Criterion VII

7.1.3: Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

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SHIVAJI MAHAVIDYALAYA, RENAPUR
DIST. LATUR

IQAC -Internal Quality Assurance Cell

Part A) File summary

Name of the Metrics : 7.1.3 – Quality Audits on Environment & Energy regularity.

Name of the Criterion Head : Dr. S.M. Londhe

Contents of the File :

Sr. No.	File Description	Page No.
1.	Green Audit / Environment Audit	3 - 23
2.	Energy Audit	24 - 33
3.	Clean & Green campus initiatives.	34 - 41

Part B) IQAC Verification Report

- **Authentic Data with tagging Completed** ✓Yes/No
- **Enclosed Supporting Documents** ✓Yes/No
- **This file is satisfactorily completed** ✓Yes/No

Co-Ordinator
IQAC, Shivaji Mahavidyalaya,
Renapur Dist.Latur

Shivaji Mahavidyalaya Renapur Dist. Latur

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1. Green audit / Environment audit

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J.S.P.M. LATUR (INDIA)

Shivaji Mahavidyalaya, Renapur Dist.Latur

Campus Environmental Audit

(2017-2022)

Audited by

Environmental Conservation Committee

Table of Contents

Indicators:

"Small deeds done are better than great deeds planned"

Environmental Audit

Green Audit is an assessment of a institute in terms of its impact on the Environment.

Introduction

J.S.P.M.Latur India Shivaji Mahavidyalaya,Renapur is established in 1993.The Collegepremises occupy near about three acres of area. From the beginning the college has maintained the ecofriendly environment and awareness among the students about environment and its conservation because traditionally our understandings of the environment was holistic. A Shloka from the *UPANISHAD* goes, ***"The whole universe together with its creatures belongs to the Lord (Nature) one can enjoy the bounties of nature by giving up allgreed.It means no creature is superior to any other and human beings should not have absolute power over nature."*** Traditionally cultures have always lived in harmony with their natural environments.The nature and humankind (*Prakriti and Purusha*) form inseperable parts of the life support system.This system has five elements i.e. *Air, Water, Land, Flora and Fauna*, which are interconnected interrelated and interdependent.

Colleges and Universities have wide-rangingimpact on the world in the region of them, bothnegative and positive. Colleges are also in a unique position as educational institutions to be leaders in pursuing environmentally sustainable solutions.Shivaji Mahavidyalaya expresses its promises to sustainability in many ways. It hastaken a number of positive steps to reduce its adverse environmental impact. But many areasremain in which substantial improvements can be made. This report serves tohighlight the environmental impact.College havemany activities and to make recommendations forimproving the College's environmental sustainability.The formationof this report was prepared byEnvironmental Conservation Committee from the same institute.Perhaps Environmental Audit in this field is first kind of experience in this region.

An attempt has been made to assess the internal environmental audit of the college campus under the able guidance of Hon.Principal Dr.R.S.Awasthi. Environmental

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Conservation Committee is established in June 2013 and working for the awareness and conservation of environment0f college campus.

THE ENVIRONMENTAL CONSERVATION COMMITTEE:

1.Dr.Awasthi R.S.	Chairman
2. Dr.Hange A.K.	Co-ordinator
3.Dr.Yadav S.G.	Joint Co-ordinator
4. Dr.Phadke S.V.	Member
5. Dr.Kambale U.P.	Member
6. Mr.Sabale C.G.	Member

The college undertakes various activities through NSS like campus beautification, campuscleanness, water, energy, and natural resources conservation and management.To create ecofriendly awareness among the students college arranges special programmes by inviting the eminent personalities, who in turn train and educate the students. Students are to be encouraged to participate in ecofriendly activities.

AIMS AND OBJECTIVES:

1. To study and maintain green diversity in premises.
2. To study and maintain faunal diversity.
3. To create the awareness about environment and its conservation.
4. Utilization and conservation of natural resources.
5. To keep the premises evergreen clean and pollution free.

08 POINTSPROGRAMME GIVEN BY COMMITTEE:

1. Green building for quality living.
2. Know green and think green.
3. Water conservation and preventation of water wastage.
4. Use of CFL bulbs instead of florescent bulbs.
5. Promoted among the students, "NO USE OF PLASTIC"
6. Turning off monitors after work.

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3

7.Co_2 neutrality is maintained in campus by developing greenery.

8. Reduce-Reuse-Recycle methods are to be followed.

Green Audit is focused on the basis of fiveindicators, covering an extremely wide range of environmentalimpacts. For each indicator, we establish a benchmark to evaluate the College overallperformance.We then examine theperformance of the College on each of these indicators, and offer recommendationsabout how the College can reduce its environmental impact within each indicator.We hope that this report will provide an accurate snapshot of Shivaji Mahavidyalaya. EnvironmentalImpact at this point in time and that it will aid the College inprioritizing positive steps it can take to improve overall sustainability. We intend thisdocument to be revisited periodically and updated,many of people helped us in our efforts to gather the informationpresented in this report.

1)Indicator:Energy Utilization

Goal: Efficient Energy use

Benchmark: Total consumption of energy for College office, Laboratories, Library, and Play ground etc.

Performance:

- The college has employed several measures to save energyincluding;
- The use of electricity CFL lamps in the college office, class rooms and laboratories
- Computers and instruments when not in use are switched off.
- Electricity wastage is controlled through bythe lights and fans can beswitched off timelyon each wing and floor.
- By using stickers of switch off power.

These initiatives had helped to reduce the overall energyconsumption in campus.

Staff and students were motivated towards energy conservation.

Generator is also used as alternative source in emergency only.

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Details of Electrical particulars working in the campus:

Sr.No.	Name of Particulars	Year-2015-16	2021-22
01	Total No. of Electrical fans	40	83
02	Total No. of Tubes	40	119
03	Refrigerator	02	02
04	Total No. of CFL lamps	40	51
05	Total No. of Sockets/switch	50	101
06	Water motor	02	02
07	Water Cooler	01	01
08	No. of Computer	24	47
09	Printers	07	12
10	Xerox Machine	02	02
11	Scanner	04	04
12	Solar lamps	10	15
13	C.C.T.C.	25	45
14	Projector	01	01

By using eco-friendly techniques committee is properly working to reduced electricity bill.

Recommendations:

The College should improve its monitoring cell to save the energy. Every staff member should take care of itto minimize the use of energy by any means and also continuous alert to student about saving the energy.

