional approach towards a responsible way in utilizing economic, financial, social and environmental resources. Green audits can “add value” to the management approaches being taken by the college and is a way of identifying, evaluating and managing environmental risks (known and unknown).

There is scope for further improvement, particularly in relation to waste, energy and water management. The constituent colleges in recent years considered the environmental impacts of most of its actions and make a concerted effort to act in an environmentally responsible manner. Even though the constituent colleges does perform fairly well, the recommendations in this report highlight many ways in which the college can work to improve its actions and become a more sustainable institution.

5.2 SUGGESTIONS:

SOME OF THE VERY IMPORTANT SUGGESTIONS ARE: -

- Increase Awareness of Environmentally Sustainable Development- Use every opportunity to raise public, government, industry, foundation, and university awareness by openly addressing the urgent need to move toward an environmentally sustainable future.
- Increase the awareness on carbon foot prints and how to reduce.
- Educate for Environmentally Responsible Citizenship- Establish programs to produce expertise in environmental management, sustainable economic development, population, and related fields to ensure that all university graduates are environmentally literate and have the awareness and understanding to be ecologically responsible citizens.
- Involve All Stakeholders- Encourage involvement of government, foundations, and industry in supporting interdisciplinary research, education, policy formation, and information exchange in environmentally sustainable development. Expand work with community and nongovernmental organizations to assist in finding solutions to environmental problems.
- Collaborate for Interdisciplinary Approaches- Convene university faculty and administrators with environmental practitioners to develop interdisciplinary approaches to curricula, research initiatives, operations, and outreach activities that support an environmentally sustainable future.
- Adopt the proposed Environmentally Responsible Purchasing Policy, and work towards creating and implementing a strategy to reduce the environmental impact of its purchasing decisions.
- Increase reduce, reuse, and recycle education on campus.
- Name all the trees and plants with its common name and scientific name.
- Display boards of fauna diversity to generate enthusiasm for learners.
- Organize earn while learn eco-friendly programs.
- Conduct exhibitions for parents and public on environment and sustainable

practices.

- Arrange training programs on environmental management system and nature conservation.
- Ensure participation of students and teachers in local environmental issues.

5.3 RECOMMENDATIONS

I. Installation of Biogas plant

II. Dig sufficient rain water pits in the campus wherever possible and maintain it regularly.

III. Name all the trees and plants with its common name and scientific name.

IV. Display boards of fauna diversity to generate enthusiasm for learners.

V. Organize earn while learn eco-friendly programmes

VI. Conduct exhibitions for parents and public on environment and sustainable practices.

VII. Arrange training programmes on environmental management system and nature conservation.

VIII. Adopt an environment policy for the college.

IX. Ensure participation of students and teachers in local environmental issues.

X. Avoid plastic/thermocol plates and cups in the college level or department level functions.

XI. Ensure for Plastic free Zone inside the campus.

XII. Noise levels are exceeding the prescribed tolerance limits. The authorities needs to give more emphasize on reducing the noise by controlling the vehicular movement and by taking other measures such as declaring the area sensitive / educational institute, no honking is allowed inside the campus etc.

CHAPTER 6. STUDY TEAM

6.1 GREEN AND ENVIRNOMENT AUDIT STUDY TEAM

This audit is conducted by visiting the location of the institute, discussing with concerned institute representatives, students and verifying the documents etc. The Study team consists of following members:

Sl.No.	Name	Designation	Signature
01	**Er. B N Ramesh Kumar**	Former Chief Environmental Officer, KSPCB Chairman, M/S Prakruthi Institute of Environmental Studies, Bengaluru	
02	**Sri V. Sreenivas**	Managing Trustee, M/S Prakruthi Institute of Environmental Studies, Bengaluru	
03	**Ms. Er. Tushali Jagwani**	Environmental Expert	
04	**Ms. Renuka**	Project Coordinator	
05	**Ms. Sharanya Ram S R**	Project Coordinator	
04	**Mr. Hemanth**	Senior Coordinator	

6.2 ACKNOWLEDGMENT

M/s Prakruthi Institute of Environmental Studies is thankful to **M/s Sri Sidhartha Academy of Higher Education** for providing an opportunity to conduct this Green and Environmental Audit Report and for giving the support during the visit to the institute and for preparation of report. The Institute is also thankful to M/s. Eco Green Solutions Systems Private Limited, MoEF/NABL Approved laboratory for monitoring and analysis of various environmental parameters from Bore well, STP, Amibent Air Quality, Stack Monitoring and Noise Monitoring. The Institute will extend the co-operation in future also.

CHAPTER 7. ASSESSMENT OF BASELINE ENVIRONMENTAL CONDITIONS AT SITE

7.1 WATER ENVIRONMENT

7.1.1 SAMPLING METHODOLOGY AND ANALYSIS

Bore well samples were collected and analyzed.

Following procedures were used while sampling and & Methodologies adopted in assessing quality of water:

- Washing the bottles/cans with distilled water prior to the sampling;
- Before collection of water the bottles/cans are again washed 2-3 times with the same water
- For surface water, Bottles were lowered to a minimum depth of 30 cm below water surface.
- At each point, different sets of water samples were collected so as to cover all the parameters
- Sterilized bottles were used for the samples that are to be analyzed for bacteria
- Parameters like pH, TDS and temperature were analyzed in the field conditions. There are specific instruments for measuring TDS and pH in the field. These are portable. These instruments will be calibrated at laboratory before use. The results were reconfirmed after getting to the laboratory. DO is fixed and titrated in the field itself.
- Appropriate preservatives are added, depending upon the elements to be analyzed and marked accordingly (APHA / IS: 3025 (part I)).
- All the water samples collected in the ice box, were immediately transported to the laboratory and freezed at <5 0C for analysis.
- Field observations were noted in the field notebook.

SAMPLE COLLECTION AND ANALYSIS OF WATER SAMPLE

Parameter	Frequency	Sampling Methadology	Preservation Method	Analysis Method	Prescribed Standard
pH, TDS and Temperature	Once in a baseline period	IS: 3025 (Part I)	Not applicable	Onsite Measurement	IS: 10500 specifications
Other physico-chemical and biological parameters			IS: 3025 (Part I)	'Standard Methods for Examination of Water and Wastewater Published by American Public HealthAssociation(APHA) / IS:3025	

7.1.2 WATER SAMPLE ANALYSIS

Samples were analyzed for various parameters as per the procedures specified in "Standard Methods for the Examination of Water and Wastewater" published by American Public Health Association (APHA). Different physico-chemical parameters of ground water during study period were compared with standard at each monitoring stations and shown in the Table below.

