



BUNTS SANGHA'S

## S.M.SHETTY COLLEGE OF SCIENCE, COMMERCE & MANAGEMENT STUDIES

### CRITERION 7

#### 7.1.2

### Facilities and Initiatives for Energy Conservation, Waste Management, Water Conservation, Green Campus, Disabled-Friendly Campus **BRIEF REPORT OF EACH FACILITIES**

S.N O	CONTENT	PAGE NO.
1.	Alternate Sources of Energy and Energy Conservation Measures	2
2.	Management of the Various Types of Degradable and Non-Degradable Water	4
3	Water Conservation	7
4	Green Initiatives	8
5	Disabled Friendly Campus	10



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# ALTERNATE ENERGY SOURCES & ENERGY CONSERVATION INITIATIVES

## INSTITUTIONAL REPORT

Over the years, the institution has been involved in making it energy efficient. In Spite of having limited space and vertical structure, the institution has deployed all possible ways to become energy efficient.

### **Infrastructural Initiatives:**

The institution has installed Solar Panels for generating electricity. It has been operational since May 2022. In the first month itself (May, 2022) the amount of energy generated through alternate source was 2294 units which was deducted from the total amount of 35834 units for billing.



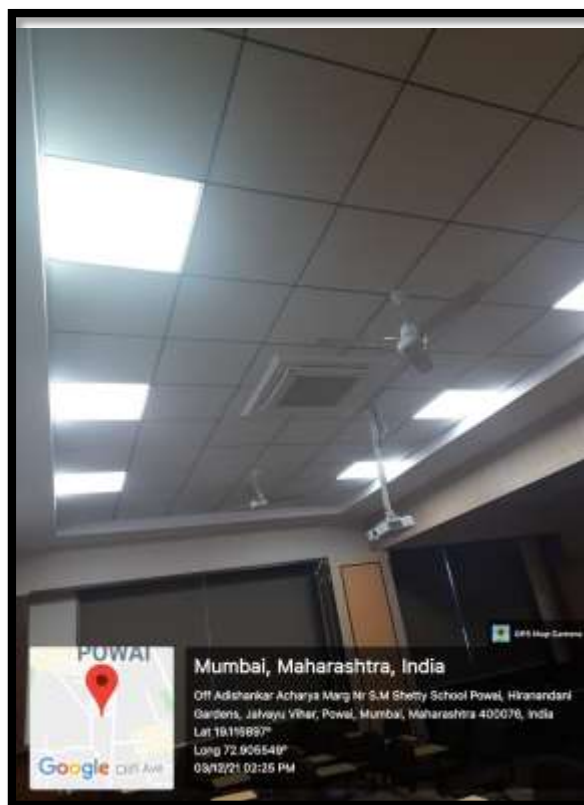
*Solar Panel in the Campus*

*Solar Panel has become operational since May 2022*

All the classrooms, laboratories and washrooms use LED lights which reduces the consumption of electricity overall.

**NAAC SSR Cycle 2 ( 2017-2022 )**

**Metric 7.1.2 - BRIEF REPORTS OF FACILITIES**



*All the classrooms and other facilities in the institution are installed with LED lights for making the campus more energy efficient and also generating less waste.*

As recommended in the Energy audit report, the Air conditioners (ACs) which were more than ten years old were replaced by 36 new better energy efficient ceiling mounted Inverter based (cassette and split) ACs of 1, 1.5 and 2 TR. These ACs are of 3 to 5 star ratings based on usage. The security persons are instructed to maintain the temperature of these ACs at 24 degree centigrade for better energy efficiency. The old window ACs have been removed.



*New ACs with Inverters and better star rating*

In April 2022, the management has also approved installation of sensor-based electric bulbs in students and staff washrooms. It has been installed in staff wash room for trial.