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5

02) Indicator: Use of Renewable Energy

Goal: Encourage purchasing and/or production of renewable energy.

Benchmark:

- A percentage of energy purchased and/or produced from renewable sources i.e. solar power.
- Future plans for setting and attaining a higher percentage.

Performance:

Adoption of solar energy under renewable energy was the best course of action in the existing circumstances. Solar technologies are broadly characterized as passive or active solar technologies depending on the way these equipments capture, convert and distribute solar energy. Active solar techniques include the use of photovoltaic panels and solar thermal collectors to harness the energy. Passive solar techniques include orienting a building to the Sun, selecting materials with favorable thermal mass or light dispersing properties, and designing spaces that naturally circulate air. The identification of renewable, sustainable and affordable energy sources has led to the installation of 'Solar Park' with 30 percent subsidy from the Government. Solar energy is one of the sources for lights, fans, heaters used in the college.

Minimal consumption of energy is the saving factor of energy conservation in the campus. College has planned to use Non conventional sources of energy in the campus to save the use of conventional sources of energy i.e. reduction in electricity. It also gives the imperative message of how the non conventional sources of energy are useful to the society by using Solar Power Lamps in the campus. Institute has installed 10 solar power lamp college premises which help to reduce electricity bills. We are planning to use solar energy in the college campus.The stickersare placed for preventing wastage of energy.

Recommendations:

- Use of renewable energy for total campus.
- Solar motor pump must be used for garden irrigation
- Avoid wastage of energy.

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6

03) Indicator:Rain Water Harvesting(R.H.W.)

Goal: Encourage efficient water usage.

Benchmark:

- Water use does not exceed **02 to 05**liter per day/ person in campus.
- The campus facilities department provides information to campususers about water use in ways that raise awareness and facilitateaction.

Performance:

The most important part of the rain water harvesting is the storage system. The storage system is designed according to the amount of water that is to be stored. The design and site (location) of the storage or the recharge system should be properly chosen. The areas which receive the rainfall frequently, there a simple storage system could be constructed, to meet the daily water requirements. Otherwise the areas which receive the lesser rainfall, there the storage systems are quite essential.

Rainwater harvesting first of all increases water security. It is the perfect solution to meet water requirements especially in the areas which do not have sufficient water resources. It helps in improving the quality of the ground water and increasing the level of the ground water. It reduces the loss of top layer of the soil. If we capture the water directly, we need not to depend much on the water storage dams. It is the good solution to the increasing water crises.The use of water in campus is within the 02 to05liter per day/ person.

The institution has enacted the projects of roof water harvesting. The project of roof water harvesting is in operation. Rain water which precipitates on roof of college building and from the roof of Indoor Stadium is collected and filtered through pipes and released in Tube well. Roof water harvesting is observed beneficial to conserve the wastage of water and it also recharge bore water (ground water level) this practice is unique and it is model for the society. College will get advantage of this practice in future.

Through this rain water harvesting project generally our college iscollecting sufficient amount of rain water annually during summer period also.

Recommendations:

- Rainwater harvesting should be done on each building.
- To provide information and feedback on water use forcampus users.

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7

4.**Indicator:Plantation:**

Goal: Ensure the quality of the indoor environment, to promote preservation and restoration of natural areas, to educate students about the process and the importance of these activities.

Benchmark:

- Select plants with low maintenance requirements and that otherwise fit the local ecosystem.
- Policies ensure that development minimizes the use of impermeable surfaces such as parking spaces and landscaping in order to reduce impacts on storm water quantity and quality.

Performance:

Tree plantation means planting trees and plants. The purpose of tree plantation is save the environment and to beautify our campus and life. Trees are valuable gifts of nature. They are known as the best friends of human beings. They benefit us in various ways. The lives of men and other animals and insects are inconceivable without the existence of trees in the world.

Trees absorb carbon dioxide and give us oxygen without which no living being can live. Trees give us shade, medicine, food, fruits, furniture, fuel etc. Trees also keep the weather cool and cause rainfall. They also bind soil and thus prevent erosion. Trees are part and parcel of our life. So, it is our duty to plant more trees and takes care of them in order to maintain balance between man and nature. To make the country economically developed and to save the globe from green house effect, we should plant trees on a large scale.

A campus is beautifully designed with Botanicalgardening at the main building of the college in 2013.Some medicinal plants, herbs, shrubs and many tree plants are also cultivated in the campus. The campus flora is divided into three parts i.e. botanical garden, lawnand plants in premises. The botanical garden was designed by planting of nearabout 100 plants in college premises in August 2013, but in 2014 half part of the botanical garden was undertaken for the construction of new college

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building.so many plants were cutdown for building construction. Today in botanical garden only 50 plant specimens were there.

In college premises there are about 22 coconut plants,40 palm trees, 15 bamboo trees, 16 caesalpinia, 12 karangi, 16 goldmohar, 10 neem trees, 07 awala trees, 06 sagwan plants, o4 badam plants, 33ixora plants, etc Presently in college campus more than 310 plants including grasses, herbs, shrubs, andtrees. All these plants were provided by drip water system to maintain greenery and wastage of water.Time to time essential dose of fertilizers were also given to plants.

LIST OF PLANTS IN COLLEGE PREMISES:

1. Botanical garden/Lawn

Sr.No	Botanical Name	Vernacular Name	Quantity in 2017-22	Quantity in 2020-22
1	*Hibiscus rosasinensus*	Jaswand	02	02
2	*Rosa indica*	Gulab	02	03
3	*Neriumindicaum*	kanheri	02	02
4	*Jasmine sambac*	Mogra	01	02
5	*Nymphaeanochli*	Kundbarmasi	01	01
6	*Ixoraasitica*	Ixora	16	22
7	*Alamandacathertica*	almanda	01	01
8	*Calindron sp.*	Calindra	01	01
9	*Dalbargialanceolaria*	Tekoma	01	01
10	*Polianthes tuberose*	Nishigandha	01	02
11	*Crossandraintumidibuliformis*	Aboli	01	01
12	*Cellistemonoleosa*	Bottle brush	02	02
13	*Mimusopselengi*	Bakul	01	01
14	*Acalypha sp.*	Acalypha	01	02
15	*Cestrum nocturnum*	Raatrani	01	01
16	*Nychanthus sp.*	Parijaat	02	01
17	*Combretumindicum*	Madhumalati	01	01
18	*Ravenallamadgascarensis*	Traveler palm	10	16
18	*Ervatamiadivariculata*	Anant	01	01
19	*Kewdaparkutiya*	Anarkali	01	01
20	*Catharanthus sp.*	Kunti	01	01
21	*Punicagranatum*	Dalimb	---	01

