

# ENVIRONMENT AUDIT REPORT

FOR THE YEAR 2022-23



**V.M.V.V.Sangha's  
Vijay Mahantesh Krupaposhit  
S.R.Vastrad Arts, Science & Vijay  
Shankarappa Bellihal Commerce College,  
Hungund - 587118**

Principal Lead Auditor:

Mallikarjun A Kambalyal.

Regd India: CEA, EA-3485, ISO 50001, 14001 Lead Auditor.

Germany Energie Berater: Anbieter-Nr 1041388

Mauritius : REA-57

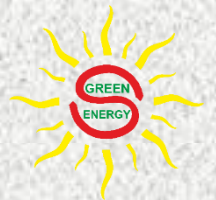
Audited by:

**SUNBSHUBH TECHNOVATIONS PVT LTD.,**

120-2, LGF, 'A' wing, IT Park,

Hubli – 580029. Karnataka. India.

Germany off: Neuer Weg 166, 47803 Krefeld, Dusseldorf. Germany



ENVIRONMENT AUDIT REPORT 2022-2023

## CONTENTS

EXECUTIVE SUMMURY.....	4
ACKNOWLEDGEMENT: .....	7
ENVIRONMENT AUDIT COMPLETION CERTIFICATE .....	8
OVERVIEW OF ENVIRONMENT AUDIT.....	12
CARBON FOOTPRINT AUDIT OBJECTIVES.....	13
DAY's ENERGY USE PLEDGE .....	17
DISCUSSIONS ON EXECUTIVE SUMMARY: .....	20
DISPOSAL OF USED BATTERIES. ....	28
BATTERY MANAGEMENT:.....	28
BATTERY PLACEMENT:.....	29
FACTORS CONSIDERED. ....	30
GEOGRAPHICAL PARAMETERS.....	30
EXHIBIT GREEN HABITS: .....	32
ACTION PLAN SUMMARY:.....	32
Notes:.....	33
Glossary .....	35

ENVIRONMENT AUDIT REPORT 2022-2023

## EXECUTIVE SUMMARY.

Sr No	Observation*	Problems*	Resulting losses*	Remedial measures*	Capital*	Projected savings*	Category 7
1	Rainwater Management	No serious water problem seen but anticipated.	Need quality water for social existence.	Structured approach to retain the rainwater within the campus.	Yes, Capital intensive	Improved quality of water and high yield. Calls for reduced pumping hours and eliminate or reduce need for water conditioners.	7.1.4
2	Surface water	Runoff to drain	Wastage of precious pure water	Divert to specified point near to borewell.	Minimal		
3	Water management	Flooding bottle watering			Nil, use of used water bottles	Minimized water use, manpower and spillage.	
4	Solid Waste Management	Spillage of waste	Dirty used packages in and around the college	Awareness to place the waste in right place.	Already in place, however, needs to be refined.	Reduced cleaning hours and good hygienic conditions.	7.1.3
5	Personal Health	Used Sanitary pads dispensing unit is not in place.	Open area disposal	Incinerator to be placed at convenient point and proper training is given to the students to make use of it.	Nil	Clean and safe health.	7.1.3
6	Used Battery dispos	Environmental hazard.		Regenerative approach.			7.1.3

Sr No	Observation*	Problems*	Resulting losses*	Remedial measures*	Capital*	Projected savings*	Category 7
7	Work culture	Paperless office, as discussed in detail.					
8	Natural Lighting	Un cleaned windows and ventilators, forced switching on of tube lights	High energy bills	Clean the windowpanes and allow maximum natural light penetration.	Nil, part of routine, In house manpower.	Substantial cost of energy bills on lighting.	7.1.2 7.1.6
9	Natural Ventilation	Permanently closed ventilators.	Creation of hot pockets below the ceiling.	Open the Ventilators for easy exit of hot/warm air from the rooms.	Nil, In house manpower.	Eliminates use of Electrical Fans and Substantial cost of energy bills	7.1.2 7.1.6
* For details, please follow the discussions in the report.							



Estd : 1967

V.M.V.V.Sangha's  
Vijay Mahantesh Krupaposhit

Post Box No. 3

S.R.Vastrad Arts, Science & Vijay Shankarappa Bellihal Commerce  
College, Hungund - 587118Prof.Smt.S.K.Math M.Sc.  
PrincipalAffiliated  
Ranichannamma Uni.Belagavi  
College Code : 6217Ph.No: 200244(08351)  
Mobile No: 9845949989  
Email ID: vmsrv\_hnd@yahoo.com

No. VMCH/ 187 /2023-24

Date: 12/06/2023

To,  
SUNSHUBH TECHNOVATIONS PVT LTD  
#402, Hill View Apartment, Adarshnagar  
2nd Cross, Opp Cricket coaching centre.,  
Hubli - 580032 Karnataka. INDIA.**Sub: Green audit work of VMKSRV Arts, Science and VS Bellihal Commerce College,  
Hungund**


Ref: Quotation through mail dated 28-04-2023

Sir,

With reference to the above subject, you are requested to undertake Green Auditing work of the college as per your quotation dated 28/04/2023.