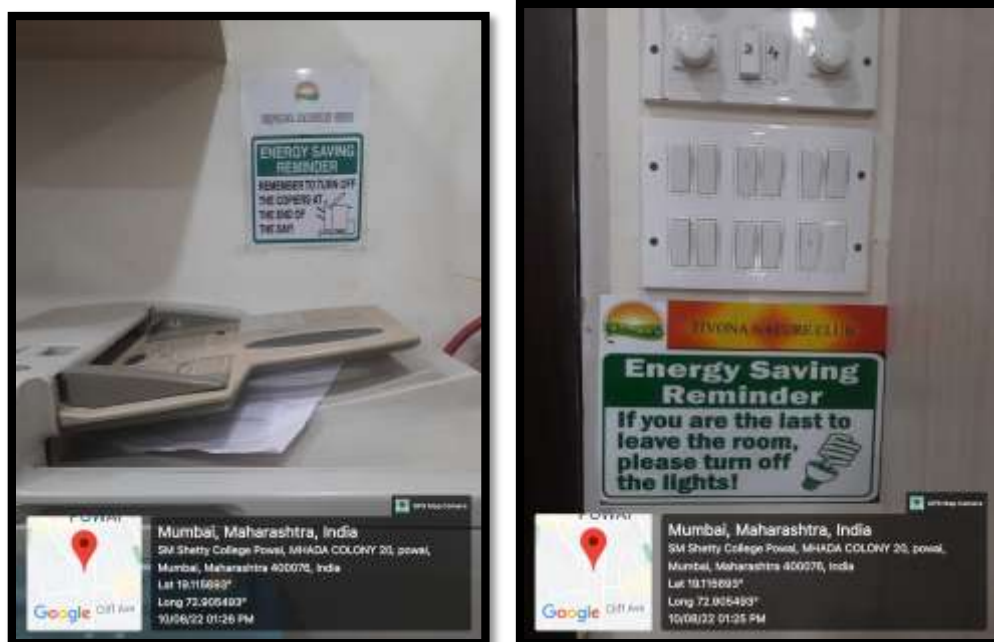
*Staff washroom have been installed with motion based light sensors*

### **Other Initiatives:**

The Nature Club of the institution, Tivona has been educating students through posters near all switch boards to avoid waste of electricity and students have been following instructions accordingly.

**NAAC SSR Cycle 2 ( 2017-2022 )**

**Metric 7.1.2 - BRIEF REPORTS OF FACILITIES**



*Tivona Nature Club has been educating staff and students for conserving energy using simple measures. If occupancy of the room is less in number, the staff and students are instructed to avoid ACs and switch off extra lights or use natural lights and fans instead.*

The institution has well-framed Energy Conservation Policy which has been uploaded on the website for communication.


  
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## **MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON-DEGRADABLE WASTE**

### **INSTITUTIONAL REPORT**

The institution has a centralized, transparent and well-planned waste management system. The institution has predetermined systems of managing different types of waste.

#### **Solid Waste Management -**

Solid waste is generated mainly from three sources from the college: examination, library and canteen.

The paper waste generated from examination and library are disposed through the Paper waste vendor. These paper vendors sell it to the agencies which manage the process of recycling.

Metal scrap generated is sold to metal casting companies through the scrap dealers. Decomposable and non decomposable wastes are segregated in the canteen. **The biodegradable waste is filled in composters** and non-degradable waste is disposed of by BMC (Brihamumbai Municipal Corporation) collection system.

The institution is in **collaboration with a nation-wide initiative “Eco-Brick”** and encourages students to prepare eco-brick using non-recyclable plastic bags and bottles which will be donated to the Green Mumbai Initiative for preparing public utility products.



*Eco- Brick made by students and teachers which will be used by the NGO to make products of public utility*



*The institution has 2 composters - Bio and Vermi Composters for bio degradable waste generated by the*

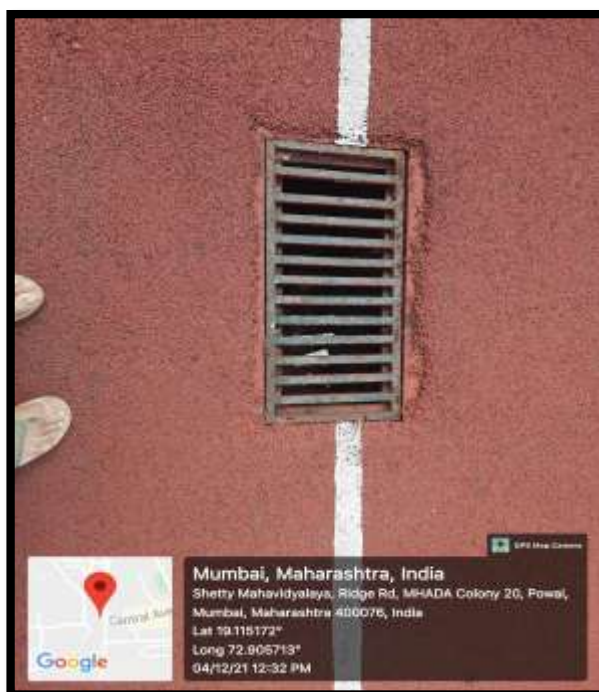
*canteen (During 2020-21, the canteen was not operational)*