TABLE: PRIMARY WATER QUALITY CRITERIA FOR DESIGNATED-BEST-USE-CLASSES

Designated-Best-Use	Category	Criteria Description
Drinking Water Source without conventional treatment but after disinfection	A	➢ Total Coliforms Organism MPN/100ml shall be 50 or less ➢ pH between 6.5 to8.5 ➢ Dissolved Oxygen 6mg/l or more ➢ Biochemical Oxygen Demand (5 days 20oC) 2mg/l or less ➢ TDS max. 500mg/lit ➢ Chlorides (as Cl-), 250 mg/L, Max
Outdoor bathing (Organized)	B	➢ Total Coliforms Organism MPN/100ml shall be 500 or less ➢ pH between 6.5 and8.5 ➢ Dissolved Oxygen 5mg/l or more ➢ Biochemical Oxygen Demand (5 days 20oC) 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	➢ Total Coliforms Organism MPN/100ml shall be 5000 or less ➢ pH between 6 to9 ➢ Dissolved Oxygen 4mg/l or more ➢ Biochemical Oxygen Demand (5 days 20oC) 3mg/l or less ➢ TDS max. 1500mg/lit ➢ Chlorides (as Cl-), 600 mg/L, Max
Propagation of Wild life and Fisheries	D	➢ pH between 6.5 to8.5 ➢ Dissolved Oxygen 4mg/l or more ➢ Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	➢ pH between 6.0 to8.5 ➢ Electrical Conductivity at 25oC micro mhos/cmMax.2250 ➢ Sodium absorption Ratio Max.26 ➢ Boron Max.2mg/l ➢ TDS max. 2100mg/lit ➢ Chlorides (as Cl-), 600 mg/L, Max
	Below-E	➢ Not Meeting A, B, C, D & E Criteria

Source: CPCB STANDARDS (CLASSIFICATION OF INLAND SURFACE WATER)

TABLE: GROUNDWATER TEST RESULTS

1. Borewell Water (UNIVERSITY BLOCK)

S.No	Parameters	RESULTS	As Per IS 10500:2018)	
			DL	PL
1.	pH @27.2^{0}C	7.40	6.5-8.5	No Relaxation
2.	Total Dissolved Solids, mg/L	1287	500	2000
3.	Conductivity@25^{0}C, µS/Cm	1980	-	-
4.	Temperature, ^{0}C	27.2	-	-
5.	Turbidity as NTU	BDL	1	5
6.	Chromium as Cr,mg/L	BDL	0.05	No Relaxation
7.	Copper as Cu, mg/L	BDL	0.05	No Relaxation
8.	Nickel as Ni, mg/L	BDL	0.02	No Relaxation
9.	Iron as Fe, mg/L	0.1	0.3	No Relaxation
10.	Zinc as Zn, mg/L	BDL	5.0	15
11.	Lead as Pb, mg/L	BDL	0.01	No Relaxation
12.	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation
13.	Sodium as Na, mg/L	67.7	-	-
14.	Potassium as K, mg/L	11.3	-	-
15.	Sulphates, mg/L	18.8	200	400
16.	Calcium as Ca, mg/L	63	75	200
17.	Total Hardness as CaCO3 , mg/L	337	200	600
18.	Magnesium as Mg, mg/L	44	30	100
19.	Chlorides as Cl, mg/L	199	250	1000
20.	Total Alkalinity as CaCO3,mg/L	280	200	600
21.	Dissolved Phosphates ,mg/L	BDL	-	-
22.	Nitrate Nitrogen as (NO3-N), mg/L	9.6	45	No Relaxation
23.	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample	
24.	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample	
25.	Fluorides as F, mg/L	0.2	1.0	1.5

ND: Not Detected BDL – Below Detection Limit

2. Borewell Water (Near Canteen)

S.No	Parameters	RESULTS	As Per IS 10500:2018)	
			DL	PL
1.	pH @27.2^{0}C	7.26	6.5-8.5	No Relaxation
2.	Total Dissolved Solids, mg/L	992	500	2000
3.	Conductivity@25^{0}C, µS/Cm	1419	-	-
4.	Temperature, ^{0}C	27.2	-	-
5.	Turbidity as NTU	BDL	1	5
6.	Chromium as Cr,mg/L	BDL	0.05	No Relaxation
7.	Copper as Cu, mg/L	BDL	0.05	No Relaxation
8.	Nickel as Ni, mg/L	BDL	0.02	No Relaxation
9.	Iron as Fe, mg/L	BDL	0.3	No Relaxation
10.	Zinc as Zn, mg/L	BDL	5.0	15
11.	Lead as Pb, mg/L	BDL	0.01	No Relaxation
12.	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation
13.	Sodium as Na, mg/L	4.4	-	-
14.	Potassium as K, mg/L	1.0	-	-
15.	Sulphates, mg/L	15.6	200	400
16.	Calcium as Ca, mg/L	53	75	200
17.	Total Hardness as CaCO3 , mg/L	194	200	600
18.	Magnesium as Mg, mg/L	14.7	30	100
19.	Chlorides as Cl, mg/L	111	250	1000
20.	Total Alkalinity as CaCO3,mg/L	149	200	600
21.	Dissolved Phosphates ,mg/L	BDL	-	-
22.	Nitrate Nitrogen as (NO3-N), mg/L	12.4	45	No Relaxation
23.	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample	
24.	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample	
25.	Fluorides as F, mg/L	0.2	1.0	1.5

ND: Not Detected BDL – Below Detection Limit

3. Borewell Water (Sri Siddartha Technology Near ITI)

S.No	Parameters	RESULTS	As Per IS 10500:2018)	
			DL	PL
1.	pH @26.8^{0}C	6.78	6.5-8.5	No Relaxation
2.	Total Dissolved Solids, mg/L	1348	500	2000
3.	Conductivity@25^{0}C, µS/Cm	2076	-	-
4.	Temperature, ^{0}C	26.8	-	-
5.	Turbidity as NTU	BDL	1	5
6.	Chromium as Cr,mg/L	BDL	0.05	No Relaxation
7.	Copper as Cu, mg/L	BDL	0.05	No Relaxation
8.	Nickel as Ni, mg/L	BDL	0.02	No Relaxation
9.	Iron as Fe, mg/L	BDL	0.3	No Relaxation
10.	Zinc as Zn, mg/L	BDL	5.0	15
11.	Lead as Pb, mg/L	BDL	0.01	No Relaxation
12.	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation
13.	Sodium as Na, mg/L	85.7	-	-
14.	Potassium as K, mg/L	6.5	-	-
15.	Sulphates, mg/L	31	200	400
16.	Calcium as Ca, mg/L	70	75	200
17.	Total Hardness as CaCO3 , mg/L	293	200	600
18.	Magnesium as Mg, mg/L	28	30	100
19.	Chlorides as Cl, mg/L	166	250	1000
20.	Total Alkalinity as CaCO3,mg/L	177	200	600
21.	Dissolved Phosphates ,mg/L	BDL	-	-
22.	Nitrate Nitrogen as (NO3-N), mg/L	33.5	45	No Relaxation
23.	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample	
24.	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample	
25.	Fluorides as F, mg/L	0.2	1.0	1.5

ND: Not Detected BDL – Below Detection Limit

4. Borewell Water (Dental College)

S.No	Parameters	RESULTS	As Per IS 10500:2018)	
			DL	PL
1.	pH @27.4^{0}C	7.22	6.5-8.5	No Relaxation
2.	Total Dissolved Solids, mg/L	992	500	2000
3.	Conductivity@25^{0}C, µS/Cm	1535	-	-
4.	Temperature, ^{0}C	27.4	-	-
5.	Turbidity as NTU	BDL	1	5
6.	Chromium as Cr,mg/L	BDL	0.05	No Relaxation
7.	Copper as Cu, mg/L	BDL	0.05	No Relaxation
8.	Nickel as Ni, mg/L	BDL	0.02	No Relaxation
9.	Iron as Fe, mg/L	BDL	0.3	No Relaxation
10.	Zinc as Zn, mg/L	BDL	5.0	15
11.	Lead as Pb, mg/L	BDL	0.01	No Relaxation
12.	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation
13.	Sodium as Na, mg/L	41.7	-	-
14.	Potassium as K, mg/L	9.2	-	-
15.	Sulphates, mg/L	14.8	200	400
16.	Calcium as Ca, mg/L	160	75	200
17.	Total Hardness as CaCO3 , mg/L	279	200	600
18.	Magnesium as Mg, mg/L	31	30	100
19.	Chlorides as Cl, mg/L	104	250	1000
20.	Total Alkalinity as CaCO3,mg/L	224	200	600
21.	Dissolved Phosphates ,mg/L	BDL	-	-
22.	Nitrate Nitrogen as (NO3-N), mg/L	15	45	No Relaxation
23.	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample	
24.	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample	
25.	Fluorides as F, mg/L	0.1	1.0	1.5

