



**SANT BABA BHAG SINGH UNIVERSITY**

# GREEN AUDIT REPORT

2021-2022

PREPARED BY  
EHS ALLIANCE SERVICES



# CERTIFICATE

AUDIT CERTIFICATE	3
ACKNOWLEDGEMENT	4
DISCLAIMER	5
CONTEXT & CONCEPT	6
INTRODUCTION	7
OVERVIEW OF UNIVERSITY	8
MISSION VISION & OBJECTIVES	10
AUDIT PARTICIPANTS	12
EXECUTIVE SUMMARY	13
GREEN AUDIT ANALYSIS	14
1.1 GENERAL INFORMATION	14
1.2 WASTE MINIMIZATION AND RECYCLING	15
1.3 GREENING THE CAMPUS	16
1.4 WATER & WASTEWATER MANAGEMENT	17
1.5 ANIMAL WELFARE	18
1.6 CARBON FOOTPRINTS	19
INITIATIVES TAKEN BY UNIVERSITY	20
RECOMMENDATIONS	21
CONCLUSION	21
REFERENCE	22
ANNEXURE I – PLANTATION DETAILS	22
ANNEXURE II – PHOTOGRAPHS OF ENVIRONMENT CONSCIOUSNESS	24



## CERTIFICATE



# CERTIFICATE

PRESENTED TO

## SANT BABA BHAG SINGH UNIVERSITY

Village Khiala, P.O Padhiana, Distt. Jalandhar-144030

Has been assessed by EHS Alliance Services for the comprehensive study of environmental impacts on institutional working framework to fulfill the requirement of

## GREEN AUDIT

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.



SIGNATURE



07.10.2022

DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001  
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM





## ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Sant Baba Bhag Singh University Jalandhar for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would like to specially thank *Dr. Dharamjit Singh Parmar* – Hon'ble Vice Chancellor and *Dr. Vijay Dhir* – Registrar for giving us an opportunity to evaluate the environmental performance of the campus.

We would also like to thank *Dr. Vikrant Jaryan* – HOD Botany and NAAC Criteria 7 in-charge, for his continuous support and guidance, without which the completion of the project would not have been possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Dr. Anju Sood

Dr. Gurpreet Kaur

Mr. Dalvir Singh

Mr. Susheel Kumar

Capt. Sukhdev Singh

Dr. Aksh Sharma

Dr. Manisha Kumari

Dr. Chitra Sharama

Ms. Amarjeet Kaur

Mr. Lucky Malhotra

Ms. Renuka

Ms. Sonia

Mr. Mandip Singh

Er. Neha Kapila

*Dy. Director IQAC*

*NAAC Criteria 6 in-charge*

*Lab Technician*

*A. P. Civil Engineering*

*Manager Facilities In-charge*

*Coordinator ESM Cell*

*A. P. Agriculture*

*A. P. (MLS)*

*A. P. Chemistry*

*Physics (LT)*

*Agriculture (LA)*

*A. P. (MLS)*

*A. P. (EE)*

*A. P. (EE)*





## DISCLAIMER

EHS Alliance Services Environment Audit Team has prepared this report for Sant Baba Bhag Singh University Jalandhar based on input data submitted by the representatives of University complemented with the best judgment capacity of the expert team.

While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

If you wish to distribute copies of this report external to your organization, then all pages must be included.

EHS Alliance, its staff and agents shall keep confidential all information relating to your organization and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies.

EHS Alliance staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.



Signature

LEAD AUDITOR



## CONCEPT AND CONTEXT

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the institute management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the institute campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of university/college environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.







## INTRODUCTION

Now days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to make them sustainable and eco-friendly. To preserve the environment within the institution, a number of viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

The activities carried out by the institution can also create adverse environmental impacts. Green audit is defined as an official inspection of the effects an institution has on the environment. Green audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for an institution to determine how and where they are using the most of the energy or water or resources; the institution can then decide how to implement changes and make savings. It can also be used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of University/college including the assessment of policies, activities, documents and records.





## OVERVIEW OF THE UNIVERSITY

Sant Baba Bhag Singh Memorial Charitable Society, under the dynamic leadership of Sant Baba Walkit Singh ji, has been providing basic infrastructure facilities to the people living in the areas of the vicinity of Dera Sant Pura Jabbar, near Adampur Doaba, Dist. Jalandhar, by constructing bridges and roads, providing street lights to villages, etc. The Society started providing formal education by setting up SBBS Institute of Engineering & Technology in 2003, followed by the setting up of SBBS International School in 2004, SBBS Institute of Education (2005), SBBS Institute of Nursing (2005), SBBS Research & Development Centre (2010), SBBS Post Graduate College (2011), SBBS Public School, Binjon (2011). Rural Healthcare is being provided through Guru Nanak Sadh Sangat Charitable Hospital, Kalra, since 2003.



