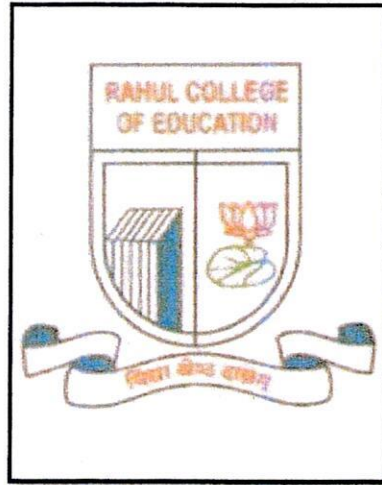


# GREEN AUDIT REPORT

of

## RAHUL COLLEGE OF EDUCATION

Navghar Raod, Bhayander (East), Thane 401 105



Year: 2020-21

Prepared by:

### ENRICH CONSULTANTS

Yashashree, 26, Nirmal Bag Society,  
Near Muktangnan English School, Parvati, Pune 411009  
Phone: 09890444795 Email: [enrichcons@gmail.com](mailto:enrichcons@gmail.com)

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## REGISTRATION CERTIFICATES

Regn. No. EA-8192		No. 2942
<b>National Productivity Council</b> (National Certifying Agency)		
<b>PROVISIONAL CERTIFICATE</b>		
This is to certify that Mr. / Ms. <u>Achyut Yashavant Mehendale</u> son / daughter of Mr. <u>Yashavant</u> has passed the National Certification Examination for Energy Auditors in April 2007, conducted on behalf of the Bureau of Energy Efficiency, Ministry of Power, Government of India. He / She is qualified as Certified Energy Manager as well as Certified Energy Auditor. He / She shall be entitled to practice as Energy Auditor under the Energy Conservation Act 2001, subject to the fulfillment of qualifications for the Accredited Energy Auditor and issue of certificate of Accreditation by the Bureau of Energy Efficiency under the said Act. This certificate is valid till the issuance of an official certificate by the Bureau of Energy Efficiency.		
Place : Chennai, India		 Controller of Examination
Date : 10 <sup>th</sup> August 2007		

## BEE AUDITOR CERTIFICATE

<b>MAHARASHTRA ENERGY DEVELOPMENT AGENCY</b> <small>An ISO 9001:2000 Reg. No. RD 91-5402</small>	
<b>Maharashtra Energy Development Agency</b> (Government of Maharashtra Institution) Aundh Road, Opposite Spicer College Road, Near Commissionerate of Animal Husbandary, Aundh, Pune, Maharashtra 411067 Ph No: 020-35000450 Email: <a href="mailto:eee@muhaurja.com">eee@muhaurja.com</a> , Web: <a href="http://www.muhaurja.com">www.muhaurja.com</a>	
ECN/2021-22/CR-14/1577	22 <sup>nd</sup> April, 2021
<b>CERTIFICATE OF REGISTRATION FOR CLASS 'A'</b>	
We hereby certify that, the firm having following particulars is registered with <b>MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA)</b> under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.	
<b>Name and Address of the firm</b>	: M/s Enrich Consultants Yashashree, Plot No. 26, Nirmal Bag Society, Near Muktagang English School, Purvati, Pune - 411009.
<b>Registration Category</b>	: Empanelled Consultant for Energy Conservation Programme for Class 'A'
<b>Registration Number</b>	: MEDA/ECN/2021-22/Class A/EA-03
<ul style="list-style-type: none"><li>Energy Conservation Programme intends to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and take concrete steps to achieve the evaluated energy savings.</li><li>MEDA reserves the right to visit at any time without giving prior information to verify quarterly activities performed by the firm and canceling the registration, if the information is found incorrect.</li><li>This empanelment is valid till 21<sup>st</sup> April, 2023 from the date of registration, to carry out energy audits under the Energy Conservation Programme</li><li>The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.</li></ul>	
 General Manager (I.C.)	

## MEDA EMPANELMENT CERTIFICATE

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## ENRICH CONSULTANTS

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Near Muktangan English School, Parvati, Pune 411 009  
Tel: 09890444795 Email: [enrichcons@gmail.com](mailto:enrichcons@gmail.com)

Ref: EC/RCOE/20-21/02

Date: 12/7/2021

### CERTIFICATE

This is to certify that we have conducted Green Audit at Rahul College of Education, Bhayander (East) Thane 401 105, in the Academic year 2020-21.