ND: Not Detected BDL – Below Detection Limit

5. Borewell Water (Boys Hostel)

S.No	Parameters	RESULTS	As Per IS 10500:2018)	
			DL	PL
1.	pH @26.8^{0}C	7.37	6.5-8.5	No Relaxation
2.	Total Dissolved Solids, mg/L	1308	500	2000
3.	Conductivity@25^{0}C, µS/Cm	2003	-	-
4.	Temperature, ^{0}C	26.8	-	-
5.	Turbidity as NTU	BDL	1	5
6.	Chromium as Cr,mg/L	BDL	0.05	No Relaxation
7.	Copper as Cu, mg/L	BDL	0.05	No Relaxation
8.	Nickel as Ni, mg/L	BDL	0.02	No Relaxation
9.	Iron as Fe, mg/L	0.1	0.3	No Relaxation
10.	Zinc as Zn, mg/L	BDL	5.0	15
11.	Lead as Pb, mg/L	BDL	0.01	No Relaxation
12.	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation
13.	Sodium as Na, mg/L	60.8	-	-
14.	Potassium as K, mg/L	11.1	-	-
15.	Sulphates, mg/L	18.2	200	400
16.	Calcium as Ca, mg/L	63	75	200
17.	Total Hardness as CaCO3 , mg/L	323	200	600
18.	Magnesium as Mg, mg/L	40	30	100
19.	Chlorides as Cl, mg/L	123	250	1000
20.	Total Alkalinity as CaCO3,mg/L	327	200	600
21.	Dissolved Phosphates ,mg/L	BDL	-	-
22.	Nitrate Nitrogen as (NO3-N), mg/L	10.2	45	No Relaxation
23.	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample	
24.	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample	
25.	Fluorides as F, mg/L	0.2	1.0	1.5

ND: Not Detected BDL – Below Detection Limit

7.1.3 GROUND WATER RESULT AND ITS INTERPRETATION

The analysis results indicate that pH of the groundwater samples were found to be within the limits. The TDS and Hardness were found to be exceeding the Disired limits. However, they are within the permissible limits. All other parameters found in the range of prescribed limits. The water quality is potable in nature after giving necessary treatment (U.F + R.O) followed by disinfection process.

All of the parameters for Ground Water samples were found within the permissible limit as per drinking water norms IS 10500:2012. They are not directly using this bore well water for drinking purpose. They have to compulsorily to treat this water before use for domestic and drinking purpose. Based on above data, it is interpreted that the ground water quality meets with the drinking water norms. However, this water shall be used for drinking after conventional treatment.

7.2 STP TREATED WATER

STP treated water was collected and tested for its quality which is discussed in table below:

Table: STP Treated Water

S. No	Parameters	Results		Tolerance Limits	Test Method
		SSAHE	SSIT		
1	pH @ 26.8 ^{0}C	7.95	7.69	6.5-8.5	IS 3025:Part-11:1983 (Reaffirmed 2017)
2	Total Suspended Solids, mg/L	15	2	20	IS 3025:Part-17:1984 (Reaffirmed-2017)
3	Bio-Chemical Oxygen Demand (3 Days at 27^{0}C), mg/L	8.5	4	10	IS 3025:Part-44:1993 (Reaffirmed-2019)
4	Chemical Oxygen Demand, mg/L	46	31.5	50	IS 3025:Part-58:2006 (Reaffirmed-2017)
5	Ammonical nitrogen as NH3-N, mg/L	3.6	BDL	5	APHA 23rd Edition 4500,NH3,B,C: 2017
6	Fecal Coliform, MPN/100ml	35	16	<100	APHA 23rd Edition(9221B): 2017

INTERPRETATION:

The Hospital and SSAHE are having one STP and SSIT is having another STP. All the tested parameters are within the tolerance limits for using on land for gardening. However, further treatment is required in case they propose to utilize for secondary purpose such as Toilet flushing, AC Cooling, Vehicle washing, etc.

7.3 AIR ENVIRONMENT

The ambient air quality monitoring was carried out in accordance with guidelines of Central Pollution Control Board (CPCB) and National Ambient Air Quality Standards (NAAQS) of CPCB of November 2009.

Table: Ambient air quality Results

Sl. No	PARAMETERS	UNIT	RESULTS			STANDARD LIMITS
			Near DG Room Area (SSAHE)	Near DG Room Area (SSIT)	Near Dental College	
1	Particulate Matter(PM10)	µg/m3	44	45.8	42.4	100 µg/m3
2	Particulate Matter(PM2.5)	µg/m3	7.5	9.3	9.8	60 µg/m3
3	Sulphur Di-oxide as SO2	µg/m3	17	19.6	13.2	80 µg/m3
4	Nitrogen Di-oxide as NO2	µg/m3	23.9	24	19	80 µg/m3

INTERPRETATION OF RESULTS:

All the parameters are within the permissible values.

7.4 NOISE ENVIRONMENT

Noise levels were monitored at the main gate area and the values are presented in the table below:

Table: Noise Monitoring Results

S.No	Monitored Location	Results dB (A) Day	Tolerance Limits
1	SSAHE - Near Water Pond	81.9	IS 9989-1981 (Reaffirmed 2014)
2	SSIT - Near College Campus Inside Circle	81.9	
CPCB Standard		**65**	

Noise levels are exceeding the prescribed tolerance limits. The authorities needs to give more emphasize on reducing the noise by controlling the vehicular movement and by taking other measures such as declaring the area sensitive / educational institute, no honking is allowed inside the campus etc.

7.5 STACK MONITORING

Stack monitoring of DG Sets were monitored which are installed in the premises of Medical college and SSIT, the values are presented in the table below:

Table: D G SET

Sl. No	PARAMETERS	UNIT	RESULTS			STANDARD LIMITS
			DG SET-1 (125-KVA) - SSIT	DG SET-1 (125-KVA) - SSAHE	DG SET-2 (125-KVA) – SSAHE NEAR CARDIAC	
1.	Particulate Matter(PM)	$\mu g/m^3$	31.1	28.1	26.3	150 $\mu g/m^3$
2.	Sulphur Di-oxide as SO2	PPM	5	6	9	100 PPM
3.	Oxides of Nitrogen as NOx	PPM	17.1	15	20.4	50 PPM

Sl. No	PARAMETERS	UNIT	RESULTS		STANDARD LIMITS
			DG SET (250-KVA) SSAHE – OPD	DG SET (250-KVA) SSAHE – boys hostel	
1.	Particulate Matter(PM)	$\mu g/m^3$	24.1	26.7	150 $\mu g/m^3$
2.	Sulphur Di-oxide as SO2	PPM	5	6	100 PPM
3.	Oxides of Nitrogen as NOx	PPM	22.6	23.3	50 PPM

INTERPRETATION OF RESULTS:

All the parameters are within the permissible values.

Annexure I.

