

# TECHNICAL REPORT OF GREEN AUDIT



*Submitted to*

**LITTLE FLOWER DEGREE COLLEGE**  
**UPPAL, HYDERABAD – 500 039, TELANGANA**

*Date of Audit: 19.04.2021*

*Valid till: 18.04.2024*



*Submitted by*

**NATURE SCIENCE FOUNDATION**

**(A Unique Research and Development Centre for Society Improvement)**  
**[ISO 9001:2015 Certified and Ministry of MSME Registered Organization]**

**No. 2669, LIG-II, Gandhi Managar, Peelamedu**

**Coimbatore 641 004, Tamil Nadu, India**

**Phone: 0422 2510006, Mobile: 9566777255, 9566777258**

**Email: [director@nsfonline.org.in](mailto:director@nsfonline.org.in)**

## CONTENTS

S.No.	Details of Reports	Page No
1.	General Introduction	3
1.1.	Introduction	3
1.2.	Environment Friendly Campus	3
1.3.	About Nature Science Foundation (NSF)	3
1.4.	About the organization	4
1.5.	Audit Team Details	5
1.6.	List of Instruments used in the Inspection Process	5
1.7.	Use of Personal Protective Equipment (PPE)	7
2.	Green Audit	9
2.1.	Introduction	9
2.2.	Importance of green audit	9
2.3.	Green audit observations	10
2.3.1.	Facilities for Human Comforts	10
2.3.2.	Natural topography, vegetation and monitoring	10
2.3.3.	Landscape design and soil erosion control	11
2.3.4.	Establishment of different gardens, vertical landscaping and roof gardens	11
2.3.5.	Survey of Flora and Fauna	12
2.4.	Air quality audit observations	12
2.5.	Atmospheric oxygen level measurements analysis and interpretation	13
3	Conclusion	15
4	References	16
5	Certificates of Nature Science Foundation	18
6	Certificates of Lead Auditors	24

# 1. GENERAL INTRODUCTION

## 1.1. Introduction

Green campus is an area of the Organization or the Organization as a whole itself contributing to have an infrastructure or development that is structured/planned to incur less energy, less water, less or no CO<sub>2</sub> emission and less or pollution free environment. Green Audit is a tool to evaluate environment management system which is systematically executed to protect and preserve the environment. Green audit constitutes the environmental friendly practices and education combined to promote sustenance of green environment by adopting user-friendly technology within the campus. It creates awareness on environmental ethics, resolves environmental issues and offers solutions to various social and economic needs. It strengthens the concept of ‘Green Building’ and ‘Oxygenated Building’ which in turn provides a healthy atmosphere to the stakeholders.

## 1.2. Environment Friendly Campus

As stated earlier, Organization is liable to provide an eco-friendly atmosphere along with good quality of drinking water facility to all the stakeholders. Manuring the cultivated plants/grown within the campus may be applied with organic manure, cow dung, farmyard manure and vermicompost instead of using chemical fertilizers. All non-compostable and single-use disposable plastic items, plastic utensils, plastic straws and stirrers should be avoided. Demonstration / awareness programme on establishing plastic-free environment and utility of organic alternatives for all incoming and current students, staff and faculty should be organized. Reduction of use of papers alternated with e-services, e-circulars, etc., and proper disposal of wastes, recycling and suitable waste management system should be considered to establish environment friendly campus.

The term ‘auditing’ is to examine the management practices and to evaluate performance of an organization in relation to environmental issues. World along with Associated Chambers of Commerce and Industry of India (ASSOCHAM), Green Building Council (IGBC) and Green Ratings Systems (GBCRS), Green Rating for Integrated Habitat Assessment (GRIHA), Bureau of Energy Efficiency (BEE), Leadership in Energy and Environmental Design (LEED), CII-GreenCo – GreenCo Rating System (CII-GRS), Food Safety Management System & Occupational Safety & Health (FSMS), Swachh Bharath under India Clean Mission (SBICM) and International Standard Organization (ISO 2021) have formulated a series of standards in the field of environmental auditing. These standards are basically intended to guide organizations and auditors on the general principles common to the execution of environmental audits.

## 1.3. About Nature Science Foundation (NSF)

NSF is the ISO QMS (9001:2015) Certified and registered with Ministry of Micro, Small and Medium Enterprise (MSME), Government of India Organization functioning energetically towards the noble cause of nature conservation and environmental protection. NSF is managed by a Board of Trustees which is a Public Charitable Trust registered under the TN Societies registration Act 1975 (TN Act 27 of 1975) on 29<sup>th</sup> November, 2017 at Peelamedu, Coimbatore 641 004, Tamil Nadu, India with Certificate

of Registration No. 114 / 2017. In addition, NSF has 12AA, 80G and Form 10AC certificates for income tax exemption and implanting various Government schemes. The main motto of the NSF is 'Save the Nature to Save the Future' and 'Go Green to Save the Planet'.

#### **1.4. About the Organization**

##### **Little Flower Degree College**

Little Flower Degree College, Uppal is a Christian Minority institution established by the Montfort Brothers of St. Gabriel. It was started in 2008 as a part of Little Flower Junior College, Hyderabad. On 21 st January 2023, LFDC has celebrated Quindecennial to commemorate its fifteenth year in its journey towards excellence in imparting education.

##### **Vision:**

Quality education that fosters academic excellence, value enrichment, social responsibility, and promotes holistic development, inclusivity and nurturing individuals who contribute positively to society.

##### **Mission:**

Cultivate academic excellence, instil ethical values that promote integrity, social responsibility through community engagement and prepare individuals with essential skills to navigate the challenges of the dynamic world and foster holistic development by embracing diverse perspectives.

- To encourage staff and students to strive for the highest standards in academics, sports, and extracurricular activities.
- To instil honesty, responsibility, and moral uprightness in all aspects of life.
- To enhance skills to face the challenges of the competitive world.
- To celebrate the diverse talents and interests.
- To promote a spirit of selflessness and compassion towards others.
- To develop responsible leaders in society.
- To cultivate Self Discipline, Self-esteem and a strong work ethic.
- To Nurture spiritual development within an ethical framework.

## 1.5. Audit Details

1. **Date of Audit** : **19.04.2021**
2. **Audit Site** : **Little Flower Degree College**  
Uppal,R.R dist(Medchal-Malkajgiri Dist New)  
Hyderabad-500039, Telangana, India
3. **Inspection Body** : **Nature Science Foundation**  
Coimbatore, Tamil Nadu, India.
4. **Audit Scope** : **Green, Environment and Energy Audits**
5. **Name of the Auditing Chairman** : **Mrs. S. Rajalakshmi**  
ISO QMS, EMS and EnMS Certified Lead Auditor, Founder & Chairman of NSF.
6. **Name of the Auditing Team Leader** : **Dr. D. Vinoth Kumar**  
ISO QMS, EMS and EnMS Certified Lead Auditor, Joint Director, NSF.
7. **Name of the Lead Auditor for Green Audit** : **Dr. R. Mary Josephine**  
ISO EMS and EnMS Certified Lead Auditor.
8. **Name of the Lead Auditor for Environment Audit** : **Ms. V. Sri Santhya**  
ISO EMS and IGBC Certified Lead Auditor.
9. **Name of the Lead Auditor for Energy Audit** : **Dr. P. Thirumoorthi**  
Bureau of Energy Efficiency Certified Auditor.

### 1.5.1. Audit Checklist Observations

During the onsite visit, respective auditors marks not applicable and write the reason for non-applicability and wherever its applicable, auditors verifies the records / practice / documents and physical observation to confirm the same.

There are two parameters such as meeting the requirements and not meeting the requirements. Marking as meeting the requirements for the specific checkpoint reveals that the physical observation and documents are up to the mark. For some checkpoints OFI – Opportunity for Improvements will be given by the auditors. The physical observations and documents which are not up to the mark will be given as not meeting the requirements. The checkpoints under not meeting the requirements are up to the Management of the Organization to develop further.

## 1.6. List of Instruments used in the Inspection Process

During the on-site visit the below listed instruments are used by the Lead Auditors and Technical experts to check the specific parameters in the view of maintaining sustainability. All the instruments are calibrated by ISO 17025 accredited

labs (JRTS Technical Services, Chennai, Tamil Nadu and Instruments Calibration and Test Centre, Coimbatore, TN). The frequency of calibration is six months once or 20 times after its use.

### 1.6.1. Oxygen Meter

Oxygen meter is used in the audit process to measure the oxygen level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 to 30% O<sub>2</sub>, resolution of 0.1%, accuracy is  $\pm (1\% \text{ reading} + 0.2\% \text{ O}_2)$ , response time is  $\leq 15$  seconds, environment pressure range is 0.9 to 1.1 atmosphere, temperature range is 0 °C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is 25°C.



### 1.6.2. Carbon dioxide meter

Carbon dioxide meter is to measure the carbon level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 ~ 4000 ppm, resolution of CO<sub>2</sub> Meter is 1 ppm, accuracy is  $\leq 1,000$  ppm, repeatability is  $\pm 20$  ppm, temperature range between 0°C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is at 25°C.



### 1.6.3. Light (LUX) Meter

Light meter is to calculate the light intensity in the organization. Suitability of the instruments are, 5 ranges. ie., 40.00, 400.0, 4,000, 40,000, 400,000 Lux, operating temperature is 0 to 50°C, Operating humidity is less than 80% RH, Power consumption is DC 8 mA approximately. This Instrument will be calibrated yearly once or during non-functioning.



### 1.6.4. Sound Level Meter

Sound level meter is to measure the noise level in the organization. This instrument is calibrated yearly once or after using 20 times. Suitability of the instruments are measurement range is 30 – 130 dB, resolution is 0.1 dB, accuracy is  $(23 \pm 5 \text{ } ^\circ\text{C})$ , Frequency of the instrument is 31.5 to 8,000 Hz, Operating temperature is 0 to 50 °C (32 to 122 °F), Operating humidity is less than 80% RH, Power consumption is DC 6 mA approximately.



### 1.6.5. pH Meter

pH meter is generally used to measure the pH level in water. It is calibrated 6 months once or after 20 times of its use. Suitability of the instrument are range of the pH meter is 0 – 14, accuracy is  $\pm 2\%$ , resolution of the instrument is 0.1 pH, operating temperature is 0 to 50 °C (32 to 122 °F).



### 1.6.6. TDS Meter

TDS meter is generally used to measure the TDS level in water. Suitability of the meter are range of TDS meter is 0 – 9990 ppm (mg/L), operating temperature is 0 to 80 °C (32 to 176 °F) and accuracy is  $\pm 2\%$ . This meter is calibrated six months once or 20 times after its use.



### 1.6.7. GPS Meter

GPS meter is subjected to know the latitude and altitude, location, etc., Suitability of the GPS meter are, dimension is 2.1" x 4.0" x 1.3" (5.4 x 10.3 x 3.3 cm), Display resolution is 128 x 160 pixels an GPS Map features included in Continental Europe. It is calibrated six months once or after 20 times of the usage.



### 1.6.8. Deluxe Water and Soil Analysis Kit

Deluxe water and soil analysis kit is used to analyze the pH, TDS, salinity, turbidity, alkalinity dissolved oxygen of water.



### 1.6.9. Digital Clamp (Voltage) Meter

It is used to check the input and output voltage between two points of an electrical circuit of Alternating Current (AC) and Direct Current (DC) by means of the high resistance of the voltage that impede the flow of current.



## 1.7. Use of Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) refers to protective clothing for the eyes, head, ears, hands, respiratory system, body, and feet. It is utilized to protect individuals from the risks of injury while minimizing exposure to chemical, biological, and physical hazards. PPE serves as the final line of defense when engineering and administrative controls are insufficient in reducing risks. Nature Science Foundation safeguards all the auditors by supplying PPE during the conduct of audits. PPE used are safety jackets, ear plugs, goggles, face shield, hand gloves, shoes, etc.,

### 1.7.1. Safety jackets:

PPE includes safety vests and suits that can be used for inspection process which will protect body injuries from extreme temperatures, flames and sparks, toxic chemicals, insect bites and radiation.



### 1.7.2. Goggles and Face shield:

Goggles and face shield are used in the inspection process while inspecting items which would cause eye damage or loss of vision, spray or toxic liquids especially in chemistry labs, nearing the electric and electronic item.





**1.7.3. Helmet:**

PPE includes hard hats and headgears which will be required for tasks that can cause any force or object falling to the head. It also helps to resist penetration.

**1.7.4. Hand gloves:**

PPE includes safety gloves and should be used for tasks that can cause hand and skin burns, absorption of harmful substances, cuts, fractures or amputations. Selection of hand gloves is based on the application of use.

**1.7.5. Safety Boots:**

Foot protection is one of the most commonly used PPE and can differ depending upon the environment. Safety boots are used for tasks that can cause serious foot and leg injuries from falling or rolling objects, hot substances, electrical hazards, and slippery surfaces.

**1.7.6. Ear Plug:**

Ear plugs are used for tasks that can cause hearing problems and loss of hearing. Hearing protection devices reduces the noise energy reducing reaching and causing damage to the inner ear. This ear plug is mostly used near sound producing devices like power motors, genets, generators, etc.,





## 2. GREEN AUDIT

### 2.1. Introduction

Green audit ensures the Organization's campus should have greenish with large diversity of trees, herbs, shrubs, climbers and lawns to reduce the environmental pollution and soil erosion; it is also useful in relation to biodiversity conservation, landscape management, irrigation/economic water utilization and maintenance of natural topography besides vegetation. For the benefit of stakeholders, solid waste management, recycling of water, disposal of sewage and waste materials (electronic and biomedical wastes), 'zero' use of plastics, single use plastic items, etc. should be followed consistently in the organization campus. Green Audit procedures includes the definition of green audit, methodology on how to conduct green audit at Educational Institutions and Industrial sectors.

### 2.2. Importance of green audit

The Management of the Organization (Auditee) should be exposed their inherent commitment towards making ecofriendly atmosphere through the green auditing and ready to encourage/follow all types of green activities. A clean and healthy environment will enhance an effective teaching/learning process. They should create the awareness on the importance of greenish initiatives through environmental education among the student members and research scholars. Green audit is the most effective, ecological approach to manage environmental complications (Rajalakshmi *et al.*, 2023). Green audit is a kind of professional care and a simple indigenized system about the environment monitoring in terms of planting more number of trees which is a duty of each and every individual who are the part of economical, financial, social and environmental factors. Green audit is a professional and useful measure for an Organization to determine how and where they are retaining the campus eco-friendly manner. It can also be used to implement the alleviation measures at win-win situation for the stakeholders and the planet. It provides an opportunity to the stakeholders for the development of ownership, personal and social responsibility.

### 2.3. Green audit observations

- It is observed that the Organization has facilities (ramp walk , lift etc.,) for disabled and different age group people.
- Adequate training and awareness programmes are conducted to the Stakeholders for sustainable development at all stages of building life cycle.
- More than 30% of open space is maintained as soft scapes (vegetation) to lower the energy conservation in the campus.
- Land scape design are planned to maintain the natural capacity of the site.
- Land scape irrigation are performed as per the microclimatic condition like during humid / winter season less watering through irrigation is observed.
- Vegetation / vegetative structures are available around the building to reduce energy consumption and maintain indoor climates.
- Herbal garden and green roof system are available to maintain sustainability.

### 2.3.1. Facilities for Human Comforts

As per the ISO Standards under elements of sustainability quality of plumbing services and buildings are maintained in line with the standard. Ramp walk and Wheel chair facilities are implemented for the benefit of disabled and different age group people.



**Ramp Walk, Lift and Wheelchair facilities designed for the comfort of person with disability.**

### 2.3.2. Natural topography, vegetation and monitoring

Natural topography means the original geographical features and natural resources of the Site. It is observed that the organization has the natural features like rocks, water resources, slopes, landscape, pathways, etc. Vegetation is the cultivation of a bunch of plants irrespective of the plant *taxa* for the covering of the area or ground topography. The observation at the campus indicated that there are more than 40% natural topography and vegetation. Monitoring plan for maintaining the vegetation and sustainability are evident through separate operation and maintenance team & their records for regular watering as per the micro climatic condition through irrigation.

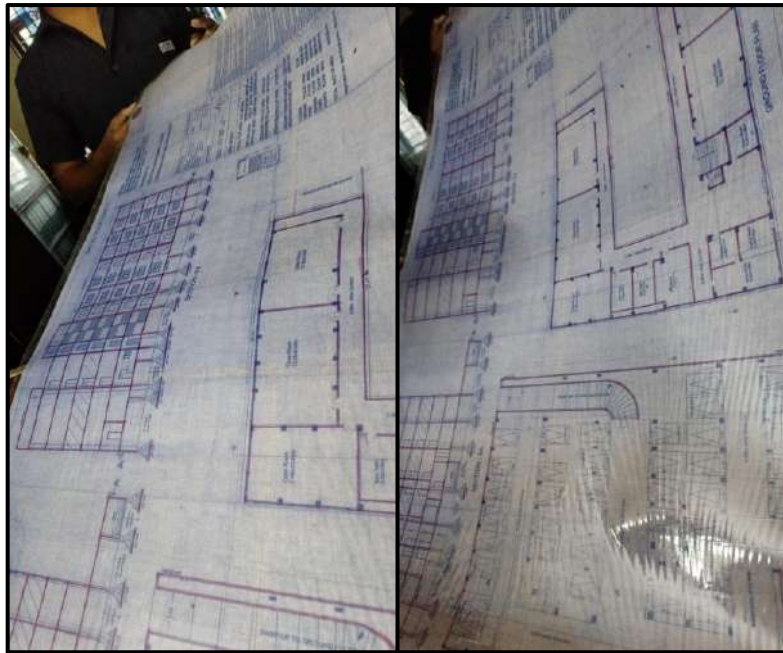


**Natural Topography and Vegetation at the Campus**

### 2.3.3. Landscape design and soil erosion control

Landscape design is an important feature for any disasters to control especially with respect to the soil erosion. In general, soil erosion occurs if the design of the land is not altered so as to prevent the slope features by strong vegetation and use of a plant

buffer zone as safe for escape of nutrients or fertilizers entering the streams. Observation revealed that the audited site has very good landscape design without disturbing the natural vegetation. Contour ploughing is being done at right angles to the slope wherever possible and ridges and furrows are properly maintained to break the flow of water down to the empty land. These activities are widely adopted to control soil erosion in the campus. Microclimatic conditions are considered, during winter season irrigation and watering to plants are controlled as per the water management plan. External landscapes are designed based on the shading pattern of the building. Green vegetation are available around the building to reduce the energy consumption.



**Building plan was observed in the Campus**

#### **2.3.4. Establishment of different gardens, vertical landscaping and roof gardens**

It is observed that Organization has implemented and maintaining gardens to lower the energy consumption. To maintain certain biomass critical for human health and also to reduce the bio-retention through water flow rates different types of gardens like ornamental garden is implemented in the campus.



**Garden observed in the campus**



### 2.3.5. Survey of Flora and Fauna

Ensuring the rich biodiversity in the green campus is an important parameter which reflects the real-time ecosystem. In general, plants improve the outdoor air quality with increased oxygen levels and reduced temperature and carbon dioxide. The record on maintenance of the plant biomass and its management are important with respect to green campus initiatives. The existence of such plants and birds in the green campus are recorded for the rich flora and fauna which are being considered as a value addition to the campus.



*Beaumontia grandiflora* Wall.



*Gloriosa superba* L.



*Plumeria obtusa* L.

### 2.4. Air quality audit observations

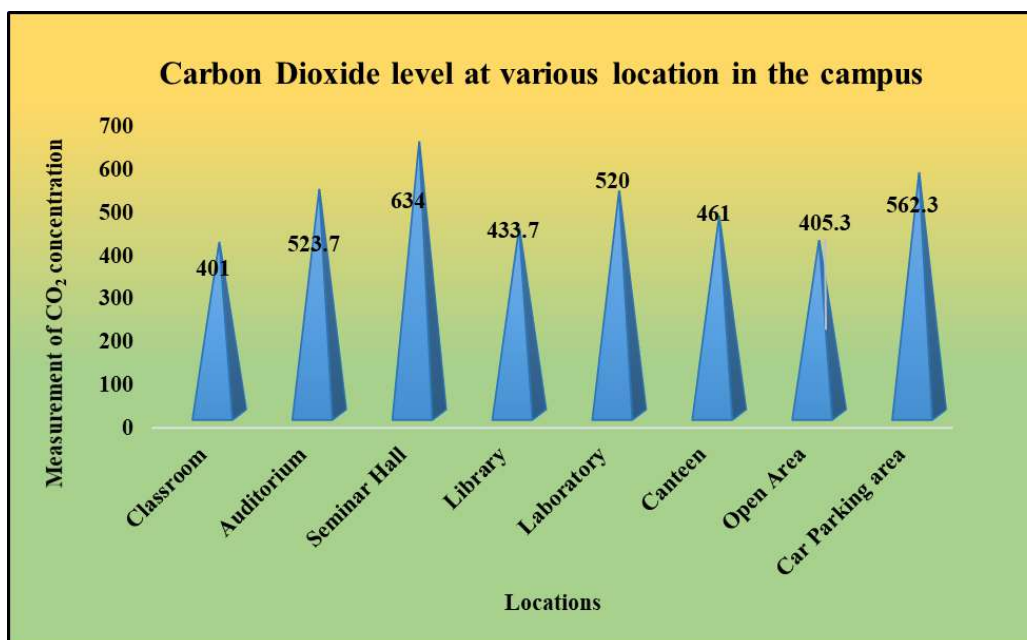
It is observed that carbon dioxide and oxygen values are acceptable range. The air circulation is very good in all the places which in turn useful to give pure air to the stakeholders. The observation showed that the concentration of CO<sub>2</sub> in the atmosphere is found to be optimal which did not exceed the critical limit of CO<sub>2</sub>. It is further revealed that all the selected locations are having pure air without any air contaminants with good air exchange/circulation in the campus. Some of the places like Canteen and Class Rooms are recorded with high level of carbon dioxide level due to student mobilization and the maximum number of electrical items fixed from which the carbon dioxide emission was observed followed by all laboratories and seminar and auditorium halls (Table 13).

**Table 13. Measurement of CO<sub>2</sub> concentration in the Organization**

S. No.	Different locations of the Organization's Campus	Carbon dioxide level (ppm)*	Remarks
1.	Classroom	401.0	Within permissible limits
2.	Auditorium	523.7	Within permissible limits
3.	Seminar Hall	634	Within permissible limits
4.	Library	433.7	Within permissible limits

5.	Laboratory	520.0	Within permissible limits
6.	Canteen	461.0	Within permissible limits
7.	Open Area	405.3	Within permissible limits
8.	Car Parking area	562.3	Within permissible limits

**Figure 7. Measurement of CO<sub>2</sub> concentration in the Organization**



## 2.5. Atmospheric oxygen level measurements analysis and interpretation

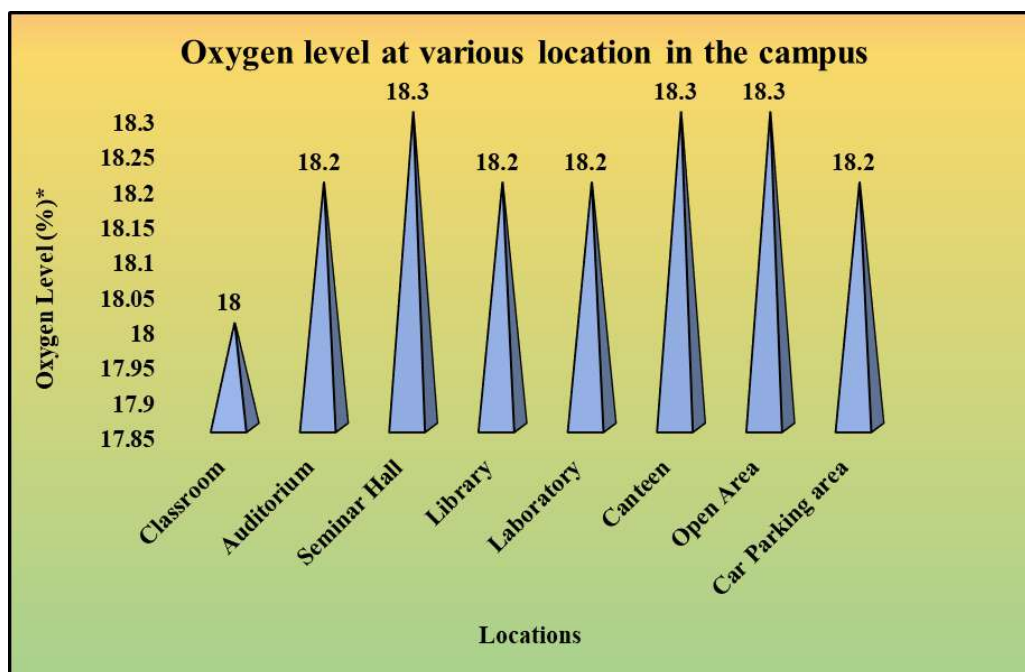
Oxygen level refers to the amount of oxygen available within the atmosphere or water bodies. Oxygen is produced/released as a by-product of photosynthesis, the metabolic activity of all green plants besides certain microbes. Oxygen plays a paramount role in metabolic activities like respiration and the energy-producing chemistry of all living organisms. In order to quantify the oxygen level, Oxygen Meter is used. The atmosphere contains 18-21% oxygen concentration, 75-78.5% nitrogen and 2-3% other gases like carbon dioxide, neon and hydrogen. The amount of oxygen level in the atmosphere is determined by abiotic factors like altitude, latitude and longitude and biotic factors like plantations in the surroundings. If it excess, it causes oxygen toxicity and oxygen poisoning by creating coughing, breathing trouble and damage the lungs to human beings. The oxygen level of different places at the campus are monitored and presented (Table 14).

**Table 14. The oxygen concentration at different places of audited organization**

S. No	Location	Oxygen Level (%)*	Remarks
1.	Classroom	18.0	O <sub>2</sub> level is good
2.	Auditorium	18.2	O <sub>2</sub> level is good
3.	Seminar Hall	18.3	O <sub>2</sub> level is good
4.	Library	18.2	O <sub>2</sub> level is good

5.	Laboratory	18.2	O <sub>2</sub> level is good
6.	Canteen	18.3	O <sub>2</sub> level is good
7.	Open Area	18.3	O <sub>2</sub> level is good
8.	Car Parking area	18.2	O <sub>2</sub> level is good

**Figure 8. The oxygen concentration in the Organization**



**CO<sub>2</sub> and O<sub>2</sub> analysis are observed in the campus**

### 3. Conclusion

The organisation has made significant progressive contributions with respect to teaching learning, research and consultancy, innovation and transfer of technology, community service and value education, *in toto*. It imparts quality education to rural, tribal and urban people across the Nation which is excellent in terms of academic activities and providing an eco-friendly atmosphere to the stakeholders. The organization has taken enormous efforts to maintain green campus in a sustainable manner. It has conducting a large number of activities for the benefit of rural and tribal community people without disturbing the natural environment. The installation of a rainwater harvesting system and irrigation system to conserve rainwater and improve the ground water levels are noteworthy. The Organization has created medicinal, herbal and ornamental gardens at small scale level for establishing a massive reforestation / afforestation programme in which a large number of trees and shrubs species were planted together for providing an eco-friendly atmosphere to the stakeholders in a sustainable manner.