In pursuance of the vision: "To encourage each and every child to get educated, acquire knowledge and wisdom so dias to learn the art of leading a happy, successful and meaningful life," all these institutions established their presence in the field of education, leading to their flowering into Sant Baba Bhag Singh University, established vide the Sant Baba Bhag Singh University Act, 2014.





### UNDERGRADUATE COURSES

B. Physiotherapy	B.Sc. (Hons) Agriculture
B.A.	B.Sc. Medical/ Life Science
LL.B	B.Sc. Medical Laboratory Science (MLS)
B.COM (Hons)	B.Sc. Non Medical
B.COM (Regular)	B.Sc. (Animation & Multimedia)
B.ED	B.Sc. (ATHM)
B.P.E.S.	BA
B.P.Ed.	BBA
B.Sc. (Fashion Design)	B.Tech. (ME, CSE, EE, CE)
*SBBSU also provides various diploma & certificate courses.	

### POSTGRADUATE COURSES

LLM	MTTM
M.A. Punjabi	M.A. English
M.COM	M.A. History
M.E	B.Sc. (Hons) Agriculture
M.P.E.S.	M.Sc. (Hons.) Chemistry
M. Tech.	M. Ed.
M.Sc. (Hons.) Mathematics	M.Sc. (Hons.) Physics
M.Sc. Ag. (Agronomy)	M.Sc. Ag. Horticulture (Vegetable Science)
M.Sc. Fashion Design	M.Sc. Ag. (Soil Science and Agriculture Chemistry)
M.Sc. Hons. Zoology	M.Sc. Ag. Horticulture (Fruit Science)
MBA	M.Sc. MLS (Clinical Microbiology)
MCA M.Sc. IT	M.Sc. MLS (Clinical Biochemistry)
MHMCT	M.Sc. (Hons.) Botany

### Ph.D. COURSES

Computer Science & Engineering	English
Electronics & Communication Engineering	Punjabi
Computer Science Applications	History
Management	Mathematics
Commerce	Chemistry
Law	Physics
Education	Botany
Physical Education	Zoology
Agriculture	

The institutions have made significant contributions in the field of education, which is visible in excellent results and placement records. With state of the art infrastructure catering to the needs

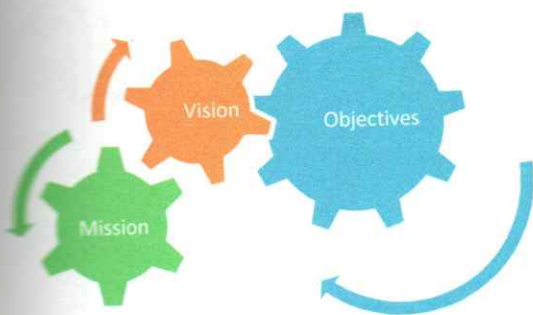


...students, a pollution and drug free campus, focus on excellence in teaching, active involvement of students & faculty in co-curricular and extracurricular activities, including NCC & NSS, industrial visits and a remarkable presence in the field of sports amongst educational institutions, along with a culture of imbibing ethical values, Sant Baba Bhag Singh University is an ideal place to be in to choose for quality education.

### Sant Baba Bhag Singh University, Jalandhar, Punjab



Geo Coordinates from Google maps: 31.4218512, 75.8091222,573



### Sant Baba Bhag Singh University

Mission | Vision | Objectives

#### MISSION

To encourage learners to be educated, acquire knowledge and wisdom so as to live a happy, successful and meaningful life.



## VISION

To achieve the best possible academic standard by exposing every student to a holistic educational experience in an active and dynamic environment.

To develop self expression, self reliance, confidence, self esteem and eventually endorse self directed learning which is befitting the life in the rapidly changing world of the new millennium.

## OBJECTIVE

- To address the educational needs of the society through participatory mechanisms.
- To develop curriculum addressing challenges of the stakeholders for finding appropriate technology options to promote a just and equitable economic and social development.
- To develop a pool of researchers and academicians across the disciplines interested in and working for rural communities leveraging academic inputs for higher education.
- To train manpower to meet with the scientific and industrial needs- locally and globally.
- To pay special attention to the improvement of the social and economic conditions and welfare of the people of the region.
- To inculcate entrepreneurial spirit among the girls belonging to rural areas.