Terms and conditions:

- 1) Completion of work and submission of reports within 40 days.
- 2) Deliverables: the green audit report shall outline the environment assessment including the following aspects:
  - I. Baseline environmental status on aspects such as energy, wastewater, hazardous / chemical waste, e-waste, green inventory(flora and fauna status)
  - II. Policy review and its impact on environment.
  - III. Identification of scope for improvement in current practices.
  - IV. Proposing technological solutions/recommendations for improving environmental condition related to energy, water, wastewater, hazardous / chemical waste, e-waste, green inventory.
  - V. Action plan in terms of short term and long term technological intervention for improving environmental conditions.
- 3) Reports: One copy of draft report shall be provided to the college for comments and discussions. Two copies of the report shall be submitted at the end of the audit.

Place: Hungund  
Date: 12/06/23
  
 The Principal  
 Vijaya Mahantesh Krupaposhit  
 S.R.Vastrad Arts, Science & V.S.Bellihal  
 Commerce College, Hungund-587118

## ACKNOWLEDGEMENT:

SUNSHUBH TECHNOVATIONS PVT LTD is pleased to express its sincere gratitude to the management of V.M.V.V.Sangha's Vijay Mahantesh Krupaposhit S.R.Vastrad Arts, Science & Vijay Shankarappa Bellihal Commerce College, Hunagund for entrusting Sunshubh Technovations Pvt Ltd with the assignment on Green Earth practices based on Educate, Practice, Advocate & Manage the resources in their educational organization.

We acknowledge assignment with order reference number VMCH/87/2023-24. We also wish to thank Smt. Prof S K Math, the Principal, and Mr. M S Daragad, NAAC Audit Co-Ordinator and Dr Parashuram C, Convenor, Criterion VII Chairman, who have been constantly following with the Carbon Handprint initiatives and developments in the college. It was on their instance that we got to evaluate the initiatives undertaken. The officials and the maintenance staff for the help rendered during the energy flow study.

We would fail if we neglect to appreciate the sincere efforts put in by the Faculty Members,

Dr S R Golagond, Criterion 1 – Curricular Aspects

Shri A H Teli, Criterion II – Teaching, Learning & Evaluation.

Dr Tippeswamy D S, Criterion III – Research, innovation & Extension.

Shri B A Kanti, Criterion IV – Infrastructure & Learning Resources.

Shri L N Kulkarni, Criterion V – Students Support and Progression.

Dr S R Nagannavar, Criterion VI – Governance, Leadership & Management.,

Dr Parashuram C, Criterion VII – Institutional Values and Best Practices

The students who against all odds have kept the college premises clean to the possible limits.

Without the crucial and significant support from the fellow teaching team the potential energy saving options and carbon footprint reduction would not be a reality.

With the motivational support of the management, ground realistic support from teaching team and sincere efforts of the students in incorporating the change (habits) and instructions, the college could effectively declare the reduction in Carbon footprint and optimize the waste reductions.



## ENVIRONMENT AUDIT COMPLETION CERTIFICATE

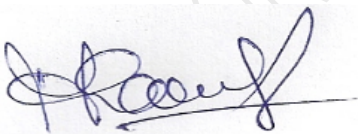
I, Mallikarjun A Kambalyal, endorse and confirm that the ENVIRONMENT Audit has been carried out on 13th June 2023 at V.M.V.V.Sangha's Vijay Mahantesh Krupaposhit S.R.Vastrad Arts, Science & Vijay Shankarappa Bellihal Commerce College, Hunagund under the instructions of out on 13th June 2023 under the instructions of Smt Prof S K Math, Principal, and Mr. M.S. Daragad, NAAC Audit Co-Ordinator and Dr Parashuram C, Convenor, Criterion VII.

This report is generated based on the site visits and evidence collected from the site and this completion certificate is issued in compliance with *Criteria* 7.1.6.

All attempts have been made to evaluate the scope for development and inculcate green practices in the campus and extended throughout the campus. The focus is also laid to make positive impact on the society for a better living.

This report is tabled in two parts. The first forms the core discussions which are subject specific under the statutory requirements of the NAAC accreditation norms. The second section is general in nature.

Any modifications, changes, omissions after the site visit shall be exclusive.



Mallikarjun A. Kambalyal B.E (E&C)

Certified Energy Auditors EA-3485.

ISO 50001:2011 & ISO14001:2015 Lead Auditor.

Date: 13th June 2023

*Credentials attached 7.1.6*





## BUREAU OF ENERGY EFFICIENCY



Examination Registration No. : **EA-3485** Serial Number **2838**

Certificate Registration No. : **2838**

### Certificate For Certified Energy Manager

This is to certify that Mr./Mrs./Ms. **Mallikarjun A Kambalyal** Son/Daughter of Mr./Mrs. **Andanappa V Kambalyal** who has passed the National Examination for certification of energy manager held in the month of **April 2006** 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 **2838** being maintained by the Bureau of Energy Efficiency under the aforesaid regulations.