ANALYSIS / MONITORING REPORTS

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An ISO 9001:2015 & ISO 45001:2018 Certified Company
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E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT

EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Sample Description	Borewell Water (University Block)	9	Sample Receipt on	27.03.2023
3	Date of Analysis Start	27.03.2023	10	Sample RC No	1260
4	Date of Analysis Completed	04.04.2023	11	Sample Code No	EGSSPL/2200
5	Date of Report/ Report No	05.04.2023/EGSSPL/2200	12	Quantity of Sample Received	2Ltrs
6	Sampling Methodology	IS 3025:PART-1:1987 (Reaffirmed 2019)	13	Environmental Conditions	Ambient
7	Appearance of Sample	Colorless Liquid	14	Sampling Time	16:20

S.No	Parameters	Results	As Per IS 10500:2018)		Test Method
			DL	PL	
1	pH @27.2^{0}C	7.40	6.5-8.5	No Relaxation	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Dissolved Solids, mg/L	1287	500	2000	IS 3025:Part-16:1984 (Reaffirmed-2017)
3	Conductivity@25^{0}C, µS/Cm	1980	-	-	IS 3025:Part-14:1985 (Reaffirmed-2019)
4	Temperature, ^{0}C	27.2	-	-	IS 3025:Part-09:1984 (Reaffirmed-2017)
5	Turbidity as NTU	BDL	1	5	IS 3025:Part-10:1984 (Reaffirmed-2017)
6	Chromium as Cr, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
7	Copper as Cu, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
8	Nickel as Ni, mg/L	BDL	0.02	No Relaxation	APHA 23rd Edition:2017-3111 B
9	Iron as Fe, mg/L	0.1	0.3	No Relaxation	APHA 23rd Edition:2017-3111 B
10	Zinc as Zn, mg/L	BDL	5.0	15	APHA 23rd Edition:2017-3111 B
11	Lead as Pb, mg/L	BDL	0.01	No Relaxation	APHA 23rd Edition:2017-3111 B
12	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation	APHA 23rd Edition:2017-3111 B
13	Sodium as Na, mg/L	67.7	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
14	Potassium as K, mg/L	11.3	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
15	Sulphates, mg/L	18.8	200	400	APHA 23rd Edition:2017 4500-SO_4^{2-} E
16	Calcium as Ca, mg/L	63	75	200	IS 3025:Part-40:1991 (Reaffirmed-2019)
17	Total Hardness as $CaCO_3$, mg/L	337	200	600	IS 3025:Part-21:2019
18	Magnesium as Mg, mg/L	44	30	100	IS 3025:Part-46:1994 (Reaffirmed -2019)
19	Chlorides as Cl, mg/L	199.0	250	1000	IS 3025:Part-32:1988 (Reaffirmed-2019)
20	Total Alkalinity as $CaCO_3$, mg/L	280	200	600	IS 3025:Part-23:1986 (Reaffirmed -2019)
21	Dissolved Phosphates ,mg/L	BDL	-	-	IS 3025:Part-31:1988 (Reaffirmed-2019)
22	Nitrate Nitrogen as (NO_3-N), mg/L	9.6	45	No Relaxation	IS 3025:Part-34:1988 (Reaffirmed-2019)
23	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample		APHA 23rd Edition:2017(9221B)
24	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample		IS:15185
25	Fluorides as F, mg/L	0.2	1.0	1.5	APHA 23rd Edition:2017 4500-F^- D

Note: Sample drawn by us

BDL: Below Detection Limit

End of Report

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E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT

EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Sample Description	Borewell Water (Boys Hostel)	9	Sample Receipt on	27.03.2023
3	Date of Analysis Start	27.03.2023	10	Sample RC No	1260
4	Date of Analysis Completed	04.04.2023	11	Sample Code No	EGSSPL/2201
5	Date of Report/ Report No	05.04.2023/EGSSPL/2201	12	Quantity of Sample Received	2Ltrs
6	Sampling Methodology	IS 3025:PART-1:1987 (Reaffirmed 2019)	13	Environmental Conditions	Ambient
7	Appearance of Sample	Colorless Liquid	14	Sampling Time	16:30

S.No	Parameters	Results	As Per IS 10500:2018)		Test Method
			DL	PL	
1	pH @26.8^{0}C	7.37	6.5-8.5	No Relaxation	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Dissolved Solids, mg/L	1308	500	2000	IS 3025:Part-16:1984 (Reaffirmed-2017)
3	Conductivity@25^{0}C, µS/Cm	2003	-	-	IS 3025:Part-14:1985 (Reaffirmed-2019)
4	Temperature, ^{0}C	26.8	-	-	IS 3025:Part-09:1984 (Reaffirmed-2017)
5	Turbidity as NTU	BDL	1	5	IS 3025:Part-10:1984 (Reaffirmed-2017)
6	Chromium as Cr, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
7	Copper as Cu, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
8	Nickel as Ni, mg/L	BDL	0.02	No Relaxation	APHA 23rd Edition:2017-3111 B
9	Iron as Fe , mg/L	0.1	0.3	No Relaxation	APHA 23rd Edition:2017-3111 B
10	Zinc as Zn, mg/L	BDL	5.0	15	APHA 23rd Edition:2017-3111 B
11	Lead as Pb, mg/L	BDL	0.01	No Relaxation	APHA 23rd Edition:2017-3111 B
12	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation	APHA 23rd Edition:2017-3111 B
13	Sodium as Na, mg/L	60.8	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
14	Potassium as K, mg/L	11.1	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
15	Sulphates, mg/L	18.2	200	400	APHA 23rd Edition:2017 4500-SO_4^{2-} E
16	Calcium as Ca, mg/L	63	75	200	IS 3025:Part-40:1991 (Reaffirmed-2019)
17	Total Hardness as $CaCO_3$, mg/L	323	200	600	IS 3025:Part-21:2019
18	Magnesium as Mg, mg/L	40	30	100	IS 3025:Part-46:1994 (Reaffirmed -2019)
19	Chlorides as Cl, mg/L	123	250	1000	IS 3025:Part-32:1988 (Reaffirmed-2019)
20	Total Alkalinity as $CaCO_3$, mg/L	327	200	600	IS 3025:Part-23:1986 (Reaffirmed -2019)
21	Dissolved Phosphates ,mg/L	BDL	-	-	IS 3025:Part-31:1988 (Reaffirmed-2019)
22	Nitrate Nitrogen as (NO_3-N), mg/L	10.2	45	No Relaxation	IS 3025:Part-34:1988 (Reaffirmed-2019)
23	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample		APHA 23rd Edition:2017(9221B)
24	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample		IS:15185
25	Fluorides as F, mg/L	0.2	1.0	1.5	APHA 23rd Edition:2017 4500-F^- D

Note: Sample drawn by us

BDL: Below Detection Limit

End of Report

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E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT

EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Institute of Technology Maralur, Tumkur-572105 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Sample Description	Borewell Water (Sir Siddartha Technology Near ITI)	9	Sample Receipt on	27.03.2023
3	Date of Analysis Start	27.03.2023	10	Sample RC No	1260
4	Date of Analysis Completed	04.04.2023	11	Sample Code No	EGSSPL/2202
5	Date of Report/ Report No	05.04.2023/EGSSPL/2202	12	Quantity of Sample Received	2Ltrs
6	Sampling Methodology	IS 3025:PART-1:1987 (Reaffirmed 2019)	13	Environmental Conditions	Ambient
7	Appearance of Sample	Colorless Liquid	14	Sampling Time	16:30