## AUDIT PARTICIPANTS

*On behalf of University:*

Name	Designation/Department
Dr. Vijay Dhir	Director IQAC/ Registrar
Dr. Anju Sood	Dy. Director IQAC
Dr. Vikrant Jaryan	NAAC Criteria 7 in-charge
Dr. Gurpreet Kaur	NAAC Criteria 6 in-charge
Mr. Dalvir Singh	Lab Technician
Mr. Susheel Kumar	A. P. Civil Engineering
Capt. Sukhdev Singh	Manager Facilities In-charge
Dr. Aksh Sharma	Coordinator ESM Cell
Dr. Manisha Kumari	A. P. Agriculture
Dr. Chitra Sharama	A. P. (MLS)
Ms. Amarjeet Kaur	A. P. Chemistry
Mr. Lucky Malhotra	Physics (LT)
Ms. Renuka	Agriculture (LA)
Mr. Mandip Singh	A. P. (EE)
Er. Neha Kapila	A. P. (EE)
Ms. Sonia	A. P. (MLS)

*Audit was conducted on behalf of EHS Alliance Services:*

Name	Position	Qualification
Dr. Uday Pratap	Lead Auditor	Ph.D. , PDIS, QCI - WASH, Lead Auditor ISO 14001:2015
Ms. Pooja Kaushik	Co- Auditor	M.Sc. Applied Geology, QCI – WASH, Field Expert







## EXECUTIVE SUMMARY

Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the individuals working in institution towards the eco-friendly environment.

This is the second attempt to conduct a green audit of this university campus for fulfilment of NAAC criteria. This audit was mainly focused on greening indicators like consumption of energy in terms of electricity and fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the campus. Initially a questionnaire was shared to know about the existing resources of the campus and resource consumption pattern of the students and staffs in the university.





# GREEN AUDIT – ANALYSIS

## 1.1 GENERAL INFORMATION

### 1. Does any Green Audit conducted earlier?

*This is second time university has gone for External Green Audit in a systematic way of monitoring their environmental eminence.*

### 2. What is the total strength (people count) of the Institute?

*Students*

*Male: 1705 Female: 1925 Total: 3630*

*Teachers (including guest faculty)*

*Male: 111 Female: 117 Total: 228*

*Non-Teaching Staff*

*Male: 131 Female: 27 Total: 158*

*Total Strength*

*Male: 1947 Female: 2069 Total: 4016*

### 3. What is the total number of working days of your campus in a year?

*There are one eighty (180) working days in a year.*

### 4. Where is the campus located?

*The campus is Located in Village Khiala, P.O Padhiana, Distt. Jalandhar-144030*

### 5. Which of the following are available in your institute?

<i>Garden area</i>	<i>Available</i>
<i>Playground</i>	<i>Available</i>
<i>Kitchen</i>	<i>Available</i>
<i>Toilets</i>	<i>Available</i>
<i>Garbage Or Waste Store Yard</i>	<i>Available</i>
<i>Laboratory</i>	<i>Yes</i>
<i>Canteen</i>	<i>Available</i>
<i>Hostel Facility</i>	<i>Yes</i>
<i>Guest House</i>	<i>Yes</i>





## 6. Which of the following are found near your institute?

<i>Municipal dump yard</i>	<i>Not in vicinity of institute</i>
<i>Garbage heap</i>	<i>No Garbage heaps</i>
<i>Public convenience</i>	<i>Public convenience is available</i>
<i>Sewer line</i>	<i>Approximately 2 KM sewer line within campus</i>
<i>Stagnant water</i>	<i>No stagnant water</i>
<i>Open drainage</i>	<i>No</i>
<i>Industry – (Mention the type)</i>	<i>No</i>
<i>Bus / Railway station</i>	<i>Adampur Airport, Jalandhar Cant Rly Stn.</i>
<i>Market / Shopping complex</i>	<i>Available</i>

## 1.2 WASTE MINIMIZATION AND RECYCLING

### 1. Does your institute generate any waste? If so, what are they?

*Yes, Solid waste, Canteen waste, paper, plastic, horticulture, laboratory waste, electronic waste, etc.*

### 2. What is the approximate amount of waste generated per day? (in KG approx.)

*Biodegradable waste – 90 Kg  
Non-biodegradable waste - 28 Kg  
Hazardous Waste – 1.5 Kg  
E-waste - 1 Kg*

### 3. How is the waste generated in the institute managed? By Composting, Recycling, Reusing, Others (specify)

- *Composting is done for biodegradable waste management.*
- *The campus has color coded waste bins for bio-degradable (green) and non-biodegradable (blue) wastes for segregation.*
- *Sewage water is treated by STP (600 KLD capacity)*
- *Solid waste is given to external authorized agency*
- *Avoid use of Single use plastic on the campus*

### 4. Do you use recycled paper in institute?



Yes, for the academic evaluation works.