Mr./Mrs./Ms. **Mallikarjun A Kambalyal** is deemed to have qualified for appointment or designation as energy manager under clause (1) 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**

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>28.01.2020</b>			

Bureau of energy Efficiency Regd No: EA3485

## *Certificate of Successful Completion*



*This is to Certify that*

***MALLIKARJUN A KAMBALYAL***

*has successfully completed the*

***Intertek***

***CQI & IRCA Certified ISO 14001:2015  
Auditor Conversion Training Course***

*The Course includes the assessment and evaluation of Environmental Management Systems to conform to the requirements of ISO 14001:2015 and ISO 19011:2011*

*This course is certified by the Chartered Quality Institute (CQI) and the International Register of Certificated Auditors (IRCA)  
– IRCA REFERENCE 18093 –*

*The course meets the training requirements for individuals seeking certification under the IRCA Auditor Certification Schemes*



*Authorising Signature: Vystra Arumova*

*Course Dates: 14<sup>th</sup> – 16<sup>th</sup> July 2017*

*Certificate Number: 47730*

*Membership Application To Be Made Within 3 Years From Last Day of Course*

121807

ISO Certified Lead Auditor. Certificate No: 47730

**bsi.**

## BSI Training Academy

This is to certify that

**Mallikarjun A. Kambalyal**

has attended and passed

**Energy Management Systems (ENMS) Auditor/Lead Auditor Training Course  
(ISO 50001:2011)**



Premanand Ramakrishnan, Director of Training

Date: 14/04/2016 - 18/04/2016

Certificate Number: ENR-00253448

This certificate is valid for 3 years from the date above for the purpose of registering as an auditor with IRCA.

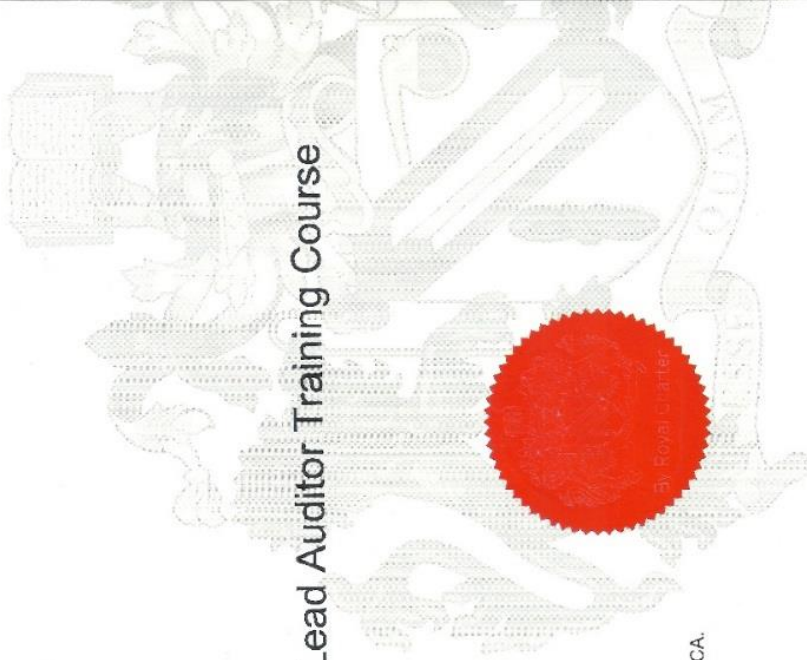


Course number A17583 certified by IRCA

The British Standards Institution is incorporated by Royal Charter  
BSI India, The Mira Corporate Suites (A-2), Plot 1 & 2 Ishwar Nagar Mathura Road, New Delhi 110085, India Tel: +91 11 2662 9000



By Royal Charter



...making excellence a habit.™

ISO Certified Lead Auditor. Certificate No: ENR-00253448

## OVERVIEW OF ENVIRONMENT AUDIT.

The main objective of the environment audit of educational institutions is to set an informative work schedule wherein, the impact assessment of all the activities carried out in day today activities are highlighted and PROs and Cons are discussed off the class room session.

Self-contribution to the society's well-being is what is intended to be discussed.

Judicious use of resources, minimal waste generation and segregation of waste at source are key aspects of the Environment Audit. In doing so the contribution of green envelope in the campus helping maintain lower temperature and retain good amount of rainwater is another key factor.

The discussions in the report have been focussed to educate the inmates of the campus so as to get maximum contribution from each and every beneficiary be it an employee or the student or even their parents.

ENVIRONMENT AUDIT REPORT 2022-2023

## CARBON FOOTPRINT AUDIT OBJECTIVES

### **Know Why, Where, What, When, How? about the Audit and the objectives....**

Carbon Footprint Audit was initiated in the beginning of 1970's, with the motive of inspecting the work executed within an organization, whose exercises could cause risk to the health of inhabitants and the environment. It exposes the genuineness of the proclamation made by the organisation with the concern on health issues. As a consequence of their operations with respect to environmental pollution it is the duty of the organisation to carry out the Carbon Footprint audit of the ongoing processes for various reasons, such as,

To make sure whether one is performing in accordance with the relevant rules and regulations,

To improve the procedures and aptness of material in use,

To analyse the potential duties and to determine a way which can lower the cost and to the revenue outflow.

Through Carbon Footprint Audit one gets adoration as to how to improve the condition of the environment. There are various factors that were forced upon and determine the growth of/or conduct of Carbon Footprint audit. Incidents like,

Decades old Bhopal gas tragedy, that has left its residual effect which still haunts us.

