

# GREEN AUDIT

STUDY PERIOD (TWO YEARS) 2022 – 2023 AND 2023 – 2024

Sustainability study  
**AUDIT REPORT**

Studied for  
**O.P. Jindal University**  
Punjipathra, Raigarh,  
(C.G.), PIN:496109

Studied in the capacity of  
Accredited and Certified GBP



Website: <https://thegreenviosolutions.co.in/>

Email: [greenviosolutions@gmail.com](mailto:greenviosolutions@gmail.com)

Background reference image Sasin Tipchai on unsplash

# Disclaimer

The Audit & Assessment Team has prepared this report for **O.P. Jindal University** located at Punjipathra, Raigarh, (C.G.), PIN:496109, India based on input data submitted by the University and 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

Palghar District, Maharashtra- 401208

[sustainableacademe@gmail.com](mailto:sustainableacademe@gmail.com)



## Acknowledgement

The Audit Assessment Team extends its appreciation to **O.P. Jindal University, Chhattisgarh, India** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are due to **Dr. R. D. Patidar**, Hon'ble Vice Chancellor and **Prof. Anurag Vijaywargiya**, Hon'ble Registrar.

We are also thankful to Institute's Task force who have played a major role in data collection - **Dr. Kalyan Phani**, Associate Professor-Metallurgy; **Dr. Deepak Singh**, Associate Professor-Electrical and **Dr. Surendra Dwivedi**, Director – Admin

The kind gesture of the **Admin and Non-teaching Staff members** for the inventory and data collection is quite commendable.

### **Sustainable Academe**

Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

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# 1. Introduction

## 1.1 Statements of the Institution

### 1.1.1 Vision for the future

The University envisions "To become a role model among the higher educational institutions globally aims at nurturing young minds to lead a sustainable transformation of society through excellence in value-based education, research, innovation, and entrepreneurship."

### 1.1.2 Mission for the future

The University will work towards the following mission:

- To develop programs and courses aligned with new-age technologies to create an industry ready talent pool, who fuel the growth of the society.
- To foster outcome-based education to enhance employability by adopting emerging technologies and experiential pedagogy across its programs, to make students understand the concept and give them the ability to solve real-world problems.
- To harness local and global collaborations to create an ecosystem for enhancing teaching, research, and institution building.
- To embed liberal education to develop well rounded globally competent leaders with holistic approaches who can work at multiple levels of responsibilities.
- To create an Industry focused environment to foster innovation and entrepreneurship for sustainable development.

## 2. Overview

### 2.1 Summarised Populace analysis for 2023-2024

#### 2.1.1 Students data

The data (shared by the Institute) shows there were **1,913 students**.

#### 2.1.2 Staff data

S. No.	Type	Male	Female	Total
1	Teaching staff	91	32	123
2	Non-Teaching staff	107	28	135
<b>Total Staff Members</b>		<b>198</b>	<b>60</b>	<b>258</b>

*Table 1: Staff data of the Institution for 2023-2024*

The staff data shows the Institute premises had **258 Staff Members**.

### 2.2 Summarised Populace analysis for 2022-2023

#### 2.2.1 Students data

The data (shared by the Institute) shows there were **1,639 students**.

#### 2.2.2 Staff data

S. No.	Type	Male	Female	Total
1	Teaching staff	87	28	115
2	Non-Teaching staff	105	25	130
<b>Total Staff Members</b>		<b>192</b>	<b>53</b>	<b>245</b>

*Table 2: Staff data of the Institution for 2022-2023*

The staff data shows the Institute premises had **245 Staff Members**.

### 3. Observation

This chapter focuses on the positive aspects adopted by the Institute either based on the previous year study or as an act towards sustainability goals.

#### Section 1 – Green practices audit

The details of the NSS Activities related to green practices.

#### Section 2 – Waste audit

The facilities have been initiated but can be improved.

#### Section 3 – Water audit



*Plate 1: Water tanks on the rooftop areas*

#### Section 4 - Health and Hygiene Audit



*Plate 2: Health centre facility in the premises*

## 4. Compliance

The compliance study was carried out through investigative ways. This was done to understand extent of implementations based on previous reports.