5. How would you spread the message of recycling to others in the community?

- Seminars for students and faculty
- Reuse waste paper for poster makings and academic evaluation work.

6. Can you achieve zero garbage in your institute? If yes, how?

Not yet achieved. SBBSU is in process to achieve zero garbage. University converts the biodegradable garden and kitchen waste into compost. The dry waste is reduced by using digital medium to circulate messages rather than printed paper.

### 1.3 GREENING THE CAMPUS

1. Is there a garden in your institute?

Yes, about 40,03,600 Sq. Ft areas are developed as Gardens.

2. Do students spend time in the garden?

2-4 Hours during winters

3. Total number of Plants in Campus?

Plant type with approx. count

Full grown Trees	1,163
Small Trees	224
Hedge Plants	4,339
Grass Cover SQM	40,03,600 Sq ft

\*Details of trees are shown in Annexure I

4. Is the campus having any Horticulture Department? (If yes, give details)

Yes, 8 staff are deployed in horticulture





5. How many Tree Plantation Drives organized by campus per annum?

*Yes, two Tree Plantation Drives are organized annually.*

6. How many trees and plants were planted in last drive? And, what is the survival rate?

*300+ trees and 4000+shrubs planted in this financial year with more than 80% survival rate.*

7. Is there any Plant Distribution Program for Students and Community?

*Yes, plants & saplings are distributed to Students and visitors at various Occasions. Besides this, landscape of some city area are also developed by Institute.*

8. Is there any Plant Ownership Program?

*No*

## 1.4 WATER AND WASTEWATER MANAGEMENT

1. List uses of water in your institute

*Basic use of water in campus:*

*Drinking – 115.85 KL/month*

*Gardening – 836.88 KL/month*

*Kitchen and Toilets – 762.64 KL/month*

*Hostel – 3250.80 KL/month*

*Others – 271.62 KL/month*

*Total = 5237.80 KL/Month*

2. How does your institute store water? Are there any water saving techniques followed in your institute?

*SBBSU stores water in below mentioned capacity tanks*



- There are total 21 Overhead Water Storage Tanks with capacity of 2000 liters
- 01 main overhead Water tank with capacity of 5 lakh liters

#### *Saving Techniques*

- The university ensures that the faucets in the washrooms and water filtration units are checked regularly and do not have any leakages.
- Also, the university has initiated the installation of auto push taps to reduce water wastage.

### 3. Locate the point of entry of water and point of exit of waste water in your institute.

*Entry - Water comes from 7 bore wells.*

*Exit- From Canteen, hostels, laboratories, toilets, etc. by covered drainage which is connected to (600 KLD) STP in campus area.*

### 4. Write down ways that could reduce the amount of water used in your institute

#### *Basic ways:*

- Close the taps after usage
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- The university ensures that the faucets in the washrooms and water filtration units are checked regularly and do not have any leakages.
- The university has initiated the installation of auto push taps to reduce water wastage.

## 1.5 ANIMAL WELFARE

### 1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

*More than 50 dogs, around 6 cats, approx. 300 Squirrels, around 300 birds, and others including butterflies, insects, bees, earthworms, etc. are there in campus. A variety of bird's species and other flora and fauna available, so institute is doing their bit for bio diversity conservation.*

### 2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

*Yes SBBSU's ESM Cell and NSS actively participates in activities including feeding the birds, planting fruit based plants for birds, organizes biodiversity awareness campaigns, etc.*



## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

### 1. Electricity used per year - CO<sub>2</sub> emission from Electricity

$$\begin{aligned} & (\text{electricity used per year in kWh/1000}) \times 0.84 \\ & 675267 \text{ kWh/1000} \times 0.84 \\ & = 675267/1000 \times 0.84 \\ & = 567.22 \text{ tons} \end{aligned}$$

### 2. LPG/PNG used per year - CO<sub>2</sub> emission from LPG/PNG

$$\begin{aligned} & (\text{LPG/PNG used per year in Kg/1000}) \times 2.99 \\ & 17100/1000 \times 2.99 \\ & = 17100/1000 \times 2.99 \\ & = 51.13 \text{ tons} \end{aligned}$$