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2. Campus Flora

Sr.No	Botanical Name	(Vernacular Name)	Quantity in 2016-2017	Quantity in 2021-22
1	*Coccusnucifera*	Coconut	**40**	**22**
2	*Azadirachtaindica*	Kadulimb	07	10
3	*Thujaorientalis*	Morpankhi	05	07
4	*Plumariaacuminata*	Pandharachafa	02	02
5	*Pothassp*	Potha	01	01
6	*Aralia sp*	Aralia kada	01	01
7	*Alstoniaecolica*	Saptaparni	04	05
8	*Derris indica*	Karanji	**15**	**12**
9	*Clitoriaturnata*	Gokarna	01	01
10	*Neriumindicum*	Kaneher	02	03
11	*Tectonagrandis*	Sagwan	04	06
12	*Bamboosa veronica*	Bambu	**20**	**15**
13	*Phoenix palm*	Palm	**50**	**40**
14	*Delonixregia*	Gulmohor	10	16
15	*Thevetiaperuviana*	PivaliKanher	01	02
16	*Caesalpiniapulcherima*	Sankasur	20	16
17	*Emblicaofficinalis*	Awla	05	07
18	*Ixoraasitica*	Ixora	27	33
19	*Ficusreligosa*	Rubber	01	01
20	*Hibiscus rosasinensus*	Jaswand	04	04
21	*Rosa indica*	Gulab	10	12
22	*Ficusreligiosa*	Peeple	--	02

(NOTE: Reduction in number of plants due to constrution of new building

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10

05) Indicator: Efforts for Carbon neutrality

Goal: To reduce carbon emission

Benchmark:

- There should be more efforts taken collectively

Performance:

The campus has three acres of land with a green environment. The building in the campus is surrounded by trees like, *Caesalpinia, Coconut, Karanj, Awala, Neem, Palms, Calotropis, Rubber,Ixora* plants decorates the beauty of campus and Greenery . The campus is pollution free and it is felt that carbon neutrality in the campus.

Conclusions

College performs fairly well on sustainability issues. The college does consider the environmental impacts of most of its actions and makes intensive effort to act in an Eco-friendly.

The recommendations in this report highlight many ways in which the college can work to improve its actions and become a more sustainable institution.

Dr.A.K.Hange
Co-Ordinator,
Environmental Conservation Committee.

Principal
Shivaji Mahavidyalaya
Renapur Dist. Latur

Shivaji Mahavidyalaya
Renapur
Dist Latur

11

THE ENVIRONMENTAL CONSERVATION COMMITTEE:

1. Dr.Awasthi R.S. Chairman

Principal
Shivaji Mahavidyalaya
Renapur Dist. Latur

2. Dr.Hange A.K. Co-ordinator

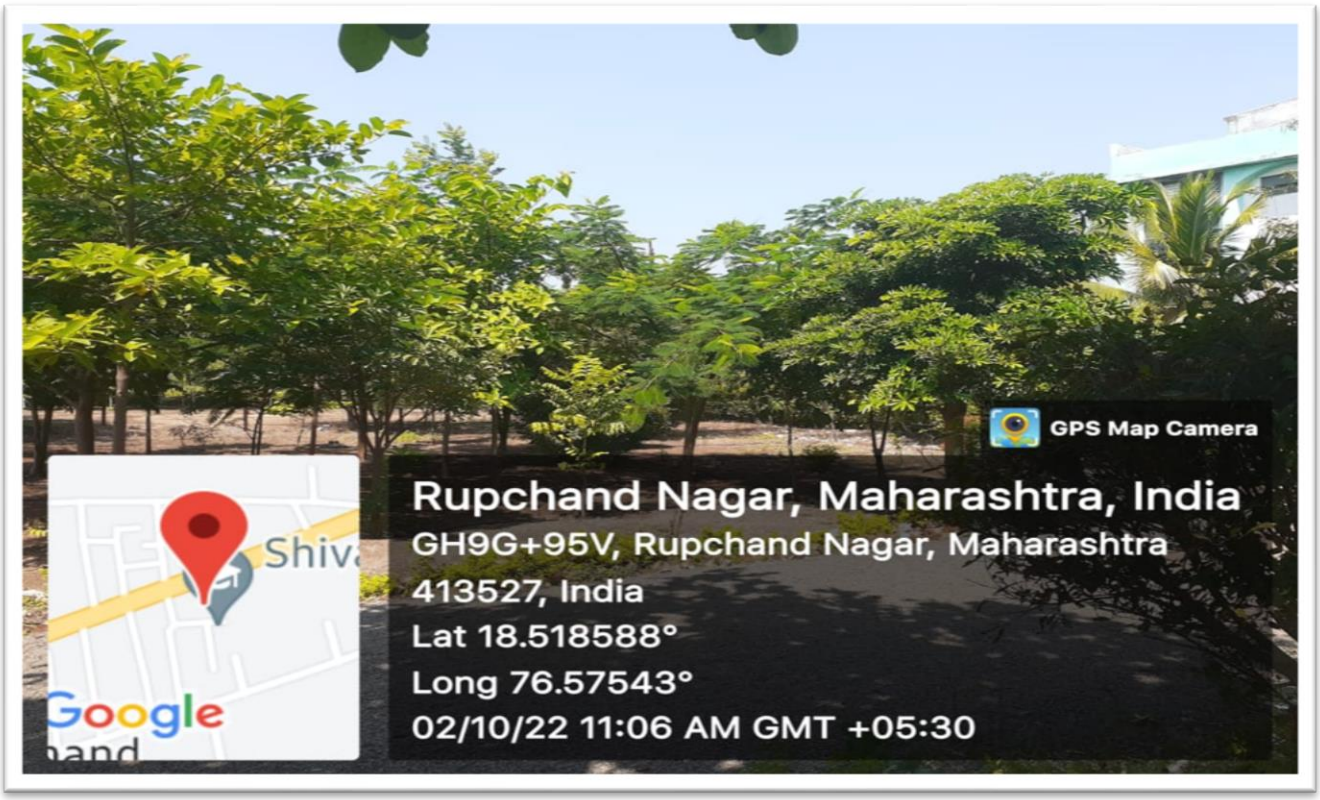
3. Dr.Yadav S.G. Joint Co-ordinator

4. Dr.Phadke S.V. Member

5. Dr.Kambale U.P. Member

6. Mr.Sabale C.G. Member

12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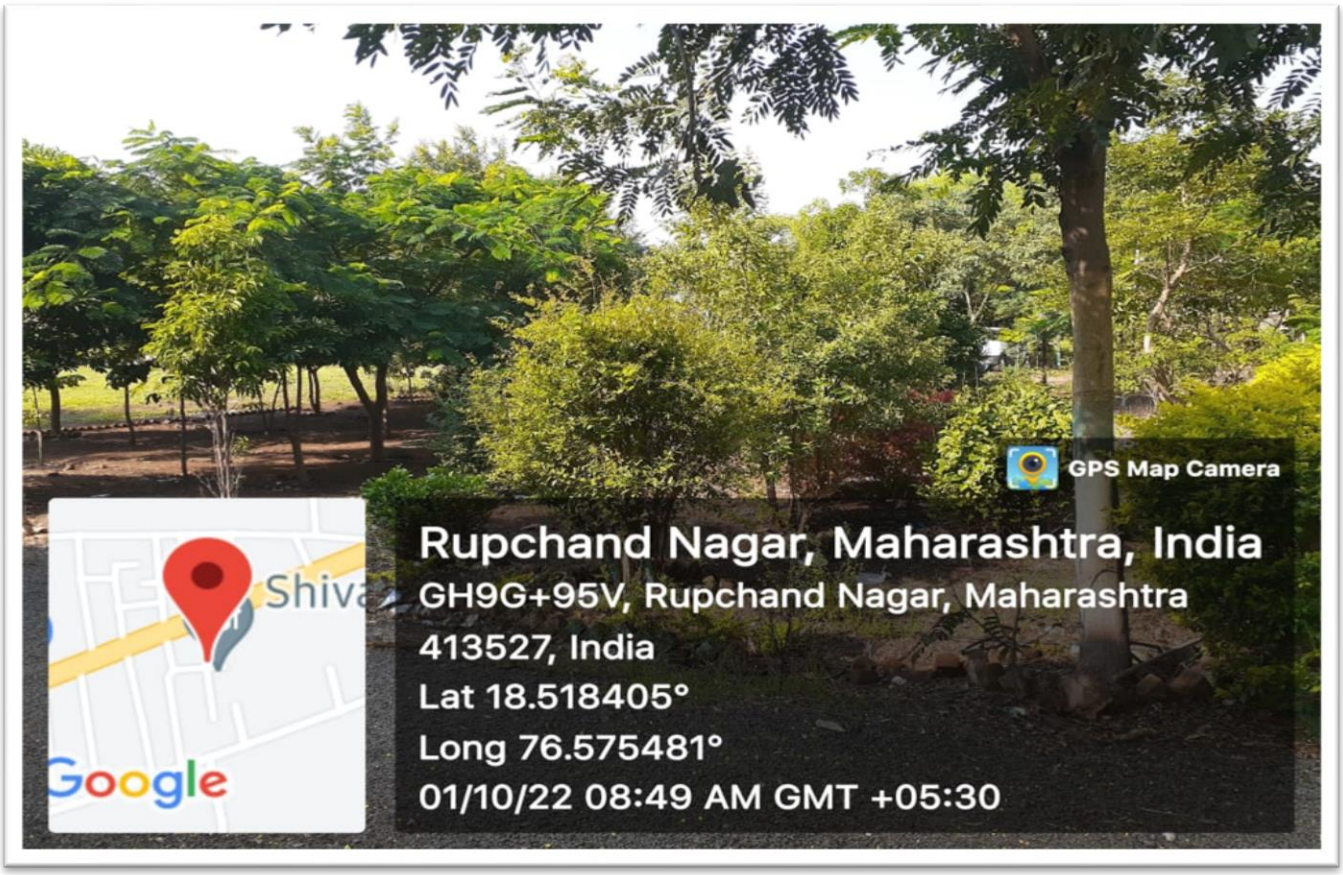
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Biodiversity in College Campus

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Shivaji College, Renapur

Dept. of Zoology

Policy about conservation & Biodiversity (fauna)

Biodiversity conservation today is the most important key aspect around us. Flora and fauna are the main source of food chain in the ecosystem. It is the moral duty of every one to conserve and protect the biodiversity around us.

Shivaji College, Renapur is having a spacious campus with full of greenery the flora is bio diversified and support the life of fauna like arthropods, reptiles, birds and mammals.

The conservation of biodiversity is mentioned and also a part in curriculum in the subject zoology. The stakeholders including students are well acquainted with the concept of preservation, conservation of endangered species in the campus. The college campus is sheltering and supporting many species of birds for their resting and life cycle birds play dispersion of seeds of important and also their trees. There is colony of garden bee and also there are beautiful butterfly both are involved in pollination. This indicates the diversity of flora and fauna in the campus. Snakes are important in food chain as they keep direct control on other small animals and mammals like Rat, Mice as they cause loss to farmers. In college campus and around few non-venomous snakes are seen like Rat snake (Dhaman), Trinket, Tuskar etc. The poisonous snakes reported seen are Cobra (Naga naja) and Russel's Viper (Ghonus or Parad). These reptiles' feeds on eggs of birds, frogs, Rat, Calotes as these are living in the campus. The students, teachers are well aware about the poisonous and non-poisonous species of snakes.

They does not harm or kill them .Such reptiles if found are then rescued safely in the nearby dense forest with the help of snake friends There are many endangered and beautiful species of birds are found in college campus like bulbul Myna sun bird, blue Jay, Bhardwaj and pigeons ,parrots

Phadke

(Dr. Phadke S.V.)

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The table is given below for the campus fauna occured...

