GREEN AUDIT

STUDY PERIOD (ONE YEAR) 2023 - 2024

Sustainability study

AUDIT REPORT

Studied for

Institute of Engineering,
Technical Campus, Bhaddal (Ropar)

Village: Bhaddal, P.O.Mianpur,
Rupnagar – 140108, Punjab

Studied in the capacity of

Accredited and Certified
Green Building Professional

Studied by

Website: https://thegreenviosolutions.co.in/
Email: greenviosolutions@gmail.com

Background reference image Sasin Tipchai on unsplash

Disclaimer

The Audit Team has prepared this report for **Institute of Engineering, Technical Campus, Bhaddal (Ropar)** located at *Village: Bhaddal, P.O.Mianpur, Rupnagar – 140108, Punjab* based on input data submitted by the Institute analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the internal team. The warranty or undertaking, expressed 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.

The audit is a thorough study based on the inspection and investigation of data collected over a period of time and should not be used for any legal action. This is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

Ar. Nahida Abdulla

Greenvio Solutions

Developing Healthy and Sustainable Environments

We are an Environmental and Architectural Design Consultancy firm

Sustainable Academe is our department for Conducting Audits

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Acknowledgement

The Audit Assessment Team extends its appreciation to **Institute of Engineering, Technical Campus, Bhaddal (Ropar), Punjab** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended are due to everyone from the Management.

We are also thankful to Institute's Task force who have played a major role in data collection.

Sustainable Academe
Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

Contents

1. Introduction

1.1 About the Institution

1.1.1 Vision

The Institute proposes

- *To impart high-caliber professional education in the state of Punjab, especially to the underprivileged population in the Kandi area, with the aim of improving their socio-economic conditioneconomic condition.*
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1.1.2 Mission

The Institute's focuses and adheres towards:

- *To establish state-of-the-art technical and professional institutes andtheir subsidiary institutes in the Kandi area.*
- *To plan and implement rural development programs in the area surrounding the Institute.*
- *To raise awareness about education, health and socio-economic development among the rural populace of the area.*
- *To achieve Excellence in each and every pursuit and to raise the standards of the Institute so as to attain an autonomous status.*

2. Overview

2.1 Summarised Populace analysis for 2023-24

2.1.1 Students data

The data (shared by Institute) shows there were 435 students. (Male and female)

2.1.2 Staff data

Above data documents 61 staff members.

Thus, total populace stands at 496 nos.

3. Documentation

3.1 Green Practices Audit

3.1.1 Green practices

The practices undertaken as an awareness/ sensitization activity with stakeholder involvement have been documented below: (June 2023 to May 2024).

S. No.	Name of the event	Particulars	Type	Date	Evidence
1.	Rounabout Maintained By IET, BHADDAL	Roundabout near mohali is maintaied by IET, Bhaddal	Physical	Every month, this roundabout is maintained	 The photo shared is previously dated

Table 1: Initiatives undertaken by the team

3.1.2 Community development

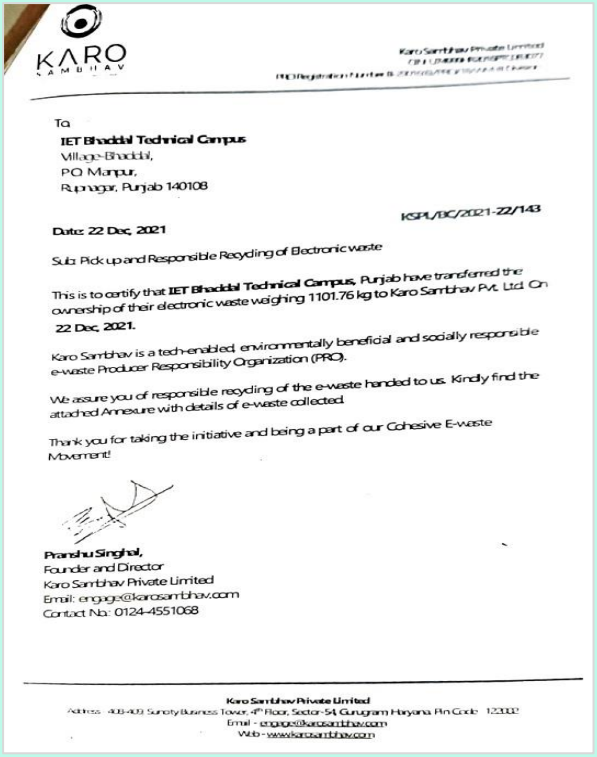
As per evidences shared there are no specific extension activities/ departments.

3.2 Waste Audit

3.2.1 Waste management (Parameters adopted)

The following practices are common to entire campus.