### 3. Diesel used per year - CO<sub>2</sub> emission from HSD (Diesel)

$$\begin{aligned} & (\text{Diesel used per year in Litre/1000}) \times 2.68 \\ & 14748 \text{ kWh/1000} \times 2.68 \\ & = 14748 / 1000 \times 2.68 \\ & = 39.52 \text{ tons} \end{aligned}$$

### 4. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

$$\begin{aligned} & \text{University owns 16 buses and 17 cars.} \\ & (16 * 1 * 2 * 180 / 100) * 0.01 + 17 * 2 * 2 * 180 / 100 * 0.02 \\ & = 3.02 \text{ tons} \end{aligned}$$

Total CO<sub>2</sub> emission per year cumulative by electricity usage + LPG + Diesel + bus and car transportation

$$(567.22 + 51.13 + 39.52 + 3.02 = 660.90 \text{ tons})$$

### Carbon absorption by flora in the institution

There are 1163 full grown trees and 224 semi grown trees of different species and approximately 4339 shrubs/hedge plants.

Carbon absorption capacity of one full grown tree 22 kg CO<sub>2</sub> Therefore Carbon absorption capacity of 1163 full-grown trees 1163 x 22 kg CO<sub>2</sub> => 25586 kg of CO<sub>2</sub> =25.59 tons of CO<sub>2</sub>.





The carbon absorption capacity of 224 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $224 \times 6.8 \text{ kg of CO}_2 = 1523 \text{ kg of CO}_2 = 1.52 \text{ tons of CO}_2$

There are approximately Hedge Plants 4339 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of  $\text{CO}_2$  where as some others absorb very low level of  $\text{CO}_2$ . In the absence of a detailed scientific study, 200g of  $\text{CO}_2$ , absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is  $4339 \times 200 \text{ g} = 867.8 \text{ kg} = 0.87 \text{ tons of CO}_2$

The lawns on the campus have buffalo grass, Mexican grass and indigenous grass species and cover a total area of 4003600 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $4003600 \times 0.1 \text{ g CO}_2 = 400360 \text{ g} | \text{CO}_2 400.36 \text{ kg CO}_2$  per day, Total carbon absorption per year is  $400.36 \times 365 = 1,46,131.4 \text{ kg of CO}_2 = 146.13 \text{ tons of CO}_2$

Grand total of carbon absorption capacity of the campus is 174.11 tons.

## GREEN INITIATIVES BY CAMPUS

- Tree Plantation Drives - Two plantation drives were carried out in the current year in the Campus.
- Solar PV – SBBSU has installed solar PV of capacity 100kW, which provides approx. 10% of the total electricity consumption
- Ground Water Recharge - 7 units of Rain Water Harvesting System.
- Air Pollution Reduction - Personal Vehicles (Students) are not allowed in the campus
- E - Waste Management – Tie up with external agency for e-waste management.
- Biodiversity Conservation – Flora and fauna conservation program and awareness campaigns organised as per the local geography.
- Solid Waste Management – Waste management is done by composting. There is ban on single plastic use and plastic crockery in the campus.
- ESM Cell Initiatives – SBBSU's ESM Cell has organised various activities such as poster competition, awareness sessions on different topics, plantation drives, different days celebration such as Environment Day, Ozone Day, Animal Day, World water day, etc.



## RECOMMENDATIONS

- University should initiate Plant ownership programs for the students, so that they can become more responsible towards the mother earth and the environment.
- Bore well water meter and water balancing is highly recommended.
- Electrical Safety audit of the campus is recommended.
- Eco-friendly parameters should be included in the purchase of articles and goods for the campus.
- SBBSU should start drip irrigation to save water in campus
- Plant distribution program in nearby villages and societies should be done frequently from May to August.
- Water and Energy Conservation awareness messages should be displayed at different places in campus.
- Flow rate of taps should be checked, it should not be more than 2.5 litres/minute.

## CONCLUSION

This audit involved extensive consultation with all the teams, interactions with key personnel on wide range of issues related to Environmental aspects. Sant Baba Bhag Singh University has an EMS cell for sustainable use of resources. The audit has identified a few observations for making the campus premise more environment friendly.

The recommendations are mentioned with observations for university campus team to initiate actions.

The audit team opines that the overall site is well-maintained from the environmental perspective. Few things that are important to initiate urgently includes initiation of drip irrigation and checking of water flow of taps. We also highly recommend for water balancing report for further water conservation and waste minimization.