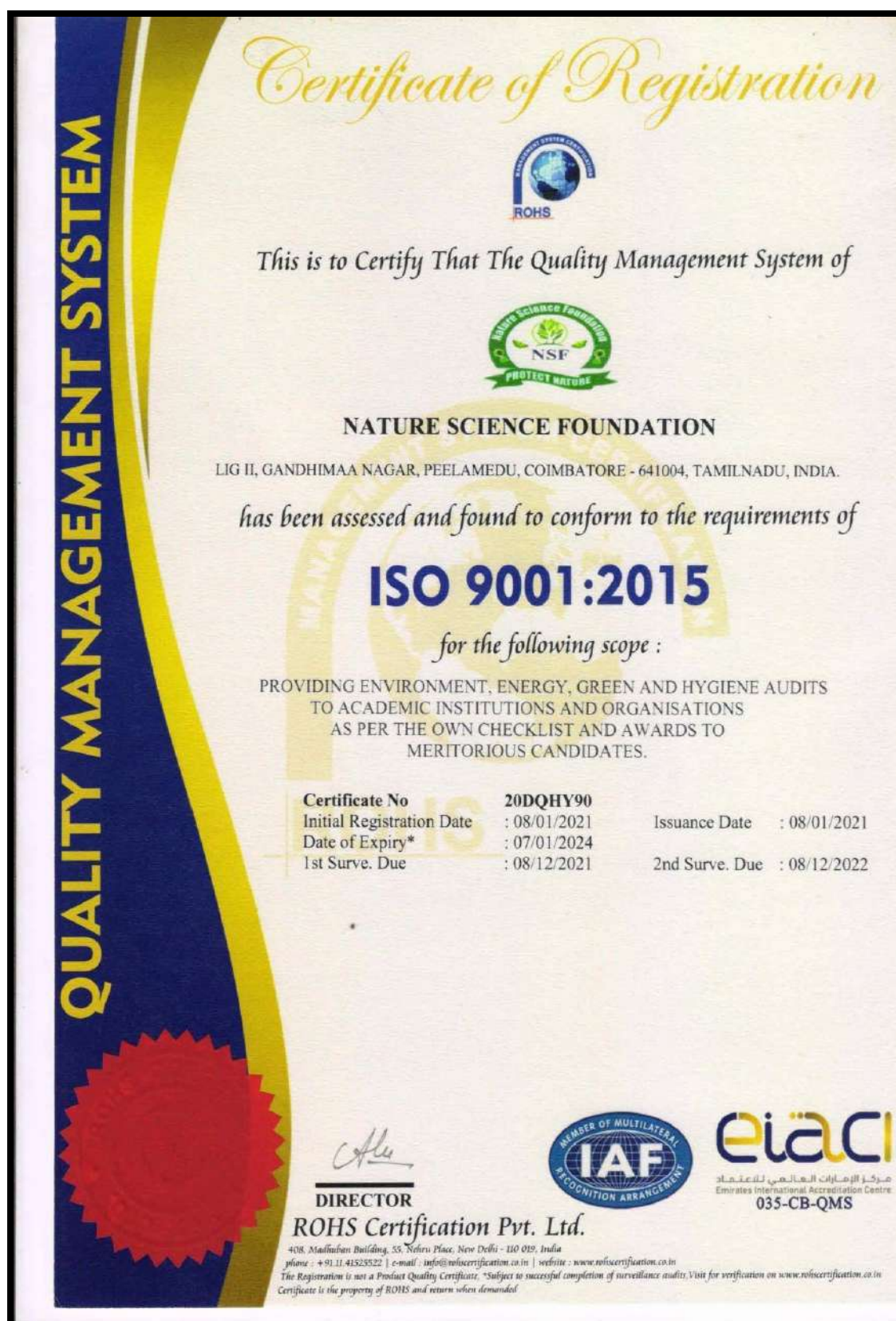
## 4. References

- Adeniji, A.A. 2018. *Audit and Assurance Services. Lagos: Value Analyst Concept of Green Audit*. New Age International, New Delhi, India.
- Aparajita, G. 1995. Environmental Audits- a Mean to Going Green. *Development Alternatives* **5** (4): 7-9.
- APHA, 2017. *Standard methods for the estimation of water and wastewater*. Vol. II, 15<sup>th</sup> edn, Washington, US.
- Arora, D.P. 2017. Environmental Audit–need of the hour. *International Journal of Advanced Research in Engineering & Management* **3** (4): 25-31.
- Aruninta, A., Kurazumi, Y., Fukagawa, K. and Ishii, J. 2017. The integration of human thermal comfort in an outdoor campus landscape in a tropical climate. *International Journal of GEOMATE* **14** (44): 26-32.
- Awasthi, D.D. 2007. *A Compendium of the macrolichens from India, Nepal and Sri Lank*. Bishen Singh Mahendra Pal Sin, Dehradun, Uttar Pradesh, India, 278p.
- Beebee, T.J.C. and Griffiths, R.A. 2000. Amphibians and Reptiles. A Natural History of the British Herpetofauna. The New Naturalist Library, London, UK.
- Brindusa M. Sluser, Caliman, F.A., Betianu, C. and Gavrilescu, M. 2007. Methods and procedures for environmental risk assessment. *Environmental Engineering and Management Journal* **6** (6): 573-592.
- Chandrabose, M. and Nair, N.C. 1988. Flora of Coimbatore, Bishen Singh and Mahendra Pal Singh, Dehra Dun, India.
- Choy, Er.A. and Karudan, R. 2016. Promoting campus sustainability: A conceptual framework for the assessment of campus sustainability. *Journal of Social Sciences and Humanities* **11** (2): 112-118.
- Culberson, C.F. and Kristinsson, H.D. 1970. A standardized method for the identification of lichen products. *Journal of Chromatography A*. **46**: 85-93.
- Fachrudin, H.T., Fachrudin, K.A. and Utami, W. 2019. Education activities to realize green campus. *Asian Social Science* **15** (8): 18-27.
- Ferenc, M., Sedlacek, O., Fuchs, R., Dinetti, M., Fraissinet, M. and D. Storch 2014. Are cities different?. Patterns of species richness and beta diversity of urban bird communities and regional species assemblages in Europe. *Global Ecology and Biogeography* **23**: 479-489.
- Freidenfelds, D., Kalnins, S.N. and Gusca, J. 2018. What does environmentally sustainable higher education institution mean?. *Energy Procedia* **147**: 42-47.
- Gamble, J.S. and Fischer, C.E.C 1972. *The Flora of the Presidency of Madras*. Vols. 1 - 3. Rep. Ed. 1957. Adlard and Sons Ltd., London, UK.
- Gowri, S. and Harikrishnan, V. 2014. Green computing: Analyzing power consumption using local cooling. *International Journal of Engineering Trends and Technology* **15** (3): 105-107.
- Henry, A.N., Chitra, V. and Balakrishnan, N.P. 1989. Flora of Tamil Nadu. Vol. 3. Botanical Survey of India, Coimbatore, Tamil Nadu, India.
- Jayson, E.A. and D.N. Mathew, 2000. Diversity and species-abundance distribution of birds in the tropical forests of Silent Valley, Coimbatore. *Journal of the Bombay Natural History Society* **97** (3): 390–399.

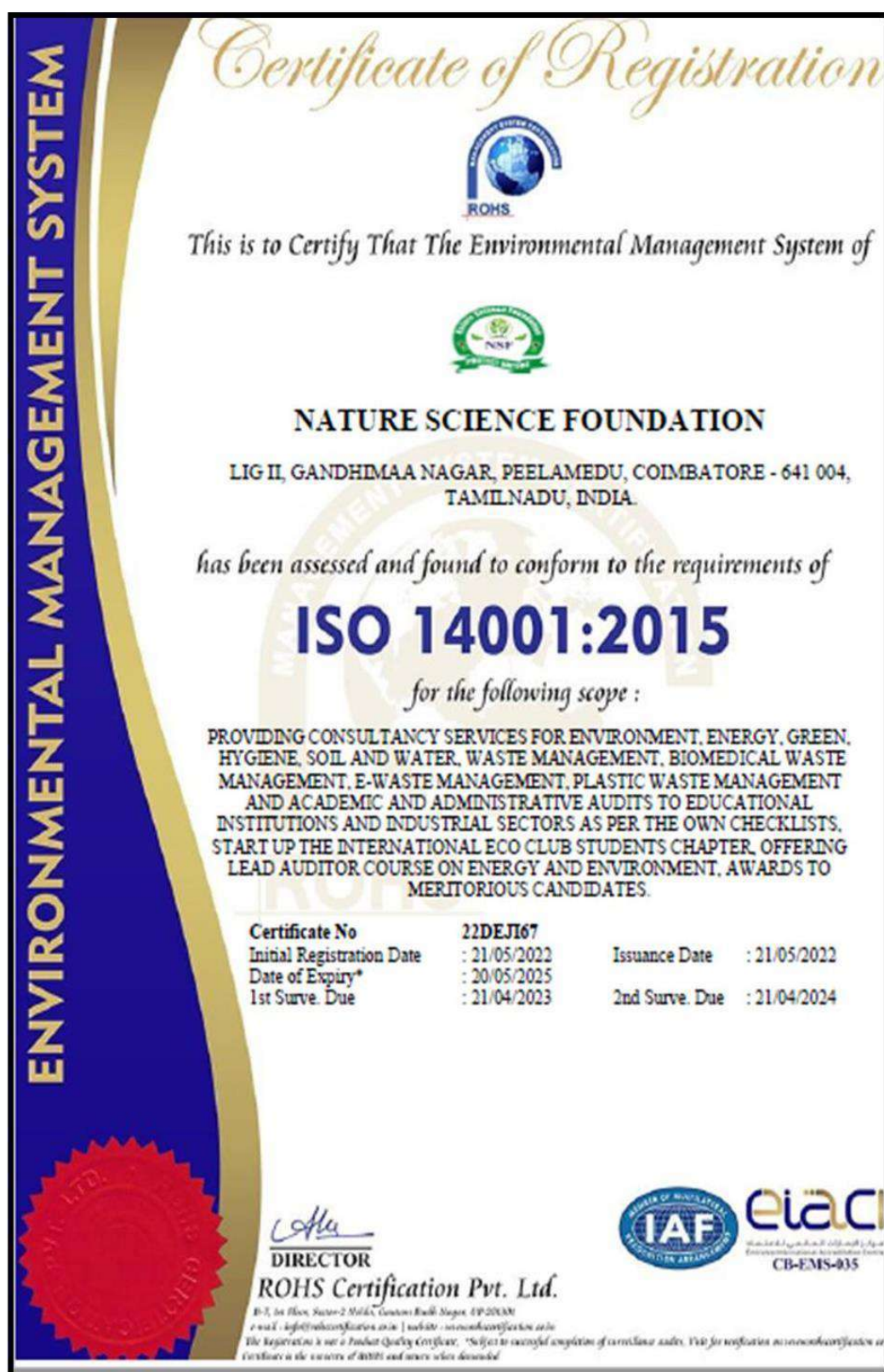
- Lauder, A., Sari, R.F., Suwartha, N. and Tjahjono, G. 2015. Critical review of a global campus sustainability ranking: Green Metric. *Journal of Cleaner Production* **108**: 852–863.
- Leal Filho, W., Muthu, N., Edwin, G. and Sima, M. 2015. Implementing campus greening initiatives: approaches, methods and perspectives. Springer, London, UK.
- León-Fernández, Y. and Domínguez-Vilches, E. 2015. Environmental management and sustainability in higher education: The case of Spanish Universities. *International Journal of Sustainability in Higher Education* **16**: 440-455.
- Marrone, P., Orsini, F., Asdrubali, F. and Guattari, C. 2018. Environmental performance of universities: Proposal for implementing campus urban morphology as an evaluation parameter in Green Metric. *Sustainable Cities and Society* **42**: 226-239.
- Nair, N.C. and Henry, A.N. 1983. Flora of Tamil Nadu, India. Ser. 1: Analysis. Vol. 1. Botanical Survey of India, Coimbatore, Tamil Nadu, India.
- Report of Green Audit, 2018. *Report of Green Audit Nitte Meenakshi Institute of Technology, Chennai, Tamil Nadu, India*. <https://www.google.com/search?q=Green+Audit+Report+Nitte+Meenakshi+Institute+Of+Technology&sxsrf>
- Ribeiro, J.M.P., Barbosa, S.B., Casagrande, J.L., Sehnem, S., Berchin, I.I., da Silva, C.G., da Silveira, A.C.M., Zimmer, G.A.A., Faraco, R.A. and de Andrade Guerra, J.B.S. 2017. Promotion of sustainable development at universities: The adoption of green campus strategies at the University of Southern Santa Catarina, Brazil. Springer Nature, Handbook of Theory and Practice of Sustainable Development in Higher Education. pp. 471-486.
- Satean, G. 2017. The need to go beyond “Green University” ideas to involve the community at Naresuan University, Thailand. Springer Nature, Sustainability Through Innovation in Product Life Cycle Design. pp. 841-857.
- Staniskis, J.K. and Katiliute, E. 2016. Principles, implementation and results of the new assessment and accreditation system “Engineering education for sustainable industries”. Springer Nature, New Developments in Engineering Education for Sustainable Development. pp. 283-294.
- Suwartha, N. and Sari, R.F. 2013. Evaluating UI Green Metric as a tool to support green universities development: Assessment of the year 2011 Ranking. *Journal of Cleaner Production* **61**: 46–53.
- Venkataraman, K. 2009. India’s Biodiversity Act 2002 and its role in conservation. *Tropical Ecology* **50** (1): 23-30.
- .....

## **5. Certificates of Nature Science Foundation**

1. ISO Certificate (QMS 9001:2015)
2. ISO Certificate (EMS 14001:2015)
3. ISO Certificate (OHSMS 45001:2018)
4. ISO Certificate (EnMS 50001:2018)
5. MSME Certificate









**QCS** MANAGEMENT PVT. LTD.  
MANAGEMENT SYSTEMS CERTIFICATION

## *Certificate of Registration*

**ISO 45001:2018 (Occupational Health & Safety Management System)**

### **NATURE SCIENCE FOUNDATION**

ADDRESS: NO. 2669, LIG-II, GANDHI MANAGAR PEELAMEDU COIMBATORE - 641 004 TAMIL NADU, INDIA.

#### **Scope of Certification:**

PROVIDING TRAINING AND AUDITING SERVICES IN THE FIELD OF  
GREEN CAMPUS, ENVIRONMENT, ENERGY, OCCUPATIONAL HEALTH AND SAFETY, HYGIENE AND  
WASTE MANAGEMENT AT EDUCATIONAL INSTITUTES AND INDUSTRIAL SECTOR.

Certificate Number : QCS/EUAS/OHS/002

Issue Date : 03/08/2022  
Expiration Date : 02/08/2023

1<sup>ST</sup> Surveillance Audit Within : 02/07/2023  
2<sup>ND</sup> Surveillance Audit Within : 02/07/2024  
Re-certification Due Date : 02/08/2025



Partha Bagchi  
(Managing Director)

Validity of this Certificate is subject to Surveillance Audits to be conducted before scheduled due dates of surveillance audits as mentioned on the certificate, failing which the certificate will stand to be withdrawn and need to be treated as an initial certification process to reactivate its continuity on the register of EUAS and QCS. This Certificate is valid when confirmed by data listed on the (Euro Universal Accreditation Systems) EUAS" [www.euas-ac.org](http://www.euas-ac.org). The authenticity & validity of this certificate may be re-affirmed by referring to our company website - [www.qcspl.com](http://www.qcspl.com). Lack of fulfillment of conditions as set out on the 'Certification Contract' (Annex 13) may render this certificate invalid. Any alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of law. This certificate remains the property of QCS and to be returned on request.

REGISTERED OFFICE: 37E/1(310) 2<sup>ND</sup> STREET, MODERN PARK, GREENAGE APARTMENT - 2<sup>ND</sup> FLOOR,  
SANTOSH PUR, KOLKATA - 700075, WEST BENGAL, INDIA.  
Email: [info@qcspl.com](mailto:info@qcspl.com). Call: +91 8697724963, +91 8902447427. Website: [www.qcspl.com](http://www.qcspl.com)





## Certificate of Registration

This is to certify that

### NATURE SCIENCE FOUNDATION

LIG II, GANDHIMAA NAGAR, PEELAMEDU, COIMBATORE - 641 004,  
TAMILNADU, INDIA.

has been independently assessed by QRO  
and is compliant with the requirement of:

**ISO 50001:2018**

### Energy Management Systems

For the following scope of activities:

PROVIDING CONSULTANCY SERVICES FOR ENVIRONMENT, ENERGY, GREEN, HYGIENE, SOIL AND WATER, WASTE MANAGEMENT, BIOMEDICAL WASTE MANAGEMENT, E-WASTE MANAGEMENT, PLASTIC WASTE MANAGEMENT AND ACADEMIC AND ADMINISTRATIVE AUDITS TO EDUCATIONAL INSTITUTIONS AND INDUSTRIAL SECTORS AS PER THE OWN CHECKLISTS, START UP THE INTERNATIONAL ECO CLUB STUDENTS CHAPTER, OFFERING LEAD AUDITOR COURSE ON ENERGY AND ENVIRONMENT, AWARDS TO MERITORIOUS CANDIDATES.

Date of Certification: 9th August 2022

2<sup>nd</sup> Surveillance Audit Due: 8th August 2024

1<sup>st</sup> Surveillance Audit Due: 8th August 2023

Certificate Expiry: 8th August 2025

**Certificate Number: 305022080903EN**



*Signature*  
Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.  
(In case surveillance audit is not allowed to be conducted: this certificate shall be suspended / withdrawn).

The Validity of this certificate can be verified at [www.qrocet.org](http://www.qrocet.org)

This certificate of registration remains the property of QRO Certification LLP, and shall be returned immediately upon request.

India Office : QRO Certification LLP

142, II<sup>nd</sup> Floor, Avtar Enclave, Near Paschim Vihar West Metro Station, Delhi-110063, (INDIA)

Website : [www.qrocet.org](http://www.qrocet.org) E-mail : [info@qrocet.org](mailto:info@qrocet.org)





भारत सरकार  
Government of India  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises



## UDYAM REGISTRATION CERTIFICATE



Our small hands to make you LARGE

<b>UDYAM REGISTRATION NUMBER</b>	UDYAM-TN-03-0073706																						
<b>NAME OF ENTERPRISE</b>	M/S NATURE SCIENCE FOUNDATION																						
<b>TYPE OF ENTERPRISE *</b>	MICRO																						
<b>MAJOR ACTIVITY</b>	SERVICES																						
<b>SOCIAL CATEGORY OF ENTREPRENEUR</b>	GENERAL																						
<b>NAME OF UNIT(S)</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>S.No.</th> <th colspan="3">Name of Unit(s)</th> </tr> <tr> <td>1</td> <td colspan="3">Green Campus, Energy and Environment Management Audits</td> </tr> </table>			S.No.	Name of Unit(s)			1	Green Campus, Energy and Environment Management Audits														
S.No.	Name of Unit(s)																						
1	Green Campus, Energy and Environment Management Audits																						
<b>OFFICIAL ADDRESS OF ENTERPRISE</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Flat/Door/Block No.</td> <td>LFG-IL2669</td> <td>Name of Premises/ Building</td> <td>GANDHIMAA NAGAR</td> </tr> <tr> <td>Village/Town</td> <td>Gandhinagar S.O</td> <td>Block</td> <td>LIG-II</td> </tr> <tr> <td>Road/Street/Lane</td> <td>Peelamedu</td> <td>City</td> <td>Coimbatore South</td> </tr> <tr> <td>State</td> <td>TAMIL NADU</td> <td>District</td> <td>COIMBATORE, Pin 641004</td> </tr> <tr> <td>Mobile</td> <td>9566777255</td> <td>Email:</td> <td>chairmannsf@gmail.com</td> </tr> </table>			Flat/Door/Block No.	LFG-IL2669	Name of Premises/ Building	GANDHIMAA NAGAR	Village/Town	Gandhinagar S.O	Block	LIG-II	Road/Street/Lane	Peelamedu	City	Coimbatore South	State	TAMIL NADU	District	COIMBATORE, Pin 641004	Mobile	9566777255	Email:	chairmannsf@gmail.com
Flat/Door/Block No.	LFG-IL2669	Name of Premises/ Building	GANDHIMAA NAGAR																				
Village/Town	Gandhinagar S.O	Block	LIG-II																				
Road/Street/Lane	Peelamedu	City	Coimbatore South																				
State	TAMIL NADU	District	COIMBATORE, Pin 641004																				
Mobile	9566777255	Email:	chairmannsf@gmail.com																				
<b>DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE</b>	28/11/2017																						
<b>DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS</b>	12/03/2020																						
<b>NATIONAL INDUSTRY CLASSIFICATION CODE(S)</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>S.No.</th> <th>NIC 2 Digit</th> <th>NIC 4 Digit</th> <th>NIC 5 Digit</th> <th>Activity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 - Legal and accounting activities</td> <td>6920 - Accounting, bookkeeping and auditing activities; tax consultancy</td> <td>69201 - Accounting, bookkeeping and auditing activities</td> <td>Services</td> </tr> <tr> <td>2</td> <td>85 - Education</td> <td>8542 - Cultural education</td> <td>85420 - Cultural education</td> <td>Services</td> </tr> <tr> <td>3</td> <td>85 - Education</td> <td>8549 - Other education n.e.c.</td> <td>85499 - Other educational services n.e.c.</td> <td>Services</td> </tr> </tbody> </table>			S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity	1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services	2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services	3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services
S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity																			
1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services																			
2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services																			
3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services																			
<b>DATE OF UDYAM REGISTRATION</b>	26/02/2022																						

\* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the Mo MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing: 26/02/2022

**For any assistance, you may contact:**

1. District Industries Centre: COIMBATORE (TAMIL NADU)

2. MSME-DI: CHENNAI (TAMIL NADU)

Visit : [www.msme.gov.in](http://www.msme.gov.in) ; [www.dcmsme.gov.in](http://www.dcmsme.gov.in) ; [www.champions.gov.in](http://www.champions.gov.in)

Follow us @minmsme & @msmechampions



**BE A  
CHAMPION**  
with the  
Ministry of  
**MSME**

## **6. Certificates of Lead Auditors**

1. Bureau of Energy Efficiency (BEE), LEED AP and GRIHA Certificates of Er. D. Dineshkumar, Energy and Environment Auditor of NSF.
2. Indian Green Building Council (IGBC AP) Accredited Professional of Dr. B. Mythili Gnanamangai, Vice-Chairman of NSF.
3. Tamil Nadu Fire and Rescue Service Certificate of Er. S. Srinivash, Energy Auditors of NSF.



## BUREAU OF ENERGY EFFICIENCY



Examination Registration No. : **EA-14056** Serial Number **9176**

Certificate Registration No. : **9176**

*[Signature]*

### Certificate For Certified Energy Manager

This is to certify that Mr./Mrs./Ms. **Dinesh Kumar D**  
Son/Daughter of Mr./Mrs. **R M Dhanasekaran** who has passed the National  
Examination for certification of energy manager held in the month of **October 2011** is  
qualified as certified energy manager subject to the provisions of Bureau of Energy Efficiency  
(Certification Procedures for Energy Managers) Regulations, 2010.

This certificate shall be valid for five years with effect from the date of award of this certificate  
and shall be renewable subject to attending the prescribed refresher training course once in every  
five years.

His /Her name has been entered in the Register of certified energy manager  
at Serial Number **9176** being maintained by the Bureau of Energy Efficiency under the  
aforesaid regulations.

Mr./Mrs./Ms. **Dinesh Kumar D** is deemed to have qualified  
for appointment or designation as energy manager under clause (i) of Section 14 of the Energy  
Conservation Act, 2001 (Act No.52 of 2001).

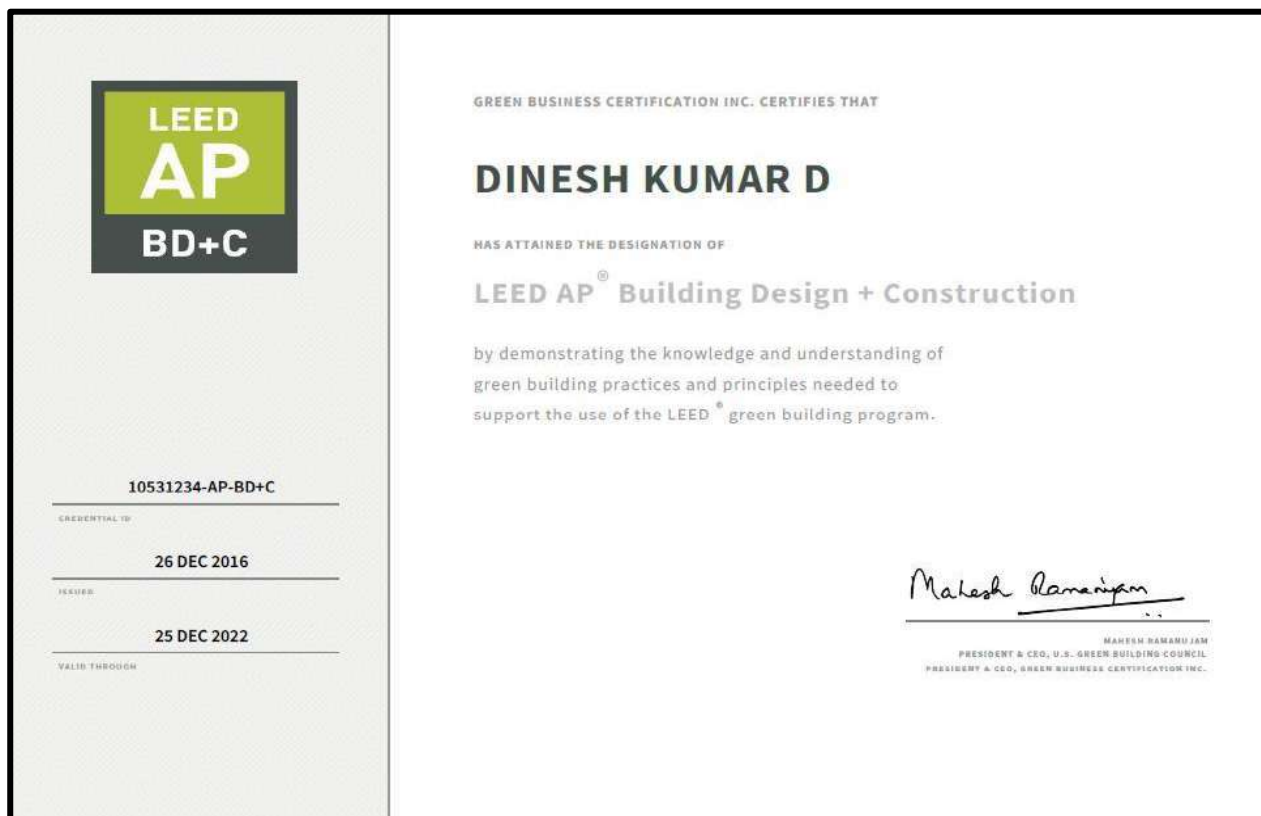
Given under the seal of the Bureau of Energy Efficiency, this **7<sup>th</sup>** day  
of **February, 2013**

*[Signature]*

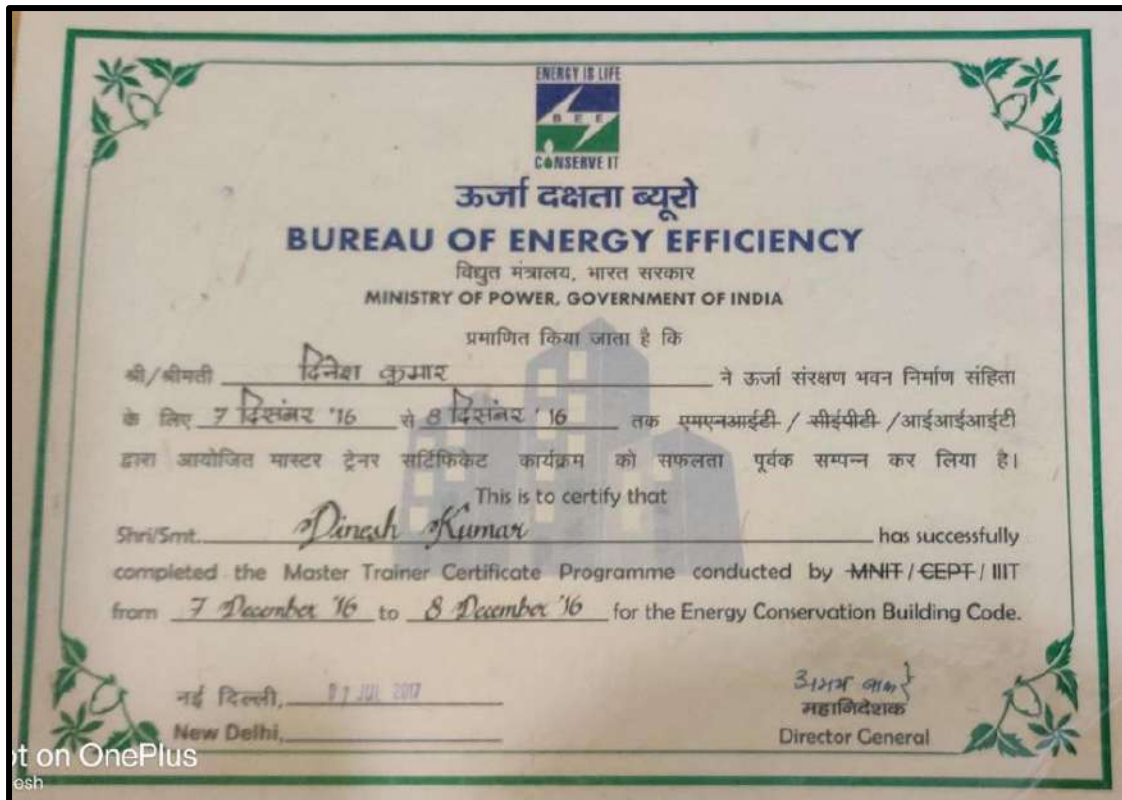
Digitally Signed: RAKESH KUMAR RAI  
Sun Mar 01 10:58:55 IST 2020  
Secretary, BEE New Delhi

Secretary  
Bureau of Energy Efficiency  
New Delhi

Dates of attending the refresher course	Secretary's Signature	Dates of attending the refresher course	Secretary's Signature
<b>22.12.2019</b>	<i>[Signature]</i>		









# TECHNICAL REPORT OF GREEN AUDIT



*Submitted to*

**LITTLE FLOWER DEGREE COLLEGE**  
**UPPAL, HYDERABAD – 500 039, TELANGANA**

*Date of Audit: 22.04.2019*

*Valid till: 21.04.2021*



*Submitted by*

**NATURE SCIENCE FOUNDATION**

**(A Unique Research and Development Centre for Society Improvement)**  
**[ISO 9001:2015 Certified and Ministry of MSME Registered Organization]**

**No. 2669, LIG-II, Gandhi Managar, Peelamedu**

**Coimbatore 641 004, Tamil Nadu, India**

**Phone: 0422 2510006, Mobile: 9566777255, 9566777258**

**Email: [director@nsfonline.org.in](mailto:director@nsfonline.org.in)**



## CONTENTS

S.No.	Details of Reports	Page No
1.	General Introduction	3
1.1.	Introduction	3
1.2.	Environment Friendly Campus	3
1.3.	About Nature Science Foundation (NSF)	3
1.4.	About the organization	4
1.5.	Audit Team Details	5
1.6.	List of Instruments used in the Inspection Process	5
1.7.	Use of Personal Protective Equipment (PPE)	7
2.	Green Audit	9
2.1.	Introduction	9
2.2.	Importance of green audit	9
2.3.	Green audit observations	10
2.3.1.	Facilities for Human Comforts	11
2.3.2.	Natural topography, vegetation and monitoring	11
2.3.3.	Landscape design and soil erosion control	12
2.3.4.	Establishment of different gardens, vertical landscaping and roof gardens	12
2.3.5.	Survey of Flora and Fauna	13
2.4.	Air quality audit observations	13
2.5.	Atmospheric oxygen level measurements analysis and interpretation	14
3	Conclusion	15
4	References	16
5	Certificates of Nature Science Foundation	18
6	Certificates of Lead Auditors	24

# 1. GENERAL INTRODUCTION

## 1.1. Introduction

Green campus is an area of the Organization or the Organization as a whole itself contributing to have an infrastructure or development that is structured/planned to incur less energy, less water, less or no CO<sub>2</sub> emission and less or pollution free environment. Green Audit is a tool to evaluate environment management system which is systematically executed to protect and preserve the environment. Green audit constitutes the environmental friendly practices and education combined to promote sustenance of green environment by adopting user-friendly technology within the campus. It creates awareness on environmental ethics, resolves environmental issues and offers solutions to various social and economic needs. It strengthens the concept of ‘Green Building’ and ‘Oxygenated Building’ which in turn provides a healthy atmosphere to the stakeholders.