S. No.	Type	Proposed practice
1.	Solid waste (Toilets)	Sewage Treatment Plant
2.	Liquid waste (Toilets, wash basins)	Sewage Treatment Plant
3.	Chemical waste from laboratories	***No information was provided thus suggested - Neutralize the liquid waste before letting into storm water drains or soak pit***

4.	Toxic waste from laboratories	***No information was provided thus suggested - Dig up a pit 20' away from Institute building to dispose toxic chemicals if any***
5.	Instrument waste And E-waste	Tie-up with vendor 'Karo Sambhav' Previous dated evidence was shared 
6.		
7.	Plastic waste	It is treated by selling or treating it as scrap
8.	Paper waste	

KARO SAMBHAV

To
IET Bhaddal Technical Campus
Village-Bhaddal,
P.O. Manpur,
Rupnagar, Punjab 140108

KSPL/BC/2021-22/143

Date: 22 Dec, 2021

Sub: Pick up and Responsible Recycling of Electronic waste

This is to certify that **IET Bhaddal Technical Campus**, Punjab have transferred the ownership of their electronic waste weighing 1101.76 kg to Karo Sambhav Pvt. Ltd. On 22 Dec, 2021.

Karo Sambhav is a tech-enabled, environmentally beneficial and socially responsible e-waste Producer Responsibility Organization (PRO).

We assure you of responsible recycling of the e-waste handed to us. Kindly find the attached Annexure with details of e-waste collected.

Thank you for taking the initiative and being a part of our Cohesive E-waste Movement!

Pranshu Singhal,
Founder and Director
Karo Sambhav Private Limited
Email: engage@karosambhav.com
Contact No.: 0124-4551068

Karo Sambhav Private Limited
Email - engage@karosambhav.com
Web - www.karosambhav.com

Table 2: Details of the waste management practices

There are 55 dustbins in indoor and 30 in outdoor areas.

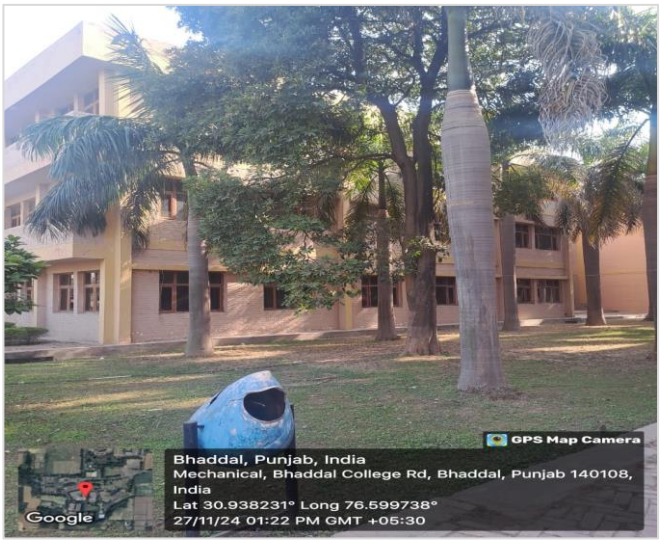


Plate 1: Dustbins in the premises

3.3 Water Audit

3.3.1 Water availability and consumption

3.3.1.1 Source of Primary water supply

The facilities included overhead water tanks.

S. No.	Type	Nos.	Location	Size	Capacity (litres)
1	Underground	1	Near workshop	10*15 foot	20,000
2	Overhead	42	Above all the blocks and hostel	1337mm*1572.5 mm	2,000
3	Fire tank	5	Yes	5 foot	6,000

Table 3: Primary water sources

3.3.1.2 Source of Secondary water supply

The Institute uses water supply for secondary usages such as watering plants, toilets, and wash basins and other spaces. There is one borewell with 300 ft. depth and 10,000 carrying capacity.

3.3.1.3 Source of Tertiary water supply

The tertiary source of water is water harvesting. The initiative is not practiced.

3.3.1.4 Source of Reusing waste water

This initiative is practiced.

3.3.1.5 Sensitization initiatives

There are no dedicated related to water conservation that have been undertaken.

3.3.1.6 Water proportion study

This section studies the total consumption of water and its proportion with the water recharged and saved on the premises.

- As per the Chapter 2 of the Report, total footfalls in premises were **4,717 nos.**

- As per NBC norms for Educational buildings with boarding facilities the water requirement is **90 litres per head for drinking water and 45 litres per head for flushing** (secondary) purposes thus making it 135 litres/ per day.
- However, in practical usage a stakeholder can use minimum of **0.25 or 0.5 to 1 litres for drinking and 6 to 8 litres for secondary purposes,** thus reframing the norm to actual requirement of 0.25 + 6 = 6.25 litres
- Thus, 6.25 litres x 4,717 populace x 225 (Min. working nos. of days) = **6,97,500 litres is the total water requirement** (Average assuming certain nos.)
- Bifurcating this study further we can assume **0.25 litres x 4,717 populace x 225 days = 27,900 litres for drinking** and primary purposes
- However, team did not inform any kind of deficiency in availability of water supply.