## || REFERENCE

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981)
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices

## || ANNEXURE I – PLANTATION DETAILS

Plants Type	Count
Trees	1163
Shrubs	4339
Climbers	69
Herbs	4187



S.No.	Name	Common name	Family	Total
1	<i>Acacia auriculiformis</i>	Northern Black Wattle	Fabaceae	12
2	<i>Acacia nelotica</i>	Kikkar	Fabaceae	8
3	<i>Albizia lebbek</i>	Lebbek/Sareen	Fabaceae	15
4	<i>Alstonia scholaris</i>	Devil tree	Apocynaceae	200
5	<i>Araucaria columnaris</i>	Cook's Pine	Araucariaceae	12
6	<i>Artocarpus heterophyllus</i>	Jackfruit	Moraceae	10
7	<i>Azadirachta indica</i>	Neem	Meliaceae	38
8	<i>Bamboo sp.</i>	Bamboo		20
9	<i>Bismarckia nobilis</i>	Bismarck Palm	Arecaceae	8
10	<i>Callistemon viminalis</i>	Bottle Brush	Myrtaceae	35
11	<i>Caryota urens</i>	Fishtail palm	Arecaceae	15
12	<i>Casuarina equisetifolia</i>	Whistling Pine	Casuarinaceae	2
13	<i>Celtis australis</i>	European Nettle Tree/Honeyberry	Cannabaceae	8
14	<i>Chukressia sp.</i>	Chukressia	Sapindaceae	87
15	<i>Citrus limetta</i>	Musambi	Rutaceae	20
16	<i>Citrus limon</i>	Lemon	Rutaceae	12
17	<i>Citrus sinensis</i>	Orange	Rutaceae	22
18	<i>Corymbia citriodora</i>	Safeda	Myrtaceae	2
19	<i>Cycas revoluta</i>	Cycas	Cycadaceae	31
20	<i>Dalbergia sissoo</i>	Shisham Tree	Fabaceae	27
21	<i>Delonix regia</i>	Gulmohar Tree	Fabaceae	7
22	<i>Eucalyptus tereticornis</i>	Eucalyptus	Myrtaceae	8
23	<i>Ficus bengalensis</i>	Bargad tree	Moraceae	4
24	<i>Ficus elastica</i>	Ruibber Plant	Moraceae	6
25	<i>Ficus infectoria</i>	Piipli	Moraceae	6
26	<i>Grevillea robusta A.Cunn.</i>	Silver Oak	Proteaceae	9
27	<i>Jacaranda mimosifolia</i>	Neeli gulmohar	Bignoniaceae	12
28	<i>Livistona chinensis</i>	Chinese fan palm	Arecaceae	10
29	<i>Mangifera indica</i>	Mango	Anacardiaceae	71
30	<i>Melia azedarach</i>	Darek	Meliaceae	85
31	<i>Moringa oleifera</i>	Sohanjna/Drumstick	Moringaceae	12
32	<i>Morus alba</i>	Shahtoot	Moraceae	7
33	<i>Morus alba</i>	Shahtut	Moraceae	6
34	<i>Musa acuminata</i>	Banana	Musaceae	3
35	<i>Neolamarckia cadamba</i>	Kadamb	Rubiaceae	5
36	<i>Phoenix roebelenii</i>	Pygmy date palm	Arecaceae	37
37	<i>Phyllanthus emblica</i>	Amla	Phyllanthaceae	15
38	<i>Pinus roxburghii</i>	Chir Pine	Pinaceae	4
39	<i>Platyclusus orientalis</i>	mayurpankhi	Cupressaceae	16
40	<i>Polyalthia longifolia</i>	Indian mast tree	Annonaceae	10
41	<i>Pongamia pinnata</i>	Sukh Chain	Papilionaceae	10



42	<i>Populus alba</i>	Poplar	Salicaceae	8
43	<i>Psidium guajava</i>	Guava	Myrtaceae	22
44	<i>Pterospermum acerifolium</i>	Kanak Champa	Malvaceae	20
45	<i>Putranjiva roxburghii</i>	Putranjiva	Euphorbiaceae	2
46	<i>Roystonea regia</i>	Royal palm	Arecaceae	30
47	<i>Salix alba</i>	Willow Tree	Salicaceae	12
48	<i>Senna siamea</i>	kassod tree	Fabaceae	7
49	<i>Syzygium cumini</i>	Jamun	Myrtaceae	20
50	<i>Terminalia arjuna</i>	Arjun Tree	Combretaceae	63
51	<i>Terminalia bellirica</i>	Bahera Plant	Combretaceae	11
52	<i>Thuja occidentalis</i>	Eastern White Cedar	Cupressaceae	6
53	<i>Toona ciliata</i>	Toon	Tilaeaceae	8
54	<i>Ziziphus jujuba Mill.</i>	Ber	Rhamnaceae	1
55	<i>Ziziphus mauritiana</i>	Ber/Indian Plum	Rhamnaceae	5
56	<i>Cassia fistula</i>	Amaltash	Fabaceae	21
				1163