The College has adopted following Green & Sustainable Practices:

- Usage of Energy Efficient LED Light Fitting
- Maximum Usage of Day Lighting
- Segregation of Waste at source
- Implementation of Rain Water Management Project
- Good internal Road
- Creation of Awareness on Ban on Single Use Plastic by Display of Poster

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

For Enrich Consultants,



**A Y Mehendale,**  
Certified Energy Auditor,  
EA-8192



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## **ACKNOWLEDGEMENT**

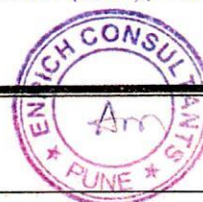
We Enrich Consultants, Pune, express our sincere gratitude to the management of Rahul College of Education, Bhayander (East) Thane 401 105, for awarding us the assignment of Green Audit of their Campus for the Year: 2020-21.

We are thankful to all Staff members for helping us during the field study.

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## EXECUTIVE SUMMARY

1. Rahul College of Education, Bhayander, consumes Energy in the form of **Electrical Energy**; used for various Electrical Equipment.

### 2. Present Energy Consumption & CO<sub>2</sub> Emission:

No	Parameter/ Value	Energy Consumed, kWh	CO <sub>2</sub> Emissions, MT
1	Total	15338	13.80
2	Maximum	2778	2.50
3	Minimum	878	0.79
4	Average	1278.17	1.15

### 3. Usage of Renewable Energy:

- The College has yet to install Roof Top Solar PV Plant.

### 4. Waste Management:

#### 4.1 Segregation of Waste at Source:

The Dry and Wet waste is segregated at the source. Waste collection Bins are kept at various points.

### 5. Rain Water Management:

The Rain water falling on terrace is used to increase the Underground Water Table.

### 6. Green & Sustainable Practices:

- Good internal road for easy movement of commuters
- Provision of Lift for Divyangajan
- Creation of Awareness Ban on Single Use Plastic by Display of Posters

### 7. Assumption:

1. 1 kWh of Electrical Energy releases 0.9 Kg of CO<sub>2</sub> into atmosphere

### 8. Reference:

- For CO<sub>2</sub> Emission Computation: [www.tatapower.com](http://www.tatapower.com)

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## ABBREVIATIONS

Kg	:	Kilo Gram
MT	:	Metric Ton
kWh	:	kilo-Watt Hour
LPD	:	Liters per Day
LED	:	Light Emitting Diode

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## **CHAPTER-I INTRODUCTION**

### **1.1 Objectives:**

1. To study present Energy Consumption
2. To compute CO<sub>2</sub> emissions
3. To Study Usage of Renewable Energy
4. To Study Waste Management Practices
5. To Study Rain Water Management
6. To Study Green & Sustainable Initiatives

### **1.2 Table No 1: General Details of College:**

No	Head	Particulars
1	Name of College	Rahul College of Education
2	Address	Navghar Road, Bhayander (East) Thane 401 105
3	Affiliation	University of Mumbai

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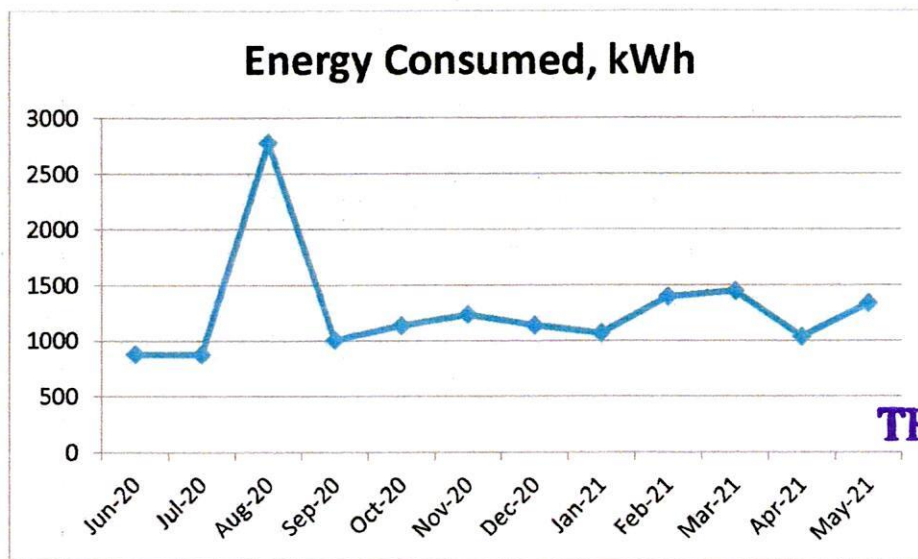
## CHAPTER-II STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of last year Electrical Energy.