S.No	Parameters	Results	As Per IS 10500:2018)		Test Method
			DL	PL	
1	pH @26.8^{0}C	6.78	6.5-8.5	No Relaxation	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Dissolved Solids, mg/L	1348	500	2000	IS 3025:Part-16:1984 (Reaffirmed-2017)
3	Conductivity@25^{0}C, µS/Cm	2076	-	-	IS 3025:Part-14:1985 (Reaffirmed-2019)
4	Temperature, ^{0}C	26.8	-	-	IS 3025:Part-09:1984 (Reaffirmed-2017)
5	Turbidity as NTU	BDL	1	5	IS 3025:Part-10:1984 (Reaffirmed-2017)
6	Chromium as Cr, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
7	Copper as Cu, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
8	Nickel as Ni, mg/L	BDL	0.02	No Relaxation	APHA 23rd Edition:2017-3111 B
9	Iron as Fe , mg/L	BDL	0.3	No Relaxation	APHA 23rd Edition:2017-3111 B
10	Zinc as Zn, mg/L	BDL	5.0	15	APHA 23rd Edition:2017-3111 B
11	Lead as Pb, mg/L	BDL	0.01	No Relaxation	APHA 23rd Edition:2017-3111 B
12	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation	APHA 23rd Edition:2017-3111 B
13	Sodium as Na, mg/L	85.7	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
14	Potassium as K, mg/L	6.5	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
15	Sulphates, mg/L	31	200	400	APHA 23rd Edition:2017 4500-SO_4^{2-} E
16	Calcium as Ca, mg/L	70	75	200	IS 3025:Part-40:1991 (Reaffirmed-2019)
17	Total Hardness as $CaCO_3$, mg/L	293	200	600	IS 3025:Part-21:2019
18	Magnesium as Mg, mg/L	28	30	100	IS 3025:Part-46:1994 (Reaffirmed -2019)
19	Chlorides as Cl, mg/L	166	250	1000	IS 3025:Part-32:1988 (Reaffirmed-2019)
20	Total Alkalinity as $CaCO_3$, mg/L	177	200	600	IS 3025:Part-23:1986 (Reaffirmed -2019)
21	Dissolved Phosphates ,mg/L	BDL	-	-	IS 3025:Part-31:1988 (Reaffirmed-2019)
22	Nitrate Nitrogen as (NO_3-N), mg/L	33.5	45	No Relaxation	IS 3025:Part-34:1988 (Reaffirmed-2019)
23	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample		APHA 23rd Edition:2017(9221B)
24	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample		IS:15185
25	Fluorides as F, mg/L	0.2	1.0	1.5	APHA 23rd Edition:2017 4500-F^- D

Note: Sample drawn by us

BDL: Below Detection Limit

End of Report

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E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT

EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Institute of Technology Maralur, Tumkur-572105 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Sample Description	Borewell Water (Near Canteen)	9	Sample Receipt on	27.03.2023
3	Date of Analysis Start	27.03.2023	10	Sample RC No	1260
4	Date of Analysis Completed	04.04.2023	11	Sample Code No	EGSSPL/2203
5	Date of Report/ Report No	05.04.2023/EGSSPL/2203	12	Quantity of Sample Received	2Ltrs
6	Sampling Methodology	IS 3025:PART-1:1987 (Reaffirmed 2019)	13	Environmental Conditions	Ambient
7	Appearance of Sample	Colorless Liquid	14	Sampling Time	16:35

S.No	Parameters	Results	As Per IS 10500:2018)		Test Method
			DL	PL	
1	pH @27.2^{0}C	7.26	6.5-8.5	No Relaxation	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Dissolved Solids, mg/L	992	500	2000	IS 3025:Part-16:1984 (Reaffirmed-2017)
3	Conductivity@25^{0}C, µS/Cm	1419	-	-	IS 3025:Part-14:1985 (Reaffirmed-2019)
4	Temperature, ^{0}C	27.2	-	-	IS 3025:Part-09:1984 (Reaffirmed-2017)
5	Turbidity as NTU	BDL	1	5	IS 3025:Part-10:1984 (Reaffirmed-2017)
6	Chromium as Cr, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
7	Copper as Cu, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
8	Nickel as Ni, mg/L	BDL	0.02	No Relaxation	APHA 23rd Edition:2017-3111 B
9	Iron as Fe , mg/L	BDL	0.3	No Relaxation	APHA 23rd Edition:2017-3111 B
10	Zinc as Zn, mg/L	BDL	5.0	15	APHA 23rd Edition:2017-3111 B
11	Lead as Pb, mg/L	BDL	0.01	No Relaxation	APHA 23rd Edition:2017-3111 B
12	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation	APHA 23rd Edition:2017-3111 B
13	Sodium as Na, mg/L	4.4	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
14	Potassium as K, mg/L	1.0	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
15	Sulphates, mg/L	15.6	200	400	APHA 23rd Edition:2017 4500-SO_4^{2-} E
16	Calcium as Ca, mg/L	53	75	200	IS 3025:Part-40:1991 (Reaffirmed-2019)
17	Total Hardness as $CaCO_3$, mg/L	194	200	600	IS 3025:Part-21:2019
18	Magnesium as Mg, mg/L	14.7	30	100	IS 3025:Part-46:1994 (Reaffirmed -2019)
19	Chlorides as Cl, mg/L	111	250	1000	IS 3025:Part-32:1988 (Reaffirmed-2019)
20	Total Alkalinity as $CaCO_3$, mg/L	149	200	600	IS 3025:Part-23:1986 (Reaffirmed -2019)
21	Dissolved Phosphates ,mg/L	BDL	-	-	IS 3025:Part-31:1988 (Reaffirmed-2019)
22	Nitrate Nitrogen as (NO_3-N), mg/L	12.4	45	No Relaxation	IS 3025:Part-34:1988 (Reaffirmed-2019)
23	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample		APHA 23rd Edition:2017(9221B)
24	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample		IS:15185
25	Fluorides as F, mg/L	0.2	1.0	1.5	APHA 23rd Edition:2017 4500-F^- D

Note: Sample drawn by us

BDL:Below Detection Limit

End of Report

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E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT

EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Sample Description	Borewell Water (Dental College)	9	Sample Receipt on	27.03.2023
3	Date of Analysis Start	27.03.2023	10	Sample RC No	1260
4	Date of Analysis Completed	04.04.2023	11	Sample Code No	EGSSPL/2204
5	Date of Report/ Report No	05.04.2023/EGSSPL/2204	12	Quantity of Sample Received	2Ltrs
6	Sampling Methodology	IS 3025:PART-1:1987 (Reaffirmed 2019)	13	Environmental Conditions	Ambient
7	Appearance of Sample	Colorless Liquid	14	Sampling Time	16:35

S.No	Parameters	Results	As Per IS 10500:2018)		Test Method
			DL	PL	
1	pH @27.4^{0}C	7.22	6.5-8.5	No Relaxation	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Dissolved Solids, mg/L	992	500	2000	IS 3025:Part-16:1984 (Reaffirmed-2017)
3	Conductivity@25^{0}C, µS/Cm	1535	-	-	IS 3025:Part-14:1985 (Reaffirmed-2019)
4	Temperature, ^{0}C	27.4	-	-	IS 3025:Part-09:1984 (Reaffirmed-2017)
5	Turbidity as NTU	BDL	1	5	IS 3025:Part-10:1984 (Reaffirmed-2017)
6	Chromium as Cr, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
7	Copper as Cu, mg/L	BDL	0.05	No Relaxation	APHA 23rd Edition:2017-3111 B
8	Nickel as Ni, mg/L	BDL	0.02	No Relaxation	APHA 23rd Edition:2017-3111 B
9	Iron as Fe , mg/L	BDL	0.3	No Relaxation	APHA 23rd Edition:2017-3111 B
10	Zinc as Zn, mg/L	BDL	5.0	15	APHA 23rd Edition:2017-3111 B
11	Lead as Pb, mg/L	BDL	0.01	No Relaxation	APHA 23rd Edition:2017-3111 B
12	Cadmium as Cd, mg/L	BDL	0.003	No Relaxation	APHA 23rd Edition:2017-3111 B
13	Sodium as Na, mg/L	41.7	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
14	Potassium as K, mg/L	9.2	-	-	IS 3025:Part-45:1993 (Reaffirmed-2019)
15	Sulphates, mg/L	14.8	200	400	APHA 23rd Edition:2017 4500-SO_4^{2-} E
16	Calcium as Ca, mg/L	160	75	200	IS 3025:Part-40:1991 (Reaffirmed-2019)
17	Total Hardness as $CaCO_3$, mg/L	279	200	600	IS 3025:Part-21:2019
18	Magnesium as Mg, mg/L	31	30	100	IS 3025:Part-46:1994 (Reaffirmed -2019)
19	Chlorides as Cl, mg/L	104	250	1000	IS 3025:Part-32:1988 (Reaffirmed-2019)
20	Total Alkalinity as $CaCO_3$, mg/L	224	200	600	IS 3025:Part-23:1986 (Reaffirmed -2019)
21	Dissolved Phosphates ,mg/L	BDL	-	-	IS 3025:Part-31:1988 (Reaffirmed-2019)
22	Nitrate Nitrogen as (NO_3-N), mg/L	15	45	No Relaxation	IS 3025:Part-34:1988 (Reaffirmed-2019)
23	Fecal Coliform, MPN/100ml	Absent	Shall not be detectable in 100ml Sample		APHA 23rd Edition:2017(9221B)
24	E.Coli, CFU/100ml	Absent	Shall not be detectable in 100ml Sample		IS:15185
25	Fluorides as F, mg/L	0.1	1.0	1.5	APHA 23rd Edition:2017 4500-F^- D

