

#### Pradnya Niketan Education Society's NAGESH KARAJAGI ORCHID COLLEGE OF ENGINEERING & TECHNOLOGY, SOLAPUR NAAC Accredited, Approved by AICTE, New Delhi & Affiliated to DBATU, Lonere

E-mail : office@orchidengg.ac.in, Website : www.orchidengg.ac.in, Phone No. 9423084363 Post Box No. 154, Gut No. 16, Solapur-Tuljapur Road, Tale Hipparaga, Solapur- 413 002.

# **Criterion 7- Institutional Values and Best Practices**

7.1.2. Environmental Consciousness and Sustainability and Divyangjan friendly initiatives

Geo-tagged Photographs of the Facilities	Facilities	Page No.
	<ol> <li>Alternate sources of Energy &amp; Energy conservation measures</li> </ol>	2-15
	2) Management of the various types of Degradable and non- degradable waste	16-20
	<ul><li>3) Water Conservation</li><li>4) Green Campus Initiatives</li></ul>	21-27 28-35
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# 1) Alternate sources of Energy & Energy conservation

<u>measures</u>





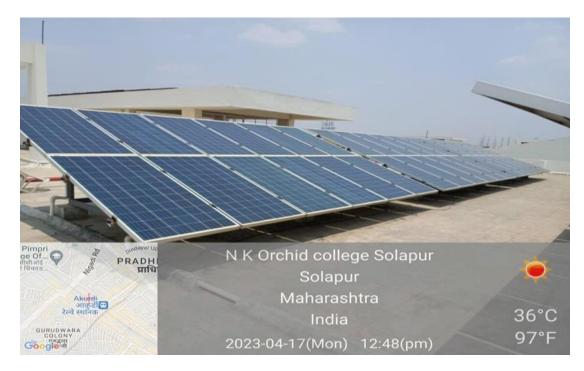


Figure 1: 36 KW Solar Power Generation System



Figure 2: 36 KW Solar Power Generation System





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Figure 3: Net metering (Generated excess electricity from Solar Power Generation System sell back to the Maharashtra State Electricity Distribution Company)







Figure 4: RO Plant operated on Solar Power Generation System



Figure 5: Lawn Sprinkler system operated on Solar Power Generation System







Figure 6: LED Bulbs for saving energy

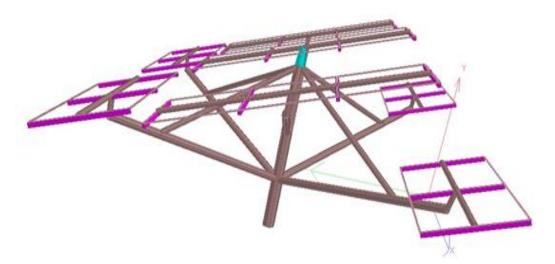


Figure 7: LED Bulbs for saving energy









Solar Project- Community Based Solar Tree





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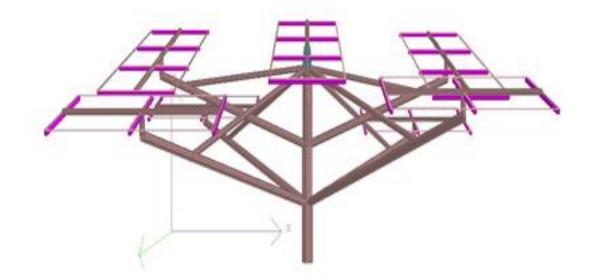