## 1.2. Environment Friendly Campus

As stated earlier, Organization is liable to provide an eco-friendly atmosphere along with good quality of drinking water facility to all the stakeholders. Manuring the cultivated plants/grown within the campus may be applied with organic manure, cow dung, farmyard manure and vermicompost instead of using chemical fertilizers. All non-compostable and single-use disposable plastic items, plastic utensils, plastic straws and stirrers should be avoided. Demonstration / awareness programme on establishing plastic-free environment and utility of organic alternatives for all incoming and current students, staff and faculty should be organized. Reduction of use of papers alternated with e-services, e-circulars, etc., and proper disposal of wastes, recycling and suitable waste management system should be considered to establish environment friendly campus.

The term ‘auditing’ is to examine the management practices and to evaluate performance of an organization in relation to environmental issues. World along with Associated Chambers of Commerce and Industry of India (ASSOCHAM), Green Building Council (IGBC) and Green Ratings Systems (GBCRS), Green Rating for Integrated Habitat Assessment (GRIHA), Bureau of Energy Efficiency (BEE), Leadership in Energy and Environmental Design (LEED), CII-GreenCo – GreenCo Rating System (CII-GRS), Food Safety Management System & Occupational Safety & Health (FSMS), Swachh Bharath under India Clean Mission (SBICM) and International Standard Organization (ISO 2021) have formulated a series of standards in the field of environmental auditing. These standards are basically intended to guide organizations and auditors on the general principles common to the execution of environmental audits.

## 1.3. About Nature Science Foundation (NSF)

NSF is the ISO QMS (9001:2015) Certified and registered with Ministry of Micro, Small and Medium Enterprise (MSME), Government of India Organization functioning energetically towards the noble cause of nature conservation and environmental protection. NSF is managed by a Board of Trustees which is a Public Charitable Trust registered under the TN Societies registration Act 1975 (TN Act 27 of 1975) on 29<sup>th</sup> November, 2017 at Peelamedu, Coimbatore 641 004, Tamil Nadu, India with Certificate

of Registration No. 114 / 2017. In addition, NSF has 12AA, 80G and Form 10AC certificates for income tax exemption and implanting various Government schemes. The main motto of the NSF is 'Save the Nature to Save the Future' and 'Go Green to Save the Planet'.

#### **1.4. About the Organization**

##### **Little Flower Degree College**

Little Flower Degree College, Uppal is a Christian Minority institution established by the Montfort Brothers of St. Gabriel. It was started in 2008 as a part of Little Flower Junior College, Hyderabad. On 21 st January 2023, LFDC has celebrated Quindecennial to commemorate its fifteenth year in its journey towards excellence in imparting education.

##### **Vision:**

Quality education that fosters academic excellence, value enrichment, social responsibility, and promotes holistic development, inclusivity and nurturing individuals who contribute positively to society.

##### **Mission:**

Cultivate academic excellence, instil ethical values that promote integrity, social responsibility through community engagement and prepare individuals with essential skills to navigate the challenges of the dynamic world and foster holistic development by embracing diverse perspectives.

- To encourage staff and students to strive for the highest standards in academics, sports, and extracurricular activities.
- To instil honesty, responsibility, and moral uprightness in all aspects of life.
- To enhance skills to face the challenges of the competitive world.
- To celebrate the diverse talents and interests.
- To promote a spirit of selflessness and compassion towards others.
- To develop responsible leaders in society.
- To cultivate Self Discipline, Self-esteem and a strong work ethic.
- To Nurture spiritual development within an ethical framework.

### 1.5. Audit Details

1. **Date of Audit** : **22.04.2019**
2. **Audit Site** : **Little Flower Degree College**  
Uppal,R.R dist(Medchal-Malkajgiri Dist New)  
Hyderabad-500039, Telangana, India
3. **Inspection Body** : **Nature Science Foundation**  
Coimbatore, Tamil Nadu, India.
4. **Audit Scope** : **Green, Environment and Energy Audits**
5. **Name of the Auditing Chairman** : **Mrs. S. Rajalakshmi**  
ISO QMS, EMS and EnMS Certified Lead Auditor, Founder & Chairman of NSF.
6. **Name of the Auditing Team Leader** : **Dr. D. Vinoth Kumar**  
ISO QMS, EMS and EnMS Certified Lead Auditor, Joint Director, NSF.
7. **Name of the Lead Auditor for Green Audit** : **Dr. R. Mary Josephine**  
ISO EMS and EnMS Certified Lead Auditor.
8. **Name of the Lead Auditor for Environment Audit** : **Ar. N. M. Pradeep Kumar**  
ISO EMS and IGBC Certified Lead Auditor.
9. **Name of the Lead Auditor for Energy Audit** : **Er.A.Karthik**  
Bureau of Energy Efficiency Certified Auditor.

#### 1.5.1. Audit Checklist Observations

During the onsite visit, respective auditors marks not applicable and write the reason for non-applicability and wherever its applicable, auditors verifies the records / practice / documents and physical observation to confirm the same.

There are two parameters such as meeting the requirements and not meeting the requirements. Marking as meeting the requirements for the specific checkpoint reveals that the physical observation and documents are up to the mark. For some checkpoints OFI – Opportunity for Improvements will be given by the auditors. The physical observations and documents which are not up to the mark will be given as not meeting the requirements. The checkpoints under not meeting the requirements are up to the Management of the Organization to develop further.

### 1.6. List of Instruments used in the Inspection Process

During the on-site visit the below listed instruments are used by the Lead Auditors and Technical experts to check the specific parameters in the view of maintaining sustainability. All the instruments are calibrated by ISO 17025 accredited labs (JRTS Technical Services, Chennai, Tamil Nadu and Instruments Calibration and

Test Centre, Coimbatore, TN). The frequency of calibration is six months once or 20 times after its use.

### 1.6.1. Oxygen Meter

Oxygen meter is used in the audit process to measure the oxygen level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 to 30% O<sub>2</sub>, resolution of 0.1%, accuracy is  $\pm (1\% \text{ reading} + 0.2\% \text{ O}_2)$ , response time is  $\leq 15$  seconds, environment pressure range is 0.9 to 1.1 atmosphere, temperature range is 0 °C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is 25°C.



### 1.6.2. Carbon dioxide meter

Carbon dioxide meter is to measure the carbon level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 ~ 4000 ppm, resolution of CO<sub>2</sub> Meter is 1 ppm, accuracy is  $\leq 1,000$  ppm, repeatability is  $\pm 20$  ppm, temperature range between 0°C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is at 25°C.



### 1.6.3. Light (LUX) Meter

Light meter is to calculate the light intensity in the organization. Suitability of the instruments are, 5 ranges. ie., 40.00, 400.0, 4,000, 40,000, 400,000 Lux, operating temperature is 0 to 50°C, Operating humidity is less than 80% RH, Power consumption is DC 8 mA approximately. This Instrument will be calibrated yearly once or during non-functioning.



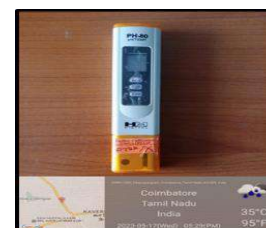
### 1.6.4. Sound Level Meter

Sound level meter is to measure the noise level in the organization. This instrument is calibrated yearly once or after using 20 times. Suitability of the instruments are measurement range is 30 – 130 dB, resolution is 0.1 dB, accuracy is  $(23 \pm 5 \text{ } ^\circ\text{C})$ , Frequency of the instrument is 31.5 to 8,000 Hz, Operating temperature is 0 to 50 °C (32 to 122 °F), Operating humidity is less than 80% RH, Power consumption is DC 6 mA approximately.



### 1.6.5. pH Meter

pH meter is generally used to measure the pH level in water. It is calibrated 6 months once or after 20 times of its use. Suitability of the instrument are range of the pH meter is 0 – 14, accuracy is  $\pm 2\%$ , resolution of the instrument is 0.1 pH, operating temperature is 0 to 50 °C (32 to 122 °F).



### 1.6.6. TDS Meter

TDS meter is generally used to measure the TDS level in water. Suitability of the meter are range of TDS meter is 0 – 9990 ppm (mg/L), operating temperature is 0 to 80 °C (32 to 176 °F) and accuracy is  $\pm 2\%$ . This meter is calibrated six months once or 20 times after its use.



### 1.6.7. GPS Meter

GPS meter is subjected to know the latitude and altitude, location, etc., Suitability of the GPS meter are, dimension is 2.1" x 4.0" x 1.3" (5.4 x 10.3 x 3.3 cm), Display resolution is 128 x 160 pixels an GPS Map features included in Continental Europe. It is calibrated six months once or after 20 times of the usage.



### 1.6.8. Deluxe Water and Soil Analysis Kit

Deluxe water and soil analysis kit is used to analyze the pH, TDS, salinity, turbidity, alkalinity dissolved oxygen of water.



### 1.6.9. Digital Clamp (Voltage) Meter

It is used to check the input and output voltage between two points of an electrical circuit of Alternating Current (AC) and Direct Current (DC) by means of the high resistance of the voltage that impede the flow of current.



## 1.7. Use of Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) refers to protective clothing for the eyes, head, ears, hands, respiratory system, body, and feet. It is utilized to protect individuals from the risks of injury while minimizing exposure to chemical, biological, and physical hazards. PPE serves as the final line of defense when engineering and administrative controls are insufficient in reducing risks. Nature Science Foundation safeguards all the auditors by supplying PPE during the conduct of audits. PPE used are safety jackets, ear plugs, goggles, face shield, hand gloves, shoes, etc.,

### 1.7.1. Safety jackets:

PPE includes safety vests and suits that can be used for inspection process which will protect body injuries from extreme temperatures, flames and sparks, toxic chemicals, insect bites and radiation.



### 1.7.2. Goggles and Face shield:

Goggles and face shield are used in the inspection process while inspecting items which would cause eye damage or loss of vision, spray or toxic liquids especially in chemistry labs, nearing the electric and electronic item.



**1.7.3. Helmet:**

PPE includes hard hats and headgears which will be required for tasks that can cause any force or object falling to the head. It also helps to resist penetration.

**1.7.4. Hand gloves:**

PPE includes safety gloves and should be used for tasks that can cause hand and skin burns, absorption of harmful substances, cuts, fractures or amputations. Selection of hand gloves is based on the application of use.

**1.7.5. Safety Boots:**

Foot protection is one of the most commonly used PPE and can differ depending upon the environment. Safety boots are used for tasks that can cause serious foot and leg injuries from falling or rolling objects, hot substances, electrical hazards, and slippery surfaces.

**1.7.6. Ear Plug:**

Ear plugs are used for tasks that can cause hearing problems and loss of hearing. Hearing protection devices reduces the noise energy reducing reaching and causing damage to the inner ear. This ear plug is mostly used near sound producing devices like power motors, genets, generators, etc.,





## 2. GREEN AUDIT

### 2.1. Introduction

Green audit ensures the Organization's campus should have greenish with large diversity of trees, herbs, shrubs, climbers and lawns to reduce the environmental pollution and soil erosion; it is also useful in relation to biodiversity conservation, landscape management, irrigation/economic water utilization and maintenance of natural topography besides vegetation. For the benefit of stakeholders, solid waste management, recycling of water, disposal of sewage and waste materials (electronic and biomedical wastes), 'zero' use of plastics, single use plastic items, etc. should be followed consistently in the organization campus. Green Audit procedures includes the definition of green audit, methodology on how to conduct green audit at Educational Institutions and Industrial sectors.

### 2.2. Importance of green audit

The Management of the Organization (Auditee) should be exposed their inherent commitment towards making ecofriendly atmosphere through the green auditing and ready to encourage/follow all types of green activities. A clean and healthy environment will enhance an effective teaching/learning process. They should create the awareness on the importance of greenish initiatives through environmental education among the student members and research scholars. Green audit is the most effective, ecological approach to manage environmental complications (Rajalakshmi *et al.*, 2023). Green audit is a kind of professional care and a simple indigenized system about the environment monitoring in terms of planting more number of trees which is a duty of each and every individual who are the part of economical, financial, social and environmental factors. Green audit is a professional and useful measure for an Organization to determine how and where they are retaining the campus eco-friendly manner. It can also be used to implement the alleviation measures at win-win situation for the stakeholders and the planet. It provides an opportunity to the stakeholders for the development of ownership, personal and social responsibility.

### 2.3. Green audit observations

- It is observed that the Organization has facilities (ramp walk , lift etc.,) for disabled and different age group people.
- Adequate training and awareness programmes are conducted to the Stakeholders for sustainable development at all stages of building life cycle.
- More than 30% of open space is maintained as soft scapes (vegetation) to lower the energy conservation in the campus.
- Land scape design are planned to maintain the natural capacity of the site.
- Land scape irrigation are performed as per the microclimatic condition like during humid / winter season less watering through irrigation is observed.
- Vegetation / vegetative structures are available around the building to reduce energy consumption and maintain indoor climates.
- Herbal garden and green roof system are available to maintain sustainability.

### 2.3.1. Facilities for Human Comforts

As per the ISO Standards under elements of sustainability quality of plumbing services and buildings are maintained in line with the standard. Ramp walk and Wheel chair facilities are implemented for the benefit of disabled and different age group people.



**Ramp Walk, Lift and Wheelchair facilities designed for the comfort of person with disability.**

### 2.3.2. Natural topography, vegetation and monitoring

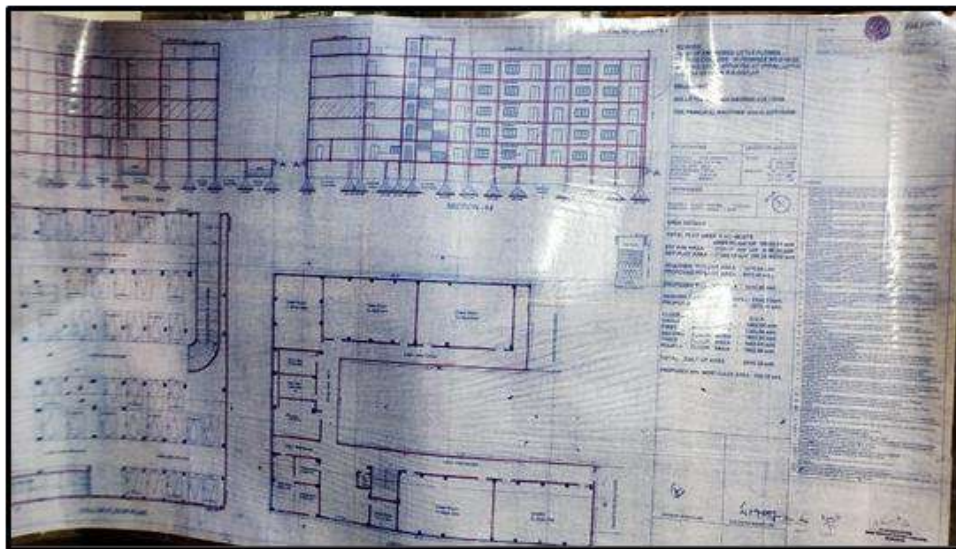
Natural topography means the original geographical features and natural resources of the Site. It is observed that the organization has the natural features like rocks, water resources, slopes, landscape, pathways, etc. Vegetation is the cultivation of a bunch of plants irrespective of the plant *taxa* for the covering of the area or ground topography. The observation at the campus indicated that there are more than 40% natural topography and vegetation. Monitoring plan for maintaining the vegetation and sustainability are evident through separate operation and maintenance team & their records for regular watering as per the micro climatic condition through irrigation.



**Natural Topography and Vegetation at the Campus**

### 2.3.3. Landscape design and soil erosion control

Landscape design is an important feature for any disasters to control especially with respect to the soil erosion. In general, soil erosion occurs if the design of the land is not altered so as to prevent the slope features by strong vegetation and use of a plant buffer zone as safe for escape of nutrients or fertilizers entering the streams. Observation revealed that the audited site has very good landscape design without disturbing the natural vegetation. Contour ploughing is being done at right angles to the slope wherever possible and ridges and furrows are properly maintained to break the flow of water down to the empty land. These activities are widely adopted to control soil erosion in the campus. Microclimatic conditions are considered, during winter season irrigation and watering to plants are controlled as per the water management plan. External landscapes are designed based on the shading pattern of the building. Green vegetation are available around the building to reduce the energy consumption.



**Building plan was observed in the Campus**

### 2.3.4. Establishment of different gardens, vertical landscaping and roof gardens

It is observed that Organization has implemented and maintaining gardens to lower the energy consumption. To maintain certain biomass critical for human health and also to reduce the bio-retention through water flow rates different types of gardens like ornamental garden is implemented in the campus.



**Garden observed in the campus**



### 2.3.5. Survey of Flora and Fauna

Ensuring the rich biodiversity in the green campus is an important parameter which reflects the real-time ecosystem. In general, plants improve the outdoor air quality with increased oxygen levels and reduced temperature and carbon dioxide. The record on maintenance of the plant biomass and its management are important with respect to green campus initiatives. The existence of such plants and birds in the green campus are recorded for the rich flora and fauna which are being considered as a value addition to the campus.



*Plumeria obtusa L.*



*Dieffenbachia seguine (Jacq.)*



*Hippeastrum puniceum (Lam.) Voss*

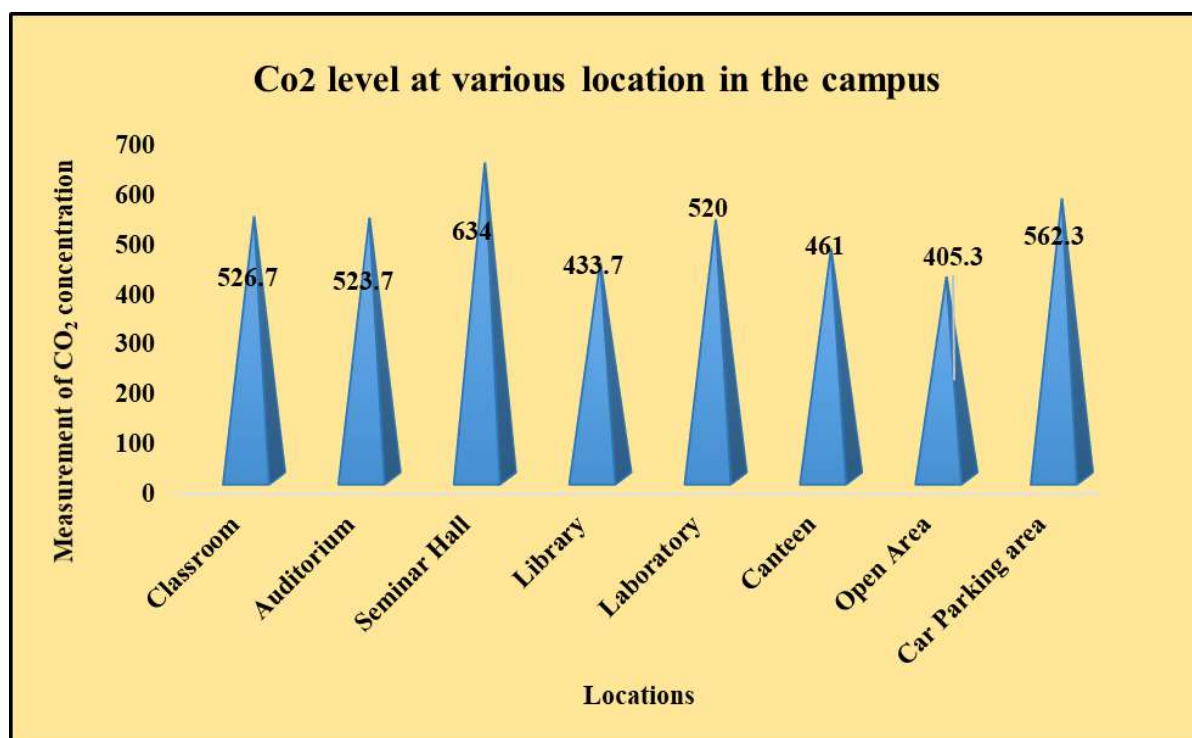
### 2.4. Air quality audit observations

It is observed that carbon dioxide and oxygen values are acceptable range. The air circulation is very good in all the places which in turn useful to give pure air to the stakeholders. The observation showed that the concentration of CO<sub>2</sub> in the atmosphere is found to be optimal which did not exceed the critical limit of CO<sub>2</sub>. It is further revealed that all the selected locations are having pure air without any air contaminants with good air exchange/circulation in the campus. Some of the places like Canteen and Class Rooms are recorded with high level of carbon dioxide level due to student mobilization and the maximum number of electrical items fixed from which the carbon dioxide emission was observed followed by all laboratories and seminar and auditorium halls (Table 13).

**Table 13. Measurement of CO<sub>2</sub> concentration in the Organization**

S. No.	Different locations of the Organization's Campus	Carbon dioxide level (ppm)*	Remarks
1.	Classroom	526.7	Within permissible limits
2.	Auditorium	523.7	Within permissible limits
3.	Seminar Hall	634	Within permissible limits
4.	Library	433.7	Within permissible limits
5.	Laboratory	520.0	Within permissible limits
6.	Canteen	461.0	Within permissible limits
7.	Open Area	405.3	Within permissible limits
8.	Car Parking area	562.3	Within permissible limits

**Figure 7. Measurement of CO<sub>2</sub> concentration in the Organization**



## 2.5. Atmospheric oxygen level measurements analysis and interpretation

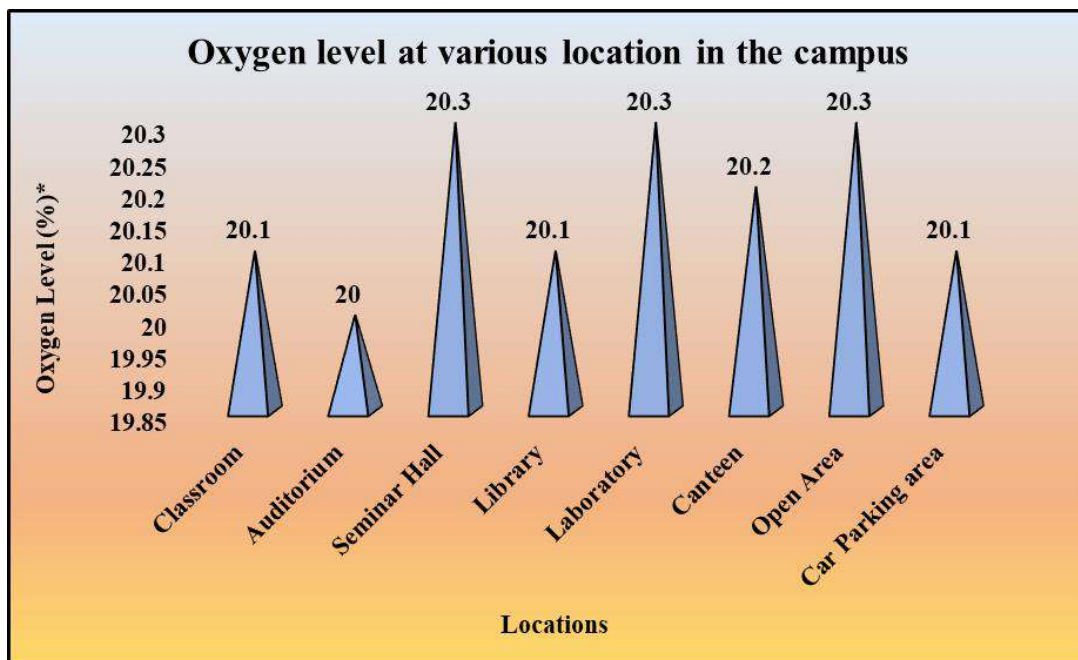
Oxygen level refers to the amount of oxygen available within the atmosphere or water bodies. Oxygen is produced/released as a by-product of photosynthesis, the metabolic activity of all green plants besides certain microbes. Oxygen plays a paramount role in metabolic activities like respiration and the energy-producing chemistry of all living organisms. In order to quantify the oxygen level, Oxygen Meter is used. The atmosphere contains 18-21% oxygen concentration, 75-78.5% nitrogen and 2-3% other gases like carbon dioxide, neon and hydrogen. The amount of oxygen level in the atmosphere is determined by abiotic factors like altitude, latitude and longitude and biotic factors like plantations in the surroundings. If it excess, it causes oxygen toxicity and oxygen poisoning by creating coughing, breathing trouble and damage the lungs to human beings. The oxygen level of different places at the campus are monitored and presented (Table 14).

**Table 14. The oxygen concentration at different places of audited organization**

S. No	Location	Oxygen Level (%)*	Remarks
1.	Classroom	20.1	O <sub>2</sub> level is good
2.	Auditorium	20.0	O <sub>2</sub> level is good
3.	Seminar Hall	20.3	O <sub>2</sub> level is good
4.	Library	20.1	O <sub>2</sub> level is good
5.	Laboratory	20.3	O <sub>2</sub> level is good
6.	Canteen	20.2	O <sub>2</sub> level is good
7.	Open Area	20.3	O <sub>2</sub> level is good
8.	Car Parking area	20.1	O <sub>2</sub> level is good



**Figure 8. The oxygen concentration in the Organization**



**CO<sub>2</sub> and O<sub>2</sub> analysis are observed in the campus**

### **3. Conclusion**

The organisation has made significant progressive contributions with respect to teaching learning, research and consultancy, innovation and transfer of technology, community service and value education, *in toto*. It imparts quality education to rural, tribal and urban people across the Nation which is excellent in terms of academic activities and providing an eco-friendly atmosphere to the stakeholders. The organization has taken enormous efforts to maintain green campus in a sustainable manner. It has conducting a large number of activities for the benefit of rural and tribal community people without disturbing the natural environment. The installation of a rainwater harvesting system and irrigation system to conserve rainwater and improve the ground water levels are noteworthy. The Organization has created medicinal, herbal and ornamental gardens at small scale level for establishing a massive reforestation / afforestation programme in which a large number of trees and shrubs species were planted together for providing an eco-friendly atmosphere to the stakeholders in a sustainable manner.