Note: Sample drawn by us

BDL:Below Detection Limit

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48/A-4, KIADB Industrial Area, Doddaballapur, Bengaluru-561203
E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	7	Sample Collected On	27.03.2023
2	Sample Description	STP–Treated Water (SSAHE)	8	Sample Receipt On	27.03.2023
3	Date of Analysis Start	27.03.2023	9	Sample RC No	1261
4	Date of Analysis Completed/Date of Report	03.04.2023/05.04.2023	10	Sample Code No	EGSSPL/2205
5	Report No	EGSSPL/2205	11	Quantity of Sample Received	2Ltrs
6	Appearance of Sample	Colorless Liquid	12	Sample Particulars	Sample received in a can

S.No	Parameters	Results	Tolerance Limits	Test Method
1	pH @26.8^{0}C	7.95	6.5-9.0	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Suspended Solids, mg/L	15	20	IS 3025:Part-17:1984 (Reaffirmed-2017)
3	Bio-Chemical Oxygen Demand, (3Days at 27^{0}C), mg/L	8.5	10	IS 3025:Part-44:1993 (Reaffirmed-2019)
4	Chemical Oxygen Demand, mg/L	46	50	IS 3025:Part-58:2006 (Reaffirmed-2017)
5	Ammonical Nitrogen as NH_3-N, mg/L	3.6	5	APHA 23rd Edition 2017: 4500,NH_3, B,C
6	Fecal Coliform, MPN/100 mL	35	<100	APHA 23rd Edition(9221B):2017

Note: Sample drawn by us

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CIN NO: U74140KA2005PTC036991

TEST REPORT EGSSPL/TF/09/01

1	Customer Name & Address	M/S. Sri Siddhartha Institute of Technology Maralur, Tumkur-572105 Karnataka, India.	7	Sample Collected On	27.03.2023
2	Sample Description	STP–Treated Water	8	Sample Receipt On	27.03.2023
3	Date of Analysis Start	27.03.2023	9	Sample RC No	1261
4	Date of Analysis Completed/Date of Report	03.04.2023/05.04.2023	10	Sample Code No	EGSSPL/2208
5	Report No	EGSSPL/2208	11	Quantity of Sample Received	2Ltrs
6	Appearance of Sample	Colorless Liquid	12	Sample Particulars	Sample received in a can

S.No	Parameters	Results	Tolerance Limits	Test Method
1	pH @26.9^{0}C	7.69	6.5-9.0	IS 3025:Part-11:1983 (Reaffirmed-2022)
2	Total Suspended Solids, mg/L	2	20	IS 3025:Part-17:1984 (Reaffirmed-2017)
3	Bio-Chemical Oxygen Demand, (3Days at 27^{0}C), mg/L	4	10	IS 3025:Part-44:1993 (Reaffirmed-2019)
4	Chemical Oxygen Demand, mg/L	31.5	50	IS 3025:Part-58:2006 (Reaffirmed-2017)
5	Ammonical Nitrogen as NH_3-N, mg/L	BDL	5	APHA 23rd Edition 2017: 4500,NH_3, B,C
6	Fecal Coliform, MPN/100 mL	16	<100	APHA 23rd Edition(9221B):2017

BDL: Below Detection Limit

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CIN: U74140KA2005PTC036991

EGSSPL/A/TF/01/00

Ambient Air Quality Analysis Report

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H.Road, Tumkur-572107 Karnataka, India.	6	Samples Particulars	Ambient Air Quality Monitoring
2	Name of the Location	Near Dental College	7	Sample Code No	EGSSPL/AAQ/448
3	Date of Sampling/ Date of Sample Received	27.03.2023/27.03.2023	8	Sample Collected By	Mr.Veeranna
4	Date of Analysis Completed/ Date of Report	04.04.2023/05.04.2023	9	Monitoring Duration	8hrs
5	Monitoring Done By	Eco Green Solution Systems Pvt. Ltd.	10	Report No	EGSSPL/AAQ/448

Instrument Details	**$PM_{2.5}$ (Fine Particulate Sampler)**	**PM_{10} (Respirable Dust Sampler)**
Make/Model No	Eco Green Instruments/ EGSS-007	Eco Green Instruments/ EGSS-NL-011
S.No	002	002
Instrument Calibrated Date	17.02.2022	17.02.2022
Instrument Calibration Due Date	16.02.2023	16.02.2023

S. No	PARAMETERS	UNIT	RESULTS	STANDARD LIMITS	PROTOCOL
1	Particulate Matter(PM_{10})	$\mu g/m^3$	42.4	100 $\mu g/m^3$	IS 5182 (Part 23):2017
2	Particulate Matter($PM_{2.5}$)	$\mu g/m^3$	9.8	60 $\mu g/m^3$	IS 5182 (Part 24):2019
3	Sulphur Dioxide as SO_2	$\mu g/m^3$	13.2	80 $\mu g/m^3$	IS 5182 (Part 2): 2017
4	Nitrogen Dioxide as NO_2	$\mu g/m^3$	19	80 $\mu g/m^3$	IS 5182 (Part 6): 2017

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CIN: U74140KA2005PTC036991

EGSSPL/A/TF/01/00

Ambient Air Quality Analysis Report

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H.Road, Tumkur-572107 Karnataka, India.	6	Samples Particulars	Ambient Air Quality Monitoring
2	Name of the Location	Near DG Room Area	7	Sample Code No	EGSSPL/AAQ/449
3	Date of Sampling/Date of Sample Received	27.03.2023/28.03.2023	8	Sample Collected By	Mr.Veeranna
4	Date of Analysis Completed/Date of Report	04.04.2023/05.04.2023	9	Monitoring Duration	8hrs
5	Monitoring Done By	Eco Green Solution Systems Pvt. Ltd.	10	Report No	EGSSPL/AAQ/449

Instrument Details	**$PM_{2.5}$ (Fine Particulate Sampler)**	**PM_{10} (Respirable Dust Sampler)**
Make/Model No	Eco Green Instruments/ EGSS-007	Eco Green Instruments/ EGSS-NL-011
S.No	001	001
Instrument Calibrated Date	18.02.2022	18.02.2022
Instrument Calibration Due Date	17.02.2023	17.02.2023