- Original report study for 2020-2021 and 2021-2022 (Site visit 16 November 2022)
- Renewal study one (Current) for 2022-2023 and 2023-2024


### 4.1 Compliance status

The details of compliance are analysed on previous year Report i.e. 2020-2021 and 2021-2022 depicted with following background colour codes:

➤ Implemented (Fully)

➤ Partially implemented

➤ Not implemented

S. No.	Recommendation	Compliance Status evidence detail
<b>Section 1 – Green practices audit</b>		
1.	As part of cleanliness programme the initiative of Swachh Bharat Abhiyan of Govt. of India is undertaken during various occasions	<p>Implemented as per the following evidence</p> 



2.

Adopt a tree scheme should be practiced for the faculties; an appropriate document of the scheme should be put up on the website and at the premises

Plantation Drive & Cake Cutting Ceremony | today @ 4.30 PM Inbox

HR OPJU Wed, Apr 3, 10:07AM (9 days ago)

to allfacultyandstaff, Dr. Anurag, Vikash, Bhushan

Dear All,  
 Please note that under the "Adopt a Tree Scheme" today we are organizing a plantation drive at 4:30 PM In Front of Reception Area followed by the cake cutting ceremony to felicitate all the employees whose birthdays are held in the month of March 2024.

During the months of March 2024, the following employees of the university had their birthdays.

Slr	Employee Name	Date of Birth
1	Mr. Vikas Kumar Mahato	01-Mar
2	Dr. Amit Jain	02-Mar
3	Mr. Nigamananda Pati	02-Mar
4	Dr. Makkuva Kalyan Phani	04-Mar
5	Mr. Boshan Kumar Nahak	07-Mar
6	Dr. Kavita Patel	08-Mar
7	Mr. Ramnath Mahant	09-Mar
8	Dr. Manik Das	10-Mar
9	Mr. Manoj Kumar Singh	22-Mar
10	Mr. Lev Kumar Patel	28-Mar

Warm Regards,

HR Department | OP Jindal University  
 Punjipattra, Raigarh - 496 109 | Chhattisgarh | INDIA  
 e: hr@opju.ac.in | m: +91 9109977025, 8827395778 | www.opju.ac.in



GPS Map Camera

OP JINDAL UNIVERSITY, Chhattisgarh, India  
 386X+JPJ, O P Jindal Industrial Park, Tumidih, Chhattisgarh 496107, India  
 Lat 22.061722°  
 Long 83.349791°  
 03/04/24 04:50 PM GMT +05:30

Google

3. The Eco Club should be formulated and implemented in the University; the activities should be documented and reflected on multiple platforms, it will be suggested to have external Green Building Professionals on board for executive decisions related to the same.



**OPJU**  
UNIVERSITY OF SUSTAINABLE TECHNOLOGY AND MANAGEMENT  
Date- 02/01/2023

OPJU/NOTICE/2023/03

**NOTICE (Revised)**  
**OFFICE OF THE REGISTRAR**

**Sub: Formation of Eco Club.**

An Eco Club consisting of the following members is reconstituted in order to empower students to participate and take up meaningful environmental activities and projects in OPJU. It is a forum through which students can reach out to influence, and engage their neighbourhood communities to promote sound environmental behavior.

S. No.	Name	Designation	Contact No.	E-mail ID
1.	Dr. S K Singh (Professor-Humanities)	Advisor	9589333661	sanjay.singh@opju.ac.in
2.	Dr. Anurag Sharma (Asst. Prof.-Civil)	Coordinator	9425280427	anurag.sharma@opju.ac.in
3.	Dr. Taniya Sengupta Rathore (Assoc. Prof.-SoS)	Coordinator	7089410141	taniya.rathore@opju.ac.in
4.	Dr. Mahasakti Mahamaya (Sr. Asst. Prof.-Civil)	Member	8895841504	mahasakti.mahamaya@opju.ac.in
5.	Dr. Deeptimayee Swain (Asst. Prof.-EE)	Member	9109977009	taniya.rathore@opju.ac.in
6.	Dr. Deepak Patel (Scientific Officer)	Member	9981260497	deepak.patel1@opju.ac.in
7.	Dr. Namrata Ojha (Asst. Prof.-SoM)	Member	7974108328	namrata.ojha@opju.ac.in
8.	Dr. Dharmender Saini (Asst. Prof.-Mechanical)	Member	9039212633	dharmender.saini@opju.ac.in
9.	Priyesh Prasad (Civil Engg.-3rd Year)	Student Coordinator	7415913292	priy.ug20civ05@opju.ac.in
10.	Bhavna Singhania (Civil Engg.-4th Year)	Student Coordinator	7873374074	bhav.ug20civ19@opju.ac.in
11.	Muskan Singh (B.Sc.-1st Year)	Student Coordinator	6205306033	musk.bsc22bt10@opju.ac.in
12.	Prachi Agrawal (MBA-1st Year)	Student Coordinator	6363845355	Prac.mba2259@opju.ac.in