Fig No 8: 3D Modelling of Solar Tree of 13.6KWHr Energy Generation



Fig No 9: Prototype Model of Solar Tree





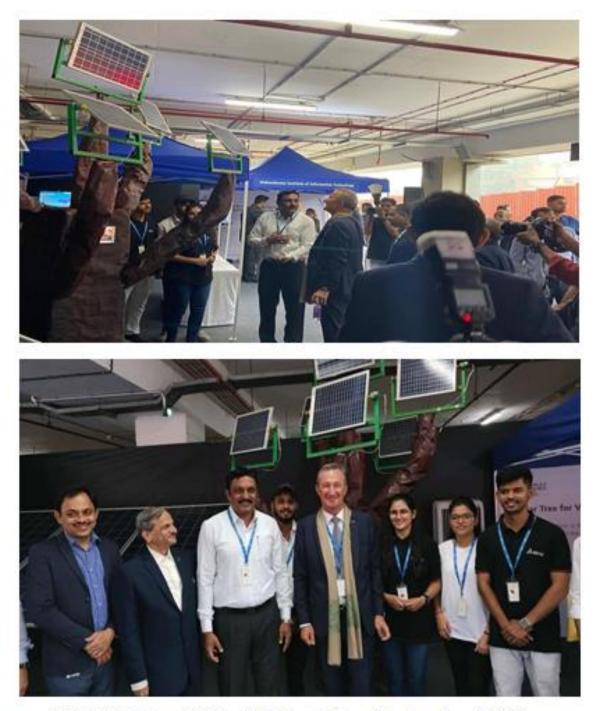


Fig No 10: Prototype Model of Solar Tree in Dassault Systems Pune Exhibition





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#### Project Title:- DESIGN AND FABRICATION OF SOLAR DEHYDRATION SYSTEM



Fig.11: Experimental Setup of Solar Dehydration





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#### PROJECT TITLE: FABRICATION AND ANALYSIS OF SOLAR OPERATED MILK

#### **PASTEURIZATION SYSTEM**



Fig. 12: Experiment Setup of Solar-Operated Milk Pasteurization System





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#### Project Title: Design of Rooftop Solar System for Pump Industry

Fig. 13: Design of Rooftop Solar System for Pump Industry

From Left Kusuma Mane, Rupali Sutar, Prof.I.I.Mujawar, Varalaxmi Maile, Sonali

Vasamale.

Project Guide: Prof. I. I. Mujawar





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Project Title: Energy Audit and Design of Solar System for TextileMill



**Fig. 14: Energy Audit and Design of Solar System for Textile Mill** From Left Manisha Awar, Kharatmal Pooja, Prof. S.S.Shaha, Halole Vijayalaxmi, Gaddam Yogeshwari





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Figure 15: Solar Lab



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Fig 17: Solar Water Heater installed in Boys Hostel's top floor which helps in reducing electricity consumption



Fig 18: Solar Water Heater installed in Boys Hostel's top floor which helps in reducing electricity consumption





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# 2) Management of the various types of Degradable and non-degradable waste





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Figure 19: Dustbin for Dry and Wet Waste near Xerox centre

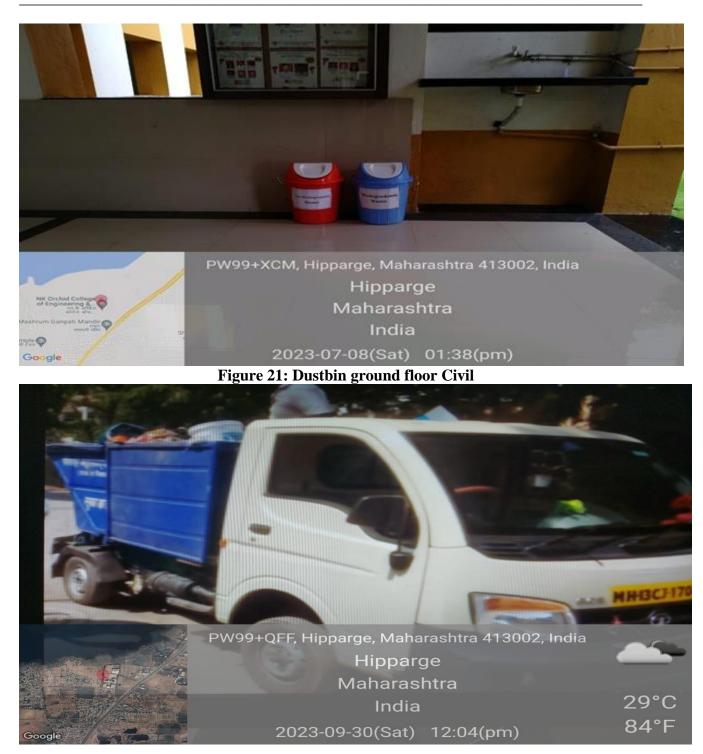


Figure 20: Dustbin near Mech-civil Garden





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#### Figure 22: Disposal of Dry and Wet Waste