## 4. References

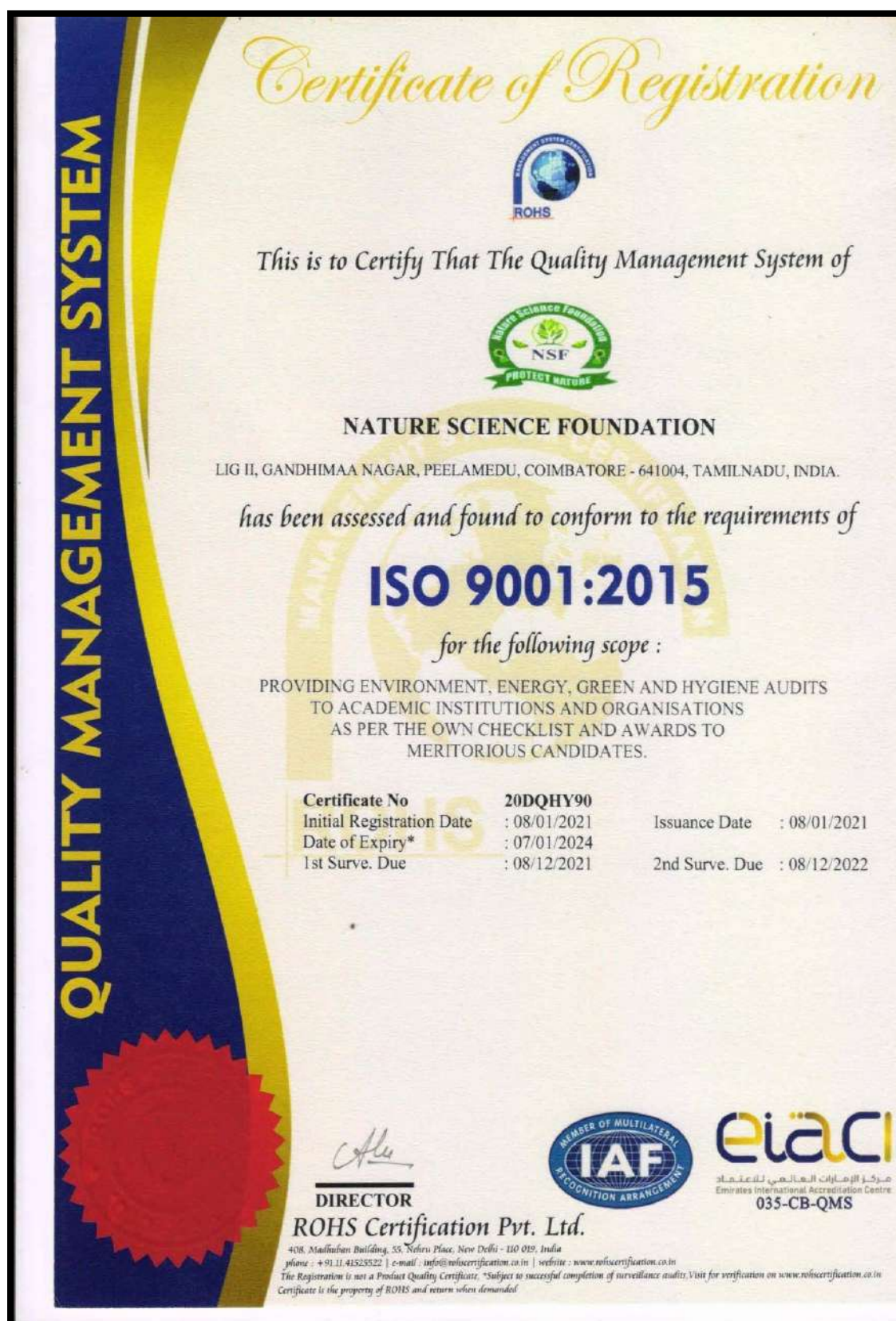
- Adeniji, A.A. 2018. *Audit and Assurance Services. Lagos: Value Analyst Concept of Green Audit*. New Age International, New Delhi, India.
- Aparajita, G. 1995. Environmental Audits- a Mean to Going Green. *Development Alternatives* **5** (4): 7-9.
- APHA, 2017. *Standard methods for the estimation of water and wastewater*. Vol. II, 15<sup>th</sup> edn, Washington, US.
- Arora, D.P. 2017. Environmental Audit–need of the hour. *International Journal of Advanced Research in Engineering & Management* **3** (4): 25-31.
- Aruninta, A., Kurazumi, Y., Fukagawa, K. and Ishii, J. 2017. The integration of human thermal comfort in an outdoor campus landscape in a tropical climate. *International Journal of GEOMATE* **14** (44): 26-32.
- Awasthi, D.D. 2007. *A Compendium of the macrolichens from India, Nepal and Sri Lank*. Bishen Singh Mahendra Pal Sin, Dehradun, Uttar Pradesh, India, 278p.
- Beebee, T.J.C. and Griffiths, R.A. 2000. Amphibians and Reptiles. A Natural History of the British Herpetofauna. The New Naturalist Library, London, UK.
- Brindusa M. Sluser, Caliman, F.A., Betianu, C. and Gavrilescu, M. 2007. Methods and procedures for environmental risk assessment. *Environmental Engineering and Management Journal* **6** (6): 573-592.
- Chandrabose, M. and Nair, N.C. 1988. Flora of Coimbatore, Bishen Singh and Mahendra Pal Singh, Dehra Dun, India.
- Choy, Er.A. and Karudan, R. 2016. Promoting campus sustainability: A conceptual framework for the assessment of campus sustainability. *Journal of Social Sciences and Humanities* **11** (2): 112-118.
- Culberson, C.F. and Kristinsson, H.D. 1970. A standardized method for the identification of lichen products. *Journal of Chromatography A*. **46**: 85-93.
- Fachrudin, H.T., Fachrudin, K.A. and Utami, W. 2019. Education activities to realize green campus. *Asian Social Science* **15** (8): 18-27.
- Ferenc, M., Sedlacek, O., Fuchs, R., Dinetti, M., Fraissinet, M. and D. Storch 2014. Are cities different?. Patterns of species richness and beta diversity of urban bird communities and regional species assemblages in Europe. *Global Ecology and Biogeography* **23**: 479-489.
- Freidenfelds, D., Kalnins, S.N. and Gusca, J. 2018. What does environmentally sustainable higher education institution mean?. *Energy Procedia* **147**: 42-47.
- Gamble, J.S. and Fischer, C.E.C 1972. *The Flora of the Presidency of Madras*. Vols. 1 - 3. Rep. Ed. 1957. Adlard and Sons Ltd., London, UK.
- Gowri, S. and Harikrishnan, V. 2014. Green computing: Analyzing power consumption using local cooling. *International Journal of Engineering Trends and Technology* **15** (3): 105-107.
- Henry, A.N., Chitra, V. and Balakrishnan, N.P. 1989. Flora of Tamil Nadu. Vol. 3. Botanical Survey of India, Coimbatore, Tamil Nadu, India.
- Jayson, E.A. and D.N. Mathew, 2000. Diversity and species-abundance distribution of birds in the tropical forests of Silent Valley, Coimbatore. *Journal of the Bombay Natural History Society* **97** (3): 390–399.

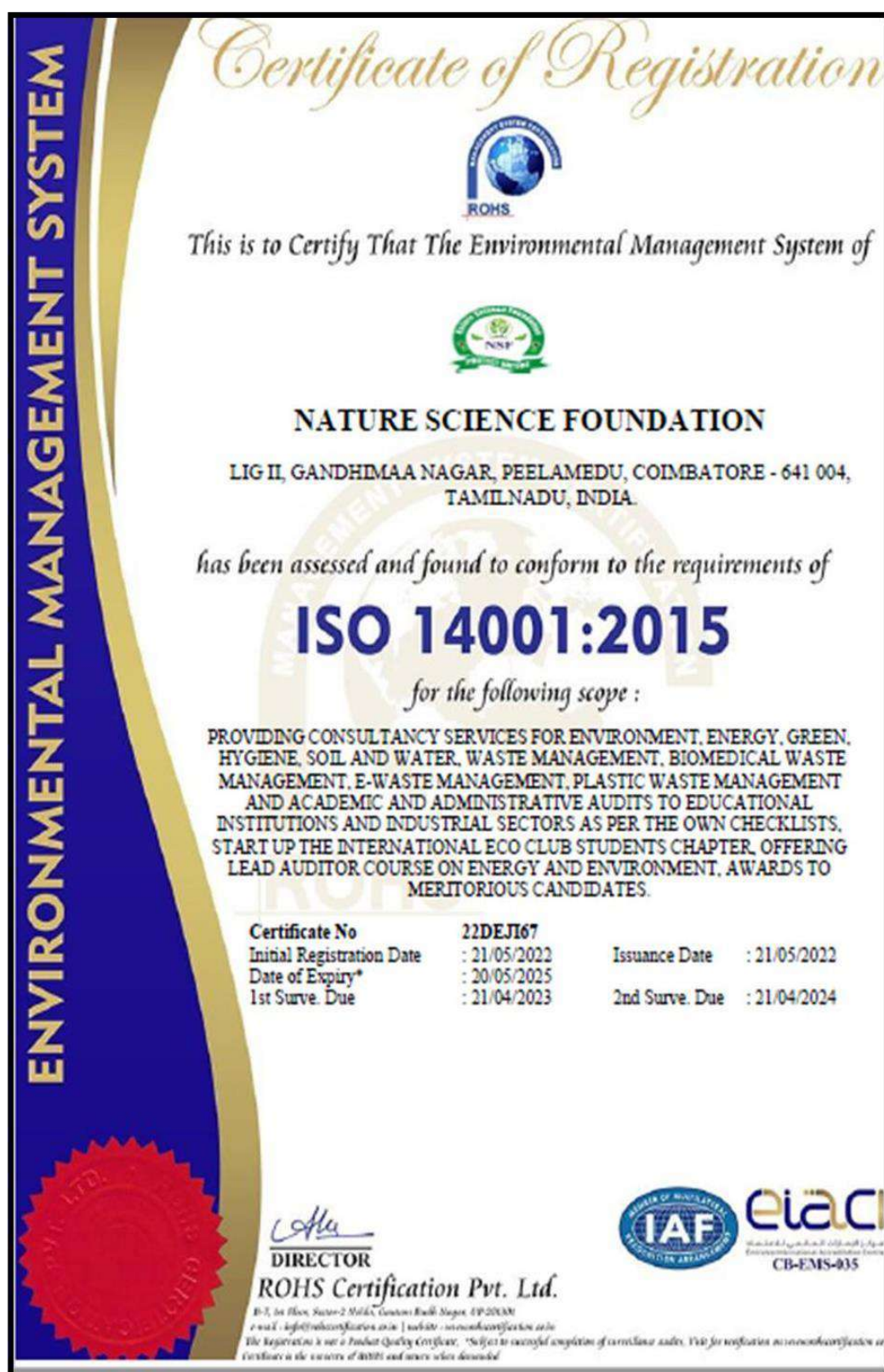
- Lauder, A., Sari, R.F., Suwartha, N. and Tjahjono, G. 2015. Critical review of a global campus sustainability ranking: Green Metric. *Journal of Cleaner Production* **108**: 852–863.
- Leal Filho, W., Muthu, N., Edwin, G. and Sima, M. 2015. Implementing campus greening initiatives: approaches, methods and perspectives. Springer, London, UK.
- León-Fernández, Y. and Domínguez-Vilches, E. 2015. Environmental management and sustainability in higher education: The case of Spanish Universities. *International Journal of Sustainability in Higher Education* **16**: 440-455.
- Marrone, P., Orsini, F., Asdrubali, F. and Guattari, C. 2018. Environmental performance of universities: Proposal for implementing campus urban morphology as an evaluation parameter in Green Metric. *Sustainable Cities and Society* **42**: 226-239.
- Nair, N.C. and Henry, A.N. 1983. Flora of Tamil Nadu, India. Ser. 1: Analysis. Vol. 1. Botanical Survey of India, Coimbatore, Tamil Nadu, India.
- Report of Green Audit, 2018. *Report of Green Audit Nitte Meenakshi Institute of Technology, Chennai, Tamil Nadu, India*. <https://www.google.com/search?q=Green+Audit+Report+Nitte+Meenakshi+Institute+Of+Technology&sxsrf>
- Ribeiro, J.M.P., Barbosa, S.B., Casagrande, J.L., Sehnem, S., Berchin, I.I., da Silva, C.G., da Silveira, A.C.M., Zimmer, G.A.A., Faraco, R.A. and de Andrade Guerra, J.B.S. 2017. Promotion of sustainable development at universities: The adoption of green campus strategies at the University of Southern Santa Catarina, Brazil. Springer Nature, Handbook of Theory and Practice of Sustainable Development in Higher Education. pp. 471-486.
- Satean, G. 2017. The need to go beyond “Green University” ideas to involve the community at Naresuan University, Thailand. Springer Nature, Sustainability Through Innovation in Product Life Cycle Design. pp. 841-857.
- Staniskis, J.K. and Katiliute, E. 2016. Principles, implementation and results of the new assessment and accreditation system “Engineering education for sustainable industries”. Springer Nature, New Developments in Engineering Education for Sustainable Development. pp. 283-294.
- Suwartha, N. and Sari, R.F. 2013. Evaluating UI Green Metric as a tool to support green universities development: Assessment of the year 2011 Ranking. *Journal of Cleaner Production* **61**: 46–53.
- Venkataraman, K. 2009. India’s Biodiversity Act 2002 and its role in conservation. *Tropical Ecology* **50** (1): 23-30.
- .....

## **5. Certificates of Nature Science Foundation**

1. ISO Certificate (QMS 9001:2015)
2. ISO Certificate (EMS 14001:2015)
3. ISO Certificate (OHSMS 45001:2018)
4. ISO Certificate (EnMS 50001:2018)
5. MSME Certificate











**QCS** MANAGEMENT PVT. LTD.  
MANAGEMENT SYSTEMS CERTIFICATION

## *Certificate of Registration*

**ISO 45001:2018 (Occupational Health & Safety Management System)**

### **NATURE SCIENCE FOUNDATION**

ADDRESS: NO. 2669, LIG-II, GANDHI MANAGAR PEELAMEDU COIMBATORE - 641 004 TAMIL NADU, INDIA.

#### **Scope of Certification:**

PROVIDING TRAINING AND AUDITING SERVICES IN THE FIELD OF  
GREEN CAMPUS, ENVIRONMENT, ENERGY, OCCUPATIONAL HEALTH AND SAFETY, HYGIENE AND  
WASTE MANAGEMENT AT EDUCATIONAL INSTITUTES AND INDUSTRIAL SECTOR.

Certificate Number : QCS/EUAS/OHS/002

Issue Date : 03/08/2022  
Expiration Date : 02/08/2023

1<sup>ST</sup> Surveillance Audit Within : 02/07/2023  
2<sup>ND</sup> Surveillance Audit Within : 02/07/2024  
Re-certification Due Date : 02/08/2025



Partha Bagchi  
(Managing Director)

Validity of this Certificate is subject to Surveillance Audits to be conducted before scheduled due dates of surveillance audits as mentioned on the certificate, failing which the certificate will stand to be withdrawn and need to be treated as an initial certification process to reactivate its continuity on the register of EUAS and QCS. This Certificate is valid when confirmed by data listed on the (Euro Universal Accreditation Systems) EUAS" [www.euas-ac.org](http://www.euas-ac.org). The authenticity & validity of this certificate may be re-affirmed by referring to our company website - [www.qcspl.com](http://www.qcspl.com). Lack of fulfillment of conditions as set out on the 'Certification Contract' (Annex 13) may render this certificate invalid. Any alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of law. This certificate remains the property of QCS and to be returned on request.

REGISTERED OFFICE: 37E/1(310) 2<sup>ND</sup> STREET, MODERN PARK, GREENAGE APARTMENT - 2<sup>ND</sup> FLOOR,  
SANTOSH PUR, KOLKATA - 700075, WEST BENGAL, INDIA.  
Email: [info@qcspl.com](mailto:info@qcspl.com). Call: +91 8697724963, +91 8902447427. Website: [www.qcspl.com](http://www.qcspl.com)



## Certificate of Registration

This is to certify that

### NATURE SCIENCE FOUNDATION

LIG II, GANDHIMAA NAGAR, PEELAMEDU, COIMBATORE - 641 004,  
TAMILNADU, INDIA.

has been independently assessed by QRO  
and is compliant with the requirement of:

**ISO 50001:2018**

### Energy Management Systems

For the following scope of activities:

PROVIDING CONSULTANCY SERVICES FOR ENVIRONMENT, ENERGY, GREEN, HYGIENE, SOIL AND WATER, WASTE MANAGEMENT, BIOMEDICAL WASTE MANAGEMENT, E-WASTE MANAGEMENT, PLASTIC WASTE MANAGEMENT AND ACADEMIC AND ADMINISTRATIVE AUDITS TO EDUCATIONAL INSTITUTIONS AND INDUSTRIAL SECTORS AS PER THE OWN CHECKLISTS, START UP THE INTERNATIONAL ECO CLUB STUDENTS CHAPTER, OFFERING LEAD AUDITOR COURSE ON ENERGY AND ENVIRONMENT, AWARDS TO MERITORIOUS CANDIDATES.

Date of Certification: 9th August 2022

2<sup>nd</sup> Surveillance Audit Due: 8th August 2024

1<sup>st</sup> Surveillance Audit Due: 8th August 2023

Certificate Expiry: 8th August 2025

**Certificate Number: 305022080903EN**



*Chunant...*  
Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.  
(In case surveillance audit is not allowed to be conducted; this certificate shall be suspended / withdrawn).

The Validity of this certificate can be verified at [www.qrocert.org](http://www.qrocert.org)

This certificate of registration remains the property of QRO Certification LLP, and shall be returned immediately upon request.

India Office : QRO Certification LLP

142, 11nd Floor, Avtar Enclave, Near Paschim Vihar West Metro Station, Delhi-110063, (INDIA)

Website : [www.qrocert.org](http://www.qrocert.org). E-mail : [info@qrocert.org](mailto:info@qrocert.org)





भारत सरकार  
Government of India  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises



सूक्ष्म, लघु एवं मध्यम उद्यम  
MICRO, SMALL & MEDIUM ENTERPRISES

## UDYAM REGISTRATION CERTIFICATE



Our small hands to make you LARGE

<b>UDYAM REGISTRATION NUMBER</b>	UDYAM-TN-03-0073706																							
<b>NAME OF ENTERPRISE</b>	M/S NATURE SCIENCE FOUNDATION																							
<b>TYPE OF ENTERPRISE *</b>	MICRO																							
<b>MAJOR ACTIVITY</b>	SERVICES																							
<b>SOCIAL CATEGORY OF ENTREPRENEUR</b>	GENERAL																							
<b>NAME OF UNIT(S)</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>S.No.</th> <th colspan="3">Name of Unit(s)</th> </tr> <tr> <td>1</td> <td colspan="3">Green Campus, Energy and Environment Management Audits</td> </tr> </table>				S.No.	Name of Unit(s)			1	Green Campus, Energy and Environment Management Audits														
S.No.	Name of Unit(s)																							
1	Green Campus, Energy and Environment Management Audits																							
<b>OFFICIAL ADDRESS OF ENTERPRISE</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Flat/Door/Block No.</td> <td>LIG-II,2669</td> <td>Name of Premises/ Building</td> <td>GANDHIMAA NAGAR</td> </tr> <tr> <td>Village/Town</td> <td>Gandhinagar S.O.</td> <td>Block</td> <td>LIG-II</td> </tr> <tr> <td>Road/Street/Lane</td> <td>Peelamedu</td> <td>City</td> <td>Coimbatore South</td> </tr> <tr> <td>State</td> <td>TAMIL NADU</td> <td>District</td> <td>COIMBATORE, Pin 641004</td> </tr> <tr> <td>Mobile</td> <td>9566777285</td> <td>Email:</td> <td>chairmansf@gmail.com</td> </tr> </table>				Flat/Door/Block No.	LIG-II,2669	Name of Premises/ Building	GANDHIMAA NAGAR	Village/Town	Gandhinagar S.O.	Block	LIG-II	Road/Street/Lane	Peelamedu	City	Coimbatore South	State	TAMIL NADU	District	COIMBATORE, Pin 641004	Mobile	9566777285	Email:	chairmansf@gmail.com
Flat/Door/Block No.	LIG-II,2669	Name of Premises/ Building	GANDHIMAA NAGAR																					
Village/Town	Gandhinagar S.O.	Block	LIG-II																					
Road/Street/Lane	Peelamedu	City	Coimbatore South																					
State	TAMIL NADU	District	COIMBATORE, Pin 641004																					
Mobile	9566777285	Email:	chairmansf@gmail.com																					
<b>DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE</b>	28/11/2017																							
<b>DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS</b>	12/03/2020																							
<b>NATIONAL INDUSTRY CLASSIFICATION CODE(S)</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>S.No.</th> <th>NIC 2 Digit</th> <th>NIC 4 Digit</th> <th>NIC 5 Digit</th> <th>Activity</th> </tr> <tr> <td>1</td> <td>69 - Legal and accounting activities</td> <td>6920 - Accounting, bookkeeping and auditing activities; tax consultancy</td> <td>69201 - Accounting, bookkeeping and auditing activities</td> <td>Services</td> </tr> <tr> <td>2</td> <td>85 - Education</td> <td>8542 - Cultural education</td> <td>85420 - Cultural education</td> <td>Services</td> </tr> <tr> <td>3</td> <td>85 - Education</td> <td>8549 - Other education n.e.c.</td> <td>85499 - Other educational services n.e.c.</td> <td>Services</td> </tr> </table>				S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity	1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services	2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services	3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services
S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity																				
1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services																				
2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services																				
3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services																				
<b>DATE OF UDYAM REGISTRATION</b>	26/02/2022																							

\* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the Mo MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing: 26/02/2022

**For any assistance, you may contact:**

1. District Industries Centre: COIMBATORE (TAMIL NADU)

2. MSME-DI: CHENNAI (TAMIL NADU)

Visit : [www.msme.gov.in](http://www.msme.gov.in) ; [www.dcmsme.gov.in](http://www.dcmsme.gov.in) ; [www.champions.gov.in](http://www.champions.gov.in)

Follow us @minmsme & @msmechampions



BE A  
CHAMPION

with the  
Ministry of  
**MSME**



## **6. Certificates of Lead Auditors**

1. Bureau of Energy Efficiency (BEE), LEED AP and GRIHA Certificates of Er. D. Dineshkumar, Energy and Environment Auditor of NSF.
2. Indian Green Building Council (IGBC AP) Accredited Professional of Dr. B. Mythili Gnanamangai, Vice-Chairman of NSF.
3. Tamil Nadu Fire and Rescue Service Certificate of Er. S. Srinivash, Energy Auditors of NSF.



## BUREAU OF ENERGY EFFICIENCY



Examination Registration No. : **EA-14056** Serial Number **9176**

Certificate Registration No. : **9176**

*[Signature]*

### Certificate For Certified Energy Manager

This is to certify that Mr./Mrs./Ms. **Dinesh Kumar D**  
Son/Daughter of Mr./Mrs. **R M Dhanasekaran** who has passed the National  
Examination for certification of energy manager held in the month of **October 2011** is  
qualified as certified energy manager subject to the provisions of Bureau of Energy Efficiency  
(Certification Procedures for Energy Managers) Regulations, 2010.

This certificate shall be valid for five years with effect from the date of award of this certificate  
and shall be renewable subject to attending the prescribed refresher training course once in every  
five years.

His /Her name has been entered in the Register of certified energy manager  
at Serial Number **9176** being maintained by the Bureau of Energy Efficiency under the  
aforesaid regulations.

Mr./Mrs./Ms. **Dinesh Kumar D** is deemed to have qualified  
for appointment or designation as energy manager under clause (i) of Section 14 of the Energy  
Conservation Act, 2001 (Act No.52 of 2001).

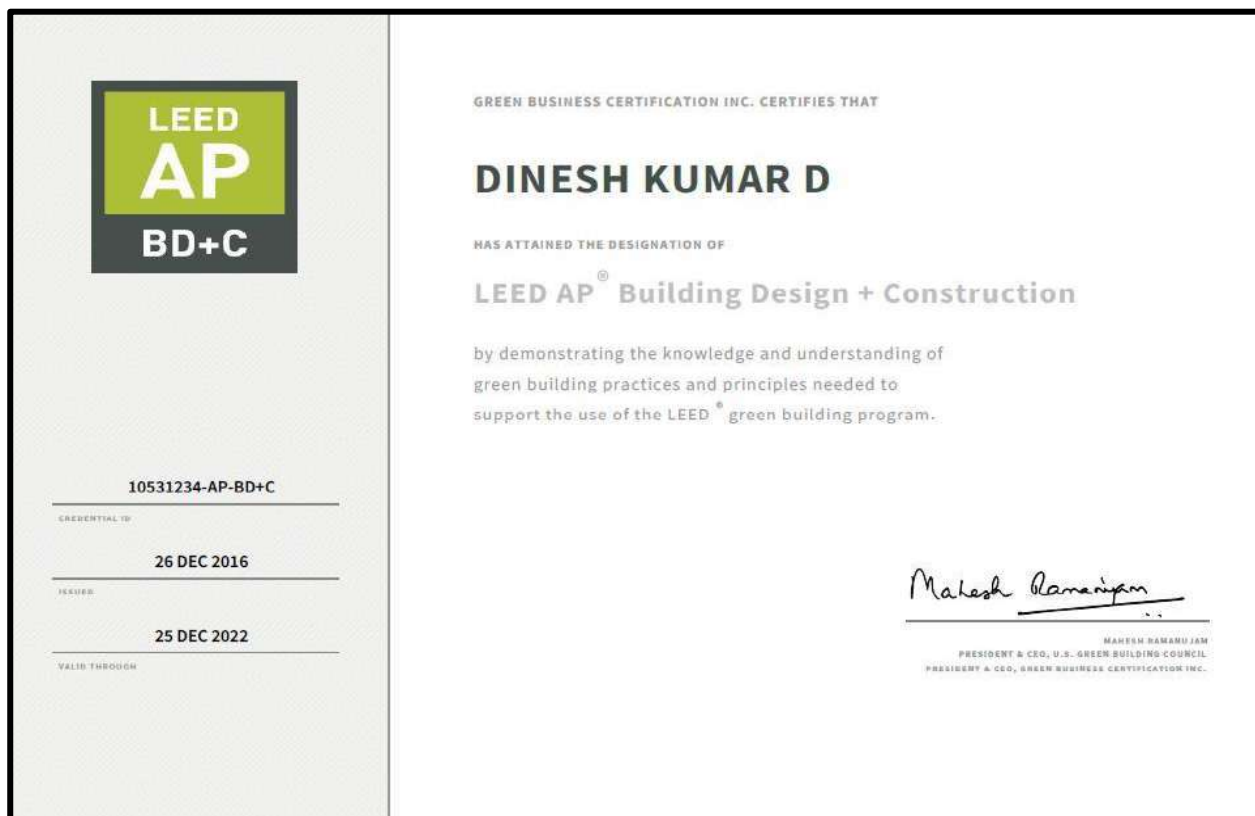
Given under the seal of the Bureau of Energy Efficiency, this **7<sup>th</sup>** day  
of **February, 2013**

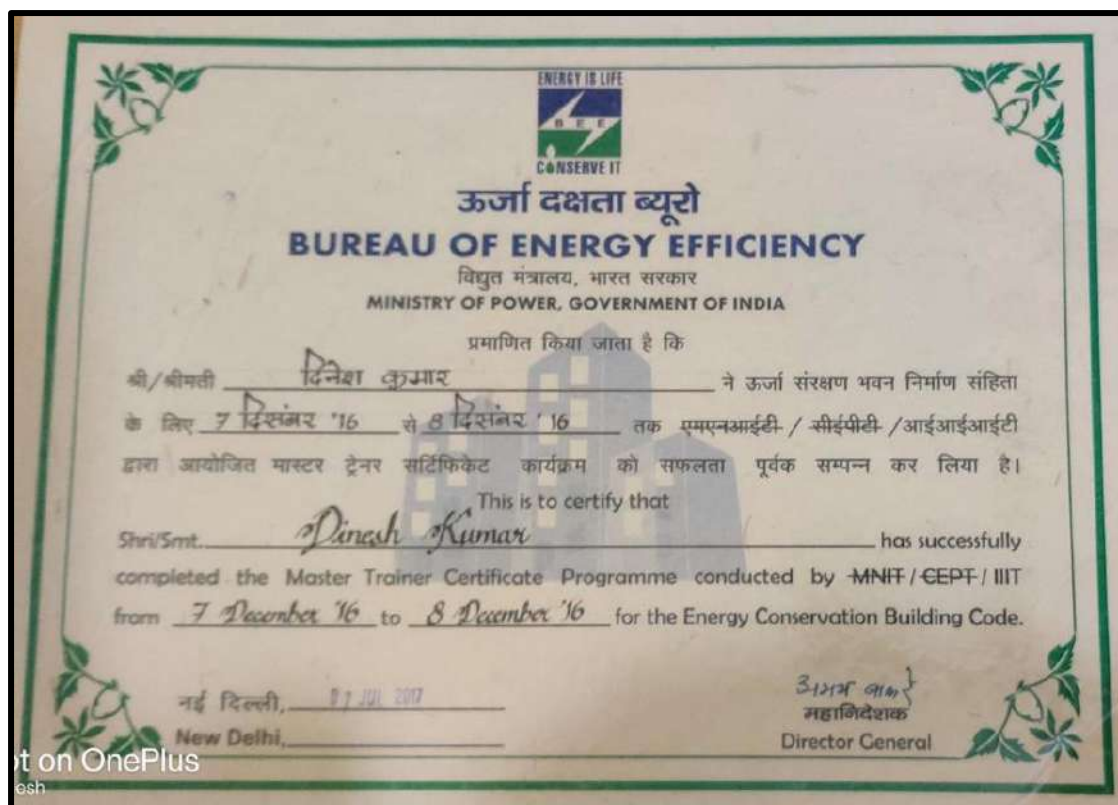
*[Signature]*

Digitally Signed: RAKESH KUMAR RAI  
Sun Mar 01 10:58:55 IST 2020  
Secretary, BEE New Delhi

Secretary  
Bureau of Energy Efficiency  
New Delhi

Dates of attending the refresher course	Secretary's Signature	Dates of attending the refresher course	Secretary's Signature
<b>22.12.2019</b>	<i>[Signature]</i>		











# TECHNICAL REPORT OF ENVIRONMENT AUDIT



*Submitted to*

**LITTLE FLOWER DEGREE COLLEGE**  
**UPPAL, HYDERABAD – 500 039, TELANGANA**

*Date of Audit: 19.04.2021*

*Valid till: 18.04.2024*



*Submitted by*

**NATURE SCIENCE FOUNDATION**

**(A Unique Research and Development Centre for Society Improvement)**  
**[ISO 9001:2015 Certified and Ministry of MSME Registered Organization]**

**No. 2669, LIG-II, Gandhi Managar, Peelamedu**

**Coimbatore 641 004, Tamil Nadu, India**

**Phone: 0422 2510006, Mobile: 9566777255, 9566777258**

**Email: [director@nsfonline.org.in](mailto:director@nsfonline.org.in)**

## CONTENTS

S.No.	Details of Reports	Page No
1.	<b>General Introduction</b>	<b>3</b>
1.1.	Introduction	3
1.2.	Environment Friendly Campus	3
1.3.	About Nature Science Foundation (NSF)	3
1.4.	About the organization	4
1.5.	Audit Team Details	5
1.6.	List of Instruments used in the Inspection Process	5
1.7.	Use of Personal Protective Equipment (PPE)	7
2.	<b>Environment Audit</b>	<b>9</b>
2.1.	Introduction	9
2.2.	Organization Details	10
2.3.	Environment audit observations	10
2.3.1.	Integrated Water Management System	11
2.3.2.	Corporate Governance	11
2.3.3.	Safety measures and green building conservation code	12
2.3.4.	Applicability and Implementation	12
2.3.5.	Parking facilities to reduce Heat Island Effect	12
2.3.6.	Public transport, low emitting vehicles and control of car smokes	12
2.3.7.	Pedestrian path facility at the campus	13
2.3.8.	Carbon footprint	14
2.3.9.	Selection of Building Material	14
2.3.10.	Waste and Water management activities	14
2.3.11.	Post Occupancy maintenance	14
3	Conclusion	15
4	References	16
5	Certificates of Nature Science Foundation	21
6	Certificates of Lead Auditors	27

## **1. GENERAL INTRODUCTION**

### **1.1. Introduction**

Green campus is an area of the Organization or the Organization as a whole itself contributing to have an infrastructure or development that is structured/planned to incur less energy, less water, less or no CO<sub>2</sub> emission and less or pollution free environment. Green Audit is a tool to evaluate environment management system which is systematically executed to protect and preserve the environment. Green audit constitutes the environmental friendly practices and education combined to promote sustenance of green environment by adopting user-friendly technology within the campus. It creates awareness on environmental ethics, resolves environmental issues and offers solutions to various social and economic needs. It strengthens the concept of ‘Green Building’ and ‘Oxygenated Building’ which in turn provides a healthy atmosphere to the stakeholders.