*(Anurag Vijaywargiya)*  
Registrar

Copy to:

- Vice Chancellor - for kind information please
- All faculty and staff
- All students
- Notice Boards
- Master File

**OP JINDAL UNIVERSITY**  
OP Jindal Knowledge Park, Punjipathra, Raigarh - 496109 (C.G.)  
☎ +91 7767 254000 www.opju.ac.in

**Section 2 – Waste audit**

4. Waste management practices (Not recommended directly in the report but undertaken by the team)



 **GPS Map Camera**

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Long 83.349791°  
29/12/23 02:52 PM GMT +05:30



Google


<p>5.</p>	<p>Waste management practices (Not recommended directly in the report but undertaken by the team) - Biogas</p>	
<p>6.</p>	<p>Messages about avoiding wastage should be placed at multiple locations</p>	
<p>7.</p>	<p>Dustbins at every 100m - There should be dustbins at every 100 m in open spaces</p>	<p>Under process</p>
<p><b>Section 3 – Water audit</b></p>		
<p>8.</p>	<p>Rain water bunds – There should be landscape beautification project undertaken to appropriate channelize the rain water through bunds and similar facilities</p>	<p>There are dedicated pits available on site</p>



9. Waste water treatment plant



### Section 4 – Health and Hygiene audit

10.	The Institute should have multiple signboards about „No smoking“ and „Healthy premises“ at every nook and corner of the Institute	
11.	The compound wall should have awareness messages about „No Smoking“ and „No Tobacco	Not implemented

*Table 3: Details of the compliance study*





*Plate 4: Discussion with the team*



*Plate 5: Investigation of the amenities and facilities in the premises*



*Plate 6: Group photo with the team post seminar for stakeholders*

### Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit       Energy audit       Environment audit

Institute: O.P. Jindal University      Date: 19/04/2024

Document objective: Induction Meeting attendance sheet

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. M. Kalyan Phani	Internal	Coordinator, NABSE	<i>M. Kalyan Phani</i>
4.	Asay Panday	Internal	Asst. Director Admin	<i>Asay Panday</i>
5.	Dr. Deepak Singh	Internal	Asst. Director IQAC	<i>Dr. Deepak Singh</i>
6.	Brijesh singh	Internal	Asst. Registrar	<i>BK Singh</i>
7.	Dr. Anurag Sharma	Internal	Coordinator - Eco Club	<i>Anurag Sharma</i>
8.	Dr. Jayashram Reth	Internal	Head UG Program, Som	<i>Reth</i>

*Anurag Sharma*  
19/4/2024

Signature & round seal  
 Name: Prof. Anurag Vijayavargiya  
 Designation: Registrar  
 For the said Institute



Signature & round seal  
 Name: Mrs. F. A. Shaikh  
 Designation: Project Coordinator  
 For The Greenvio Solutions

Website: [thegreenviosolutions.co.in](http://thegreenviosolutions.co.in) Email: [greenviosolutions@gmail.com](mailto:greenviosolutions@gmail.com)



Plate 7: Evidence file related to induction meeting attendance record



**Evidence documents for Site visit of external audit team**

Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit       Energy audit       Environment audit