S. No	PARAMETERS	UNIT	RESULTS	STANDARD LIMITS	PROTOCOL
1	Particulate Matter(PM_{10})	µg/m³	44.0	100 µg/m³	IS 5182 (Part 23):2017
2	Particulate Matter($PM_{2.5}$)	µg/m³	7.5	60 µg/m³	IS 5182 (Part 24):2019
3	Sulphur Dioixde as SO_2	µg/m³	17.0	80 µg/m³	IS 5182 (Part 2): 2017
4	Nitrogen Dioxide as NO_2	µg/m³	23.9	80 µg/m³	IS 5182 (Part 6): 2017

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CIN: U74140KA2005PTC036991

EGSSPL/A/TF/01/00

Ambient Air Quality Analysis Report

1	Customer Name & Address	M/S. Sri Siddhartha Institute of Technology Maralur, Tumkur-572105 Karnataka, India.	6	Samples Particulars	Ambient Air Quality Monitoring
2	Name of the Location	Near DG Room Area	7	Sample Code No	EGSSPL/AAQ/450
3	Date of Sampling/Date of Sample Received	27.03.2023/28.03.2023	8	Sample Collected By	Mr.Veeranna
4	Date of Analysis Completed/Date of Report	04.04.2023/05.04.2023	9	Monitoring Duration	8hrs
5	Monitoring Done By	Eco Green Solution Systems Pvt. Ltd.	10	Report No	EGSSPL/AAQ/450

Instrument Details	**$PM_{2.5}$ (Fine Particulate Sampler)**	**PM_{10} (Respirable Dust Sampler)**
Make/Model No	Eco Green Instruments/ EGSS-007	Eco Green Instruments/ EGSS-NL-011
S.No	001	001
Instrument Calibrated Date	18.02.2022	18.02.2022
Instrument Calibration Due Date	17.02.2023	17.02.2023

S. No	PARAMETERS	UNIT	RESULTS	STANDARD LIMITS	PROTOCOL
1	Particulate Matter(PM_{10})	µg/m³	45.8	100 µg/m³	IS 5182 (Part 23):2017
2	Particulate Matter($PM_{2.5}$)	µg/m³	9.3	60 µg/m³	IS 5182 (Part 24):2019
3	Sulphur Dioixde as SO_2	µg/m³	19.6	80 µg/m³	IS 5182 (Part 2): 2017
4	Nitrogen Dioxide as NO_2	µg/m³	24.0	80 µg/m³	IS 5182 (Part 6): 2017

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E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN NO: U74140KA2005PTC036991

TEST REPORT

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road-572107 Karnataka, India.	6	Sample Collected On	27.03.2023
2	Date of Data Downloaded	04.04.2023	7	Sample Receipt On	27.03.2023
3	Report No	EGSSPL/EN-001/22-23	8	Sampling Methodology	IS 9989-1981 (RA-2014)
4	Sample Collected By	M/S. Eco Green Solution Systems Pvt. Ltd. 48/A-4, KIADB Industrial Area, Veerapura Post, Doddaballapur, Bengaluru-561203	9	Sample Code No	EN-001/22-23
5	Particulars of the Instrument Used	Sound Level Meter	10	Environmental Conditions	Normal

Instrument Details	**Sound Level Meter**
Make/ Model No	HTC/SL 1352
Instrument Calibrated Date	25.07.2022
Instrument Calibration Due Date	24.07.2023

Results (Day Time)

S.No	**Monitored Location**	**Results**			**Standard Limit**
		Min	**Max**	**Leq in dB (A)**	
Ambient Noise Monitoring					
1	Near Water Pond	80.3	83.5	81.9	**Limits as per KSPCB in 75 dB(A) Leq Max**

Note: All readings are taken at a distance of 1mtr from the location.

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CIN NO: U74140KA2005PTC036991

TEST REPORT

1	Customer Name & Address	M/S. Sri Siddhartha Institute of Technology Maralur, Tumkur-572105 Karnataka, India.	6	Sample Collected On	27.03.2023
2	Date of Data Downloaded	04.04.2023	7	Sample Receipt On	27.03.2023
3	Report No	EGSSPL/EN-002/22-23	8	Sampling Methodology	IS 9989-1981 (RA-2014)
4	Sample Collected By	M/S. Eco Green Solution Systems Pvt. Ltd. 48/A-4, KIADB Industrial Area, Veerapura Post, Doddaballapur, Bengaluru-561203	9	Sample Code No	EN-002/22-23
5	Particulars of the Instrument Used	Sound Level Meter	10	Environmental Conditions	Normal

Instrument Details	**Sound Level Meter**
Make/ Model No	HTC/SL 1352
Instrument Calibrated Date	25.07.2022
Instrument Calibration Due Date	24.07.2023

Results (Day Time)

S.No	**Monitored Location**	**Results**			**Standard Limit**
		Min	**Max**	**Leq in dB (A)**	
Ambient Noise Monitoring					
1	Near College Campus Inside Circle	78.2	83.5	81.9	**Limits as per KSPCB in 75 dB(A) Leq Max**

Note: All readings are taken at a distance of 1mtr from the location.

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CIN: U74140KA2005PTC036991

EGSSPL/A/TF/01/00

TEST REPORT

1	Customer Name & Address	M/S. Sri Siddhartha Institute of Technology Maralur, Tumkur-572105 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Stack Location	DG SET-1 (125-KVA)	9	Sample Receipt On	27.03.2023
3	Date of Analysis Completed/Date of Report	04.04.2023/05.04.2023	10	Sample Code No	SE-3002
4	Sampling Methodology	IS:11255 (Part-3):2008 (Reaffirmed 2018)	11	Environmental Conditions	Ambient
5	Report No	EGSSPL/SE/3002/22-23	12	Sample Collected By	Mr.Veeranna
6	Particulars of the Instruments Used	Stack Monitoring Kit & Flue Gas Analyser	13	Instrument S.No/Model	08-DTI-2015/ EGSS-009 & FGA-53X
7	Instruments Calibrated Date	16.02.2023 & 30.08.2022	14	Instruments Calibration Due Date	15.02.2024 & 29.08.2023

DATA COLLECTED DETAILS

1	Date of Monitoring	27.03.2023
2	Manometer Reading (H) mm (Average)	7.4
3	Stack Gas Temperature (^oC)	123
4	Ambient Temperature (^oC)	31
5	Stack Gas Velocity (m/s)	11.3
6	Rate of Sampling	33
7	Nozzle Used	1/4" Dia = 6.35 X 10^{-5}
8	Pitot Tube Constant	0.9107
9	Period of Sampling in Minutes	30
10	Stack Diameter (m)	0.26
11	Height of the Stack (m)	7mtr from ARL

S. No	Parameters	Unit	Results	Protocol	Standard Limits
1	Particulate Matter as PM	mg/Nm^3	31.1	IS:11255 (Part-1) 1985 (Reaffirmed 2019)	150 mg/Nm^3
2	Sulphur dioxide as SO_2	PPM	5.0	EGSSPL/ST/SOP/FGA/001	100PPM
3	Oxides of Nitrogen as NO_x	PPM	17.1	EGSSPL/ST/SOP/FGA/002	50PPM

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EGSSPL/A/TF/01/00

TEST REPORT

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Stack Location	DG SET-1 (125 KVA)	9	Sample Receipt On	27.03.2023
3	Date of Analysis Completed/Date Of Report	04.04.2023/05.04.2023	10	Sample Code No	SE-3003
4	Sampling Methodology	IS:11255 (Part-3):2008 (Reaffirmed 2018)	11	Environmental Conditions	Ambient
5	Report No	EGSSPL/SE/3003/22-23	12	Sample Collected By	Mr.Veeranna
6	Particulars of the Instrument Used	Stack Monitoring Kit & Flue Gas Analyser	13	Instrument S.No/Model	08-DTI-2015/ EGSS-009 & FGA-53X
7	Instrument Calibrated Date	16.02.2023 & 30.08.2022	14	Instruments Calibration Due Date	15.02.2024 & 29.08.2023