## ANNEXURE II – PHOTOS



Environment Day Celebration – 5<sup>th</sup> June 2022







World Ozone Day was celebrated by organizing plantation Drive and poster making activity



Awareness Program on Disaster Management on 24<sup>th</sup> May, 2022







Say NO to Plastic poster making Activity and rally on 21<sup>st</sup> April 2022



AWARENESS CAMP on Harmful effects of Single Use Plastic and Radiations: Remedial Measures



World Animal Day Celebration



Guest lecture on 'Soil Conservation'





padhiana, Punjab, India  
 padhiana, jalandhar Punjab 144030, India  
 Lat 31.421752°  
 Long 75.808943°  
 22/03/22 11:59 AM

Water conservation poster making activity on 'World Water Day'



Manko, Punjab, India  
 Unnamed Road, Manko, Punjab 144106, India  
 Lat 31.438003°  
 Long 75.778922°  
 19/04/22 12:32 PM

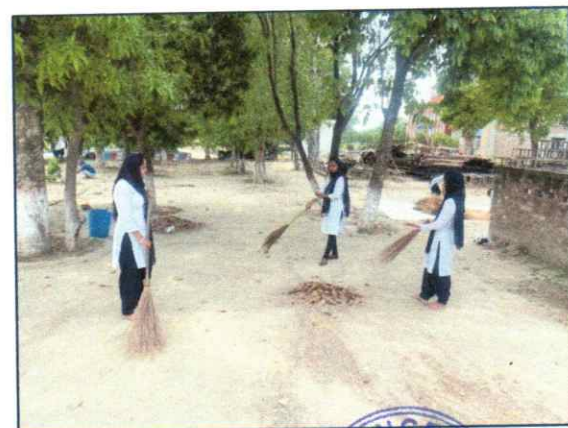


Khiala, Punjab, India  
 CRC4+WX, Khiala, Punjab 144030, India  
 Lat 31.422456°  
 Long 75.808004°  
 13/06/22 09:58 AM

Tree Plantation and Technology Awareness Camp' in the Manko Village on 19-April-2022.

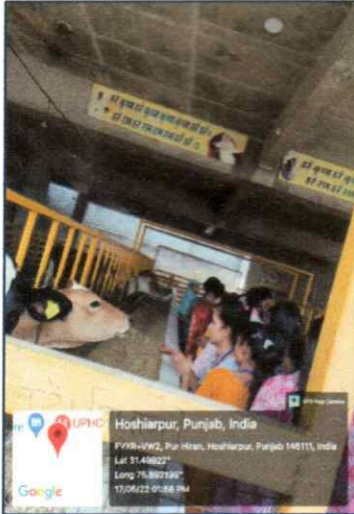


Hoshiarpur, Punjab, India  
 FVXV+G2H, Pur Hiran, Hoshiarpur, Punjab 146111, India  
 Lat 31.499008°  
 Long 75.892035°  
 17/05/22 02:05 PM



'Cleaning activity' was organized under Swachh Bharat Abhiyan





Gaushala Visit



Save Earth awareness campaign



National Science Day was celebrated on 28<sup>th</sup> February by organising various activities such as Rangoli competition, poster competition, and social outreach.







Mahingrowal, Punjab, India  
 MW3R+367, Mahingrowal, Punjab 146024, India  
 Lat 31.653369°  
 Long 75.939953°  
 26/04/22 11:49 AM

Waste management awareness lecture



Crop Residue Management Awareness Campaign



ENERGY CONSERVATION DAY was celebrated by organising poster making activity – 16<sup>th</sup> Dec, 2021