Our buildings catching fire due to various reasons,

Industries blowing off taking valuable human lives etc,

People going sick, feeling tired, after long hours of operations in the organization,

Increased demand of generators due to inconsistent power supply, which has resulted or lead into recent floods and droughts,

are some of the situations to ponder about?

To address various issues in context with human health, ENVIRONMENT audit is assigned to "Criteria 7" of NAAC (National assessment and accreditation council) accreditation. NAAC is a self-governing organization in India that declares the institutions as Grade "A", Grade "A+", or Grade "A++"..., according to the scores assigned at the time of accreditation.

The other intention of organising Carbon Footprint audit is to update the environment conditions in and around the institutions i.e., within the compound and outside the compound. It is carried out with the aid of performing certain tasks like waste management, energy consumed, diesel burnt it performing the objective of the organization. Lastly to self-assess the net carbon footprint of the conduct of process in the organization.

The goals of Carbon Footprint audit

The purpose of carrying out Carbon Footprint audit is securing the environment and cut down the threat posed to human health.

To Make sure that rules and regulations are complied with.

To avoid the environmental interruptions that are more difficult to handle and their corrections call for high cost.

To suggest the best protocol for adding to sustainable development.

To execute the process of the organisations utilising minimum natural resources and efficient use of those resources contributing to minimum waste generation.

How is the Carbon Footprint audit conducted?

- Pre-audit
- Planning
- selecting the team of auditors both internal and external
- schedule the audit facility
- acquire the background information
- visit areas under audit

### **On site conditions:**

Understand the scope of audit

Analyse the strengths and weaknesses of the internal controls

Conduct audit with end user comfort focused and making it easy to perform.

Collect necessary evidence so that the stakeholders stand to understand how and where they are going wrong in the process of their conduct.

Post audit draw the report based on the data collected.

On confirmation of the preliminary report, draw a final report of the observations and inference with accuracy more near to implementable way.

Discuss various remedial measures for alternatives if required.

Prepare an action plan to overcome the shortcomings with continual observation on the action plan initiated.

**Energy audit:** It deals with use of energy in carrying out the task. In the Audit process conservation prevails over efficiency. Conservation awareness and implementation plays a significant role. Awareness in conservation brings in Efficiency by itself. Hence, energy audit will always consider not to use the energy if necessary. At best it can be used judiciously. The final objective is to assess the extent of impact on the environment either Direct or Indirect. One such key tool is CARBON FOOTPRINT.

Carbon Footprint also considers various other components as discussed below.

**Water audit:** Water is one of the cheapest commodities next to the Air we breathe. Although we Indians, use less water in comparison to western countries. However, the extent of pollutants that we leave behind has polluted all the resources including the deep well.

Rainwater harvesting is one of the best techniques that can be adopted by harvesting the rainwater and using it at the time of scarcity. the audit team to observe and investigate the relevant methods that can be adopted and implemented and draw the balance of use of water.

**Waste management audit:** The point of generation of waste, the type of waste generated, i.e., hazardous, recyclable and organically compostable wastes and segregating method at the point of generation for easy and best way to handle the same. Evaluating such methods to minimise the use of resources in the process of their management.

**Environmental quality audit:** It analyses air quality, noise level and the programs undertaken by the institution for plantation creating awareness of trees around us and how nature provides us with remedial measures within its framework.

**Health audit:** In the process of use of resources and conduct of the activities, they can develop impact on human health, that might be off minutely harmful, cause permanent disorder or may even cause death. Occupational health hazards are discussed in detail and the stakeholders are informed of the same and required necessary remedial measures indicated.

**Renewable energy:** To make in organisation net zero net zero carbon emission use of renewable resources including energy such as solar wind biogas geothermal energies are put into ooh utilisation.



**Carbon handprint:** The net impact All the above components of Carbon Footprint Audits are to make an organisation contribute zero emissions which are called by bhai use of water generation of waste use of energy e environmental damage health damage and finally to explore if the campus or direction can go in in contributing to third-party emissions minimising

**Benefits of Carbon Footprint audit:** To draw home the benefits, the system has been separated out into various audits as listed above. In doing so, and if audit findings are effectively implemented there are many advantages that can be practiced in the process

Recognise the cost saving methods through waste minimising and managing technologies.

Point out the prevailing and forth coming complications.

Authenticate conformity with the legal requirements.

Empower the organisation to frame a better environmental performance.

Portray a good image of the institution which helps build better relationships with the group's organisations, stakeholders in and around its operations

Enhance the alertness for environmental guidelines duties and conduct of preparedness for any eventualities due to environmental disasters.

## DAY'S ENERGY USE PLEDGE

### DAY'S CARBON HANDPRINT PLEDGE (proposed)

*(Indicative templet for display at all prominent areas, classrooms, waiting rooms, canteen, library, relaxing areas in the campus.)*

We, The Principal, staff and students, adopt responsible practices in our day's energy use with due regard to the environment. We pledge to avoid using electrical power where not needed. We also pledge to use judiciously the electrical power by using Energy efficient products.

We shall practice to switch off all appliances when not in use.