Fauna. Quantity in numbers

Sr. No.	Scientific Name	Local Name	Quantity in 2017-18	Quantity in 2018-19
1.	*Carvus Spiend*	Crow	15 – 20	10 – 15
2.	*Posser Domesticusens*	Sparrow	30 – 40	20 – 30
3.	*Discurus Macrocerus*	Kotwal	5 – 7	4 – 5
4.	*Eudynamys scolopaceus*	Kokila	3 – 7	2 – 3
5.	*Columba livia*	Piegen	20 – 25	10 – 15
6.	*Psittacula euparia*	Parrot	15 – 20	5 – 7
7.	*Stumus pagodarum*	Myna	30 – 35	15 – 20
8.	*Upupa epops*	Huppa	2 – 3	1 – 2
9.	*Bubulcus ibis*	Cattle egret	10 – 15	9 – 10
10.	*Pyconotus cafer*	Bulbul	5 – 10	4 – 8
11.	*Merops orientalis*	Bee eater	5 – 10	4 – 7
12.	*Caracias benghalensis*	Nilkanth	3 – 5	2 – 3
13.	*Vanalleus lopwing*	Titvi	5 – 7	4 – 6
14.	*Centropus sinsensis*	Bharadwaj	5 – 7	3 – 4
15.	*Nectarinia zeylonica*	Sunbird	2 – 6	2 – 3
16.	*Dove*	Parva	15 – 20	10 – 12
17.	*Rianus carculens*	Kite	2 – 4	1 – 2
18.	*Bubo bubo*	Owl	2 – 3	1 – 2
19.	*Funambulus*	Squirrels	15 – 20	10 – 12
20.	*Felis domesticus*	Cat	3 – 5	2 – 3
21.	*Cannis familiaris*	Dog	10 – 12	7 – 10
22.	*Caloctes versicular*	Girgit	10 – 15	9 – 10
23.	*Gecko*	Wall lizard	10 – 12	9 – 10
24.	*Honey-comb*	Mohal	0 – 2	0 – 2

(Dr. Kamble U.P.)

(Dr. Phadke S.V.)

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Phadke
(Dr. Phadke S.V.)

Principal
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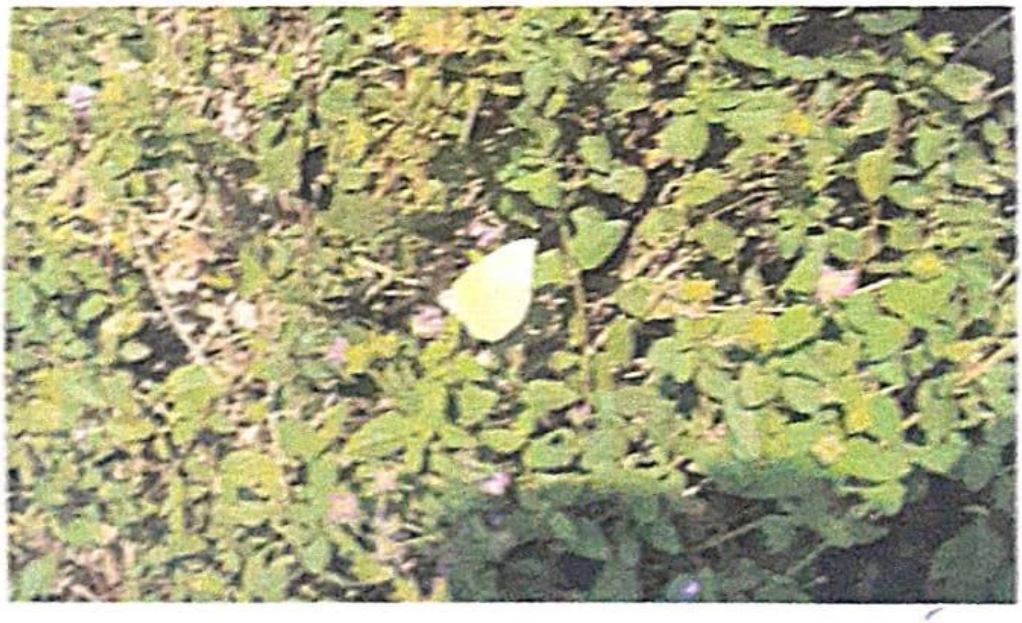

Phadke

(Dr. Phadke G.V.)

Principal
Shivaji Maha-Vidyalaya
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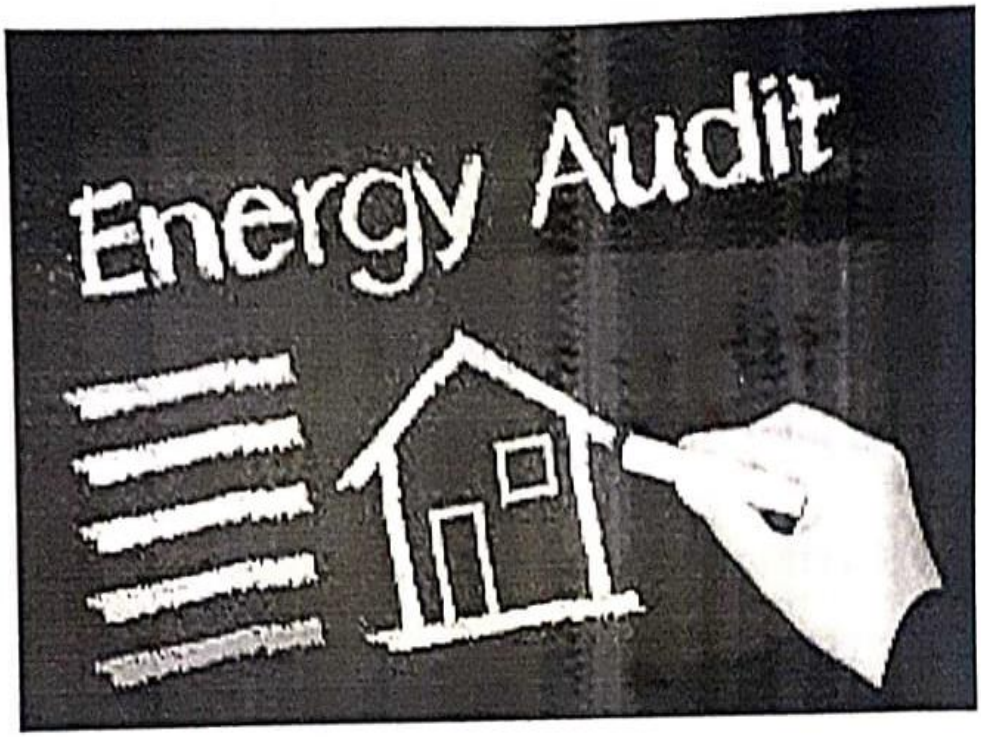
2. Energy Audit