### **Liquid waste management -**

The wastewater is disposed as per BMC guidelines through the drainage system if it is contaminated with detergents.



*Water free from detergent is used for watering the plantation in the campus*



*Waste water of the garden is collected and is filtered.*

### Biomedical waste management -

The institution does not actually generate any bio-medical waste during its operations. However, there are two probable sources identified which may generate bio-medical waste.

(i) **Medical Centre:** The medical centre does not conduct any surgery or use syringes for injections. For any such accidents or ailments the students are sent to the nearby hospital. However, for disposing blood soaked bandages the centre uses a red carry bag as per the guideline of BMC.

(ii) **Ladies Washrooms:** The used sanitary napkins are disposed of using black carry bag as per BMC guidelines. Female students and staff were educated to dispose of the used napkins using signage inside all ladies washrooms.



*Disposal System in Ladies Washroom with Guidance for waste disposal*

**E-waste management** - College has an e-waste management cell under the IT department, “e-Environmentation”. The cell organizes competition on e-waste reuse and other activities based on e-waste management. The institution has collaborated with Aavni Environment and Sustainability Consultancy for providing assistance in recycling of e-waste.



*E-Waste Bin installed in campus for collecting Electronic Waste*

The institution conducts 3 types of activities with the old electronic durables:

1. **DONATION** - The institution has been donating old electronic products which are in working condition its own employees and to other needy institutions of the parent community or around Mumbai
2. **SELLING FAULTY DEVICES** - The e-waste which cannot be reused is sold for recycling to the agency by inviting quotations from at least 3 vendors.
3. **DISPOSAL OF E-SCRAP:** The e-waste which cannot be used in above two categories is sold as scrap.

This activity of e-waste disposal is carried out once every 4-5 years, so that a significant amount of e-products can be donated or disposed of. Last donation and disposal of e-waste was organised in May - September 2018. The vendor which was selected for last e-waste disposal is a prominent e-waste management company of the city

· **Waste recycling system -**

- The Institution has composters for biodegradable waste.
- For paper waste and metallic waste, the institution sells the scrap to the agencies which either on their own or through another vendor get it recycled.
- For e-waste, the institution is either donating it for reuse or sell it to the agency which are expert in e-waste management (currently with AK Enterprises)
- For e-waste management guidance the institution has collaborated with Aavni Environment and Sustainability Consultancy.
- The water waste which is free from detergents is used manually for watering the plants