Table No 2: Electrical Energy Consumption Analysis: 2020-21:

No	Month	Energy Consumed, kWh
1	Jun-20	878
2	Jul-20	878
3	Aug-20	2778
4	Sep-20	1005
5	Oct-20	1136
6	Nov-20	1237
7	Dec-20	1139
8	Jan-21	1069
9	Feb-21	1398
10	Mar-21	1448
11	Apr-21	1036
12	May-21	1336
13	Total	15338
14	Maximum	2778
15	Minimum	878
16	Average	1278.17

Chart No 1: To study the variation of Monthly Energy Consumption, kWh:



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### CHAPTER III STUDY OF CARBON FOOT PRINTING

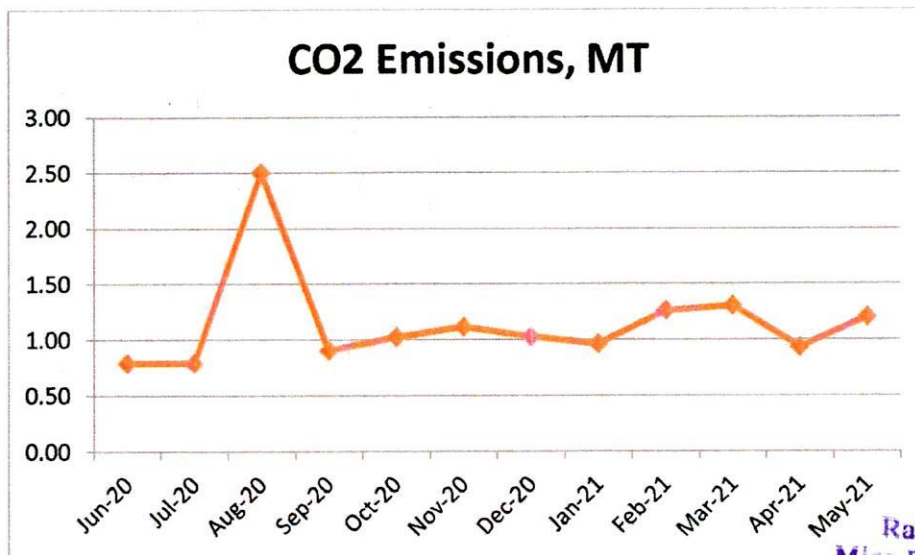
A Carbon Foot print is defined as the Total Greenhouse Gas emissions, emitted due to various activities. **Basis for computation of CO<sub>2</sub> Emissions:**

- 1 kWh of Electrical Energy releases 0.9 Kg of CO<sub>2</sub> into atmosphere

**Table No 3: Month wise CO<sub>2</sub> Emissions:**

No	Month	Energy Consumed, kWh	CO <sub>2</sub> Emissions, MT
1	Jun-20	878	0.79
2	Jul-20	878	0.79
3	Aug-20	2778	2.50
4	Sep-20	1005	0.90
5	Oct-20	1136	1.02
6	Nov-20	1237	1.11
7	Dec-20	1139	1.03
8	Jan-21	1069	0.96
9	Feb-21	1398	1.26
10	Mar-21	1448	1.30
11	Apr-21	1036	0.93
12	May-21	1336	1.20
13	Total	15338	13.80
14	Maximum	2778	2.50
15	Minimum	878	0.79
16	Average	1278.17	1.15

**Chart No 2: Representation of Month wise CO<sub>2</sub> Emissions:**

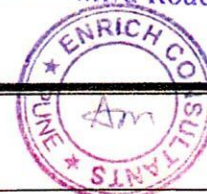


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*[Signature]*

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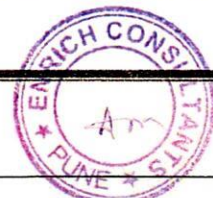
**CHAPTER IV**  
**STUDY OF USAGE OF RENEWABLE ENERGY**

The College has yet to install Roof Top Solar PV Plant.