Shivaji Mahavidyalaya, Renapur



Campus Energy Audit

Audited by

Energy Committee

JSPM

Shivaji Mahavidyalaya, Renapur

Energy Auditing Committee

Sr. No.	Name	Designation
1.	Dr. Kulal P. M.	Coordinator
2.	Mr. Raut D. K.	Member
3.	Mr. Kambale K. P.	Member

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Executive Summery

Energy today has become a key factor in deciding the product cost at micro level as well as in dictating the inflation and the debt burden at the macro level. Energy cost is a significant factor in economic activity at par with factors of production like capital, land and labor. The imperatives of an energy shortage situation calls for energy conservation measure, which essentially mean using less energy for the same level of activity. Energy Audit attempts to balance the total_energy_inputs with its use and serves to identify all the energy streams in the systems and quantifies energy usage's according to its discrete function. Energy Audit helps in energy cost optimization, pollution control, safety aspects and suggests the methods to improve the operating & maintenance practices of the system. It is instrumental in coping with the situation of variation in energy cost availability, reliability of energy supply, decision on appropriate energy mix, decision on using improved energy conservation equipment's Instrumentation and technology.

Energy Audit is the key to a systematic approach for decision-making in the area of energy management. It attempts to balance the total energy inputs with its use, and serves to identify all the energy streams in a facility. It quantifies energy usage according to its discrete functions.

The _EnergyAudit would give a positive orientation to the energy cost reduction, preventive maintenance and quality control programmes which are vital for production and utility activities. Such an audit programme will help to keep focus on variations which occur in the energy costs, availability and reliability of supply of energy, decide on appropriate energy_mix, identify energy conservation technologies, retrofit for energy conservation equipment etc. The primary objective of Energy Audit is to determine ways to reduce energy consumption per unit of product output or to lower operating costs. Te present report shows the energy audit of Shivaji Mahavidyalaya, Renapur campus in terms of audit phase.

1. Introduction

In broad sense, Energy Efficiency means economizing on the use of energy without adversely affecting economic growth and development. It includes improving the efficiency of energy extraction, Transmission and Distribution and increasing the productivity of energy use.

Designated consumers

Central Govt. specify the following criteria for energy Intensive Industries and other establishments. (As per EC Act 2001, Section 14(e)), for Industries Electrical connected load - 5000 KW and above Designated Consumers to get energy audit.

Bureau of Energy Efficiency (BEE)

The Bureau of Energy Efficiency is an agency of the Government of India, under the Ministry of Power created in March 2002 under the provisions of the nation's 2001 Energy Conservation Act. The agency's function is to develop programs which will increase the conservation and efficient use of energy in India .

2. Energy Audit

As per the Energy Conservation Act, 2001, Energy Audit is defined as "the verification, monitoring and analysis of use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption".

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There are three phase of Energy Audit

1. Pre audit phase
2. Audit phase
3. Post audit phase

Above phases include following stages

1. Data Collection –

In preliminary data collection phase, exhaustive data collection was performed using different tools such as observation, survey communicating with responsible persons and measurements.

Following steps were taken for data collection:

- The team went to each Department, Office, Library, Laboratory, etc.
- Data about the general information was collected by observation and interview.
- The power consumption of appliances was recorded by taking an average value in some cases.

2. Data Analysis -

Detailed analysis of data collected include: calculation of energy consumption, analysis of latest electricity bill of the campus, understanding the tariff plan provided by the Maharashtra Power Corporation Limited. Data related to water usages were also analysed using appropriate methodology.

3. Recommendation -

On the basis of results of data analysis and observations, some steps for reducing power and water consumption were recommended. Proper treatments for waste were also suggested. Use of fossil fuels has to be reduced for the sake of community health. The above target areas particular to the college was evaluated through questionnaire circulated among the students for data collection. Five categories of questionnaires were distributed. The formats of these are given below.

2.1 Audit Phase

In Shivaji MAhavidyalaya, Renapur energy auditing was done with the help of team teaching staff. The energy audit began with the teams walking through all the different facilities at the college, determining the different types of appliances and utilities (lights, taps, toilets, fridges, etc.) as well as measuring the usage per item (Watts indicated on the appliance) and identifying the relevant consumption patterns (such as how often an appliance is used) and their impacts. The staff and learners were interviewed to get details of usage, frequency or general characteristics of certain appliances.

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2.2.1Data collection

Data collection was done in the sectors such as sources of Energy and energy consumption pattern. College records and documents were verified several times to clarify the data received through survey and discussions. Although whole process was completed within one month

2.2.2 Site Tour

Site inspection was done along with students and staff. Questionnaires were answered during the site tour and relevant documents were collected.

2.2.3 Review of Documents and Records

Documents such as electricity bills, registers of electricity, fuel consumption were collected and reviewed.

2.2.4 Site inspection

College and its premises were visited and analyzed by the audit-teams several times to gather information. Campus trees were counted and identified. Botanical garden, play grounds, Indoor Stadium, canteen, library, office rooms and parking grounds were also visited to collect data.
Number and type of vehicles used by the stakeholders were counted and fuel consumption for each vehicle was verified with the user. Number of LPG cylinders used in labs, and canteen were also counted. Leakage of a few water taps were noticed during the site inspection

2.2.5 Energy Sources and Consumption Areas in Shivaji Mahavidyalaya, Renapur

There are 2 College Buildings, 1 library block, 1 Indoor Stadium, 2 college canteens 1 Reading Room. Analysis implies Main College Building is relatively more power consuming unit of the campus. Small consumption of auditorium is due to its small size, less usage and no ACs.

2.2.2.1 Energy Sources

Transformer of capacity 800 KVA (step down), has been installed outside the campus for distribution of power to College. In case of power cut we supply power to fulfill demands with help of generator which runs on diesel as fuel.

Generator - 500 KVA

Power efficiency of generator is 80%

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4

2.2.2.2 Energy consumption

Energy consumption is shown in table 1.