Figure 23: Degradable (Decomposition) Waste



Figure 24: Degradable (Decomposition) Waste







Figure 25: Non-Degradable (Decomposition) Waste





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# 3) Water Conservation







Figure 26: "Recycle and Reuse of Waste Water" (80,000 litre of waste water is treated and reused for gardening)



Figure 27: "Recycle and Reuse of Waste Water" (80,000 litre of waste water is treated and reused for gardening)







**Figure 28: Drip Irrigation** 



Figure 29: Drip Irrigation







Figure 30: Through Sprinkler System water is conserved



Figure 31: Through Sprinkler System water is conserved





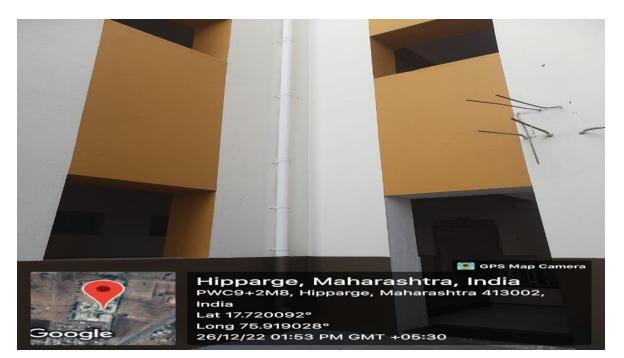


Figure 32: Recycle and Reuse of waste water for gardening

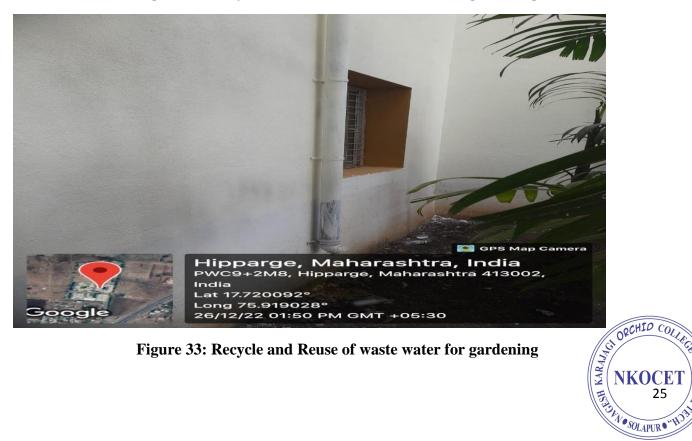


Figure 33: Recycle and Reuse of waste water for gardening



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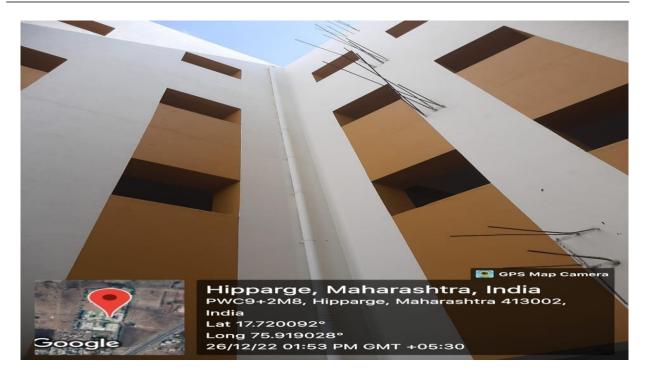