### **1.2. Environment Friendly Campus**

As stated earlier, Organization is liable to provide an eco-friendly atmosphere along with good quality of drinking water facility to all the stakeholders. Manuring the cultivated plants/grown within the campus may be applied with organic manure, cow dung, farmyard manure and vermicompost instead of using chemical fertilizers. All non-compostable and single-use disposable plastic items, plastic utensils, plastic straws and stirrers should be avoided. Demonstration / awareness programme on establishing plastic-free environment and utility of organic alternatives for all incoming and current students, staff and faculty should be organized. Reduction of use of papers alternated with e-services, e-circulars, etc., and proper disposal of wastes, recycling and suitable waste management system should be considered to establish environment friendly campus.

The term ‘auditing’ is to examine the management practices and to evaluate performance of an organization in relation to environmental issues. World along with Associated Chambers of Commerce and Industry of India (ASSOCHAM), Green Building Council (IGBC) and Green Ratings Systems (GBCRS), Green Rating for Integrated Habitat Assessment (GRIHA), Bureau of Energy Efficiency (BEE), Leadership in Energy and Environmental Design (LEED), CII-GreenCo –GreenCo Rating System (CII-GRS), Food Safety Management System & Occupational Safety & Health (FSMS), Swachh Bharath under India Clean Mission (SBICM) and International Standard Organization have formulated a series of standards in the field of environmental auditing. These standards are basically intended to guide organizations and auditors on the general principles common to the execution of environmental audits.

### **1.3. About Nature Science Foundation (NSF)**

NSF is the ISO QMS (9001:2015) Certified and registered with Ministry of Micro, Small and Medium Enterprise (MSME), Government of India Organization functioning energetically towards the noble cause of nature conservation and environmental protection. NSF is managed by a Board of Trustees which is a Public Charitable Trust

registered under the TN Societies registration Act 1975 (TN Act 27 of 1975) on 29<sup>th</sup> November, 2017 at Peelamedu, Coimbatore 641 004, Tamil Nadu, India with Certificate of Registration No. 114 / 2017. In addition, NSF has 12AA, 80G and Form 10AC certificates for income tax exemption and implanting various Government schemes. The main motto of the NSF is ‘Save the Nature to Save the Future’ and ‘Go Green to Save the Planet’.

#### **1.4. About the Organization**

##### **Little Flower Degree College**

Little Flower Degree College, Uppal is a Christian Minority institution established by the Montfort Brothers of St. Gabriel. It was started in 2008 as a part of Little Flower Junior College, Hyderabad. On 21<sup>st</sup> January 2023, LFDC has celebrated Quindecennial to commemorate its fifteenth year in its journey towards excellence in imparting education.

##### **Vision:**

Quality education that fosters academic excellence, value enrichment, social responsibility, and promotes holistic development, inclusivity and nurturing individuals who contribute positively to society.

##### **Mission:**

Cultivate academic excellence, instil ethical values that promote integrity, social responsibility through community engagement and prepare individuals with essential skills to navigate the challenges of the dynamic world and foster holistic development by embracing diverse perspectives.

- To encourage staff and students to strive for the highest standards in academics, sports, and extracurricular activities.
- To instil honesty, responsibility, and moral uprightness in all aspects of life.
- To enhance skills to face the challenges of the competitive world.
- To celebrate the diverse talents and interests.
- To promote a spirit of selflessness and compassion towards others.
- To develop responsible leaders in society.
- To cultivate Self Discipline, Self-esteem and a strong work ethic.
- To Nurture spiritual development within an ethical framework.

### 1.5. Audit Details

- |  |  |
|--|--|
| <b>1. Date of Audit</b>                                  | <b>: 19.04.2021</b>  |
| <b>2. Audit Site</b>                                     | <b>: Little Flower Degree College</b><br>Uppal,R.R dist(Medchal-Malkajgiri Dist New)<br>Hyderabad-500039, Telangana, India |
| <b>3. Inspection Body</b>                                | <b>: Nature Science Foundation</b><br>Coimbatore, Tamil Nadu, India.   |
| <b>4. Audit Scope</b>                                    | <b>: Green, Environment and Energy Audits</b>  |
| <b>5. Name of the Auditing Chairman</b>                  | <b>: Dr. S. Rajalakshmi</b><br>ISO QMS, EMS and EnMS Certified Lead Auditor, Founder & Chairman of NSF.                    |
| <b>6. Name of the Auditing Team Leader</b>               | <b>: Dr. D. Vinoth Kumar</b><br>ISO QMS, EMS and EnMS Certified Lead Auditor, Assistant Director & Programme Manager, NSF. |
| <b>7. Name of the Lead Auditor for Green Audit</b>       | <b>: Dr. R. Mary Josephine</b><br>ISO EMS and EnMS Certified Lead Auditor.   |
| <b>8. Name of the Lead Auditor for Environment Audit</b> | <b>: Ms. V. Sri Santhya</b><br>ISO EMS and IGBC Certified Lead Auditor.  |
| <b>9. Name of the Lead Auditor for Energy Audit</b>      | <b>: Dr. P. Thirumoorthi</b><br>Bureau of Energy Efficiency Certified Auditor.   |

#### 1.5.1. Audit Checklist Observations

During the onsite visit, respective auditors marks not applicable and write the reason for non-applicability and wherever its applicable, auditors verifies the records / practice / documents and physical observation to confirm the same.

There are two parameters such as meeting the requirements and not meeting the requirements. Marking as meeting the requirements for the specific checkpoint reveals that the physical observation and documents are up to the mark. For some checkpoints OFI – Opportunity for Improvements will be given by the auditors. The physical observations and documents which are not up to the mark will be given as not meeting the requirements. The checkpoints under not meeting the requirements are up to the Management of the Organization to develop further.

### 1.6. List of Instruments used in the Inspection Process

During the on-site visit the below listed instruments are used by the Lead Auditors and Technical experts to check the specific parameters in the view of



maintaining sustainability. All the instruments are calibrated by ISO 17025 accredited labs (JRTS Technical Services, Chennai, Tamil Nadu and Instruments Calibration and Test Centre, Coimbatore, TN). The frequency of calibration is six months once or 20 times after its use.

### 1.6.1. Oxygen Meter

Oxygen meter is used in the audit process to measure the oxygen level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 to 30% O<sub>2</sub>, resolution of 0.1%, accuracy is  $\pm (1\% \text{ reading} + 0.2\% \text{ O}_2)$ , response time is  $\leq 15$  seconds, environment pressure range is 0.9 to 1.1 atmosphere, temperature range is 0 °C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is 25°C.



### 1.6.2. Carbon dioxide meter

Carbon dioxide meter is to measure the carbon level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 ~ 4000 ppm, resolution of CO<sub>2</sub> Meter is 1 ppm, accuracy is  $\leq 1,000$  ppm, repeatability is  $\pm 20$  ppm, temperature range between 0°C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is at 25°C.



### 1.6.3. Light (LUX) Meter

Light meter is to calculate the light intensity in the organization. Suitability of the instruments are, 5 ranges. ie., 40.00, 400.0, 4,000, 40,000, 400,000 Lux, operating temperature is 0 to 50°C, Operating humidity is less than 80% RH, Power consumption is DC 8 mA approximately. This Instrument will be calibrated yearly once or during non-functioning.



### 1.6.4. Sound Level Meter

Sound level meter is to measure the noise level in the organization. This instrument is calibrated yearly once or after using 20 times. Suitability of the instruments are measurement range is 30 – 130 dB, resolution is 0.1 dB, accuracy is  $(23 \pm 5 \text{ } ^\circ\text{C})$ , Frequency of the instrument is 31.5 to 8,000 Hz, Operating temperature is 0 to 50 °C (32 to 122 °F), Operating humidity is less than 80% RH, Power consumption is DC 6 mA approximately.



### 1.6.5. pH Meter

pH meter is generally used to measure the pH level in water. It is calibrated 6 months once or after 20 times of its use. Suitability of the instrument are range of the pH meter is 0 – 14, accuracy is  $\pm 2\%$ , resolution of the instrument is 0.1 pH, operating temperature is 0 to 50 °C (32 to 122 °F).



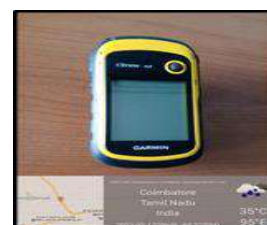
### 1.6.6. TDS Meter

TDS meter is generally used to measure the TDS level in water. Suitability of the meter are range of TDS meter is 0 – 9990 ppm (mg/L), operating temperature is 0 to 80 °C (32 to 176 °F) and accuracy is  $\pm 2\%$ . This meter is calibrated six months once or 20 times after its use.



### 1.6.7. GPS Meter

GPS meter is subjected to know the latitude and altitude, location, etc., Suitability of the GPS meter are, dimension is 2.1" x 4.0" x 1.3" (5.4 x 10.3 x 3.3 cm), Display resolution is 128 x 160 pixels an GPS Map features included in Continental Europe. It is calibrated six months once or after 20 times of the usage.



### 1.6.8. Deluxe Water and Soil Analysis Kit

Deluxe water and soil analysis kit is used to analyze the pH, TDS, salinity, turbidity, alkalinity dissolved oxygen of water.



### 1.6.9. Digital Clamp (Voltage) Meter

It is used to check the input and output voltage between two points of an electrical circuit of Alternating Current (AC) and Direct Current (DC) by means of the high resistance of the voltage that impede the flow of current.



## 1.7. Use of Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) refers to protective clothing for the eyes, head, ears, hands, respiratory system, body, and feet. It is utilized to protect individuals from the risks of injury while minimizing exposure to chemical, biological, and physical hazards. PPE serves as the final line of defense when engineering and administrative controls are insufficient in reducing risks. Nature Science Foundation safeguards all the auditors by supplying PPE during the conduct of audits. PPE used are safety jackets, ear plugs, goggles, face shield, hand gloves, shoes, etc.,

### 1.7.1. Safety jackets:

PPE includes safety vests and suits that can be used for inspection process which will protect body injuries from extreme temperatures, flames and sparks, toxic chemicals, insect bites and radiation.



### 1.7.2. Goggles and Face shield:

Goggles and face shield are used in the inspection process while inspecting items which would cause eye damage or loss of vision, spray or toxic liquids especially in chemistry labs, nearing the electric and electronic item.



**1.7.3. Helmet:**

PPE includes hard hats and headgears which will be required for tasks that can cause any force or object falling to the head. It also helps to resist penetration.

**1.7.4. Hand gloves:**

PPE includes safety gloves and should be used for tasks that can cause hand and skin burns, absorption of harmful substances, cuts, fractures or amputations. Selection of hand gloves is based on the application of use.

**1.7.5. Safety Boots:**

Foot protection is one of the most commonly used PPE and can differ depending upon the environment. Safety boots are used for tasks that can cause serious foot and leg injuries from falling or rolling objects, hot substances, electrical hazards, and slippery surfaces.

**1.7.6. Ear Plug:**

Ear plugs are used for tasks that can cause hearing problems and loss of hearing. Hearing protection devices reduces the noise energy reducing reaching and causing damage to the inner ear. This ear plug is mostly used near sound producing devices like power motors, genets, generators, etc.,



## 2. ENVIRONMENT AUDIT

### 2.1. Introduction

Environmental (Eco) audit is quantitative and qualitative data to track air, soil and water and to gain actionable insights to improve the operational performance in the atmosphere. It provides a 360° view of a surrounding campus and makes it easy for Owners / Managers / Environmentalists to collaborate, measure, control and reduce environmental negative impacts. Finally, it leads to enhance the quality of life of all living organisms. Eco audit initiatives are the need of the hour across the world due to changing environmental conditions and global warming besides ever-increasing human population and anthropogenic activities (NCP, 2016). Eco audit aims to make a sustainable and friendly environment for the stakeholders. In this context, to conserve eco-friendly atmosphere of an organization, well-developed environmental objectives and targets should be undertaken to reduce the harmful effects to a greater extent.

The audit process can remarkably minimize the environmental pollution in the campus which in turn reduces the impact of global warming scenario. As per the Rules and Regulations laid by Government, the environmental legislations should be followed by all the Institutions and Organizations and make sure that their activities should not degrade the environment. The environmental audit involves systematic documentation of periodic objective review by a regulated entity on available facilities, their operations and practices related to resolve the environmental requirements. In general, environmental audit is planned to achieve an optimum resource utilization and improved process performance in the audit sites. Venkataraman (2009) stated that it is a 'Common Sense Approach' to identify the problems and solve those problems pertaining to curb eco-friendly atmosphere. Environmental audit enables an overall and complete overview at the audit sites to facilitate our understanding of flow of materials and to focus the priority areas where waste reduction is achieved thereby cost saving is made possible.

Purpose of the audit is to determine performance of the environmental management systems and equipment related to environmental safety. Audit reports can provide key information to the management in relation to risk areas, progress towards strategic objectives and targets. Audit work can be undertaken voluntary for the benefit/advantage of the company and it can be executed with the help of environmental auditing authorities. As mentioned earlier, it helps in the proper natural resource utilization and on the whole, it improves the quality of environment.

An environmental auditor will study an organization's performance towards the environmental sustainability in a systematic manner where environmental management systems and equipment are performing with the aims of a) facilitating management control of environmental practices, b) assessing compliance with company policies, c) facilitating professional competence, d) sustenance activities without harming the environment and e) practicing the environmental conservation.

## 2.2. Organization Details

**Table 2. Campus details**

S.No.	Details / Descriptions	Quantity
1.	Total strength of Students	1190
2.	Total strength of Employees	44
3.	Total number of Buses in the campus	2
4.	Number of Cars entering in the campus	3
5.	Number of Motorcycles entering in the campus	50
6.	Number of other vehicles (Lorry, Ambulance, Jeep, Trucks, Cranes, Poclain, and etc. entering in the campus)	0
7.	Number of E-Vehicles	2
8.	Number of RO Water Plants	1
9.	Number of Borewells	2
10.	Number of Open wells	0
11.	Number of Percolation Ponds	0
12.	Number of Wastewater treatment facility	0
13.	Number of Rain harvesting system	2
14.	Number of Composting pits and Vermicompost units	2

## 2.3. Environment audit observations.

- Human comforts are implemented and observed like ramp walk, fire safety, etc.,
- To reduce the demand of water, rain water harvesting system is implemented and used for irrigation facilities.
- Fire extinguishers are available in the building to consider the safety of all the Stakeholders and maintained properly.
- It is observed that the mock drills and awareness programmes are conducted for disaster management.
- Paver block to increase the percolation of rain water to ground are implemented and practiced.
- Parking is provided under the tree shade to reduce the Heat Island effect (Temperature).
- Rain water harvesting unit is maintained well without using any chemical, the water is used for irrigation purpose.
- Use of potable and non-potable waters are identified and differentiated to conserve water.
- Public transport facilities are available in the campus to control air pollution.
- Bicycle for internal mobility is implemented and used inside the campus.
- The pedestrian pathways are maintained with adequate shading facilities by planting more number of trees.
- No offsite and subsidized parking are encouraged in the campus.
- Waste are segregated before the disposal.
- Biodegradable waste are used in the vermicomposting as a recycling practice



### 2.3.1. Integrated Water Management System

Water is one of the major source of living. Per captia water consumption in the building is calculated as per the water management plan (litres / person/ day). To reduce the demand of water consumption rain water harvesting unit is implemented and practiced. Proper monitoring plan is made evident to reduce the water consumption in the leakage areas.



**Water Management activities observed in the campus**

### 2.3.2. Corporate Governance

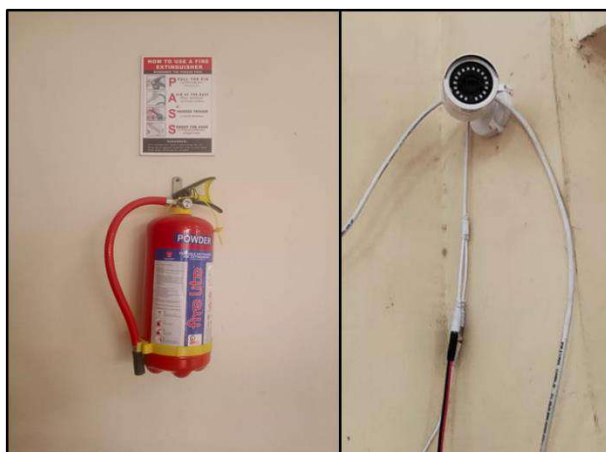
Training and awareness programmes are conducted to the stake holders to maintain sustainability. Some of the programmes conducted by the Organization are Care and Share - Visit to old age home (Women) and Women Hygiene Drive - Donation Day(LFDC students interacting with orphanage HIV Kids).



**Awareness activities conducted by the organization**

### 2.3.3. Safety measures and green building conservation code

Environmental safety measures are very important in the buildings as far as students, staff members and other stakeholders are concerned and it requires vigilance and awareness. Management should extend by issuing guidance and the best safety tools. The organization has have a police force, escort services, call boxes, first aid box, fire extinguishers, fire alarms, security systems and staffs towards the safety measures. Organization has very good safety measures as per the green building conservation code such as fire extinguisher and fire bell and alarms in all the place.



**Fire Extinguisher and CCTV Surveillance Facilities observed in the campus**

### 2.3.4. Applicability and Implementation

Guidelines of Architect, Designer and Civil contractor for the existing building addresses the choice of material, design methodology, operation and maintenance related options, etc., and also addresses the applicability.

### 2.3.5. Parking facilities to reduce Heat Island Effect

Heat island effect denotes the temperature level. It is observed that the vehicles are parked under the Tree shade to reduce the heat island effect for the benefit of stakeholders and to maintain sustainability. To reduce the heat island effect parking areas are made up of high albedo materials with light colored paints observed in the organization.

### 2.3.6. Public transport, low emitting vehicles and control of car smokes

Utility of public transportation (buses) reduces carbon emissions greatly and decreases the development of smog within the towns. This means that human beings have healthy air to respire. Comparing a bus travelling with a car transport for a person, it has been observed that buses are the most effective system by producing lower quantum of emission of carbon when compared to that of car transport. This will be a huge decrease in utility of natural resources per person. Other than this, it also gives more benefits like less noise and traffic congestion. Whenever possible, try to take public transport in place of one's own vehicle. The audited Organization is provided two E- Vehicles to maintain eco-friendly environment in the campus and to reduce carbon dioxide emissions. Apart from the e-vehicles, students are encouraged to use bicycles. The tree species are planted abundantly to provide shade to the pedestrian.





**Vehicles are parked under the sheds observed in the campus**

### **2.3.7. Pedestrian path facility at the campus**

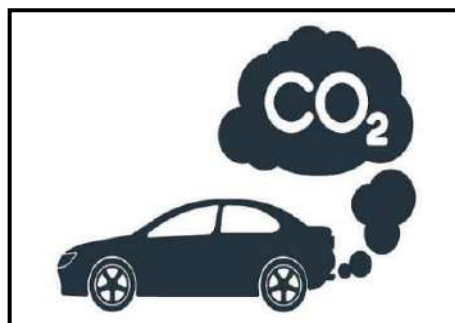
The concept of pedestrian path is to give safe space to walk freely by the pedestrian. It is very important in the green campus in terms of freely walk pedestrians or people going on foot without any obstacles. The pedestrian path is otherwise called as zebra crossing by the combination of black and white stripes remained to characterize the zebra. In addition, pedestrian path is created in the green campus along with road side which meant for walking only using special cement bricks and stones. The pedestrian path aims to end circulation not only cars, buses, vans, trucks and other vehicles but also giving safe space to the pedestrians, where cross and pass through blocks and also forcing vehicles to comply with it. The audited organization is having very good facility in creating pedestrian path for stakeholders with all the facilities such as accessible public toilets, barrier free environment, dustbins, stone benches, etc. Use of bicycles are encouraged in the Campus to control carbon emission and air pollution.



**Pedestrian Pathway and Stone benches are available for Ecofriendly atmosphere**

### 2.3.8. Carbon footprint

Carbon footprint means measuring/recording the greenhouse gases (GHG) emissions of an organization within its defined boundary. Observations on carbon dioxide and oxygen levels monitored in different parts of the campus are presented under Air Quality Audit section while observation on carbon footprint due to electricity usage per year at the Organization along with other fossil fuel utility are presented under Energy Audit portion of this Technical Report.



### 2.3.9. Selection of Building Material

Building materials are selected as per the Guidelines to Architect, Designer and Civil contractors. Low carbon emitting cements, bricks, etc., are used for the construction and recycled glass materials are used for windows. Construction material are not stored in the campus.

### 2.3.10. Waste and Water management activities

Management of water and waste are the two important parameters which plays a vital role to maintain sustainability. Rainwater harvesting is implemented and maintained properly for water conservation, this water is used for irrigation and domestic purpose. It is observed that different colored dustbins are used in the Organization to segregate the waste at the source of generation.



**Waste Management activities observed in the campus**

### 2.3.11. Post Occupancy maintenance

Post occupancy maintenance is the activities performed after the completion of construction work and handed over to the owner for further maintenance. The following activities are observed during the onsite visit as post occupancy maintenance

- Vegetation and plants are maintained properly with regular watering through irrigation facilities.
- Soil is maintained well without adding any chemical fertilizers and pesticides.
- To reduce the energy consumption HVAC system are maintained properly.
- Girls sick room was observed.





**Post Occupancy maintenance observed in the campus**

### **3. Conclusion**

The Organisation is one among the well- established colleges adopting substantially the environmental protection initiatives. Swachh Bharath Abhiyan is implemented effectively by the campus to promote sanitation and cleanliness. Environmental audit is carried out to provide an indication to the management about how the environmental system and equipment are performing. As a result, the best practicable means can be applied to preserve air, water, soil, plant and animal life from the adverse effect.

## 4. References

- Abba, M., Said, R.M., Abdullah, A. and Mahat, F. 2018. The relationship between environment operational performance and disclosure of Nigerian listed companies. *Journal of Environmental Accounting and Management*, **6** (1): 1-15.
- Adeniji, A.A. 2018. *Audit and Assurance Services. Lagos: Value Analyst Concept of Green Audit*. New Age International, New Delhi, India.
- Aerts, W., Cormier, D. and Magnan, M., 2008. Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economics* **64** (3): 643-659.
- Alba-Hidalgo, D., del Alamo, J.B. and Gutierrez-Perez, J. 2018. Towards a definition of environmental sustainability evaluation in higher education. **In: World Higher Education Policy**. Oxford University Press, London, UK, Vol. 31, pp. 447-470.
- AOAC, 1990. *Official Methods of Analysis of the Association of Official Analytical Chemistry*, Ed, Helrich, K. 15th Edition, AOAC Inc., USA, Vol 1 & 2, pp. 2246-2248.
- Aparajita, G. 1995. Environmental Audits- a Mean to Going Green. *Development Alternatives* **5** (4): 7-9.
- APHA, 2017. *Standard Methods for the Estimation of Wastewaters*. Vol. II, 15<sup>th</sup> Edn, Washington, US.
- Arora, D.P. 2017. Environmental Audit–need of the hour. *International Journal of Advanced Research in Engineering & Management* **3** (4): 25-31.
- Aruninta, A., Kurazumi, Y., Fukagawa, K. and Ishii, J. 2017. The integration of human thermal comfort in an outdoor campus landscape in a tropical climate. *International Journal of GEOMATE* **14** (44): 26-32.
- Astriani, N. 2016. Legal Policy of Water Resources Management by Local Governments: A Review of Right to Water in Indonesia. *Hasanuddin Law Review* **2** (2): 250-257.
- Bae, S.H. and Seol, I. 2006. An exploratory empirical investigation of environmental audit programs in S&P 500 companies. *Management Research News* **29** (9): 573-579.
- Ballou, B., Chen, P.C., Grenier, J.H., and Heitger, D.L. 2018. Corporate social responsibility assurance and reporting quality: Evidence from restatements. *Journal of Accounting and Public Policy*, **37** (2): 167-188.
- Bardati, D.R. 2006. The integrative role of the campus environmental audit: experiences at Bishop's University, Canada. *International Journal of Sustainability in Higher Education* **7** (1): 57-68.
- Braam, G.J.M., Uit de Weerd, L., Hauck, M., and Huijbregts, M.A.J., 2016. Determinants of corporate environmental reporting: the importance of environmental performance and assurance. *Journal of Cleaner Production* **129**: 724-734.
- Breiting, S. and Mogensen, F. 1999. Action competence and environmental education. *Cambridge Journal of Education* **29** (3): 349-353.
- Brindusa M., Sluser, Caliman, F.A., Betianu, C. and Gavrilescu, M. 2007. Methods and procedures for environmental risk assessment. *Environmental Engineering and Management Journal* **6** (6): 573-592.

- Buckman, A.H., Mayfield, M. and Beck, S.B.M. 2014. What is a smart building?. *Smart Sustainable Built Environment* **3** (2): 92-109.
- Carbon footprint calculation. [www.carbonfootprint.com](http://www.carbonfootprint.com).
- Cardenas, I.C. and Halman, J.I.M., 2016. Coping with uncertainty in environmental impact assessments: Open techniques. *Environment Impact Assessment Review* **60**: 24–39.
- Cardozo, N.H., da Silveira Barros, S.R., Quelhas, O.L.G., Filho, E.R.M. and Salles, W. 2019. Benchmarks analysis of the higher education institutions participants of the Green Metric World University Ranking. Springer, Universities and Sustainable Communities: Meeting the Goals of the Agenda 2030, World Sustainability Series. pp. 667-683.
- Choy, Er.A. and Karudan, R. 2016. Promoting campus sustainability: A conceptual framework for the assessment of campus sustainability. *Journal of Social Sciences and Humanities* **11** (2): 112-118.
- Conde, M.C. and Sanchez, J.S. 2017. The school curriculum and environmental education: A school environmental audit experience. *International Journal of Environmental & Science Education* **5** (4): 477-494.
- Costantino, F., Di-Gravio, G. and Tronci, M. 2018. Environmental Audit improvements in industrial systems through FRAM. *FAC PapersOnLine* **11**: 1155–1161.
- Dagiliut, R. and Liobikien, G. 2014. University contributions to environmental sustainability: challenges and opportunities from the Lithuanian case. *Journal of Cleaner Production* **108**: 891-899.
- Erol, G.H. and Gezer, K. 2006. Prospective of elementary school teachers attitudes toward environmental problems. *International Journal of Environmental and Science Education*, **1** (1): 65-77.
- Fachrudin, H.T., Fachrudin, K.A. and Utami, W. 2019. Education activities to realize green campus. *Asian Social Science* **15** (8): 18-27.
- Ferenc, M., Sedlacek, O., Fuchs, R., Dinetti, M., Fraissinet, M. and D. Storch 2014. Are cities different?. Patterns of species richness and beta diversity of urban bird communities and regional species assemblages in Europe. *Global Ecology and Biogeography* **23**: 479-489.
- Freidenfelds, D., Kalnins, S.N. and Gusca, J. 2018. What does environmentally sustainable higher education institution mean?. *Energy Procedia* **147**: 42-47.
- Ghaffarianhoseini, A., Berardi, U., AlWaer, H., Chang, S., Halawa, E., Ghaffarianhoseini, A. and Clements-Croome, D. 2016. What is an intelligent building? Analysis of recent interpretations from an international perspective. *Architectural Science Review* **59** (5): 338-357.
- Ghaffarianhoseini, A., AlWaer, H., Ghaffarianhoseini, A., Clements-Croome, D. Berardi, U., Raahemifar, K. and Tookey, J. 2018. Intelligent or smart cities and buildings: a critical exposition and a way forward. *Intelligent Buildings International*, **10** (2): 122-129.
- Gowri, S. and Harikrishnan, V. 2014. Green computing: Analyzing power consumption using local cooling. *International Journal of Engineering Trends and Technology* **15** (3): 105-107.