Institute: O.P. JINDAL UNIVERSITY      Date: 19/04/2024

**Document objective: Exit Meeting attendance sheet**

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr S.K. Singh	Internal	Professor	
4.	Dr. Deepak Singh	Internal	Dy. Director, IQAC	
5.	Dr. Jayabharanash Ratu	Internal	Associate prof., Head of Prog., Som	
6.	Brijesh songotm	Internal	Asst. Registrar	
7.	Dr.M.Kalyan Phani	Internal	Coordinator - NAACSE	
8.	Dr. Mahasweta Mahalingam	Internal	Assist Professor Civil	
9.	Dr. Anurag Sharma	Internal	Coordinator - Eco Club	
10.	Dr. Gresh C. Mishra,	Internal	Director - IQAC	

Signature & round seal  
 Name: Prof. Anurag Vijayarajgiya  
 Designation: Registrar  
**For the said Institute**



Signature & round seal  
 Name: Mrs. F. A. Shaikh  
 Designation: Project Coordinator  
**For The Greenvio Solutions**



Website: [thegreenviosolutions.co.in](http://thegreenviosolutions.co.in) Email: [greenviosolutions@gmail.com](mailto:greenviosolutions@gmail.com)

**Plate 8: Evidence file related to exit meeting attendance record**

## 5. Suggestion

The suggestion (inference) would act as a 'PLAN OF ACTION' to implement all the suggestions in a detailed manner. The same has been identified in two phases for a total duration of three years.

### ➔ Phase 1

- *Duration: One year from the date of Report submission – Shared currently*
- These are first hand suggestions
- They are easy and quick to implement
- They involve close very less or almost no expenses
- They can serve as a foundation for the entire plan of action

## Section 1 – Green practices audit

### ➔ Environmental awareness

- There can be various slogans in local and national language on the compound wall giving the message of saving the environment through the joint efforts of the students and staff thereby making the student socially and environmentally responsible citizens.

### ➔ Government initiatives

- Undertake initiatives such as Swachh Bharat Abhiyan, cleanliness drives in the Institute and surrounding villages also activities such as the capacity building of locals in surrounding villages by Institute students.

### ➔ Increase the green awareness practice

- This should be in terms of the physical and virtual events, which will be beneficial for all stakeholders in the shared premises. (Basically the frequency of the lectures should be increased)

### ➔ Mandatory programs should be conducted on following days

- January

- i. Wd. Braille Day
- February
  - i. Wd. Wetland day
  - ii. Wd. Pulses day
  - iii. Intd. Polar Bear Day
  - iv. NI. Science day
- March
  - i. Wd. Wildlife day
  - ii. Intd. Action for Rivers
  - iii. Global Recycling Day
  - iv. Wd. Sparrow day
  - v. World forest day/ Intl. day of happiness
  - vi. Wd. Water day
  - vii. Wd. Meteorological & resources day
- 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
- May
  - i. Wd Migratory Bird Day
  - ii. Intd. Of plant health
  - iii. Wd. Bee day
  - iv. Intd. Biological diversity
  - v. Wd. No tobacco day
- June
  - i. Wd. Bicycle day
  - ii. Wd. Env't 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. NI. Birds day
  - iii. Wd. Energy/ Diabetes
  - iv. Wd. Toilet day
- December
  - i. Intd. Person with disability day
  - ii. Wd. Soil day

Note:

- ➔ Wd. Stands for World
- ➔ Intd. Stands for International Day

## Section 2 - Waste audit

### ➔ Awareness

- Educate the housekeeping staff through monthly or quarterly programs related to waste management
- Generate awareness among student and staff stakeholders about products that generate waste through display boards about 'Do not litter' with messages about waste management, its importance and process

### ➔ Measures towards waste management

- Check cutlery practice in canteen area to inculcate healthy habits
  - i. Steel/ paper/ *bagasses* (sugarcane waste) plates for food
  - ii. Paper cups/ *Kulhad* or mud containers for tea
  - iii. Food served on leaf and further used for composting
  - iv. Spoons or straws made of disposable or edible material
  - v. Stakeholders can be guided to bring their own tiffin's for material management
  - vi. Possibilities of waste paper reused including newspaper for cutlery replacement can be explored
- Waste management for every type of waste
  - i. Increase the manpower for campus management
  - ii. Avoid any kind of waste burning as it is hazardous
  - iii. Green organic waste – Dust, dry leaves, twigs, branches – Converted into organic compost/ bio fertilizer
  - iv. Brown organic waste – Non-vegetarian food waste along with green organic waste converted into vermin compost
  - v. Scrap materials – Generated through furniture or old products should be recycled 100% through workshops for stakeholders
  - vi. Go paperless – Use online medium to transfer notes and all information which save paper waste