#### PURPOSE:

To realistically and comprehensively reduce energy consumption, assure acceptable indoor air quality, and improve energy efficiency on campus through methods that are consistent with a safe, secure, and inviting campus community. As outlined in this policy, energy conservation will be accomplished by developing a proactive and progressive approach to providing energy efficient, responsible, and cost-effective operations on campus. This policy will be reviewed and updated periodically as public awareness, management techniques, and technologies change.

**APPLIES TO:** Faculty, staff, students, and visitors.

**CAMPUS:** V.M.V.V.Sangha's Vijay Mahantesh Krupaposhit S.R.Vastrad Arts, Science & Vijay Shankarappa Bellihal Commerce College, Hunagund

Principal

Chairperson

## **ABOUT THE COLLEGE**

V.M.V.V.Sangha's Vijay Mahantesh Krupaposhit S.R.Vastrad Arts, Science & Vijay Shankarappa Bellihal Commerce College, Hunagund KARNATAKA is located in a small town educating the rural children of nearby villages.

The college has Arts Commerce and Science stream.

The upkeep of the campus speaks for their concern to the environment. With few corrective measures the college can consider to move towards being CARBON NEUTRAL.

## **ABOUT ENVIRONMENT AUDIT:**

V.M.V.V.Sangha's Vijay Mahantesh Krupaposhit S.R.Vastrad Arts, Science & Vijay Shankarappa Bellihal Commerce College, Hunagund, Karnataka has asked SUNSHUBH TECHNOVATIONS PVT LTD, Hubli, to conduct the ENVIRONMENT Audit for their Institution.

In this context, the management of the Institute represented by Smt. Prof. S K Math, Principal, entrusted us the task of conducting the feasibility study to reduce energy consumption and adopt green habits.

SUNSHUBH TECHNOVATIONS PVT LTD, Hubli, represented by Mr. Mallikarjun A Kambalyal made a detailed study and readings of various appliances were taken and carried out the ENVIRONMENT audit along with the safety parameters.

We hope the points presented will be self-explanatory, if there is need for any clarification, we are open for discussions.

## **LIMITATIONS:**

Our recommendations are in the interest of conservation of Electrical Energy and Green Culture i.e., the reduction in CARBON FOOTPRINT. The compliance to the recommendations will be subjected to meeting the safety and Environmental rules and guidelines.

**ONGOING STATUS:**

It's an optimistic & highly dedicated team effort lead by the Principal & the senior staff who have dedicated all their wits & free time to initiate Green Carpet the entire college premises. It is also a fact that there do exist, few short comings which however is unintentional & on being trained & educated the campus should look for continued minimized waste generation. With all due appreciation to the management, staff involved & cooperation by the students, we have made few suggestions which on implementation, will reduce, demand for water & electrical power. It will also reduce the existing level of pollution to bear minimum.

There is high potential among the students to be educated and spread the knowledge of going ZERO waste generation in their respective colonies and society they dwell in, contributing positively to the cause of

**NO WASTE – NO POLLUTION – NO HEALTH HAZARD.**

ENVIRONMENT AUDIT REPORT 2022-2023

## DISCUSSIONS ON EXECUTIVE SUMMARY:

### ENVIRONMENT Audit.



Aerial View of the College Campus

### DISCUSSIONS ON EXECUTIVE SUMMARY:

The campus is spread over scenic, elevated terrain. The Rocky structure makes things great for beatification with local flora and fauna. The campus has good opportunity to nurture the knowledge among the students from Biology, Physics and Geology.

We have discussed one such opportunity for the students and team of faculty from Physics department.

Primary Considerations: Conservation practices that can be brought about in the campus contributing to use of natural resources.

Water is the primary source of energy and motivation factor for all good things that can happen in the world.

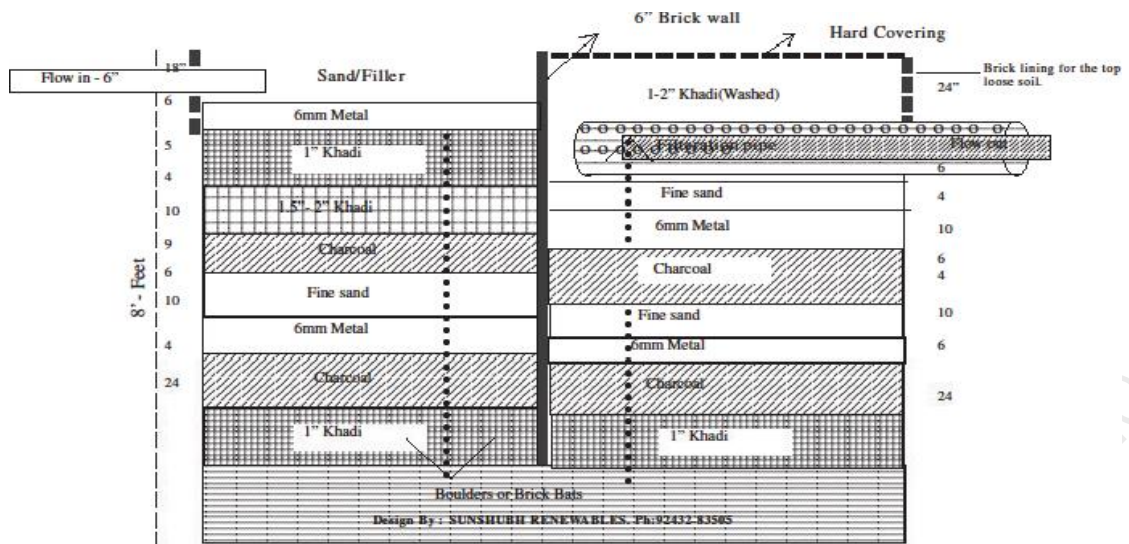
The gradient indicates that the complete campus rainwater can be pooled at a Point near the gotanical gargen and the same can be put to use at a later days.