- Goyal, E. and Gupta, M. 2014. Moving toward socially and environmentally responsible management education-Case study of Mumbai. *Journal Applied Environmental Education & Communication* **13**: 146-161.
- Haahkim, W. and Yunus, A. 2017. Environmental audit as an Instrument for environmental protection and management. *The Business and Management Review* **9** (2): 228-232.
- Handy, S.L., Boarnet, M.G., Ewing, R. and Killingsworth, R.E. 2002. How the built environment affects physical activity: views from urban planning. *American Journal of Preventive Medicine* **23** (2S): 64–73.
- Hertwich, E.G. 2005. Consumption and the rebound effect: An industrial ecology perspective. *Journal of Industrial Ecology*, **9** (1-2): 85-98.
- Hoque, A.A. and Sultana, T. 2017. Environmental sustainability practices in South Asian university campuses: an exploratory study on Bangladeshi universities. *Springer Nature*, **19** (6): 2163–2180.
- Irwansyah. 2017. Research-Based Environmental Law: The Debate Between Ecology Versus Development. *Sriwijaya Law Review* **1** (1): 44-66.
- Irwansyah, Wardhani, H. and Ahsan, Y. 2017. Environmental audit for environmental protections and Management. *The Business and Management Review* **9** (2): 228-232.
- Khoufi, N. and Khoufi, W. 2018. An empirical examination of the determinants of audit report delay in France. *Managerial Auditing Journal*, **33** (8/9): 700-714.
- Kosajan, V., Chang, M., Xiong, X., Feng, Y. and Wang, S. 2018. The design and application of a Government environmental information disclosure index in China. *Journal of Cleaner Production* **202**: 1192-1201.
- Lauder, A., Sari, R.F., Suwartha, N. and Tjahjono, G. 2015. Critical review of a global campus sustainability ranking: Green Metric. *Journal of Cleaner Production* **108**: 852–863.
- Leal Filho, W., Muthu, N., Edwin, G. and Sima, M. 2015. *Implementing campus greening initiatives*. Springer, London, UK.
- León-Fernandez, Y. and Dominguez-Vilches, E. 2015. Environmental management and sustainability in higher education: The case of Spanish Universities. *International Journal of Sustainability in Higher Education* **16**: 440-455.
- Maltby, J. 1995. Environmental audit: theory and practices, *Managerial Auditing Journal*, **10** (8): 15-26. <https://doi.org/10.1108/02686909510147372>.
- Marrone, P., Orsini, F., Asdrubali, F. and Guattari, C. 2018. Environmental performance of universities: Proposal for implementing campus urban morphology as an evaluation parameter in Green Metric. *Sustainable Cities and Society* **42**: 226-239.
- Murdifin, I., Pelu, M.F.A., Perdana, A.A.H., Putra, K., Arumbarkah, A.M., Muslim, M. and Rahmah, A. 2019. Environmental disclosure as corporate social responsibility: Evidence from the biggest nickel mining in Indonesia. *International Journal of Energy Economics and Policy* **9** (1): 115.
- NCP, 2006. *National Environmental Policy-2006*, Government of India, Ministry of Environment and Forest, New Delhi, India.
- Nunes, B.T., Pollard, S.J.T., Burgess, B.J., Ellis, G., de los Rios, I.C. and Charnley, F. 2018. University contributions to the circular economy: Professing the hidden curriculum: Professing the hidden curriculum. *Sustainability* **10** (8): 112-119.



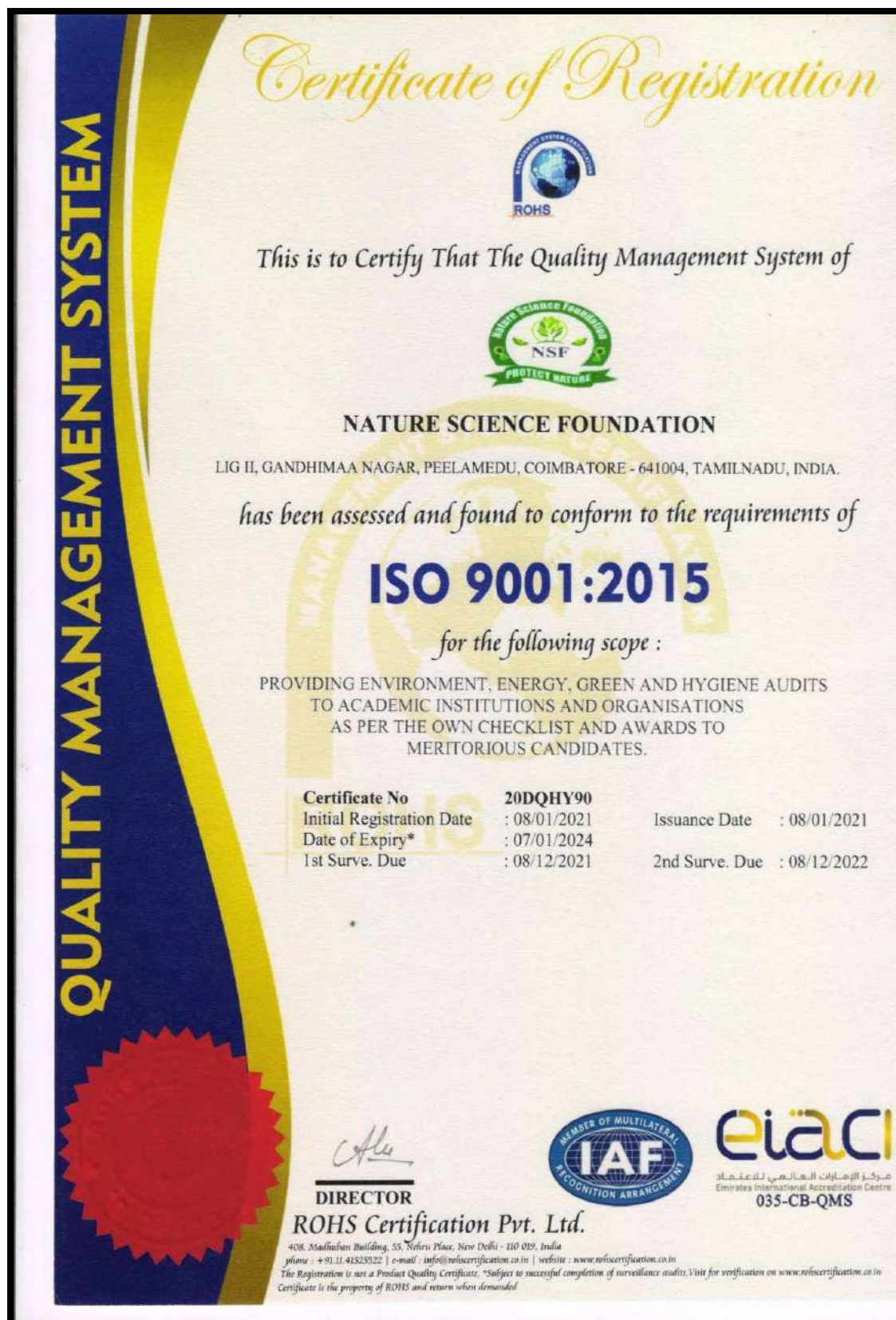
- Ounsaneha, W., Chotklang, N., Laosee, O. and Rattanapan, C. 2017. Predictors of behavior intention to develop a green university: A case of an undergraduate university in Thailand. *International Journal of GEOMATE*. **15** (49): 162-216.
- Patten, D.M. 2002. The relationship between environmental performance and environmental disclosure: a research note. *Accounting, Organizations and Society*, **27** (8): 763-73.
- Patriarca, R., Di Gravio, G., Costantino, F., Tronci, M., 2017. The Functional Resonance Analysis Method for a systemic risk based environmental auditing in a sinter plant: A semi-quantitative approach. *Environment Impact Assessment Review* **63**: 72–86.
- Peters, G.F. and Romi, A.M. 2014. Does the voluntary adoption of corporate governance mechanisms improve environmental risk disclosures? Evidence from greenhouse gas emission accounting. *Journal of Business Ethics* **125** (4): 637-666.
- Ponmurugan, P. 2018. *Biotechnology Techniques in Biodiversity Conservation*. New Age International, New Delhi, India.
- Pradip, J.S. and Patil, P.D. 2014. Green Audit - A tool for attaining sustainable development and achieving competitive advantage. *IBMRD's Journal of Management & Research*, **3** (1): 85-93.
- Ramachandra, T.V. and Bachamanda, S. 2007. Environmental audit of Municipal solid waste management. *International Journal Environmental Technology and Management*. **7** (3/4): 369–391.
- Ramachandra T.V. and Saira Varghese K. 2003. Exploring possibilities of achieving sustainability in solid waste management. *Indian Journal Environmental Health* **45** (4): 255-264.
- Ragazzi, M. and Ghidini, F. 2017. Environmental sustainability of universities: critical analysis of a green ranking. *Energy Procedia*, **119**: 111-120.
- Report of Green Audit, 2018. *Report of Green Audit Nitte Meenakshi Institute of Technology, Chennai, Tamil Nadu, India*. <https://www.google.com/search?q=Green+Audit+Report+Nitte+Meenakshi+Institute+Of+Technology&sxsrf>.
- Ribeiro, J.M.P., Barbosa, S.B., Casagrande, J.L., Sehnem, S., Berchin, I.I., da Silva, C.G., da Silveira, A.C.M., Zimmer, G.A.A., Faraco, R.A. and de Andrade Guerra, J.B.S. 2017. Promotion of sustainable development at universities: The adoption of green campus strategies at the University of Southern Santa Catarina, Brazil. Springer Nature, Handbook of Theory and Practice of Sustainable Development in Higher Education. pp. 471-486.
- Sallis, J.F. 2009. Measuring physical activity environments: a brief history. *American Journal of Preventive Medicine* **36** (4 Suppl.): S86–S92.
- Satean, G. 2017. The need to go beyond. Green University. ideas to involve the community at Naresuan University, Thailand. Springer Nature, Sustainability Through Innovation in Product Life Cycle Design. Thailand, pp. 841-857.
- Shriberg, M. 2002. Institutional assessment tools for sustainability in higher education: strengths, weaknesses, and implications for practice and theory. *International Journal of Sustainability in Higher Education* **3** (3): 254-270.
- Sharma, D.K. 2020. An Effective Implementation of Environmental Audit (A Case Study of Hindustan Copper Ltd.). *TEST Engineering and Management* **83**: 5370-5379.

- Sharp, L. 2002. Green campuses: the road from little victories to systemic transformation. *International Journal of Sustainability in Higher Education* **3** (2): 128-145.
- Setyowati, M., Kusumawanto, A. and Prasetya, A. 2017. Study of waste management towards sustainable green campus in Universitas Gadjah Mada. *Journal of Physics: Conference Series*, **1022**: 1547-1553.
- Singhania, M. and Gandhi, G. 2015. Social and environmental disclosure index: Perspectives from Indian corporate sector. *Journal of Advances in Management Research*, **12** (2): 192-208.
- Staniskis, J.K. and Katiliute, E. 2016. Principles, implementation and results of the new assessment and accreditation system 'Engineering education for sustainable industries'. Springer Nature, New Developments in Engineering Education for Sustainable Development. Thailand, pp. 283-294.
- Suwartha, N. and Sari, R.F. 2013. Evaluating UI Green Metric as a tool to support green universities development: Assessment of the year 2011 Ranking. *Journal of Cleaner Production* **61**: 46-53.
- Thompson, D. 2002. *Tools for Environmental Management*, New Society Publishers, Gabriola Island, BC.
- Verma, S., Ahmad, M. and Parwal, R. 2012. Green audit - A Boom to human civilization. *International Journal of Trends in Economics Management & Technology*, **1** (6): 82-86.
- Venkataraman, K. 2009. India's Biodiversity Act 2002 and its role in conservation. *Tropical Ecology* **50** (1): 23-30.
- Vinothkumar, D., Sreenivasan, P.V., Rajalakshmi, S., Vanitha, S. and Gnanamangai, Wang, Y., Shi, H., Sun, M., Huisin, D., Hansson, L. and Wang, R. 2013. Moving towards an ecologically sound society? Starting from green universities and environmental higher education. *Journal of Cleaner Production* **61**: 1-5.
- Woo, J. and Choi, K.S. 2013. Analysis of potential reductions of greenhouse gas emissions on the college campus through the energy saving action programs. *Environmental Engineering Research* **18** (3): 191-197.
- York, R. and Rosa, E.A. 2003. Key challenges to ecological modernization theory: Institutional efficacy, case study evidence, units of analysis, and the pACE of eco-efficiency. *Organization and Environment* **16** (3): 273-288.

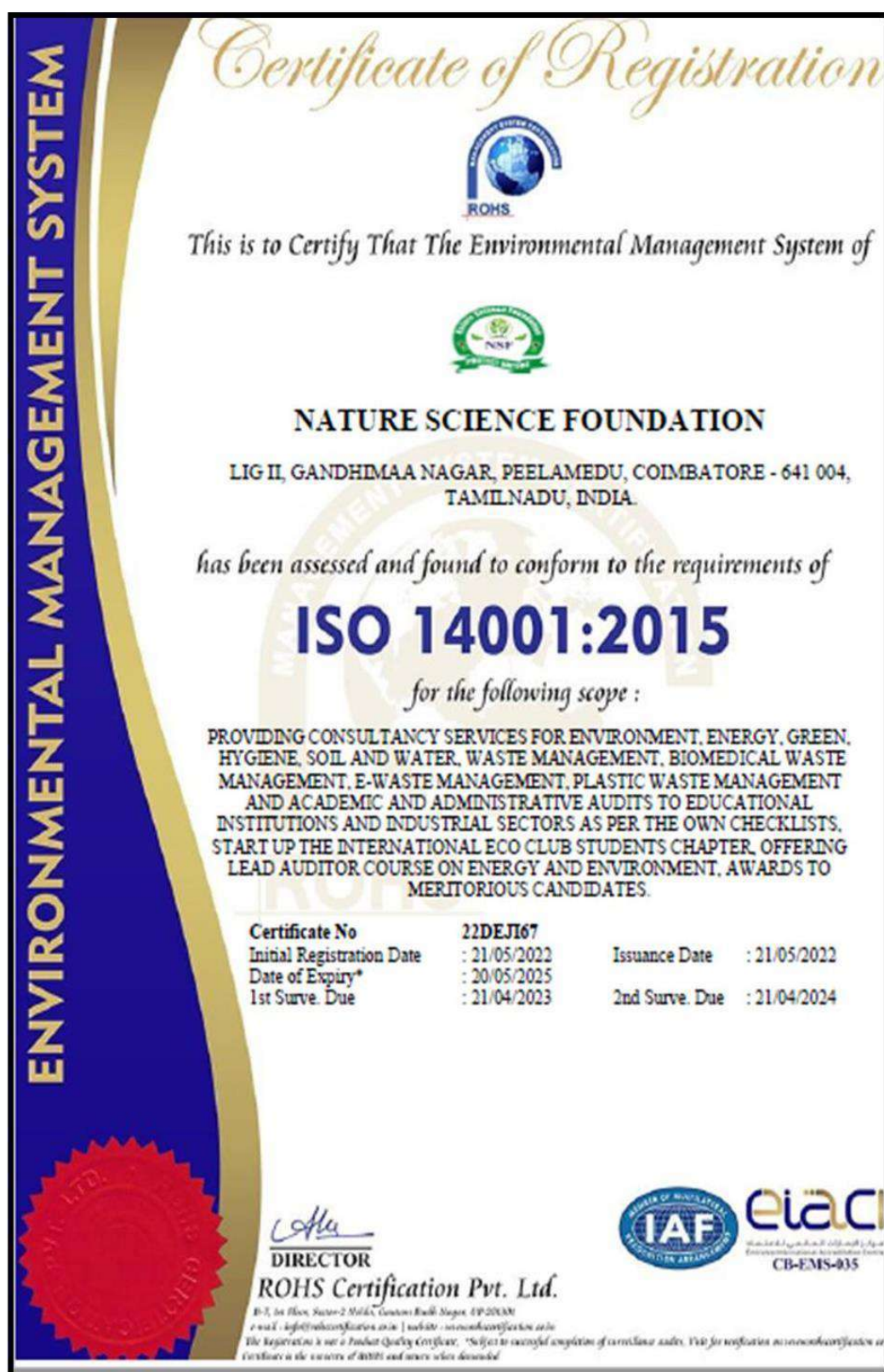
\*\*\*\*\*

## **5. Certificates of Nature Science Foundation**

1. ISO Certificate (QMS 9001:2015)
2. ISO Certificate (EMS 14001:2015)
3. ISO Certificate (OHSMS 45001:2018)
4. ISO Certificate (EnMS 50001:2018)
5. MSME Certificate









**QCS** MANAGEMENT PVT. LTD.  
MANAGEMENT SYSTEMS CERTIFICATION

## *Certificate of Registration*

**ISO 45001:2018 (Occupational Health & Safety Management System)**

### **NATURE SCIENCE FOUNDATION**

ADDRESS: NO. 2669, LIG-II, GANDHI MANAGAR PEELAMEDU COIMBATORE - 641 004 TAMIL NADU, INDIA.

#### **Scope of Certification:**

PROVIDING TRAINING AND AUDITING SERVICES IN THE FIELD OF  
GREEN CAMPUS, ENVIRONMENT, ENERGY, OCCUPATIONAL HEALTH AND SAFETY, HYGIENE AND  
WASTE MANAGEMENT AT EDUCATIONAL INSTITUTES AND INDUSTRIAL SECTOR.

Certificate Number : QCS/EUAS/OHS/002

Issue Date : 03/08/2022  
Expiration Date : 02/08/2023

1<sup>ST</sup> Surveillance Audit Within : 02/07/2023  
2<sup>ND</sup> Surveillance Audit Within : 02/07/2024  
Re-certification Due Date : 02/08/2025



Partha Bagchi  
(Managing Director)

Validity of this Certificate is subject to Surveillance Audits to be conducted before scheduled due dates of surveillance audits as mentioned on the certificate, failing which the certificate will stand to be withdrawn and need to be treated as an initial certification process to reactivate its continuity on the register of EUAS and QCS. This Certificate is valid when confirmed by data listed on the (Euro Universal Accreditation Systems) EUAS" [www.euas-ac.org](http://www.euas-ac.org). The authenticity & validity of this certificate may be re-affirmed by referring to our company website - [www.qcspl.com](http://www.qcspl.com). Lack of fulfillment of conditions as set out on the 'Certification Contract' (Annex 13) may render this certificate invalid. Any alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of law. This certificate remains the property of QCS and to be returned on request.

REGISTERED OFFICE: 37E/1(310) 2<sup>ND</sup> STREET, MODERN PARK, GREENAGE APARTMENT - 2<sup>ND</sup> FLOOR,  
SANTOSH PUR, KOLKATA - 700075, WEST BENGAL, INDIA.  
Email: [info@qcspl.com](mailto:info@qcspl.com). Call: +91 8697724963, +91 8902447427. Website: [www.qcspl.com](http://www.qcspl.com)





## Certificate of Registration

This is to certify that

### NATURE SCIENCE FOUNDATION

**LIG II, GANDHIMAA NAGAR, PEELAMEDU, COIMBATORE - 641 004,  
TAMILNADU, INDIA.**

has been independently assessed by QRO  
and is compliant with the requirement of:

### ISO 50001:2018

### Energy Management Systems

For the following scope of activities:

**PROVIDING CONSULTANCY SERVICES FOR ENVIRONMENT, ENERGY, GREEN, HYGIENE, SOIL AND WATER, WASTE MANAGEMENT, BIOMEDICAL WASTE MANAGEMENT, E-WASTE MANAGEMENT, PLASTIC WASTE MANAGEMENT AND ACADEMIC AND ADMINISTRATIVE AUDITS TO EDUCATIONAL INSTITUTIONS AND INDUSTRIAL SECTORS AS PER THE OWN CHECKLISTS, START UP THE INTERNATIONAL ECO CLUB STUDENTS CHAPTER, OFFERING LEAD AUDITOR COURSE ON ENERGY AND ENVIRONMENT, AWARDS TO MERITORIOUS CANDIDATES.**

Date of Certification: 9th August 2022      2<sup>nd</sup> Surveillance Audit Due: 8th August 2024  
1<sup>st</sup> Surveillance Audit Due: 8th August 2023      Certificate Expiry: 8th August 2025

**Certificate Number: 305022080903EN**






Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.  
(In case surveillance audit is not allowed to be conducted; this certificate shall be suspended / withdrawn).

The Validity of this certificate can be verified at [www.grocert.org](http://www.grocert.org)

This certificate of registration remains the property of QRO Certification LLP, and shall be returned immediately upon request.

India Office : QRO Certification LLP  
142, 11nd Floor, Avtar Enclave, Near Paschim Vihar West Metro Station, Delhi-110063, (INDIA)  
Website : [www.grocert.org](http://www.grocert.org). E-mail : [info@grocert.org](mailto:info@grocert.org)



भारत सरकार  
Government of India  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises



सूक्ष्म, लघु एवं मध्यम उद्यम  
MICRO, SMALL & MEDIUM ENTERPRISES

## UDYAM REGISTRATION CERTIFICATE



Our small hands to make you LARGE

<b>UDYAM REGISTRATION NUMBER</b>	UDYAM-TN-03-0073706																							
<b>NAME OF ENTERPRISE</b>	M/S NATURE SCIENCE FOUNDATION																							
<b>TYPE OF ENTERPRISE *</b>	MICRO																							
<b>MAJOR ACTIVITY</b>	SERVICES																							
<b>SOCIAL CATEGORY OF ENTREPRENEUR</b>	GENERAL																							
<b>NAME OF UNIT(S)</b>	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Name of Unit(s)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Green Campus, Energy and Environment Management Audits</td> </tr> </tbody> </table>				S.No.	Name of Unit(s)	1	Green Campus, Energy and Environment Management Audits																
S.No.	Name of Unit(s)																							
1	Green Campus, Energy and Environment Management Audits																							
<b>OFFICIAL ADDRESS OF ENTERPRISE</b>	<table border="1"> <thead> <tr> <th>Flat/Door/Block No.</th> <th>1/1G-II,2669</th> <th>Name of Premises/ Building</th> <th>GANDHIMAA NAGAR</th> </tr> </thead> <tbody> <tr> <td>Village/Town</td> <td>Gandhinagar S.O.</td> <td>Block</td> <td>1/1G-II</td> </tr> <tr> <td>Road/Street/Lane</td> <td>Peelamedu</td> <td>City</td> <td>Coimbatore South</td> </tr> <tr> <td>State</td> <td>TAMIL NADU</td> <td>District</td> <td>COIMBATORE, Pin 641004</td> </tr> <tr> <td>Mobile</td> <td>9566777285</td> <td>Email:</td> <td>chairmansf@gmail.com</td> </tr> </tbody> </table>				Flat/Door/Block No.	1/1G-II,2669	Name of Premises/ Building	GANDHIMAA NAGAR	Village/Town	Gandhinagar S.O.	Block	1/1G-II	Road/Street/Lane	Peelamedu	City	Coimbatore South	State	TAMIL NADU	District	COIMBATORE, Pin 641004	Mobile	9566777285	Email:	chairmansf@gmail.com
Flat/Door/Block No.	1/1G-II,2669	Name of Premises/ Building	GANDHIMAA NAGAR																					
Village/Town	Gandhinagar S.O.	Block	1/1G-II																					
Road/Street/Lane	Peelamedu	City	Coimbatore South																					
State	TAMIL NADU	District	COIMBATORE, Pin 641004																					
Mobile	9566777285	Email:	chairmansf@gmail.com																					
<b>DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE</b>	28/11/2017																							
<b>DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS</b>	12/03/2020																							
<b>NATIONAL INDUSTRY CLASSIFICATION CODE(S)</b>	<table border="1"> <thead> <tr> <th>S.No.</th> <th>NIC 2 Digit</th> <th>NIC 4 Digit</th> <th>NIC 5 Digit</th> <th>Activity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 - Legal and accounting activities</td> <td>6920 - Accounting, bookkeeping and auditing activities; tax consultancy</td> <td>69201 - Accounting, bookkeeping and auditing activities</td> <td>Services</td> </tr> <tr> <td>2</td> <td>85 - Education</td> <td>8542 - Cultural education</td> <td>85420 - Cultural education</td> <td>Services</td> </tr> <tr> <td>3</td> <td>85 - Education</td> <td>8549 - Other education n.e.c.</td> <td>85499 - Other educational services n.e.c.</td> <td>Services</td> </tr> </tbody> </table>				S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity	1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services	2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services	3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services
S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity																				
1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services																				
2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services																				
3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services																				
<b>DATE OF UDYAM REGISTRATION</b>	26/02/2022																							

\* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the Mo MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing: 26/02/2022

**For any assistance, you may contact:**

1. District Industries Centre: COIMBATORE (TAMIL NADU)

2. MSME-DI: CHENNAI (TAMIL NADU)

Visit : [www.msme.gov.in](http://www.msme.gov.in) ; [www.dcmsme.gov.in](http://www.dcmsme.gov.in) ; [www.champions.gov.in](http://www.champions.gov.in)

Follow us @minmsme & @msmechampions



**BE A  
CHAMPION**  
with the  
Ministry of  
**MSME**



## **6. Certificates of Lead Auditors**

1. Bureau of Energy Efficiency (BEE), LEED AP and GRIHA Certificates of Er. D. Dineshkumar, Energy and Environment Auditor of NSF.
2. Indian Green Building Council (IGBC AP) Accredited Professional of Dr. B. Mythili Gnanamangai, Vice-Chairman of NSF.
3. Tamil Nadu Fire and Rescue Service Certificate of Er. S. Srinivash, Energy Auditors of NSF.



## BUREAU OF ENERGY EFFICIENCY



Examination Registration No. : **EA-14056** Serial Number **9176**

Certificate Registration No. : **9176**

*[Signature]*

### Certificate For Certified Energy Manager

This is to certify that Mr./Mrs./Ms. **Dinesh Kumar D**  
Son/Daughter of Mr./Mrs. **R M Dhanasekaran** who has passed the National  
Examination for certification of energy manager held in the month of **October 2011** is  
qualified as certified energy manager subject to the provisions of Bureau of Energy Efficiency  
(Certification Procedures for Energy Managers) Regulations, 2010.

This certificate shall be valid for five years with effect from the date of award of this certificate  
and shall be renewable subject to attending the prescribed refresher training course once in every  
five years.

His /Her name has been entered in the Register of certified energy manager  
at Serial Number **9176** being maintained by the Bureau of Energy Efficiency under the  
aforesaid regulations.

Mr./Mrs./Ms. **Dinesh Kumar D** is deemed to have qualified  
for appointment or designation as energy manager under clause (i) of Section 14 of the Energy  
Conservation Act, 2001 (Act No.52 of 2001).

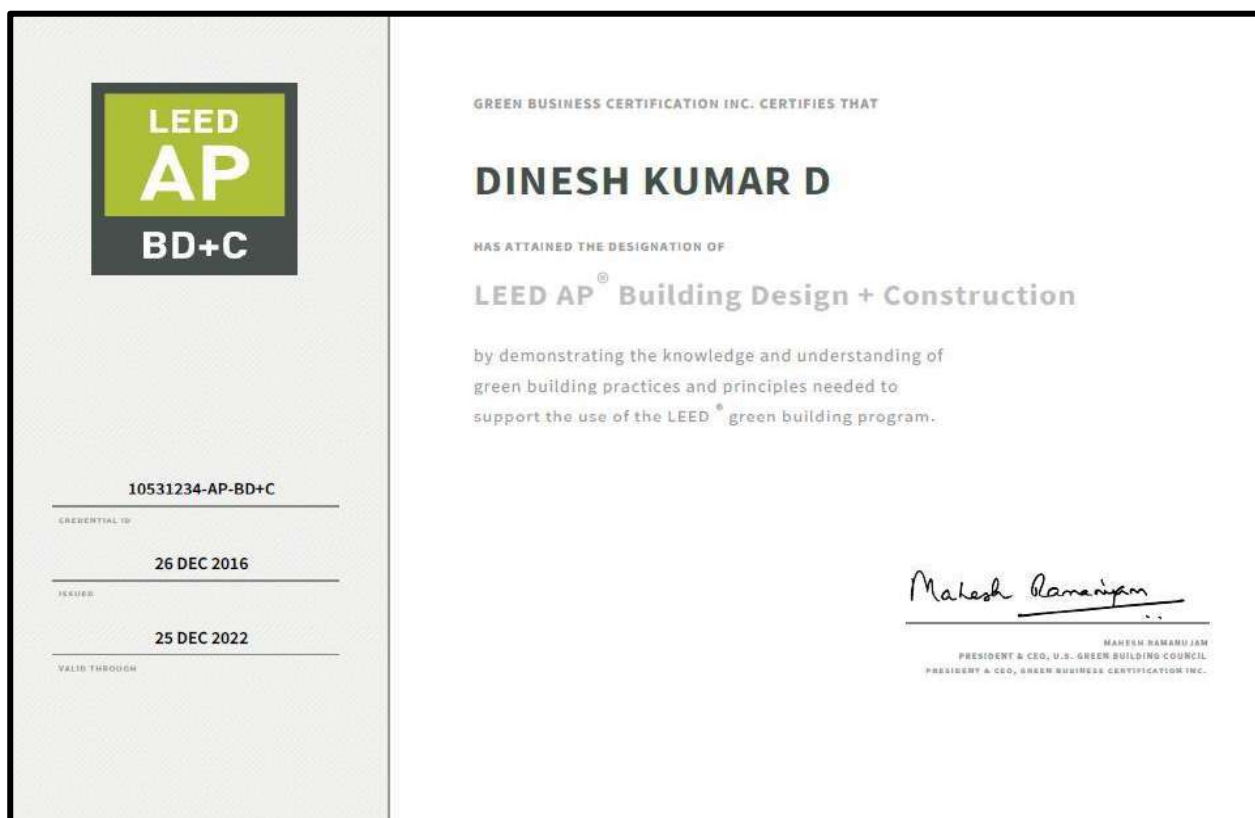
Given under the seal of the Bureau of Energy Efficiency, this **7<sup>th</sup>** day  
of **February, 2013**