DATA COLLECTED DETAILS

1	Date of Monitoring	27.03.2023
2	Manometer Reading (H) mm (Average)	8.1
3	Stack Gas Temperature (^oC)	97
4	Ambient Temperature (^oC)	30
5	Stack Gas Velocity (m/s)	11.4
6	Rate of Sampling	35
7	Nozzle Used	1/4" Dia = 6.35 X 10^{-5}
8	Pitot Tube Constant	0.9107
9	Period of Sampling in Minutes	28
10	Stack Diameter (m)	0.26
11	Height of the Stack (m)	7mtr from ARL

S. No	Parameters	Unit	Results	Protocol	Standard Limits
1	Particulate Matter as PM	mg/Nm^3	28.1	IS:11255 (Part-1) 1985 (Reaffirmed 2019)	150 mg/Nm^3
2	Sulphur dioxide as SO_2	PPM	6.0	EGSSPL/ST/SOP/FGA/001	100PPM
3	Oxides of Nitrogen as NO_x	PPM	15	EGSSPL/ST/SOP/FGA/002	50PPM

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TEST REPORT

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Stack Location	DG SET-2 Cardiac	9	Sample Receipt On	27.03.2023
3	Date of Analysis Completed/Date of Report	04.04.2023/05.04.2023	10	Sample Code No	SE-3004
4	Sampling Methodology	IS:11255 (Part-3):2008 (Reaffirmed 2018)	11	Environmental Conditions	Ambient
5	Report No	EGSSPL/SE/3004/22-23	12	Sample Collected By	Mr.Veeranna
6	Particulars of the Instrument Used	Stack Monitoring Kit & Flue Gas Analyser	13	Instrument S.No/Model	08-DTI-2015/ EGSS-009 & FGA-53X
7	Instrument Calibrated Date	16.02.2023 & 30.08.2022	14	Instruments Calibration Due Date	15.02.2024 & 29.08.2023

DATA COLLECTED DETAILS

1	Date of Monitoring	27.03.2023
2	Manometer Reading (H) mm (Average)	7.7
3	Stack Gas Temperature (^oC)	109
4	Ambient Temperature (^oC)	30
5	Stack Gas Velocity (m/s)	11.3
6	Rate of Sampling	34
7	Nozzle Used	1/4" Dia = 6.35 X 10^{-5}
8	Pitot Tube Constant	0.9107
9	Period of Sampling in Minutes	29
10	Stack Diameter (m)	0.26
11	Height of the Stack (m)	7mtr from ARL

S. No	Parameters	Unit	Results	Protocol	Standard Limits
1	Particulate Matter as PM	mg/Nm^3	26.3	IS:11255 (Part-1) 1985 (Reaffirmed 2019)	150 mg/Nm^3
2	Sulphur dioxide as SO_2	PPM	9.0	EGSSPL/ST/SOP/FGA/001	100PPM
3	Oxides of Nitrogen as NO_x	PPM	20.4	EGSSPL/ST/SOP/FGA/002	50PPM

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TEST REPORT OF PROCESS EMISSION

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Stack Location	DG OPD Block 250 KVA	9	Sample Receipt On	27.03.2023
3	Date of Analysis Completed/Date of Report	04.04.2023/05.04.2023	10	Sample Code No	SE-3005
4	Sampling Methodology	IS:11255 (Part-3):2008 (Reaffirmed 2018)	11	Environmental Conditions	Ambient
5	Report No	EGSSPL/SE/3005/22-23	12	Sample Collected By	Mr.Veeranna
6	Particulars of the Instrument Used	Stack Monitoring Kit & Flue Gas Analyser	13	Instrument S.No/Model	08-DTI-2015/ EGSS-009 & FGA-53X
7	Instrument Calibrated Date	16.02.2023 & 30.08.2022	14	Instruments Calibration Due Date	15.02.2024 & 29.08.2023

DATA COLLECTED DETAILS

1	Date of Monitoring	27.03.2023
2	Manometer Reading (H) mm (Average)	7.6
3	Stack Gas Temperature (^oC)	107
4	Ambient Temperature (^oC)	30
5	Stack Gas Velocity (m/s)	11.2
6	Rate of Sampling	34
7	Nozzle Used	1/4" Dia = 6.35 X 10^{-5}
8	Pitot Tube Constant	0.9107
9	Period of Sampling in Minutes	29
10	Stack Diameter (m)	0.26
11	Height of the Stack (m)	7mtr from ARL

S. No	Parameters	Unit	Results	Protocol	Standard Limits
1	Particulate Matter as PM	mg/Nm^3	24.1	IS:11255 (Part-1) 1985 (Reaffirmed 2019)	150 mg/Nm^3
2	Sulphur dioxide as SO_2	PPM	5.0	EGSSPL/ST/SOP/FGA/001	100PPM
3	Oxides of Nitrogen as NO_x	PPM	22.6	EGSSPL/ST/SOP/FGA/002	50PPM

Authorized Signatory
S.Asokan

ECO GREEN SOLUTION SYSTEMS PVT LTD

Recognized by Ministry Of Environment & Forests (MOEF)
Govt.Of India, New Delhi, Dt: 25.02.2019 to 24.02.2024
An ISO 9001:2015 & ISO 45001:2018 Certified Company
48/A-4, KIADB Industrial Area, Doddaballapur, Bengaluru-561203
E-mail: lab@egsspl.in, ecogreen@egsspl.in

CIN: U74140KA2005PTC036991

EGSSPL/A/TF/01/00

TEST REPORT

1	Customer Name & Address	M/S. Sri Siddhartha Academy of Higher Education Agalakote, B.H. Road, Tumkur-572107 Karnataka, India.	8	Sample Collected On	27.03.2023
2	Stack Location	DG Set 250 KVA (Boys Hostel)	9	Sample Receipt On	27.03.2023
3	Date of Analysis Completed/Date Of Report	04.04.2023/05.04.2023	10	Sample Code No	SE-3006
4	Sampling Methodology	IS:11255 (Part-3):2008 (Reaffirmed 2018)	11	Environmental Conditions	Ambient
5	Report No	EGSSPL/SE/3006/22-23	12	Sample Collected By	Mr.Veeranna
6	Particulars of the Instrument Used	Stack Monitoring Kit & Flue Gas Analyser	13	Instrument S.No/Model	08-DTI-2015/ EGSS-009 & FGA-53X
7	Instrument Calibrated Date	16.02.2023 & 30.08.2022	14	Instruments Calibration Due Date	15.02.2024 & 29.08.2023

DATA COLLECTED DETAILS

1	Date of Monitoring	27.03.2023
2	Manometer Reading (H) mm (Average)	8.8
3	Stack Gas Temperature (^oC)	99
4	Ambient Temperature (^oC)	30
5	Stack Gas Velocity (m/s)	11.6
6	Rate of Sampling	36
7	Nozzle Used	1/4" Dia = 6635 X 10^{-5}
8	Pitot Tube Constant	0.9107
9	Period of Sampling in Minutes	28
10	Stack Diameter (m)	0.26
11	Height of the Stack (m)	12mtrs from AGL

S.No	Parameters	Unit	Results	Protocol	Standard Limits
1	Particulate Matter as PM	mg/Nm^3	26.7	IS:11255 (Part-1) 1985 (Reaffirmed 2019)	150 mg/Nm^3
2	Sulphur dioxide as SO_2	PPM	6.0	EGSSPL/ST/SOP/FGA/001	Not Specified
3	Oxides of Nitrogen as NO_x	PPM	23.3	EGSSPL/ST/SOP/FGA/002	Not Specified

Authorized Signatory
S.Asokan