Figure 34: Recycle and Reuse of waste water for gardening

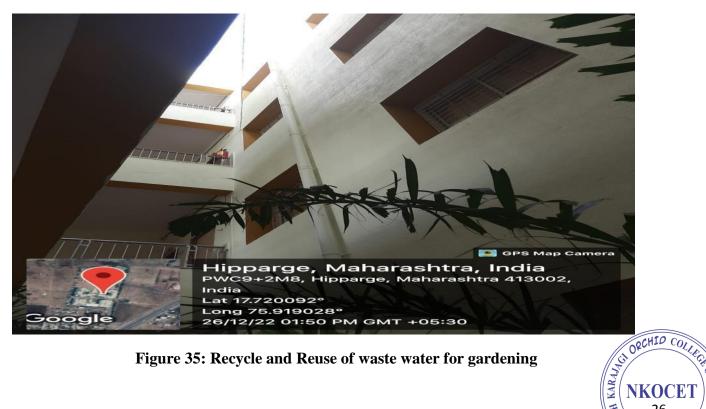


Figure 35: Recycle and Reuse of waste water for gardening

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Figure 36: Side drains to collect rain water



Figure 37: Side drains to collect rain water





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# 4) Green Campus Initiatives





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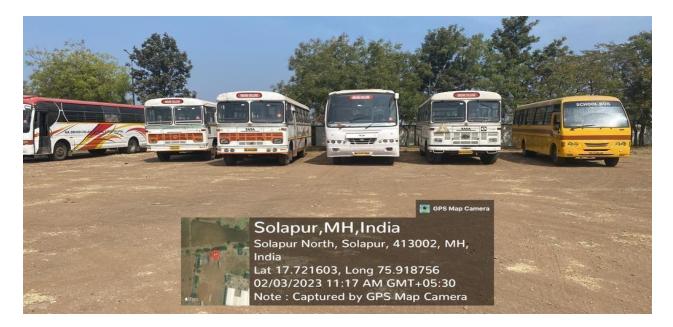


Figure 38: Most of our students are using Public transport which reduces carbon emission by Individual Students



Figure 39: Most of our students are using Public transport which reduces carbon emission by Individual Students





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Figure 40: "Recycle and Reuse of Waste Water" (80,000 litre of waste water is treated and reused for gardening)



Figure 41: "Recycle and Reuse of Waste Water" (80,000 litre of waste water is treated and reused for gardening)







**Figure 42: Trees Planted in the Campus** 



**Figure 43: Trees Planted in the Campus** 







**Figure 44: Pedestrian Friendly Pathway** 



**Figure 45: Pedestrian Friendly Pathway** 





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Figure 46: E-Vehicle



Figure 47: E-Vehicle





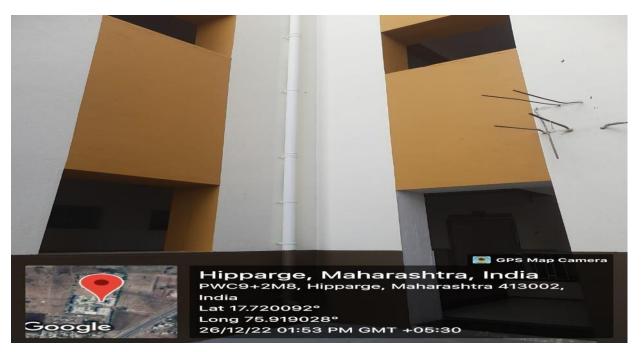


Figure 48: Pipes attached to the roofs of the buildings



Figure 49: Pipes attached to the roofs of the buildings





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#### Figure 50: Rain water collected through the pipes is used to water the plants