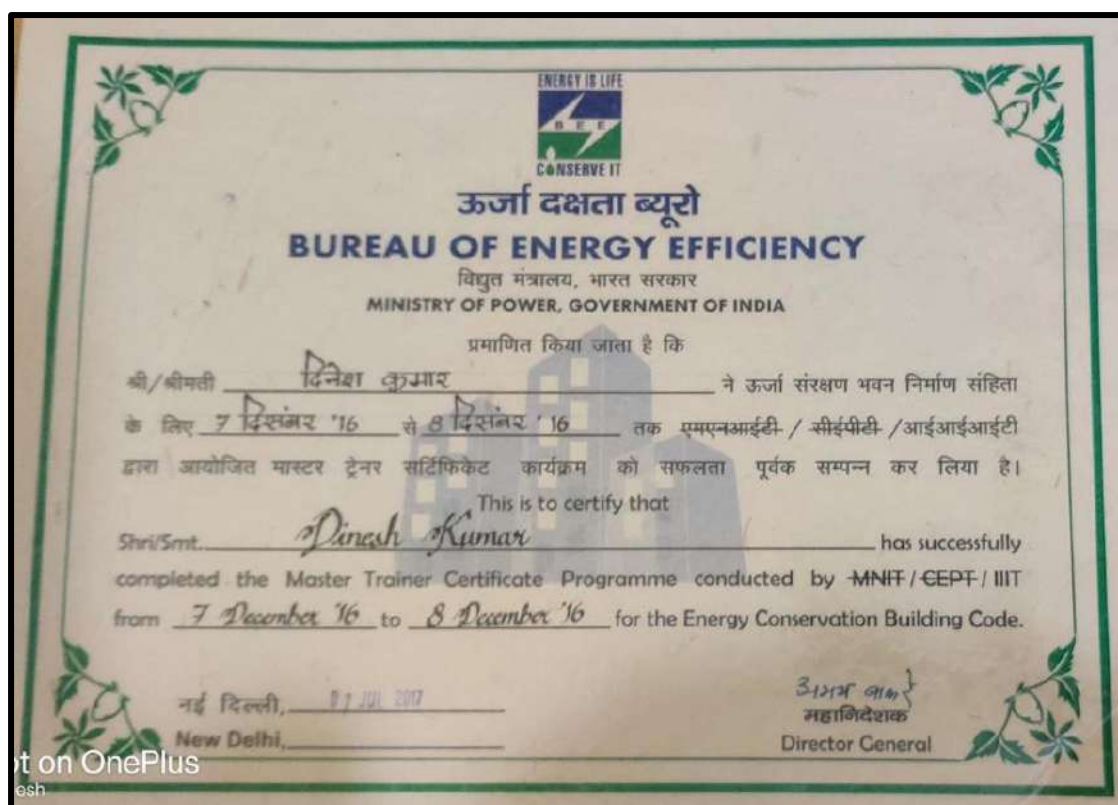
*[Signature]*

Digitally Signed: RAKESH KUMAR RAI  
Sun Mar 01 10:58:55 IST 2020  
Secretary, BEE New Delhi

Secretary  
Bureau of Energy Efficiency  
New Delhi

Dates of attending the refresher course	Secretary's Signature	Dates of attending the refresher course	Secretary's Signature
<b>22.12.2019</b>	<i>[Signature]</i>		





it on OnePlus  
esh







# TECHNICAL REPORT OF ENVIRONMENT AUDIT



*Submitted to*

**LITTLE FLOWER DEGREE COLLEGE**  
**UPPAL, HYDERABAD – 500 039, TELANGANA**

*Date of Audit: 22.04.2019*

*Valid till: 21.04.2021*



*Submitted by*

**NATURE SCIENCE FOUNDATION**

**(A Unique Research and Development Centre for Society Improvement)**  
**[ISO 9001:2015 Certified and Ministry of MSME Registered Organization]**

**No. 2669, LIG-II, Gandhi Managar, Peelamedu**

**Coimbatore 641 004, Tamil Nadu, India**

**Phone: 0422 2510006, Mobile: 9566777255, 9566777258**

**Email: [director@nsfonline.org.in](mailto:director@nsfonline.org.in)**

## CONTENTS

S.No.	Details of Reports	Page No
1.	General Introduction	3
1.1.	Introduction	3
1.2.	Environment Friendly Campus	3
1.3.	About Nature Science Foundation (NSF)	3
1.4.	About the organization	4
1.5.	Audit Team Details	5
1.6.	List of Instruments used in the Inspection Process	5
1.7.	Use of Personal Protective Equipment (PPE)	7
2.	Environment Audit	9
2.1.	Introduction	9
2.2.	Organization Details	10
2.3.	Environment audit observations	10
2.3.1.	Integrated Water Management System	11
2.3.2.	Corporate Governance	11
2.3.3.	Safety measures and green building conservation code	12
2.3.4.	Applicability and Implementation	12
2.3.5.	Parking facilities to reduce Heat Island Effect	12
2.3.6.	Public transport, low emitting vehicles and control of car smokes	12
2.3.7.	Pedestrian path facility at the campus	13
2.3.8.	Carbon footprint	13
2.3.9.	Selection of Building Material	13
2.3.10.	Waste and Water management activities	14
2.3.11.	Post Occupancy maintenance	14
3	Conclusion	14
4	References	15
5	Certificates of Nature Science Foundation	20
6	Certificates of Lead Auditors	26

## **1. GENERAL INTRODUCTION**

### **1.1. Introduction**

Green campus is an area of the Organization or the Organization as a whole itself contributing to have an infrastructure or development that is structured/planned to incur less energy, less water, less or no CO<sub>2</sub> emission and less or pollution free environment. Green Audit is a tool to evaluate environment management system which is systematically executed to protect and preserve the environment. Green audit constitutes the environmental friendly practices and education combined to promote sustenance of green environment by adopting user-friendly technology within the campus. It creates awareness on environmental ethics, resolves environmental issues and offers solutions to various social and economic needs. It strengthens the concept of ‘Green Building’ and ‘Oxygenated Building’ which in turn provides a healthy atmosphere to the stakeholders.

### **1.2. Environment Friendly Campus**

As stated earlier, Organization is liable to provide an eco-friendly atmosphere along with good quality of drinking water facility to all the stakeholders. Manuring the cultivated plants/grown within the campus may applied with organic manure, cow dung, farmyard manure and vermicompost instead of using chemical fertilizers. All non-compostable and single-use disposable plastic items, plastic utensils, plastic straws and stirrers should be avoided. Demonstration / awareness programme on establishing plastic-free environment and utility of organic alternatives for all incoming and current students, staff and faculty should be organized. Reduction of use of papers alternated with e-services, e-circulars, etc., and proper disposal of wastes, recycling and suitable waste management system should be considered to establish environment friendly campus.

The term ‘auditing’ is to examine the management practices and to evaluate performance of an organization in relation to environmental issues. World along with Associated Chambers of Commerce and Industry of India (ASSOCHAM), Green Building Council (IGBC) and Green Ratings Systems (GBCRS), Green Rating for Integrated Habitat Assessment (GRIHA), Bureau of Energy Efficiency (BEE), Leadership in Energy and Environmental Design (LEED), CII-GreenCo –GreenCo Rating System (CII-GRS), Food Safety Management System & Occupational Safety & Health (FSMS), Swatch Bharath under India Clean Mission (SBICM) and International Standard Organization have formulated a series of standards in the field of environmental auditing. These standards are basically intended to guide organizations and auditors on the general principles common to the execution of environmental audits.

### **1.3. About Nature Science Foundation (NSF)**

NSF is the ISO QMS (9001:2015) Certified and registered with Ministry of Micro, Small and Medium Enterprise (MSME), Government of India Organization functioning energetically towards the noble cause of nature conservation and environmental



protection. NSF is managed by a Board of Trustees which is a Public Charitable Trust registered under the TN Societies registration Act 1975 (TN Act 27 of 1975) on 29<sup>th</sup> November, 2017 at Peelamedu, Coimbatore 641 004, Tamil Nadu, India with Certificate of Registration No. 114 / 2017. In addition, NSF has 12AA, 80G and Form 10AC certificates for income tax exemption and implementing various Government schemes. The main motto of the NSF is 'Save the Nature to Save the Future' and 'Go Green to Save the Planet'.

#### **1.4. About the Organization**

##### **Little Flower Degree College**

Little Flower Degree College, Uppal is a Christian Minority institution established by the Montfort Brothers of St. Gabriel. It was started in 2008 as a part of Little Flower Junior College, Hyderabad. On 21<sup>st</sup> January 2023, LFDC has celebrated Quindecennial to commemorate its fifteenth year in its journey towards excellence in imparting education.

##### **Vision:**

Quality education that fosters academic excellence, value enrichment, social responsibility, and promotes holistic development, inclusivity and nurturing individuals who contribute positively to society.

##### **Mission:**

Cultivate academic excellence, instil ethical values that promote integrity, social responsibility through community engagement and prepare individuals with essential skills to navigate the challenges of the dynamic world and foster holistic development by embracing diverse perspectives.

- To encourage staff and students to strive for the highest standards in academics, sports, and extracurricular activities.
- To instil honesty, responsibility, and moral uprightness in all aspects of life.
- To enhance skills to face the challenges of the competitive world.
- To celebrate the diverse talents and interests.
- To promote a spirit of selflessness and compassion towards others.
- To develop responsible leaders in society.
- To cultivate Self Discipline, Self-esteem and a strong work ethic.
- To Nurture spiritual development within an ethical framework.

### 1.5. Audit Details

1. **Date of Audit** : **22.04.2019**
2. **Audit Site** : **Little Flower Degree College**  
Uppal,R.R dist(Medchal-Malkajgiri Dist New)  
Hyderabad-500039, Telangana, India
3. **Inspection Body** : **Nature Science Foundation**  
Coimbatore, Tamil Nadu, India.
4. **Audit Scope** : **Green, Environment and Energy Audits**
5. **Name of the Auditing Chairman** : **Mrs. S. Rajalakshmi**  
ISO QMS, EMS and EnMS Certified Lead Auditor, Founder & Chairman of NSF.
6. **Name of the Auditing Team Leader** : **Ms. V. Sri Santhya**  
ISO QMS, EMS and EnMS Certified Lead Auditor, Assistant Director & Programme Manager, NSF.
7. **Name of the Lead Auditor for Green Audit** : **Dr. R. Mary Josephine**  
ISO EMS and EnMS Certified Lead Auditor.
8. **Name of the Lead Auditor for Environment Audit** : **Ar. N. M. Pradeep Kumar**  
ISO EMS and IGBC Certified Lead Auditor.
9. **Name of the Lead Auditor for Energy Audit** : **Er. A. Karthik**  
Bureau of Energy Efficiency Certified Auditor.

#### 1.5.1. Audit Checklist Observations

During the onsite visit, respective auditors marks not applicable and write the reason for non-applicability and wherever its applicable, auditors verifies the records / practice / documents and physical observation to confirm the same.

There are two parameters such as meeting the requirements and not meeting the requirements. Marking as meeting the requirements for the specific checkpoint reveals that the physical observation and documents are up to the mark. For some checkpoints OFI – Opportunity for Improvements will be given by the auditors. The physical observations and documents which are not up to the mark will be given as not meeting the requirements. The checkpoints under not meeting the requirements are up to the Management of the Organization to develop further.

### 1.6. List of Instruments used in the Inspection Process

During the on-site visit the below listed instruments are used by the Lead Auditors and Technical experts to check the specific parameters in the view of maintaining sustainability. All the instruments are calibrated by ISO 17025 accredited

labs (JRTS Technical Services, Chennai, Tamil Nadu and Instruments Calibration and Test Centre, Coimbatore, TN). The frequency of calibration is six months once or 20 times after its use.

### 1.6.1. Oxygen Meter

Oxygen meter is used in the audit process to measure the oxygen level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 to 30% O<sub>2</sub>, resolution of 0.1%, accuracy is  $\pm (1\% \text{ reading} + 0.2\% \text{ O}_2)$ , response time is  $\leq 15$  seconds, environment pressure range is 0.9 to 1.1 atmosphere, temperature range is 0 °C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is 25°C.



### 1.6.2. Carbon dioxide meter

Carbon dioxide meter is to measure the carbon level in the organization. The instrument is calibrated after using 20 times. Suitability of the instrument are range between 0 ~ 4000 ppm, resolution of CO<sub>2</sub> Meter is 1 ppm, accuracy is  $\leq 1,000$  ppm, repeatability is  $\pm 20$  ppm, temperature range between 0°C to 50°C, 32°F to 122°F, temperature resolution is 0.1°C, temperature accuracy is at 25°C.



### 1.6.3. Light (LUX) Meter

Light meter is to calculate the light intensity in the organization. Suitability of the instruments are, 5 ranges. ie., 40.00, 400.0, 4,000, 40,000, 400,000 Lux, operating temperature is 0 to 50°C, Operating humidity is less than 80% RH, Power consumption is DC 8 mA approximately. This Instrument will be calibrated yearly once or during non-functioning.



### 1.6.4. Sound Level Meter

Sound level meter is to measure the noise level in the organization. This instrument is calibrated yearly once or after using 20 times. Suitability of the instruments are measurement range is 30 – 130 dB, resolution is 0.1 dB, accuracy is (23 $\pm$ 5 °C), Frequency of the instrument is 31.5 to 8,000 Hz, Operating temperature is 0 to 50 °C (32 to 122 °F), Operating humidity is less than 80% RH, Power consumption is DC 6 mA approximately.



### 1.6.5. pH Meter

pH meter is generally used to measure the pH level in water. It is calibrated 6 months once or after 20 times of its use. Suitability of the instrument are range of the pH meter is 0 – 14, accuracy is  $\pm 2\%$ , resolution of the instrument is 0.1 pH, operating temperature is 0 to 50 °C (32 to 122 °F).



### 1.6.6. TDS Meter

TDS meter is generally used to measure the TDS level in water. Suitability of the meter are range of TDS meter is 0 – 9990 ppm (mg/L), operating temperature is 0 to 80 °C (32 to 176 °F) and accuracy is  $\pm 2\%$ . This meter is calibrated six months once or 20 times after its use.



### 1.6.7. GPS Meter

GPS meter is subjected to know the latitude and altitude, location, etc., Suitability of the GPS meter are, dimension is 2.1" x 4.0" x 1.3" (5.4 x 10.3 x 3.3 cm), Display resolution is 128 x 160 pixels an GPS Map features included in Continental Europe. It is calibrated six months once or after 20 times of the usage.



### 1.6.8. Deluxe Water and Soil Analysis Kit

Deluxe water and soil analysis kit is used to analyze the pH, TDS, salinity, turbidity, alkalinity dissolved oxygen of water.



### 1.6.9. Digital Clamp (Voltage) Meter

It is used to check the input and output voltage between two points of an electrical circuit of Alternating Current (AC) and Direct Current (DC) by means of the high resistance of the voltage that impede the flow of current.



## 1.7. Use of Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) refers to protective clothing for the eyes, head, ears, hands, respiratory system, body, and feet. It is utilized to protect individuals from the risks of injury while minimizing exposure to chemical, biological, and physical hazards. PPE serves as the final line of defense when engineering and administrative controls are insufficient in reducing risks. Nature Science Foundation safeguards all the auditors by supplying PPE during the conduct of audits. PPE used are safety jackets, ear plugs, goggles, face shield, hand gloves, shoes, etc.,

### 1.7.1. Safety jackets:

PPE includes safety vests and suits that can be used for inspection process which will protect body injuries from extreme temperatures, flames and sparks, toxic chemicals, insect bites and radiation.



### 1.7.2. Goggles and Face shield:

Goggles and face shield are used in the inspection process while inspecting items which would cause eye damage or loss of vision, spray or toxic liquids especially in chemistry labs, nearing the electric and electronic item.





**1.7.3. Helmet:**

PPE includes hard hats and headgears which will be required for tasks that can cause any force or object falling to the head. It also helps to resist penetration.

**1.7.4. Hand gloves:**

PPE includes safety gloves and should be used for tasks that can cause hand and skin burns, absorption of harmful substances, cuts, fractures or amputations. Selection of hand gloves is based on the application of use.

**1.7.5. Safety Boots:**

Foot protection is one of the most commonly used PPE and can differ depending upon the environment. Safety boots are used for tasks that can cause serious foot and leg injuries from falling or rolling objects, hot substances, electrical hazards, and slippery surfaces.

**1.7.6. Ear Plug:**

Ear plugs are used for tasks that can cause hearing problems and loss of hearing. Hearing protection devices reduces the noise energy reducing reaching and causing damage to the inner ear. This ear plug is mostly used near sound producing devices like power motors, genets, generators, etc.,



## 2. ENVIRONMENT AUDIT

### 2.1. Introduction

Environmental (Eco) audit is quantitative and qualitative data to track air, soil and water and to gain actionable insights to improve the operational performance in the atmosphere. It provides a 360° view of a surrounding campus and makes it easy for Owners / Managers / Environmentalists to collaborate, measure, control and reduce environmental negative impacts. Finally, it leads to enhance the quality of life of all living organisms. Eco audit initiatives are the need of the hour across the world due to changing environmental conditions and global warming besides ever-increasing human population and anthropogenic activities (NCP, 2016). Eco audit aims to make a sustainable and friendly environment for the stakeholders. In this context, to conserve eco-friendly atmosphere of an organization, well-developed environmental objectives and targets should be undertaken to reduce the harmful effects to a greater extent.

The audit process can remarkably minimize the environmental pollution in the campus which in turn reduces the impact of global warming scenario. As per the Rules and Regulations laid by Government, the environmental legislations should be followed by all the Institutions and Organizations and make sure that their activities should not degrade the environment. The environmental audit involves systematic documentation of periodic objective review by a regulated entity on available facilities, their operations and practices related to resolve the environmental requirements. In general, environmental audit is planned to achieve an optimum resource utilization and improved process performance in the audit sites. Venkataraman (2009) stated that it is a 'Common Sense Approach' to identify the problems and solve those problems pertaining to curb eco-friendly atmosphere. Environmental audit enables an overall and complete overview at the audit sites to facilitate our understanding of flow of materials and to focus the priority areas where waste reduction is achieved thereby cost saving is made possible.

Purpose of the audit is to determine performance of the environmental management systems and equipment related to environmental safety. Audit reports can provide key information to the management in relation to risk areas, progress towards strategic objectives and targets. Audit work can be undertaken voluntary for the benefit/advantage of the company and it can be executed with the help of environmental auditing authorities. As mentioned earlier, it helps in the proper natural resource utilization and on the whole, it improves the quality of environment.

An environmental auditor will study an organization's performance towards the environmental sustainability in a systematic manner where environmental management systems and equipment are performing with the aims of a) facilitating management control of environmental practices, b) assessing compliance with company policies, c) facilitating professional competence, d) sustenance activities without harming the environment and e) practicing the environmental conservation.

## 2.2. Organization Details

**Table 2. Campus details**

S.No.	Details / Descriptions	Quantity
1.	Total strength of Students	1154
2.	Total strength of Employees	42
3.	Total number of Buses in the campus	2
4.	Number of Cars entering in the campus	3
5.	Number of Motorcycles entering in the campus	58
6.	Number of other vehicles (Lorry, Ambulance, Jeep, Trucks, Cranes, Poclain, and etc. entering in the campus)	0
7.	Number of E-Vehicles	2
8.	Number of RO Water Plants	1
9.	Number of Borewells	2
10.	Number of Open wells	0
11.	Number of Percolation Ponds	0
12.	Number of Wastewater treatment facility	0
13.	Number of Rain harvesting system	2
14.	Number of Composting pits and Vermicompost units	2

## 2.3. Environment audit observations.

- Human comforts are implemented and observed like ramp walk, fire safety, etc.,
- To reduce the demand of water, rain water harvesting system is implemented and used for irrigation facilities.
- Fire extinguishers are available in the building to consider the safety of all the Stakeholders and maintained properly.
- It is observed that the mock drills and awareness programmes are conducted for disaster management.
- Paver block to increase the percolation of rain water to ground are implemented and practiced.
- Parking is provided under the tree shade to reduce the Heat Island effect (Temperature).
- Rain water harvesting unit is maintained well without using any chemical, the water is used for irrigation purpose.
- Use of potable and non-potable waters are identified and differentiated to conserve water.
- Public transport facilities are available in the campus to control air pollution.
- Bicycle for internal mobility is implemented and used inside the campus.
- The pedestrian pathways are maintained with adequate shading facilities by planting more number of trees.
- No offsite and subsidized parking are encouraged in the campus.
- Waste are segregated before the disposal.
- Biodegradable waste are used in the vermicomposting as a recycling practice

### 2.3.1. Integrated Water Management System

Water is one of the major source of living. Per captia water consumption in the building is calculated as per the water management plan (litres / person/ day). To reduce the demand of water consumption rain water harvesting unit is implemented and practiced. Proper monitoring plan is made evident to reduce the water consumption in the leakage areas.



**R.O.Plant observed in the campus**

### 2.3.2. Corporate Governance

Training and awareness programmes are conducted to the stake holders to maintain sustainability. Some of the programmes conducted by the Organization are Tawekendo (Self Defence) techniques performance by students of Yodha organization and Pinkathon Marathon 3K Run held at Necklace Road on “Breast Cancer Awareness”

<p>08.03.2019 -Mr Raghuveer, Head of YODHA Foundation and 30 girls of the foundation Showcasing their self-defence techniques in Karate and Taekwondo</p>	
	
<p>Students of Yodha organisation displaying Taekwondo (Self Defence)</p>	
<p>10.03.2019 - Students and Faculty of LFDC participating in the Pinkathon Marathon 3K Run held on “Breast Cancer Awareness”. Milind Soman, Model cum Actor cutting hair to make wigs for Cancer Patients and also participated in the run.</p>	
	
<p>Pinkathon Marathon held on “Breast Cancer Awareness”</p>	<p>Milind Soman cutting hair to make wigs for cancer patients</p>

**Awareness activities conducted by the organization**



### 2.3.3. Safety measures and green building conservation code

Environmental safety measures are very important in the buildings as far as students, staff members and other stakeholders are concerned and it requires vigilance and awareness. Management should extend by issuing guidance and the best safety tools. The organization has have a police force, escort services, call boxes, first aid box, fire extinguishers, fire alarms, security systems and staffs towards the safety measures. Organization has very good safety measures as per the green building conservation code such as fire extinguisher and fire bell and alarms in all the place.



**Fire Extinguisher and CCTV Surveillance Facilities observed in the campus**

### 2.3.4. Applicability and Implementation

Guidelines of Architect, Designer and Civil contractor for the existing building addresses the choice of material, design methodology, operation and maintenance related options, etc., and also addresses the applicability.

### 2.3.5. Parking facilities to reduce Heat Island Effect

Heat island effect denotes the temperature level. It is observed that the vehicles are parked under the Tree shade to reduce the heat island effect for the benefit of stakeholders and to maintain sustainability. To reduce the heat island effect parking areas are made up of high albedo materials with light colored paints observed in the organization.

### 2.3.6. Public transport, low emitting vehicles and control of car smokes

Utility of public transportation (buses) reduces carbon emissions greatly and decreases the development of smog within the towns. This means that human beings have healthy air to respire. Comparing a bus travelling with a car transport for a person, it has been observed that buses are the most effective system by producing lower quantum of emission of carbon when compared to that of car transport. This will be a huge decrease in utility of natural resources per person. Other than this, it also gives more benefits like less noise and traffic congestion. Whenever possible, try to take public transport in place of one's own vehicle. The audited Organization is provided two E-Vehicles to maintain eco-friendly environment in the campus and to reduce carbon dioxide emissions. Apart from the e-vehicles, students are encouraged to use bicycles. The tree species are planted abundantly to provide shade to the pedestrian.



### 2.3.7. Pedestrian path facility at the campus

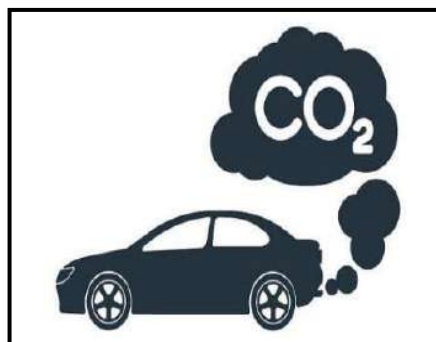
The concept of pedestrian path is to give safe space to walk freely by the pedestrian. It is very important in the green campus in terms of freely walk pedestrians or people going on foot without any obstacles. The pedestrian path is otherwise called as zebra crossing by the combination of black and white stripes remained to characterize the zebra. In addition, pedestrian path is created in the green campus along with road side which meant for walking only using special cement bricks and stones. The pedestrian path aims to end circulation not only cars, buses, vans, trucks and other vehicles but also giving safe space to the pedestrians, where cross and pass through blocks and also forcing vehicles to comply with it. The audited organization is having very good facility in creating pedestrian path for stakeholders with all the facilities such as accessible public toilets, barrier free environment, dustbins, stone benches, etc. Use of bicycles are encouraged in the Campus to control carbon emission and air pollution.



**Pedestrian Pathway and Stone benches are available for Ecofriendly atmosphere**

### 2.3.8. Carbon footprint

Carbon footprint means measuring/recording the greenhouse gases (GHG) emissions of an organization within its defined boundary. Observations on carbon dioxide and oxygen levels monitored in different parts of the campus are presented under Air Quality Audit section while observation on carbon footprint due to electricity usage per year at the Organization along with other fossil fuel utility are presented under Energy Audit portion of this Technical Report.



### 2.3.9. Selection of Building Material

Building materials are selected as per the Guidelines to Architect, Designer and Civil contractors. Low carbon emitting cements, bricks, etc., are used for the construction and recycled glass materials are used for windows. Construction material are not stored in the campus.

### 2.3.10. Waste and Water management activities

Management of water and waste are the two important parameters which plays a vital role to maintain sustainability. Rainwater harvesting is implemented and maintained properly for water conservation, this water is used for irrigation and domestic purpose. It is observed that different colored dustbins are used in the Organization to segregate the waste at the source of generation.



### 2.3.11. Post Occupancy maintenance

Post occupancy maintenance is the activities performed after the completion of construction work and handed over to the owner for further maintenance. The following activities are observed during the onsite visit as post occupancy maintenance

- Vegetation and plants are maintained properly with regular watering through irrigation facilities.
- Soil is maintained well without adding any chemical fertilizers and pesticides.
- To reduce the energy consumption HVAC system are maintained properly.
- Girls sick room was observed.



**Post Occupancy maintenance observed in the campus**

## 3. Conclusion

The Organisation is one among the well- established colleges adopting substantially the environmental protection initiatives. Swachh Bharath Abhiyan is implemented effectively by the campus to promote sanitation and cleanliness. Environmental audit is carried out to provide an indication to the management about how the environmental system and equipment are performing. As a result, the best practicable means can be applied to preserve air, water, soil, plant and animal life from the adverse effect.

## 4. References

- Abba, M., Said, R.M., Abdullah, A. and Mahat, F. 2018. The relationship between environment operational performance and disclosure of Nigerian listed companies. *Journal of Environmental Accounting and Management*, **6** (1): 1-15.
- Adeniji, A.A. 2018. *Audit and Assurance Services. Lagos: Value Analyst Concept of Green Audit*. New Age International, New Delhi, India.
- Aerts, W., Cormier, D. and Magnan, M., 2008. Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economics* **64** (3): 643-659.
- Alba-Hidalgo, D., del Alamo, J.B. and Gutierrez-Perez, J. 2018. Towards a definition of environmental sustainability evaluation in higher education. **In: World Higher Education Policy**. Oxford University Press, London, UK, Vol. 31, pp. 447-470.
- AOAC, 1990. *Official Methods of Analysis of the Association of Official Analytical Chemistry*, Ed, Helrich, K. 15th Edition, AOAC Inc., USA, Vol 1 & 2, pp. 2246-2248.
- Aparajita, G. 1995. Environmental Audits- a Mean to Going Green. *Development Alternatives* **5** (4): 7-9.
- APHA, 2017. *Standard Methods for the Estimation of Wastewaters*. Vol. II, 15<sup>th</sup> Edn, Washington, US.
- Arora, D.P. 2017. Environmental Audit–need of the hour. *International Journal of Advanced Research in Engineering & Management* **3** (4): 25-31.
- Aruninta, A., Kurazumi, Y., Fukagawa, K. and Ishii, J. 2017. The integration of human thermal comfort in an outdoor campus landscape in a tropical climate. *International Journal of GEOMATE* **14** (44): 26-32.
- Astriani, N. 2016. Legal Policy of Water Resources Management by Local Governments: A Review of Right to Water in Indonesia. *Hasanuddin Law Review* **2** (2): 250-257.
- Bae, S.H. and Seol, I. 2006. An exploratory empirical investigation of environmental audit programs in S&P 500 companies. *Management Research News* **29** (9): 573-579.
- Ballou, B., Chen, P.C., Grenier, J.H., and Heitger, D.L. 2018. Corporate social responsibility assurance and reporting quality: Evidence from restatements. *Journal of Accounting and Public Policy*, **37** (2): 167-188.
- Bardati, D.R. 2006. The integrative role of the campus environmental audit: experiences at Bishop's University, Canada. *International Journal of Sustainability in Higher Education* **7** (1): 57-68.
- Braam, G.J.M., Uit de Weerd, L., Hauck, M., and Huijbregts, M.A.J., 2016. Determinants of corporate environmental reporting: the importance of environmental performance and assurance. *Journal of Cleaner Production* **129**: 724-734.
- Breiting, S. and Mogensen, F. 1999. Action competence and environmental education. *Cambridge Journal of Education* **29** (3): 349-353.
- Brindusa M., Sluser, Caliman, F.A., Betianu, C. and Gavrilescu, M. 2007. Methods



- and procedures for environmental risk assessment. *Environmental Engineering and Management Journal* **6** (6): 573-592.
- Buckman, A.H., Mayfield, M. and Beck, S.B.M. 2014. What is a smart building?. *Smart Sustainable Built Environment* **3** (2): 92-109.
- Carbon footprint calculation. [www.carbonfootprint.com](http://www.carbonfootprint.com).
- Cardenas, I.C. and Halman, J.I.M., 2016. Coping with uncertainty in environmental impact assessments: Open techniques. *Environment Impact Assessment Review* **60**: 24–39.
- Cardozo, N.H., da Silveira Barros, S.R., Quelhas, O.L.G., Filho, E.R.M. and Salles, W. 2019. Benchmarks analysis of the higher education institutions participants of the Green Metric World University Ranking. Springer, Universities and Sustainable Communities: Meeting the Goals of the Agenda 2030, World Sustainability Series. pp. 667-683.
- Choy, Er.A. and Karudan, R. 2016. Promoting campus sustainability: A conceptual framework for the assessment of campus sustainability. *Journal of Social Sciences and Humanities* **11** (2): 112-118.
- Conde, M.C. and Sanchez, J.S. 2017. The school curriculum and environmental education: A school environmental audit experience. *International Journal of Environmental & Science Education* **5** (4): 477-494.
- Costantino, F., Di-Gravio, G. and Tronci, M. 2018. Environmental Audit improvements in industrial systems through FRAM. *FAC PapersOnLine* **11**: 1155–1161.
- Dagiliut, R. and Liobikien, G. 2014. University contributions to environmental sustainability: challenges and opportunities from the Lithuanian case. *Journal of Cleaner Production* **108**: 891-899.
- Erol, G.H. and Gezer, K. 2006. Prospective of elementary school teachers attitudes toward environmental problems. *International Journal of Environmental and Science Education*, **1** (1): 65-77.
- Fachrudin, H.T., Fachrudin, K.A. and Utami, W. 2019. Education activities to realize green campus. *Asian Social Science* **15** (8): 18-27.
- Ferenc, M., Sedlacek, O., Fuchs, R., Dinetti, M., Fraissinet, M. and D. Storch 2014. Are cities different?. Patterns of species richness and beta diversity of urban bird communities and regional species assemblages in Europe. *Global Ecology and Biogeography* **23**: 479-489.
- Freidenfelds, D., Kalnins, S.N. and Gusca, J. 2018. What does environmentally sustainable higher education institution mean?. *Energy Procedia* **147**: 42-47.
- Ghaffarianhoseini, A., Berardi, U., AlWaer, H., Chang, S., Halawa, E., Ghaffarianhoseini, A. and Clements-Croome, D. 2016. What is an intelligent building? Analysis of recent interpretations from an international perspective. *Architectural Science Review* **59** (5): 338-357.
- Ghaffarianhoseini, A., AlWaer, H., Ghaffarianhoseini, A., Clements-Croome, D. Berardi, U., Raahemifar, K. and Tookey, J. 2018. Intelligent or smart cities and buildings: a critical exposition and a way forward. *Intelligent Buildings International*, **10** (2): 122-129.
- Gowri, S. and Harikrishnan, V. 2014. Green computing: Analyzing power consumption using local cooling. *International Journal of Engineering Trends and Technology* **15** (3): 105-107.