## RAIN WATERMANAGEMENT:

## Category 7.1.4



From the gradient discussed above, the profile varies from 563Mtrs to 559Mtrs in flow with the marked arrows. For cost effective rainwater management, it is advised to divert the surface rainwater to the area marked #559 Mtrs.



Not to scale.

Layout structure for 8' depth, hard strata.

**GARDEN:**

The college has creatively used the centre space for gardening. Green. The rainwater if used to recharge the subsoil, the perennial plants down the slope would thrive with green cover. The terrace water in the campus, flows along at random, there is a need for planned exit points & channelized to manageable area to avoid flooding at the low-lying areas.



**SURFACE WATER**

**Category 7.1.4**

The water that hits the road may be channelized to the lowest point ( Point

A) along at random, there are no specified exit points provided & hence would flood the low-lying areas.

The fact that Water & Tar (Bitumen) do not go hand in gloves, the road should be made in such a way that the rainwater does not over stay. The road should be such that the water flows off across the road and at no stage the water should be allowed to flow along the road. Although the roads are laid, in future, It is advised to consider the use of perforated pavers as shown in the subsequent discussions. The runoff water can prove to be very resourceful if harvested judiciously.



Illustrative

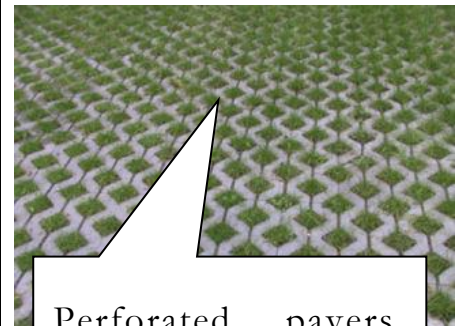
### CONCRETE PAVERS:

It is observed that the part of the open area in the college has been left open. The Rain water will runoff into adjoining areas. Hence, acting against the interest of water conservation measures & depriving the perennial plants around it from natural watering system.

It would be appreciated if the perforated pavers are used in lieu of the present system. This will help in increasing the greenery in addition to managing the Rainwater & preventing possible flooding.


### SOLUTION:

Guide the terrace Rainwater to flow through the pipe. This helps to avoid dampening the walls and prevent defacing the inside part.



Perforated pavers, increase water percolation, prevent flooding and gives decorated flooring too.



<p>It also prevents down flow of rainwater at random.</p>	
<p><u>WATER MANAGEMENT:</u></p>	<p><u>Category 7.1.4</u></p>
<p>Watering the plants in excess or not watering them hampers the healthy growth, it also results into wastage of water &amp; increase manpower.</p> <p><b>SOLUTION:</b></p> <p>Water management is advised as shown in the illustration here, using the waste plastic pet bottles. This will help in surface evaporation loss. For larger plants it is advised to incorporate mulching &amp; using organic waste &amp; cover with newspaper/wastepaper. The significance of newspaper to cover the mulched area draws the attention of the students &amp; the visitors. Thus, creating a platform for education &amp; knowledge sharing.</p>	
<p><b>SOLID WASTE MANAGEMENT</b></p>	<p><b>Category 7.1.3</b></p>

It is highly appreciated & worth noticing the level of awareness of spillage. It was noticed that the college management is focusing to maintain cleanliness & spitting Gutka is banned. To keep the good going, it is important that we facilitate the provision for waste disposal. Hence, it is advised to place waste segregation bins. There is an urgent need for placing waste bins at regular distances. Ideally for every room there should be two bins placed in front of the class room .

One in Yellow/Red and the other in Green in colour.

It is necessary to educate the inmates to use to place degradable waste like food, paper and other vegetable waste in GREEN coloured bin. The plastic and other metal waste, should be placed in red/yellow coloured bin.

This method imparts the sense of segregating waste at source and makes the task of handling waste simple.

It also makes room for revenue generation as the plastic and metal waste can be sold at a later date.

### **SOLUTION:**

A very innovative concept of waste collection system has been introduced by the college nearby @ Ilkal. A little change can be followed i.e., colour the baskets and display its objective.



Illustrative Corrective measures

#### Plastic Bins



#### Metal Bins



#### Local Biodegradable Bins.

The green is to be used for organic waste and paper.

The yellow for Plastic and Metal waste.

The red should be used for chemical, hygienic waste like medicinal packings, pads etc.,

Ease of approach should make the clean & green practices self-sustainable.

By incorporating the segregation of the solid waste at the point of its source will make the task of handling it at the Vermicomposting pit easy and time saving.