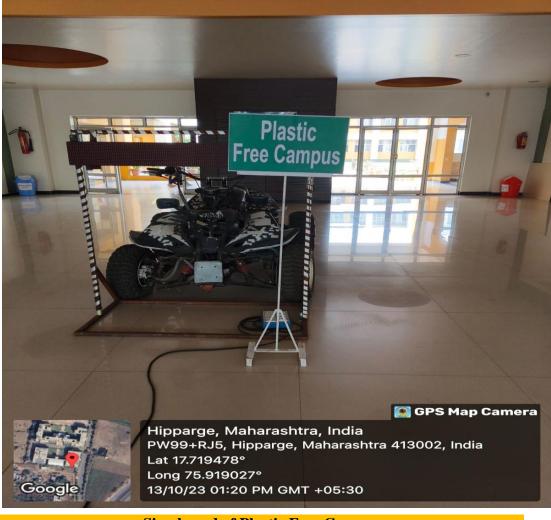


Figure 51: Rain Water Harvesting





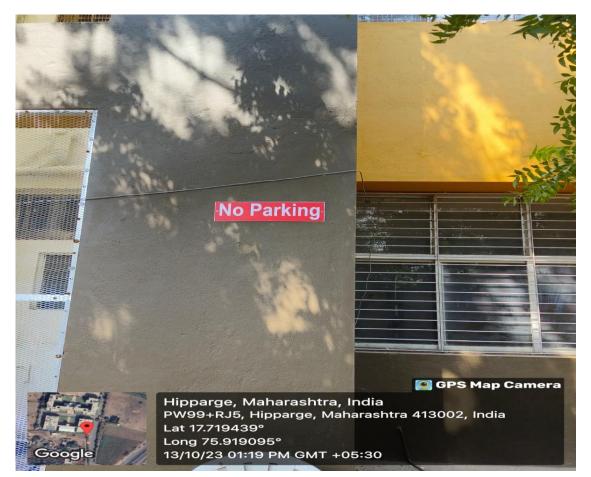
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**Sign board of Plastic Free Campus** 





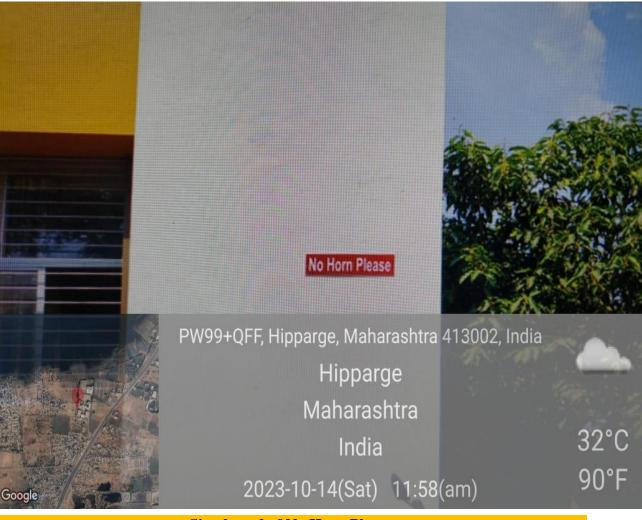


Sign board of No Parking





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Sign board of No Horn Please





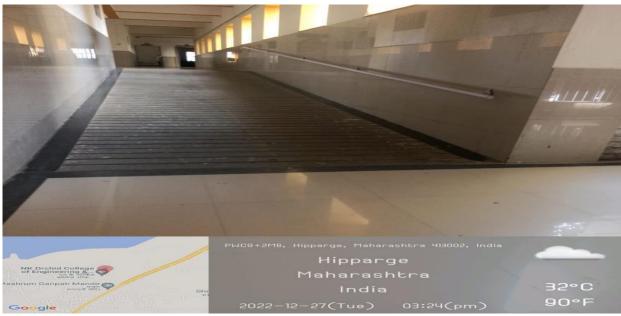








Figure 52: Ramps for Wheelchair with rails



**Figure 53: Ramps for Wheel Chair with rails** 







Figure 54: Ramps for Wheelchair with rails



Figure 55: Ramps for Wheelchair with rails







Figure 56: Washroom for the Divyangjan



Figure 57: Wheelchair for the Divyangjan