Plate 2: Water coolers in the premises

3.4 Health and Hygiene Audit

This section has been excluded.

4. Suggestion

The suggestion (inference) would act as a 'PLAN OF ACTION' to implement all the suggestions in a detailed manner.

- Conduct the 'Before' and 'After' study with photos
- Document the same in 'Action taken report'

S. No.	Aspect with evidence if any	Suggestion
1.	Green practices 'AWARENESS' aspect	**Mandatory programs should be conducted on following days** o January i. Wd. Braille Day o February i. Wd. Wetland day ii. Wd. Pulses day iii. Intd. Polar Bear Day iv. Nl. Science day o March i. Wd. Wildlife day ii. Intd. Action for Rivers iii. Global Recycling Day iv. Wd. Sparrow day v. Wordl forest day/ Intl. day of happiness vi. Wd. Water day vii. Wd. Meteorological & resources day o April i. Intd. Mine awareness day ii. World health day iii. Wd Atmosphere Day iv. Intd. Earth day v. Intd girl in ict/ Wd. Safety, health o May i. Wd Migratory Bird Day ii. Intd. Of plant health iii. Wd. Bee day iv. Intd. Biological diversity v. Wd. No tobacco day o June i. Wd. Bicycle day ii. Wd. Envt day iii. World Oceans Day iv. Global Wind Day v. Wd. Combat drought vi. Sustn. Gastronomy day

		vii. Intd. Of the tropics ○ July i. Intd. Of cooperatives & World Day Free of Plastic Bags ii. Soil conservation iii. Wd. Population day iv. Mangrove Ecosystem ○ August i. Intd. Indigenous day ○ September i. Intd. Clean blue sky ii. Intd. Literacy/ Clean-up Day iii. World ozone day iv. Intd. Of peace/ Zero Emission Day v. Intd. Aware food loss ○ October i. Wd. Nature day ii. Wd. Habitat day iii. Wd. Wildlife day iv. Wd. Cotton day v. Wd. Migratory bird vi. Intd. Rural women vii. Wd. Food day viii. Climate Action ix. Wd. Cities day ○ November i. Wd. Tsunami awareness ii. Nl. Birds day iii. Wd. Energy/ Diabetes iv. Wd. Toilet day ○ December i. Intd. Person with disability day ii. Wd. Soil day
2.	Green practices 'COMMUNITY DEVELOPMENT' aspect	Undertake Unnat Bharat Abhiyan project
3.	Water aspect **Aspect area:** **Information display**	Every water tank/ external pit/ water cooler should be painted with: ➲ Nos. ➲ Capacity in cu. Litres or litres ➲ Usage – Primary (Drinking); Tertiary (Rain water) and Secondary (Cleaning, washing, flushing, watering etc.) ➲ Last cleaning maintenance date and by whom ➲ Name and logo of the Institute
4.	Water aspect	➲ Wherever taps supply regular/ non-potable water introduce a

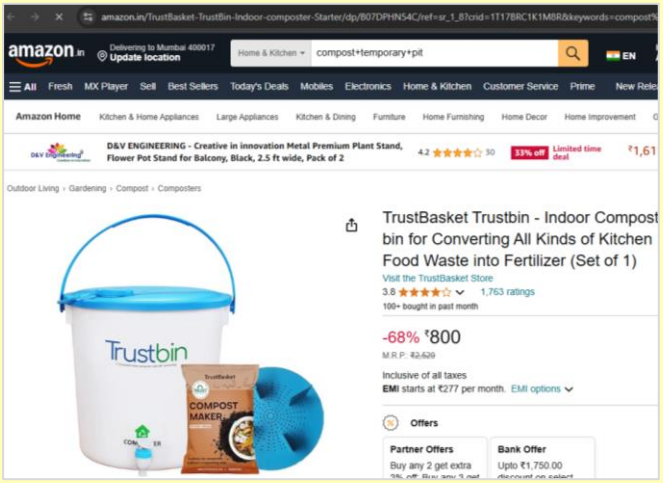
	Aspect area: **Display board**	board stating **'Not suitable for drinking'** ➲ Similarly, intrdouce **'Drinking water don't wash here'** board on or above every drinking water cooler/ filter
5.	Waste aspect	➲ Neutralize the chemical liquid waste before letting into storm water drains or soak pit ➲ Dig up a pit 20' away from Institute building to dispose toxic chemicals if any
6.	Waste aspect **Aspect area:** **Organic composting**	Undertake composting on Institute level using Biocompster 
7.	Health & Hygiene aspect **Aspect area:** **Zone demarcation through signages**	Introduce zone boards (Optional through mention of state/ central govt. acts) at entrance of the premises in an enlarged A1 poster  ***Sample images for zones*** Image source: Compliance signs

Table 4: Observation based suggestion study of the campus

5. Compilation

The study is based on the data collected, analyzed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyze and study the data collected.

- IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013

- IGBC Green Landscape Rating system, March 2013