Table 1: Energy consumption year 2020-21

Bill Month	Consumption (Units)	Generation by Solar (Units)	Bill amount
Aug 2022	741	570	6,110.00
Jul 2022	935	346	4,470.00
Jun 2022	806	511	2,570.00
May 2022	789	573	100.00
Apr 2022	793	599	-1,620.00
Mar 2022	773	773	100.00
Feb 2022	584	890	-270.00
Jan 2022	632	951	-640.00
Dec 2021	776	61	-970.00
Nov 2021	526	14	-5,770.00
Oct 2021	454	24	-9,310.00
Sep 2021	434	23	-12,340.00
Total in 1 Year	**8243**	**5335**	
Average per month	**686**	**444**	

2.2.6 Key Findings and Observations of Energy Usages

The base of energy audit is that its findings are supported by documents and verifiable information. The audit process seeks, on a sampled basis, to track past actions, activities, events, and procedures to ensure that they are carried out according to systems requirements and in the correct manner. Energy audits form a part of a process. Although they are individual events, the real value of energy audits is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time.

Although audits are carried out using policies, procedures, documented systems and objectives as a test, there is always an element of subjectivity in an audit. The essence of any energy audit is to find out how well energy management equipment is performing. Each of the three components are crucial in ensuring that the organization's energy performance meets the goals set in its energy policy.

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5

- Electricity Charges average Rs. 3000/ per moth
- Number of Generators = 01
- Cost of generator = 500/ month
- Total no. of CFL bulbs = 51
- Total No. of LED tube lights =119
- LED focus lamp = 04
- No. of fans = 83
- Total Equipments in Lab = 56
- No. of computers = 47
- Water motor = 02
- Water cooler = 01
- No. of printers = 12
- Scanner = 04
- Solar Lamp in campus = 15
- C. C.T. V = 45
- Projector = 01
- Xerox Machine = 02
- No. of Refrigerators = 02
- Solar Panel = 01 (10KW)
- Street & Campus Solar Panel (Pole)= 32

2.2.7 Already Existing Power Saving Measures

We already have Solar Panel installed on top of Main Building

Turn off electrical equipment's when not in use.
False ceilings in class rooms for maintaining optimum room temperature.

Resistance regulators being replaced with lectronic regulators.

Master switches installed outside rooms in hostels only.

CFLs are being replaced by more efficient LEDs

Use computers and electronic equipment's in power saving mode

2.2.8 Recommendations for Better Energy Efficiency

Based on the analysis of the power consumption data, certain steps have been recommended for improving energy efficiency of the campus. Complete cost analysis of implementation of recommended measures has been performed wherever necessary. Also, a number of general measures for energy efficiency have been listed.

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Use of Master Switch outside each room.
Use of motion sensors in Toilets.

Photos

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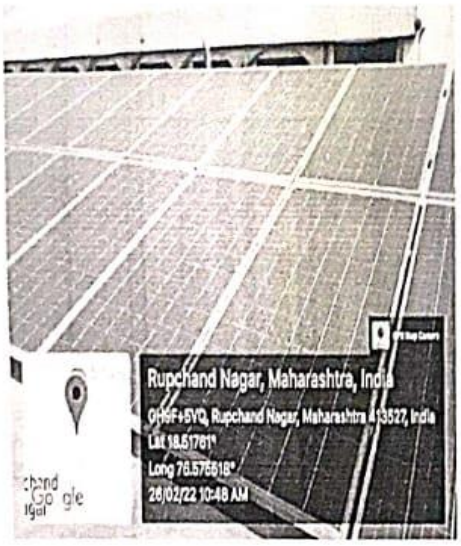
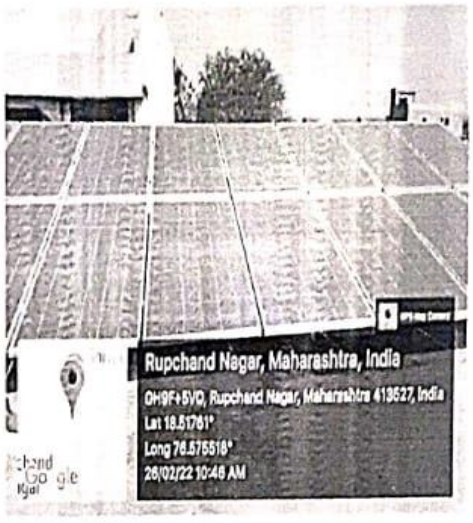
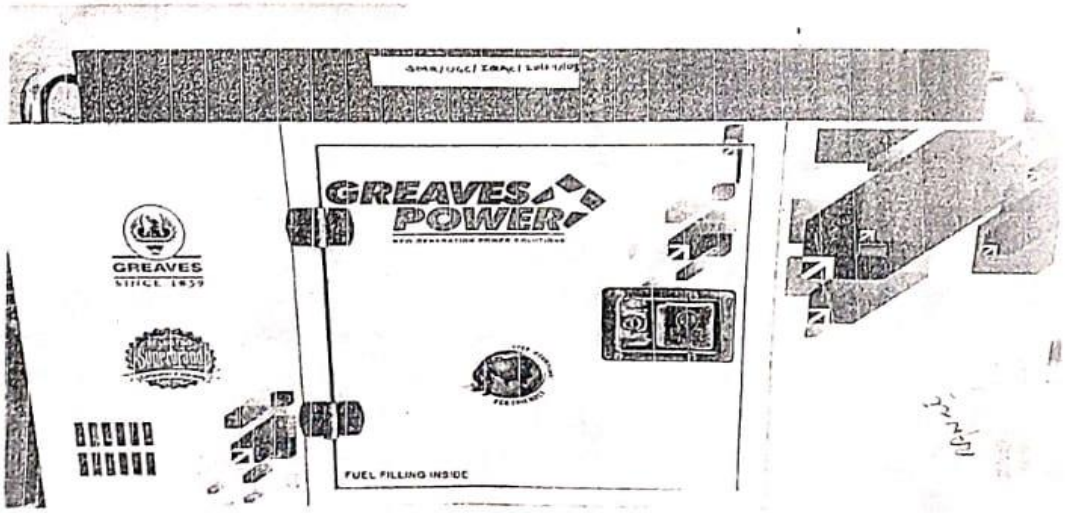
7