Well ventilated building structure



Well maintained College campus



Lush green campus



Green Campus



Solar PV installation on building roofs



STP of capacity 600 KLD



Ventilated classrooms



Well equipped computer labs



Well equipped library





Paved pathways



Indoor classrooms



Color coded dustbins



Water conservation message display



Awareness message on No plastic usage



Awareness message - soil conservation



Water storage tanks



Tree with name plate



Rainwater storage tanks







**PUBLIC HEALTH DISEASE & HYGIENE PRACTICES"**  
 ORGANIZED BY  
 Department of Life Sciences & Allied Health Sciences (UNDER AEGIS OF IQAC, SBBSU)  
**14<sup>th</sup> March 2022- Monday**  
 Timing:- 10:00 am to 1:00 pm  
 Venue:- Gurdwara Shehad Baba Mall Ji, Village Daroli kaler  
 In Association with Dasmesh Welfare Society, (Regd.), District Hoshiarpur  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Awareness drive on health and hygiene

**ONE DAY SEMINAR ON "ONE EARTH. ONE PEOPLE. ONE SOLUTION- NEED OF THE HOUR"**  
 ORGANIZED BY  
 Department of Computer Science Application with Collaboration of Yash Foundation, Patti Road  
 Let's Act to #SaveSoil  
 Dr. Anshu Singh  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Seminar on earth conservation

**ENVIRONMENTAL SUSTAINABILITY**  
 ORGANIZED BY  
 Department of Management with collaboration of Santar Primary School, Chibral (under the Aegis of IQAC)  
**22<sup>nd</sup> March 2022**  
 Activities  
 Safai Abhiyan  
 Dr. Namdev Singh Chahal  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Environmental awareness drive

**Awareness Camp on: JOB HANDS TO PROTECT ENVIRONMENT & SAY NO TO PLASTIC**  
 Organized By:  
 Department of Physical Sciences, EHS (Under the aegis of IQAC)  
 Venue: Govt Primary School Kapatl, Block, Jalandhar, Jalandhar  
 Date: 28/05/2022 (10:00 am onwards)  
 Topics to be covered:  
 Awareness regarding the Environment & Need of protection of environment.  
 Awareness regarding harmful effects of plastic.  
 Awareness regarding harmful effects of plastic on health.

No Plastic Campaign

**"CONTRIBUTIONS OF SCIENCE IN SUSTAINABLE FUTURE"**  
 ORGANIZED BY  
 Department of Physical Sciences  
 Under the aegis of IQAC, with in collaboration with Dasmesh Youth Club, Baggaal Gajner, Distt Hoshiarpur  
**03<sup>rd</sup> March 2022**  
 Venue: Village Menko, Jalandhar  
 Dr. Anshu Singh  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Awareness campaign on sustainable future

**PLANTATION DRIVE"**  
 Theme: Only One Earth  
 ORGANIZED BY  
 ENVIRONMENT SUSTAINABILITY AND MANAGEMENT CELL, SBBSU (UNDER THE AEGIS OF IQAC, SBBSU)  
**13<sup>th</sup> June 2022- MONDAY**  
 Timing:- 9:30 am- 11:30 am  
 Dr. Anshu Singh  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Plantation Drive organised by SBBSU

**INTERNATIONAL YOGA DAY CELEBRATION**  
 YOGA  
 Dr. Anshu Singh  
 Dr. Shweta Singh  
 Dr. Akash Sharma

International Yoga Day Celebration

**AND PLANT ADOPTION DRIVE"**  
 ORGANIZED BY  
 ENVIRONMENT SUSTAINABILITY AND MANAGEMENT CELL, SBBSU (UNDER THE AEGIS OF IQAC, SBBSU)  
**3<sup>rd</sup> March to 4<sup>th</sup> March 2022**  
 Day 1: 03<sup>rd</sup> March, 2022 11:00 am onwards  
 Venue: Village Menko, In Association with Dasmesh Youth Club, Baggaal Gajner, Distt Hoshiarpur  
 Day 2: 04<sup>th</sup> March, 2022 11:00 am onwards  
 Venue: Sadiy, Gurgaon  
 Dr. Anshu Singh  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Plant adoption drive

**"IMPACT OF POLLUTION ON WETLANDS IN PUNJAB"**  
 Department of Life Sciences & Allied Health Sciences (LSHA), SBBSU (Under the aegis of IQAC, SBBSU)  
**WEDNESDAY, 31<sup>st</sup> MARCH, 2021**  
 START: 11 AM -12 PM  
 Registration Link: <https://forms.gle/4v1w785Y1Jk3s99>  
 Dr. Anshu Singh  
 Dr. Shweta Singh  
 Dr. Akash Sharma

Seminar on impact of pollution on Wetlands

\*\*\*\*\*END OF THE REPORT\*\*\*\*\*