### ORGANIC WASTE MANAGEMENT:

The organic waste management system should be built and information on the benefits should be prominently displayed.

It would be highly appreciated if it is on one side and in front of the college. The information displayed would educate the pupil of other institutes as well.



Mulching with Solid waste.

Use of Paper and waste management. The college need to work out a policy for paperless communication and record maintenance. The college within its purview can consider going paperless. To draw home the

The copy can be downloaded using the link <https://www.ijeat.org/wp-content/uploads/papers/v8i4/D6268048419.pdf>

possibilities, We are presenting a technical article in reference to various areas it is made possible.

### HEALTH HAZARD:

The Institution needs to install sanitary pad dispenser. It is important to provide secured feeling to the ladies in the campus.

It is also important that the Sanitary pad incinerator be provided for safe disposal.

Proper usage training is necessary for the inmates of the Hostel and to all the girls.

Illustrative



## DISPOSAL OF USED BATTERIES.

### BATTERY MANAGEMENT:

The batteries disposal is an environment threat. The lead which is a major component has serious adverse effects. The acidic fumes damage the electronic components and when disposed to environment through uncertified local ragpickers either as scrap or buyback option, The institute stands to be morally responsible to such environmental pollution.

Hence the disposal of the batteries should be prolonged. This is possible by putting into use the Battery regenerative system

However, much before the regeneration It is good practice to make room for cross ventilation for the batteries to be placed in cool place.

The benefits include –

In normal operating mode, the batteries are known to last for 5 to 6 years.

With good working practice, they would last for almost three times the life.

Prolonged life of the Batteries.

Avoids acid fumes accumulation on the Batteries.

Increased life of all electronic gadgets around the Battery bank.

Delayed discarding of the Batteries avoids environment pollution and Revenue outflow for the organisation.

WE suggest to regenerate the batteries once every 3 years, so that the sulphur lining is minimized. If the regeneration is executed once every three years, we can regain the working performance to 95 to 98% of its original status.

However, this needs to be backed up with necessary periodical check with the density of the battery solution.

In compliance with

Category 7.1.1, 7.1.2, 7.1.3 and 7.1.5

## BATTERY PLACEMENT:



The batteries breath acid fumes. It is good practice to make room for cross ventilation for the batteries to be placed in cool place.

The benefits include –

Prolonged life of the Batteries.

Avoids acid fumes accumulation on the Batteries.

Increased life of all electronic gadgets around the Battery bank.

Delayed discarding of the Batteries avoids environment pollution and Revenue outflow for the organisation.

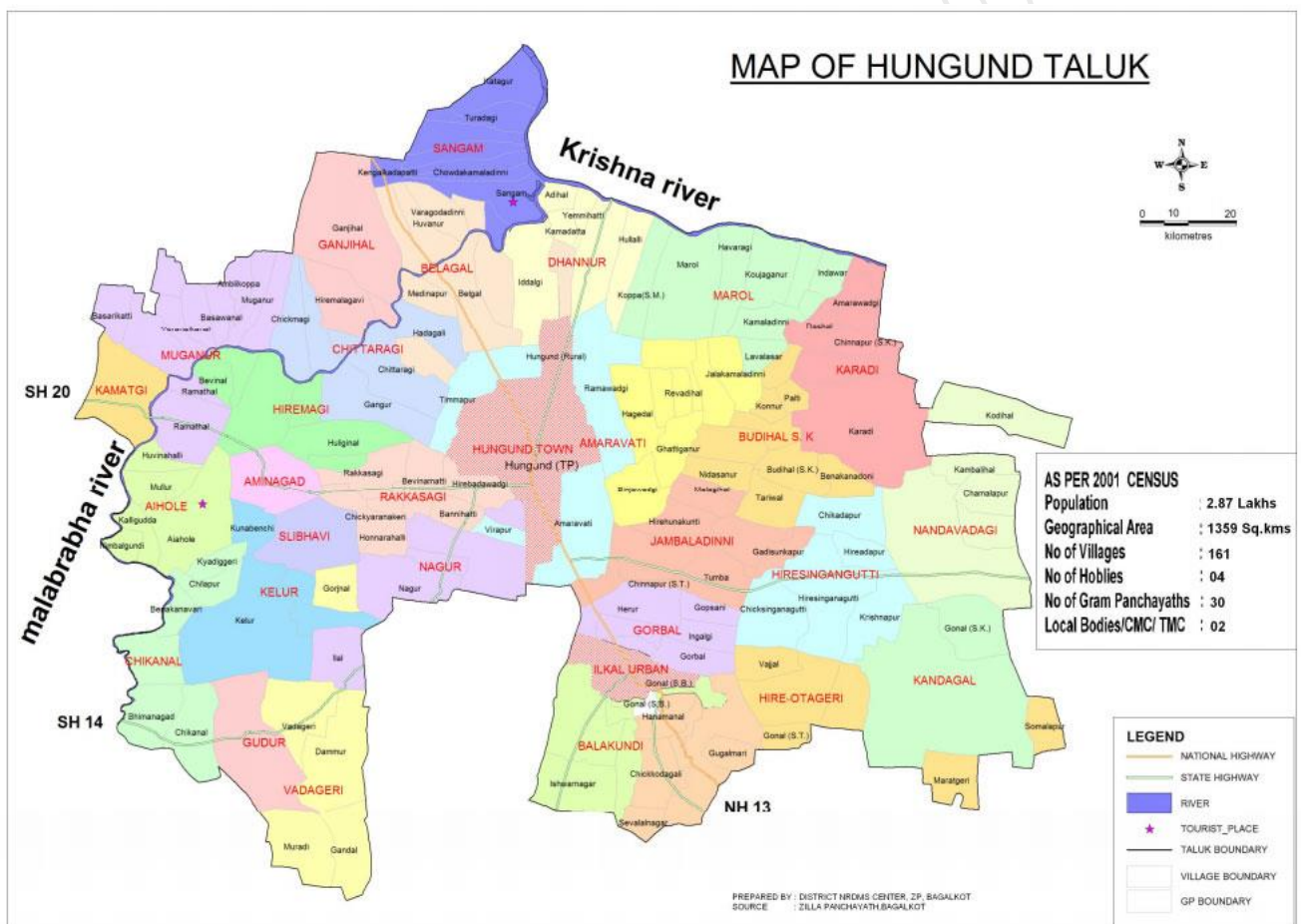
**SOLUTION:** The placement of batteries needs to be at the place very close to cross ventilation, if possible, in open but shaded place. The following clippings are explained.