- Goyal, E. and Gupta, M. 2014. Moving toward socially and environmentally responsible management education-Case study of Mumbai. *Journal Applied Environmental Education & Communication* **13**: 146-161.
- Haahkim, W. and Yunus, A. 2017. Environmental audit as an Instrument for environmental protection and management. *The Business and Management Review* **9** (2): 228-232.
- Handy, S.L., Boarnet, M.G., Ewing, R. and Killingsworth, R.E. 2002. How the built environment affects physical activity: views from urban planning. *American Journal of Preventive Medicine* **23** (2S): 64-73.
- Hertwich, E.G. 2005. Consumption and the rebound effect: An industrial ecology perspective. *Journal of Industrial Ecology*, **9** (1-2): 85-98.
- Hoque, A.A. and Sultana, T. 2017. Environmental sustainability practices in South Asian university campuses: an exploratory study on Bangladeshi universities. *Springer Nature*, **19** (6): 2163-2180.
- Irwansyah. 2017. Research-Based Environmental Law: The Debate Between Ecology Versus Development. *Sriwijaya Law Review* **1** (1): 44-66.
- Irwansyah, Wardhani, H. and Ahsan, Y. 2017. Environmental audit for environmental protections and Management. *The Business and Management Review* **9** (2): 228-232.
- Khoufi, N. and Khoufi, W. 2018. An empirical examination of the determinants of audit report delay in France. *Managerial Auditing Journal*, **33** (8/9): 700-714.
- Kosajan, V., Chang, M., Xiong, X., Feng, Y. and Wang, S. 2018. The design and application of a Government environmental information disclosure index in China. *Journal of Cleaner Production* **202**: 1192-1201.
- Lauder, A., Sari, R.F., Suwartha, N. and Tjahjono, G. 2015. Critical review of a global campus sustainability ranking: Green Metric. *Journal of Cleaner Production* **108**: 852-863.
- Leal Filho, W., Muthu, N., Edwin, G. and Sima, M. 2015. *Implementing campus greening initiatives*. Springer, London, UK.
- León-Fernandez, Y. and Dominguez-Vilches, E. 2015. Environmental management and sustainability in higher education: The case of Spanish Universities. *International Journal of Sustainability in Higher Education* **16**: 440-455.
- Maltby, J. 1995. Environmental audit: theory and practices, *Managerial Auditing Journal*, **10** (8): 15-26. <https://doi.org/10.1108/02686909510147372>.
- Marrone, P., Orsini, F., Asdrubali, F. and Guattari, C. 2018. Environmental performance of universities: Proposal for implementing campus urban morphology as an evaluation parameter in Green Metric. *Sustainable Cities and Society* **42**: 226-239.
- Murdifin, I., Pelu, M.F.A., Perdana, A.A.H., Putra, K., Arumbarkah, A.M., Muslim, M. and Rahmah, A. 2019. Environmental disclosure as corporate social responsibility: Evidence from the biggest nickel mining in Indonesia. *International Journal of Energy Economics and Policy* **9** (1): 115.
- NCP, 2006. *National Environmental Policy-2006*, Government of India, Ministry of Environment and Forest, New Delhi, India.
- Nunes, B.T., Pollard, S.J.T., Burgess, B.J., Ellis, G., de los Rios, I.C. and Charnley, F.

2018. University contributions to the circular economy: Professing the hidden curriculum: Professing the hidden curriculum. *Sustainability* **10** (8): 112-119.
- Ounsaneha, W., Chotklang, N., Laoosee, O. and Rattanapan, C. 2017. Predictors of behavior intention to develop a green university: A case of an undergraduate university in Thailand. *International Journal of GEOMATE*. **15** (49): 162-216.
- Patten, D.M. 2002. The relationship between environmental performance and environmental disclosure: a research note. *Accounting, Organizations and Society*, **27** (8): 763-73.
- Patriarca, R., Di Gravio, G., Costantino, F., Tronci, M., 2017. The Functional Resonance Analysis Method for a systemic risk based environmental auditing in a sinter plant: A semi-quantitative approach. *Environment Impact Assessment Review* **63**: 72–86.
- Peters, G.F. and Romi, A.M. 2014. Does the voluntary adoption of corporate governance mechanisms improve environmental risk disclosures? Evidence from greenhouse gas emission accounting. *Journal of Business Ethics* **125** (4): 637-666.
- Ponmurugan, P. 2018. *Biotechnology Techniques in Biodiversity Conservation*. New Age International, New Delhi, India.
- Pradip, J.S. and Patil, P.D. 2014. Green Audit - A tool for attaining sustainable development and achieving competitive advantage. *IBMRD's Journal of Management & Research*, **3** (1): 85-93.
- Ramachandra, T.V. and Bachamanda, S. 2007. Environmental audit of Municipal solid waste management. *International Journal Environmental Technology and Management*. **7** (3/4): 369–391.
- Ramachandra T.V. and Saira Varghese K. 2003. Exploring possibilities of achieving sustainability in solid waste management. *Indian Journal Environmental Health* **45** (4): 255-264.
- Ragazzi, M. and Ghidini, F. 2017. Environmental sustainability of universities: critical analysis of a green ranking. *Energy Procedia*, **119**: 111-120.
- Report of Green Audit, 2018. *Report of Green Audit Nitte Meenakshi Institute of Technology, Chennai, Tamil Nadu, India*. <https://www.google.com/search?q=Green+Audit+Report+Nitte+Meenakshi+Institute+Of+Technology&sxsrf>.
- Ribeiro, J.M.P., Barbosa, S.B., Casagrande, J.L., Sehnem, S., Berchin, I.I., da Silva, C.G., da Silveira, A.C.M., Zimmer, G.A.A., Faraco, R.A. and de Andrade Guerra, J.B.S. 2017. Promotion of sustainable development at universities: The adoption of green campus strategies at the University of Southern Santa Catarina, Brazil. Springer Nature, Handbook of Theory and Practice of Sustainable Development in Higher Education. pp. 471-486.
- Sallis, J.F. 2009. Measuring physical activity environments: a brief history. *American Journal of Preventive Medicine* **36** (4 Suppl.): S86–S92.
- Satean, G. 2017. The need to go beyond. Green University. ideas to involve the community at Naresuan University, Thailand. Springer Nature, Sustainability Through Innovation in Product Life Cycle Design. Thailand, pp. 841-857.
- Shriberg, M. 2002. Institutional assessment tools for sustainability in higher education: strengths, weaknesses, and implications for practice and theory. *International Journal of Sustainability in Higher Education* **3** (3): 254-270.
- Sharma, D.K. 2020. An Effective Implementation of Environmental Audit (A Case

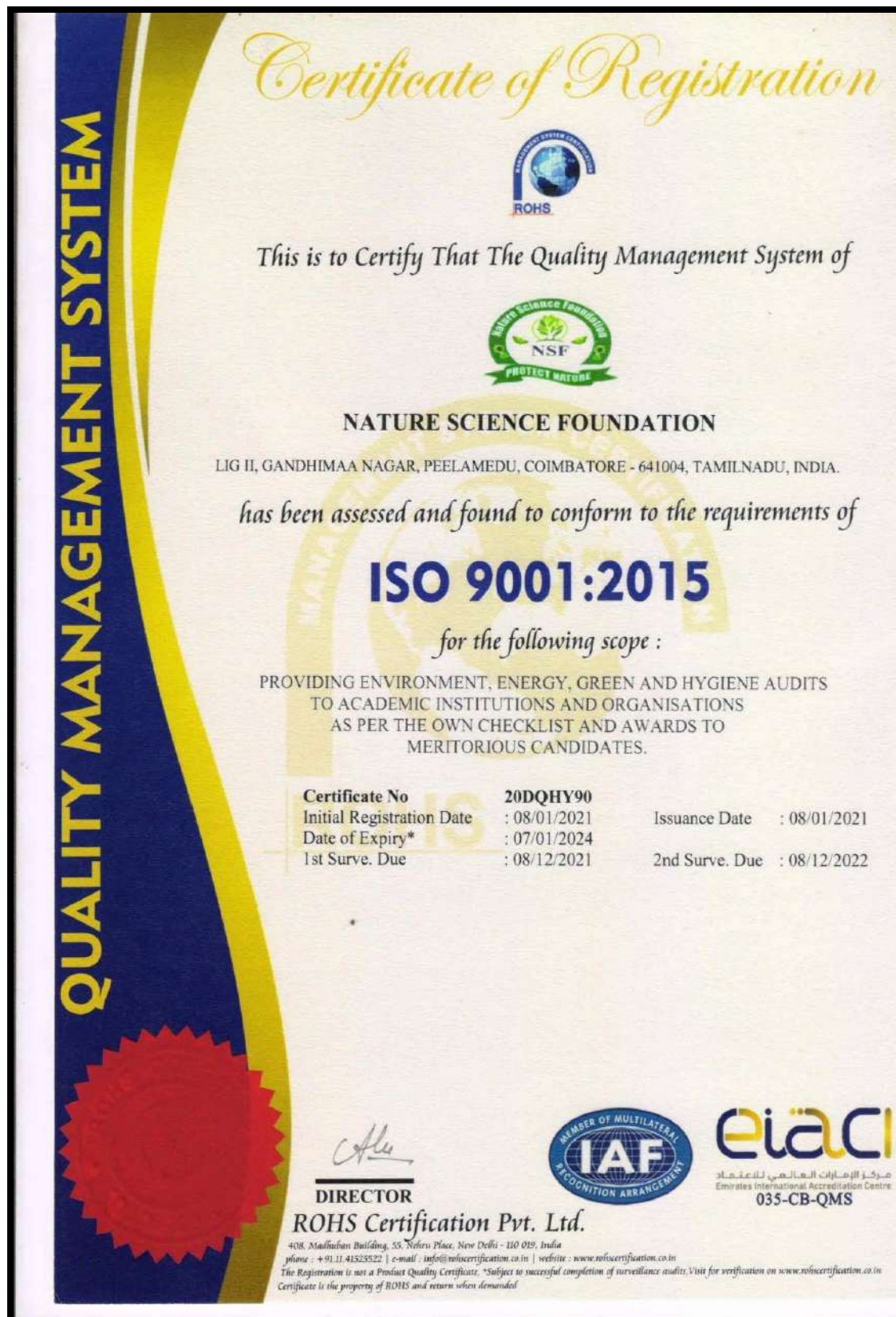
- Study of Hindustan Copper Ltd.). *TEST Engineering and Management* **83**: 5370-5379.
- Sharp, L. 2002. Green campuses: the road from little victories to systemic transformation. *International Journal of Sustainability in Higher Education* **3** (2): 128-145.
- Setyowati, M., Kusumawanto, A. and Prasetya, A. 2017. Study of waste management towards sustainable green campus in Universitas Gadjah Mada. *Journal of Physics: Conference Series*, **1022**: 1547-1553.
- Singhania, M. and Gandhi, G. 2015. Social and environmental disclosure index: Perspectives from Indian corporate sector. *Journal of Advances in Management Research*, **12** (2): 192-208.
- Staniskis, J.K. and Katiliute, E. 2016. Principles, implementation and results of the new assessment and accreditation system 'Engineering education for sustainable industries'. Springer Nature, New Developments in Engineering Education for Sustainable Development. Thailand, pp. 283-294.
- Suwartha, N. and Sari, R.F. 2013. Evaluating UI Green Metric as a tool to support green universities development: Assessment of the year 2011 Ranking. *Journal of Cleaner Production* **61**: 46-53.
- Thompson, D. 2002. *Tools for Environmental Management*, New Society Publishers, Gabriola Island, BC.
- Verma, S., Ahmad, M. and Parwal, R. 2012. Green audit - A Boom to human civilization. *International Journal of Trends in Economics Management & Technology*, **1** (6): 82-86.
- Venkataraman, K. 2009. India's Biodiversity Act 2002 and its role in conservation. *Tropical Ecology* **50** (1): 23-30.
- Vinothkumar, D., Sreenivasan, P.V., Rajalakshmi, S., Vanitha, S. and Gnanamangai, Wang, Y., Shi, H., Sun, M., Huisin, D., Hansson, L. and Wang, R. 2013. Moving towards an ecologically sound society? Starting from green universities and environmental higher education. *Journal of Cleaner Production* **61**: 1-5.
- Woo, J. and Choi, K.S. 2013. Analysis of potential reductions of greenhouse gas emissions on the college campus through the energy saving action programs. *Environmental Engineering Research* **18** (3): 191-197.
- York, R. and Rosa, E.A. 2003. Key challenges to ecological modernization theory: Institutional efficacy, case study evidence, units of analysis, and the pACE of eco-efficiency. *Organization and Environment* **16** (3): 273-288.

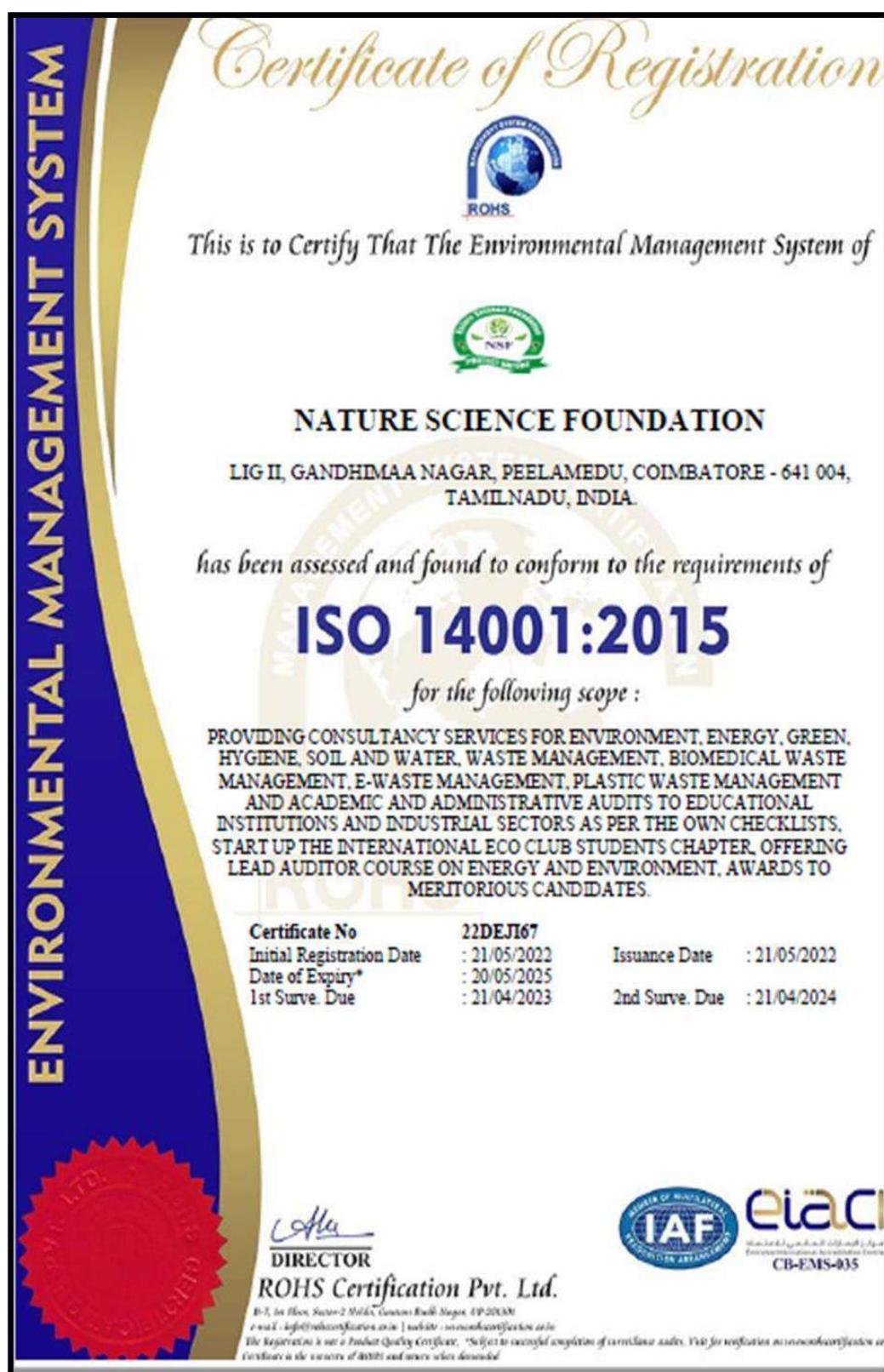
\*\*\*\*\*



## **5. Certificates of Nature Science Foundation**

1. ISO Certificate (QMS 9001:2015)
2. ISO Certificate (EMS 14001:2015)
3. ISO Certificate (OHSMS 45001:2018)
4. ISO Certificate (EnMS 50001:2018)
5. MSME Certificate









**QCS** MANAGEMENT PVT. LTD.  
MANAGEMENT SYSTEMS CERTIFICATION

## *Certificate of Registration*

**ISO 45001:2018 (Occupational Health & Safety Management System)**

### **NATURE SCIENCE FOUNDATION**

ADDRESS: NO. 2669, LIG-II, GANDHI MANAGAR PEELAMEDU COIMBATORE - 641 004 TAMIL NADU, INDIA.

#### **Scope of Certification:**

PROVIDING TRAINING AND AUDITING SERVICES IN THE FIELD OF  
GREEN CAMPUS, ENVIRONMENT, ENERGY, OCCUPATIONAL HEALTH AND SAFETY, HYGIENE AND  
WASTE MANAGEMENT AT EDUCATIONAL INSTITUTES AND INDUSTRIAL SECTOR.

Certificate Number : QCS/EUAS/OHS/002

Issue Date : 03/08/2022  
Expiration Date : 02/08/2023

1<sup>ST</sup> Surveillance Audit Within : 02/07/2023  
2<sup>ND</sup> Surveillance Audit Within : 02/07/2024  
Re-certification Due Date : 02/08/2025



Partha Bagchi  
(Managing Director)

Validity of this Certificate is subject to Surveillance Audits to be conducted before scheduled due dates of surveillance audits as mentioned on the certificate, failing which the certificate will stand to be withdrawn and need to be treated as an initial certification process to reactivate its continuity on the register of EUAS and QCS. This Certificate is valid when confirmed by data listed on the (Euro Universal Accreditation Systems) EUAS" [www.euas-ac.org](http://www.euas-ac.org). The authenticity & validity of this certificate may be re-affirmed by referring to our company website - [www.qcspl.com](http://www.qcspl.com). Lack of fulfillment of conditions as set out on the 'Certification Contract' (Annex 13) may render this certificate invalid. Any alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of law. This certificate remains the property of QCS and to be returned on request.

REGISTERED OFFICE: 37E/1(310) 2<sup>ND</sup> STREET, MODERN PARK, GREENAGE APARTMENT - 2<sup>ND</sup> FLOOR,  
SANTOSH PUR, KOLKATA - 700075, WEST BENGAL, INDIA.  
Email: [info@qcspl.com](mailto:info@qcspl.com) Call: +91 8697724963, +91 8902447427. Website: [www.qcspl.com](http://www.qcspl.com)





## Certificate of Registration

This is to certify that

### NATURE SCIENCE FOUNDATION

**LIG II, GANDHIMAA NAGAR, PEELAMEDU, COIMBATORE - 641 004,  
TAMILNADU, INDIA.**

has been independently assessed by QRO  
and is compliant with the requirement of:

### ISO 50001:2018

### Energy Management Systems

For the following scope of activities:

**PROVIDING CONSULTANCY SERVICES FOR ENVIRONMENT, ENERGY, GREEN, HYGIENE, SOIL AND WATER, WASTE MANAGEMENT, BIOMEDICAL WASTE MANAGEMENT, E-WASTE MANAGEMENT, PLASTIC WASTE MANAGEMENT AND ACADEMIC AND ADMINISTRATIVE AUDITS TO EDUCATIONAL INSTITUTIONS AND INDUSTRIAL SECTORS AS PER THE OWN CHECKLISTS, START UP THE INTERNATIONAL ECO CLUB STUDENTS CHAPTER, OFFERING LEAD AUDITOR COURSE ON ENERGY AND ENVIRONMENT, AWARDS TO MERITORIOUS CANDIDATES.**

Date of Certification: 9th August 2022      2<sup>nd</sup> Surveillance Audit Due: 8th August 2024  
1<sup>st</sup> Surveillance Audit Due: 8th August 2023      Certificate Expiry: 8th August 2025

**Certificate Number: 305022080903EN**






Head of Certification

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of the audit.  
(In case surveillance audit is not allowed to be conducted: this certificate shall be suspended / withdrawn).

The Validity of this certificate can be verified at [www.grocert.org](http://www.grocert.org)

This certificate of registration remains the property of QRO Certification LLP, and shall be returned immediately upon request.

India Office : QRO Certification LLP  
142, 11nd Floor, Avtar Enclave, Near Paschim Vihar West Metro Station, Delhi-110063, (INDIA)  
Website : [www.grocert.org](http://www.grocert.org). E-mail : [info@grocert.org](mailto:info@grocert.org)



भारत सरकार  
Government of India  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises



सूक्ष्म, लघु एवं मध्यम उद्यम  
MICRO, SMALL & MEDIUM ENTERPRISES

## UDYAM REGISTRATION CERTIFICATE



Our small hands to make you LARGE

<b>UDYAM REGISTRATION NUMBER</b>	UDYAM-TN-03-0073706																							
<b>NAME OF ENTERPRISE</b>	M/S NATURE SCIENCE FOUNDATION																							
<b>TYPE OF ENTERPRISE *</b>	MICRO																							
<b>MAJOR ACTIVITY</b>	SERVICES																							
<b>SOCIAL CATEGORY OF ENTREPRENEUR</b>	GENERAL																							
<b>NAME OF UNIT(S)</b>	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Name of Unit(s)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Green Campus, Energy and Environment Management Audits</td> </tr> </tbody> </table>				S.No.	Name of Unit(s)	1	Green Campus, Energy and Environment Management Audits																
S.No.	Name of Unit(s)																							
1	Green Campus, Energy and Environment Management Audits																							
<b>OFFICIAL ADDRESS OF ENTERPRISE</b>	<table border="1"> <thead> <tr> <th>Flat/Door/Block No.</th> <th>1/1G-II,2669</th> <th>Name of Premises/ Building</th> <th>GANDHIMAA NAGAR</th> </tr> </thead> <tbody> <tr> <td>Village/Town</td> <td>Gandhinagar S.O.</td> <td>Block</td> <td>1/1G-II</td> </tr> <tr> <td>Road/Street/Lane</td> <td>Peelamedu</td> <td>City</td> <td>Coimbatore South</td> </tr> <tr> <td>State</td> <td>TAMIL NADU</td> <td>District</td> <td>COIMBATORE, Pin 641004</td> </tr> <tr> <td>Mobile</td> <td>9566777285</td> <td>Email:</td> <td>chairmansf@gmail.com</td> </tr> </tbody> </table>				Flat/Door/Block No.	1/1G-II,2669	Name of Premises/ Building	GANDHIMAA NAGAR	Village/Town	Gandhinagar S.O.	Block	1/1G-II	Road/Street/Lane	Peelamedu	City	Coimbatore South	State	TAMIL NADU	District	COIMBATORE, Pin 641004	Mobile	9566777285	Email:	chairmansf@gmail.com
Flat/Door/Block No.	1/1G-II,2669	Name of Premises/ Building	GANDHIMAA NAGAR																					
Village/Town	Gandhinagar S.O.	Block	1/1G-II																					
Road/Street/Lane	Peelamedu	City	Coimbatore South																					
State	TAMIL NADU	District	COIMBATORE, Pin 641004																					
Mobile	9566777285	Email:	chairmansf@gmail.com																					
<b>DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE</b>	28/11/2017																							
<b>DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS</b>	12/03/2020																							
<b>NATIONAL INDUSTRY CLASSIFICATION CODE(S)</b>	<table border="1"> <thead> <tr> <th>S.No.</th> <th>NIC 2 Digit</th> <th>NIC 4 Digit</th> <th>NIC 5 Digit</th> <th>Activity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>69 - Legal and accounting activities</td> <td>6920 - Accounting, bookkeeping and auditing activities; tax consultancy</td> <td>69201 - Accounting, bookkeeping and auditing activities</td> <td>Services</td> </tr> <tr> <td>2</td> <td>85 - Education</td> <td>8542 - Cultural education</td> <td>85420 - Cultural education</td> <td>Services</td> </tr> <tr> <td>3</td> <td>85 - Education</td> <td>8549 - Other education n.e.c.</td> <td>85499 - Other educational services n.e.c.</td> <td>Services</td> </tr> </tbody> </table>				S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity	1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services	2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services	3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services
S.No.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity																				
1	69 - Legal and accounting activities	6920 - Accounting, bookkeeping and auditing activities; tax consultancy	69201 - Accounting, bookkeeping and auditing activities	Services																				
2	85 - Education	8542 - Cultural education	85420 - Cultural education	Services																				
3	85 - Education	8549 - Other education n.e.c.	85499 - Other educational services n.e.c.	Services																				
<b>DATE OF UDYAM REGISTRATION</b>	26/02/2022																							

\* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the Mo MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from <https://udyamregistration.gov.in> & Date of printing: 26/02/2022

For any assistance, you may contact:

1. District Industries Centre: COIMBATORE (TAMIL NADU)
2. MSME-DI: CHENNAI (TAMIL NADU)

Visit : [www.msme.gov.in](http://www.msme.gov.in) ; [www.dcmsme.gov.in](http://www.dcmsme.gov.in) ; [www.champions.gov.in](http://www.champions.gov.in)

Follow us @minmsme & @msmechampions



**BE A  
CHAMPION**  
with the  
Ministry of  
**MSME**

## **6. Certificates of Lead Auditors**

1. Bureau of Energy Efficiency (BEE), LEED AP and GRIHA Certificates of Er. D. Dineshkumar, Energy and Environment Auditor of NSF.
2. Indian Green Building Council (IGBC AP) Accredited Professional of Dr. B. Mythili Gnanamangai, Vice-Chairman of NSF.
3. Tamil Nadu Fire and Rescue Service Certificate of Er. S. Srinivash, Energy Auditors of NSF.





## BUREAU OF ENERGY EFFICIENCY



Examination Registration No. : **EA-14056** Serial Number **9176**

Certificate Registration No. : **9176**

*[Signature]*

### Certificate For Certified Energy Manager

This is to certify that Mr./Mrs./Ms. **Dinesh Kumar D**  
Son/Daughter of Mr./Mrs. **R M Dhanasekaran** who has passed the National  
Examination for certification of energy manager held in the month of **October 2011** is  
qualified as certified energy manager subject to the provisions of Bureau of Energy Efficiency  
(Certification Procedures for Energy Managers) Regulations, 2010.

This certificate shall be valid for five years with effect from the date of award of this certificate  
and shall be renewable subject to attending the prescribed refresher training course once in every  
five years.

His /Her name has been entered in the Register of certified energy manager  
at Serial Number **9176** being maintained by the Bureau of Energy Efficiency under the  
aforesaid regulations.

Mr./Mrs./Ms. **Dinesh Kumar D** is deemed to have qualified  
for appointment or designation as energy manager under clause (i) of Section 14 of the Energy  
Conservation Act, 2001 (Act No.52 of 2001).

Given under the seal of the Bureau of Energy Efficiency, this **7<sup>th</sup>** day  
of **February, 2013**

*[Signature]*

Digitally Signed: RAKESH KUMAR RAI  
Sun Mar 01 10:58:55 IST 2020  
Secretary, BEE New Delhi

Secretary  
Bureau of Energy Efficiency  
New Delhi

Dates of attending the refresher course	Secretary's Signature	Dates of attending the refresher course	Secretary's Signature
<b>22.12.2019</b>	<i>[Signature]</i>		