Solar Panel In College campus



Generator In Campus

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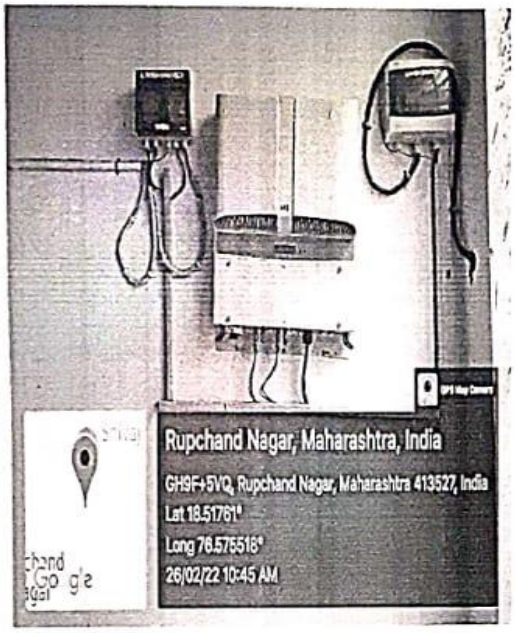

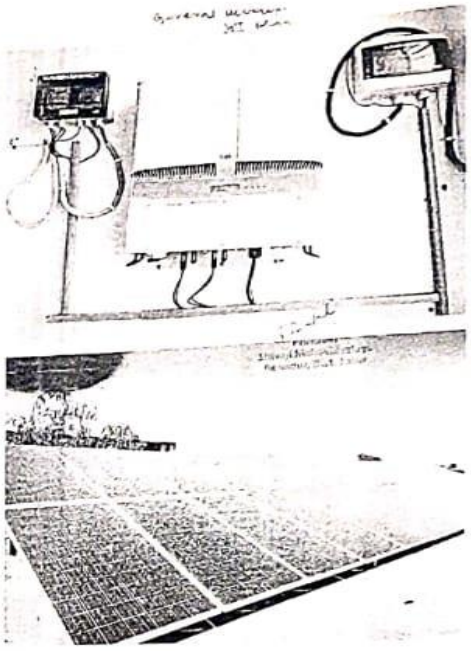

Solar Energy Transformer

Dr. P. M. Kulal
Coordinator
Energy Committee

Mr. Raut D. K.
Member
Energy Committee

Principal
Principal
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9

3. Clean and green campus initiatives

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04/03/2020

जा.नं./नपरे/स्वच्छता/19

प्रमाणपत्र

प्रमाणित करण्यात येते, की जयक्रांती शिक्षण प्रसारक मंडळ, लातूर द्वारा संचालित शिवाजी महाविद्यालय, रेणापूर जि. लातूर ही एक मान्यताप्राप्त शिक्षण संस्था असून, सदरील महाविद्यालयाचा परिसर स्वच्छ आहे. तेथे घनकचरा व्यवस्थापन स्वच्छ भारत अभियानाच्या निकषानुसार होत आहे. नगर पंचायत, रेणापूरच्या आवाहनानुसार तेथे वेगळा केलेला ओला आणि सुका कचरा घंटा गाडीच्या सहायाने नगर पंचायत, रेणापूरच्या माध्यमातून संकलित केला जातो.

नगर पंचायतीच्या स्वच्छता अभियानात महाविद्यालयाचा सक्रीय सहभाग असतो.

करिता प्रमाणपत्र देण्यात येत आहे.

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स्वच्छ सर्वेक्षण 2020

:: प्रशस्ती पत्र ::

प्रशस्ती पत्र देण्यात येते कि, प्राचार्य, शिवाजी महाविद्यालय, रेणापुर

यांनी स्वच्छ सर्वेक्षण २०२० अंतर्गत नगर पंचायत, रेणापुर येथे माहे नोव्हेंबर २०१९

रेणापुर शहर स्वच्छ ठेवण्यात सर्वोत्कृष्ट कामगिरी बजावली आहे.

त्यांच्या या उत्कृष्ट कामगिरी बद्दल त्यांना नगर पंचायत, रेणापुर मार्फत प्रशस्ती पत्र देऊन गौरविण्यात येत आहे.

दिनांक - 18/12/2019

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04/03/2020

जा.क्र./न.पं.रे./स्वच्छता/18

प्रमाणपत्र

प्रमाणित करण्यात येते, की जयक्रांती शिक्षण प्रसारक मंडळ, लातूर द्वारा संचालित शिवाजी महाविद्यालय, रेणापूर जि. लातूर ही एक मान्यताप्राप्त शिक्षण संस्था असून, सदरील महाविद्यालयाचा परिसर हरित आहे. तेथे विविध प्रकारच्या फळा-फुलांचे वृक्ष आहेत. पर्यावरण संवर्धनात महाविद्यालयाचे योगदान असून ते सातत्याने टिकवण्याचा प्रयत्न केला जातो.

करिता प्रमाणपत्र देण्यात येत आहे.

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उत्कृष्ट महाविद्यालय

(ग्रामीण विभाग)

शै.वर्ष २०२१-२२

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महाविद्यालयास सन्मानित करण्यात येत आहे.

डॉ.उद्धव भोसले
कुलगुरू

दिनांक : १ डिसेंबर २०२१

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सौजन्य–राष्ट्रीय तंबाखू नियंत्रण कार्यक्रम,जि.श.वि. कार्यालय,लातूर
GPS Map Camera
Rupchand Nagar, Maharashtra, India
Shop No 01 Near Shivaji College, Renapur - Mohgoan Rd, Rupchand Nagar, Maharashtra 413527, India
Lat 18.518666°
Long 76.574736°
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Google


CAMPUS RE PUR
GPS Map Camera
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प्रमाणपत्र

प्रमाणित करण्यात येते, की जयक्रांती शिक्षण प्रसारक मंडळ, लातूर द्वारा संचालित शिवाजी महाविद्यालय, रेणापूर जि. लातूर ही एक मान्यताप्राप्त शिक्षण संस्था असून, सदरील महाविद्यालयाच्या परिसरात जलव्यवस्थापन योग्य पद्धतीने केले जाते. महाविद्यालयातील सर्व इमारतींवरील पावसाचे पाणी एकत्र करून जलपुनर्भरण केलेले आहे. त्यामुळे पाण्याच्या बाबतीत हे महाविद्यालय स्वयंपूर्ण असून नगर पंचायतीच्या पाण्याशिवाय हजारो विद्यार्थ्यांना स्वच्छ आणि मुबलक पाणी दिले जाते.

जल संवर्धनात महाविद्यालयाचे योगदान असून ते सातत्याने टिकवण्याचा प्रयत्न केला जातो.

करिता प्रमाणपत्र देण्यात येत आहे.

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Purified Water Facility for Students