## FACTORS CONSIDERED.

### GEOGRAPHICAL PARAMETERS

Source : [https://en.wikipedia.org/wiki/Bagalkot\\_district](https://en.wikipedia.org/wiki/Bagalkot_district).

Hungund or Hunagunda is a taluk in the northern district of Bagalkot in Karnataka, India. Major towns in the taluk are Amingad, Hunagunda. Kudalasangama, where the social reformist Basavanna died, is located in the taluk. Hunagunda Taluk also contains Aihole and Pattadkal which were once under the rule of Chalukyas of Badami. Amingad is known for Amingad karadantu, a sweet dish.



Hungund is located at  $16.07^{\circ}\text{N } 76.05^{\circ}\text{E}$ .<sup>[1]</sup> It has an average elevation of 531 metres (1742 feet). The soil found in the area is usually black or red and the soil is very fertile.

### Tourism Places around Hunagund.

Aihole, Pattadakal, Badami, Banashankari, Kudalasangama, Bijapur,

## Demographics

As of the 2001 Indian census, Hunagunda had a population of 18,035. Males constituted 51% of the population and females 49%. Hunagunda had an average literacy rate of 64%, higher than the national average of 59.5%: male literacy was 75%, and female literacy was 53%. In Hunagunda, 13% of the population was under 6 years of age. Kannada is the most widely spoken language in the taluk.

## Education

Hunagunda and Ilkal have some noted educational institutions in the region. Vijaya Mahantesh High School in Hunagunda was established in 1915 as Anglo Vernacular School. Hunagunda also has a Rural Polytechnic college.

## Economy

Agriculture is the largest employer in Hunagunda. The chief crops cultivated are ragi and jowar, as well as groundnut, gram, tuvar daal and moong daal. Ilkal is famous for Ilkal saree and Red Granite.

Ilkal is a City in Bagalkot district in the Indian state of Karnataka. The town is located in a valley that lies in south-east corner of Bagalkot district and is quite close to the borders of Kushtagi taluk of the Koppal district. Now Ilkal city is taluka head quarter. It lies at a distance of about 12 km (7.5 mi) south of Hunagund. Between these two towns, Ilkal is an important centre of trade, commerce, education, and industry.





## **EXHIBIT GREEN HABITS:**

The college administration, should engage its resources in exhibiting Green Habits as discussed.

## **ACTION PLAN SUMMARY:**

Earmark the action plan.

Prioritize the initiatives and execute.

Observe the benefits and shortcomings.

Workout further improvement by involving the staff and students.

## **MODE OF ACTION:**

The process of ENVIRONMENT AUDIT & ENERGY CONSERVATION should be carried out in three steps.

Good housekeeping practices using available manpower.

Minor alterations using in house work culture with minimum investments on accessories as discussed.

Capital investments, which may be required for installation of new methodologies may be taken up on phased manner.

We will be happy to assist you for any further advice/consultancy if required either on Rainwater management or on any of the measures discussed in the report.

We hope the measures are implemented in good spirit and to human convenience and comfort.

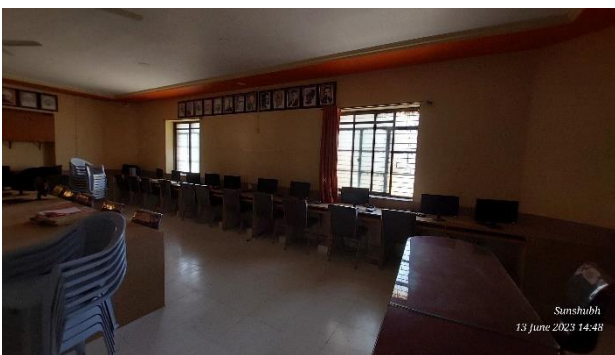
NOTES:

ENVIRONMENT AUDIT REPORT 2022-2023

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# GLOSSARY









ENVIRONMENT