### ➔ Regular checks

- Food wastage - Check the quantity of food wastage in canteen/ hostel mess and device a plan of action with the staff accordingly
- Dustbins overflow – Location of the dustbins, whether they are over flowing, whether the waste is dumped anywhere within or in backyard of premises – Take a check and collect the waste appropriately

### ➔ Facilities

- One dry small dustbin of each class must be installed
- One dry big dustbin has to be installed in every 10-20 meters of walking area in outdoor spaces
- Install twin litter dustbins on every floor, outdoors specifically canteen - Provision of coloured specific dustbins for different waste, instruction boards at multiple locations 'OR' Blue dustbin for degradable or red dustbin for household waste or green dustbin for recyclable
- Install Sani bins with display of 'Sanitary pads icon' in washrooms of every department and toilets

DETAILED

## Section 3 - Water audit

### ➔ Awareness

- Remind every stakeholder about water conservation/ avoid water wastage by displaying board at every wash room, laboratories, outdoor ground and canteen areas
- Literate employees about water conservation and educate the staff members about the measures and action that can be taken

### ➔ Measures towards water conservation

- Put a container below the outdoor unit pipe of every air conditioner and reuse the same for secondary purposes such as washing cars, cleaning campus outdoor areas etc. avoid using the same for plantation.
  - i. Maintain a record of the nos. of containers and water recycled on a daily basis, further prepare a monthly or quarterly report about the same

### ➔ Regular checks

- Check taps/ faucets of toilets, wash basins, laboratories and outdoor areas for non-working conditions and leakages on a daily basis after 5 pm or once Institute's working hours are over
- If there is hostel facility there should be a regular check once students go to the Institute for any open taps or any type of water wastage; additionally replace all showers with bucket and tap system within hostel premises
- Lock the outdoor taps when they are not in use and check pipelines for damage to avoid any non-maintenance
- Use buckets for floor cleaning to save water and recycle the waste water
- Any kind of water wastage in any area indoor/ outdoor in every department of the Institute and report about the same to authorities
- Cover any open drain/ open water area (except farm/ water pond) that can be prone to become a mosquito breeding spot

## Section 4 - Health and Hygiene Audit

### ➔ Awareness

- Prepare specific instructions for cleaning and sanitizing and display the instructions all over premises
- Display signages/ posters about 'Do not spit' and 'Keep surrounding clean' No smoking' and 'Healthy premises' for healthy habits
- Undertake every Saturday 'Campus Cleanliness program' once in a week by the students and staff members

### ➔ Neat and clean premises practices

- Daily one times cleaning of all floors passage areas through sweeping dusting in indoor areas collection of dry fallen leaves and access ways; watering of plants in outdoor areas
- Daily three times cleaning, disinfecting washroom areas and check to avoid any garbage burning all around campus
- Weekly deep cleaning of building spaces including individual areas, open grounds and grass cutting

### ➔ Stakeholder intervention

- Practice pest control programs with through external stakeholders such that 'Once in every 15 days for Library' whereas 'Once in a month for outdoor areas such as open drains, mosquito breeding spots etc.' and 'Once in every six months or annually for entire campus'

### ➔ Hygiene Facilities - Availability of Sanitizing Equipment

- Water dispenser (Non-mechanic/ electric), hand wash on every floor
- There should be facilities such as potpourri, camphor tablets in the toilet to avoid smell and health related issues in toilet areas
- Install sanitary vending machine or make the sanitary pads available through a female representative, the information about the same should be displayed in foyer areas
- Green carpets could be placed outside drinking water and toilet blocks. This will add to hygiene areas and keep the water spillage under control.



## 6. 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.

- ➔ Uniform Plumbing Code – India, 2008
- ➔ IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- ➔ IGBC Green Landscape Rating system, March 2013
- ➔ BOMA Canada Waste Auditing Guide, Best Environmental Standards, BOMA BEST – Canada