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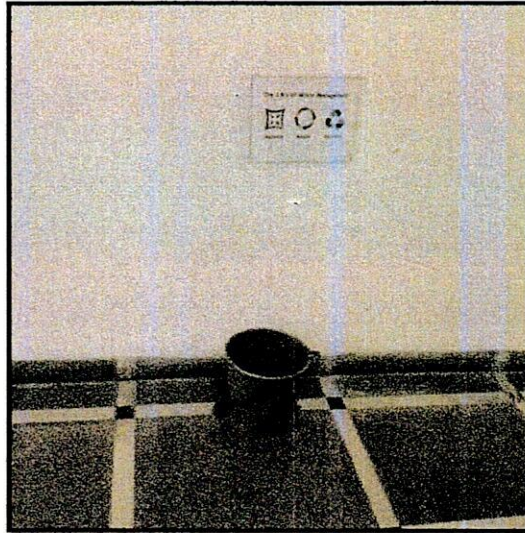


## **CHAPTER V STUDY OF WASTE MANAGEMENT**

### **5.1 Segregation of Waste at Source:**

The Dry and Wet waste is segregated at the source. Waste collection Bins are kept at various points.

**Photograph of Waste Collection Bin:**



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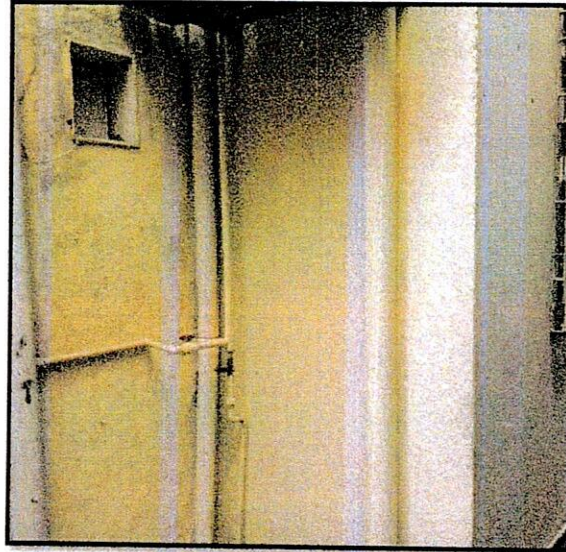


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## CHAPTER-VI STUDY OF RAIN WATER MANAGEMENT

The Rain water falling on terrace is used to increase the Underground Water Table.

Photograph of Rain Water Collecting Pipe:



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*[Handwritten Signature]*

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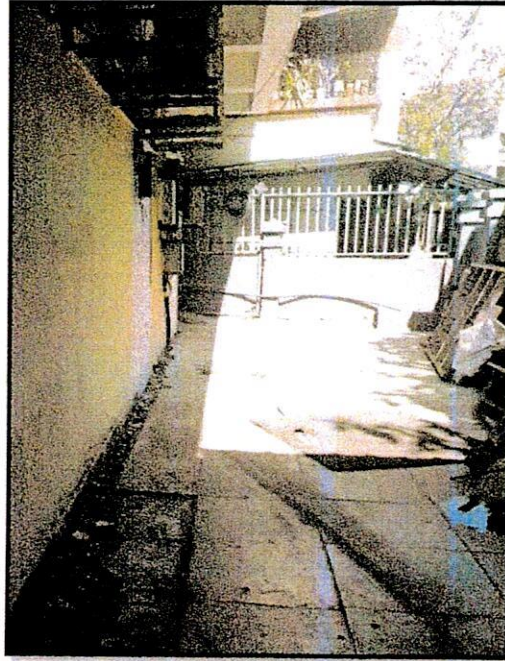
## **CHAPTER-VII**

### **STUDY OF GREEN & SUSTAINABLE PRACTICES**

#### **7.1 Pedestrian Friendly Road:**

The College has well maintained internal road to facilitate the easy movement of the students within the campus.

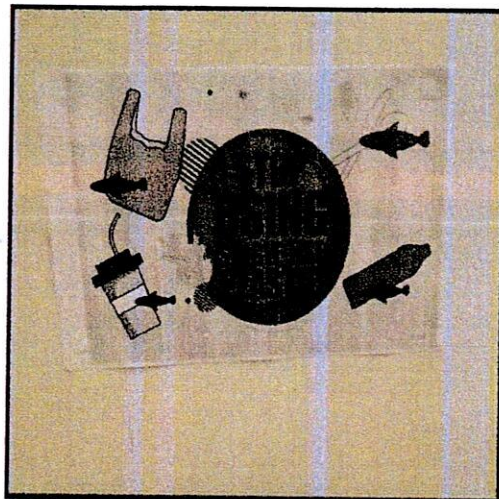
**Photograph of Internal Road inside the College Campus:**



#### **7.2 Creation of Awareness about Ban on Single Use Plastic:**

The College has displayed posters emphasizing on importance of Ban on Single Use Plastic.

**Photograph of Ban on Single Use Plastic:**



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*[Handwritten Signature]*

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