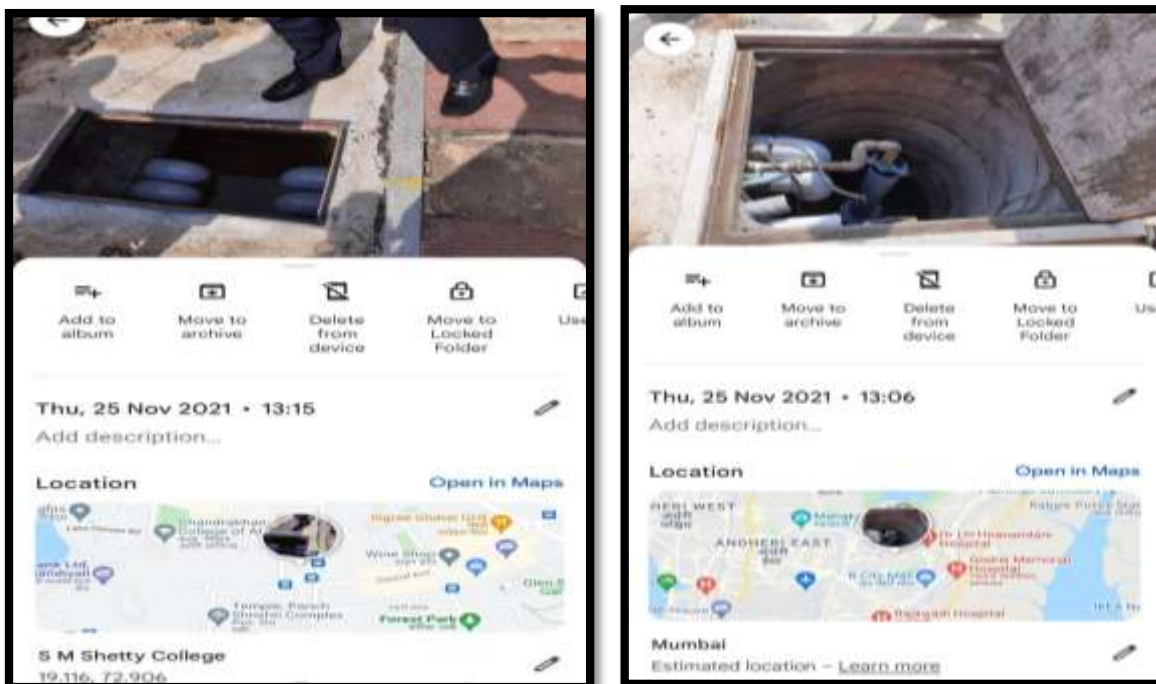
· **Hazardous chemicals and radioactive waste management** - No such waste is generated by the college



## **WATER CONSERVATION**

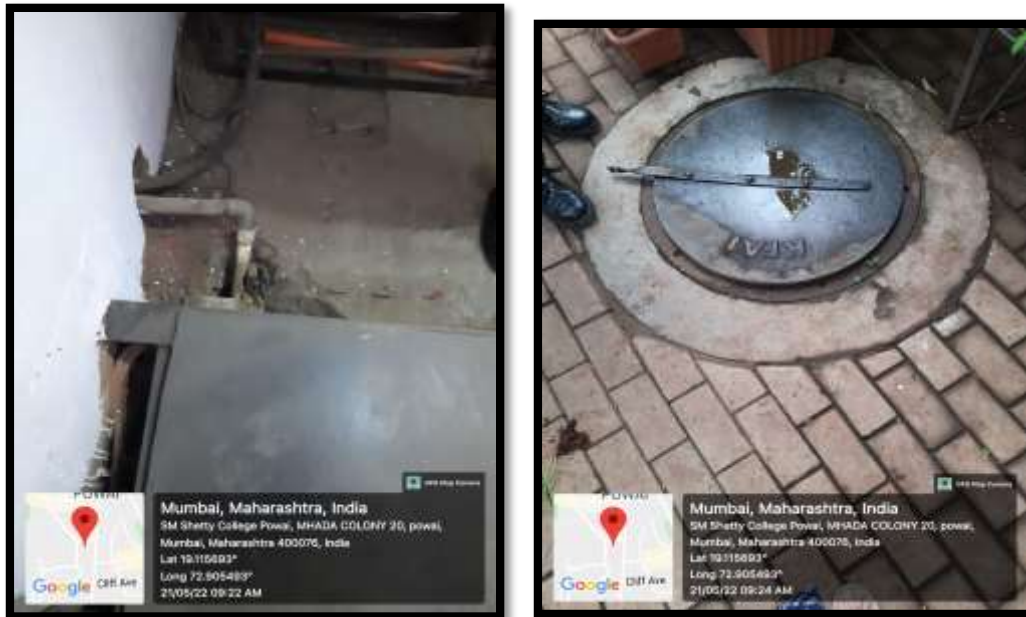
### **INSTITUTIONAL REPORT**

The college makes efforts to conserve water through rain water harvesting, which is routed to an underground /open recharge collector. Rain water and excess water from the garden flow into the underground collector built for the purpose. The collected water is pumped up by the borewell as a separate source of water to be used for various purposes. This is to ensure adequate usage of rainwater and excess water. The borewell water and other sources like the municipality supply are judiciously used so as to not waste water and make best use of rainwater.

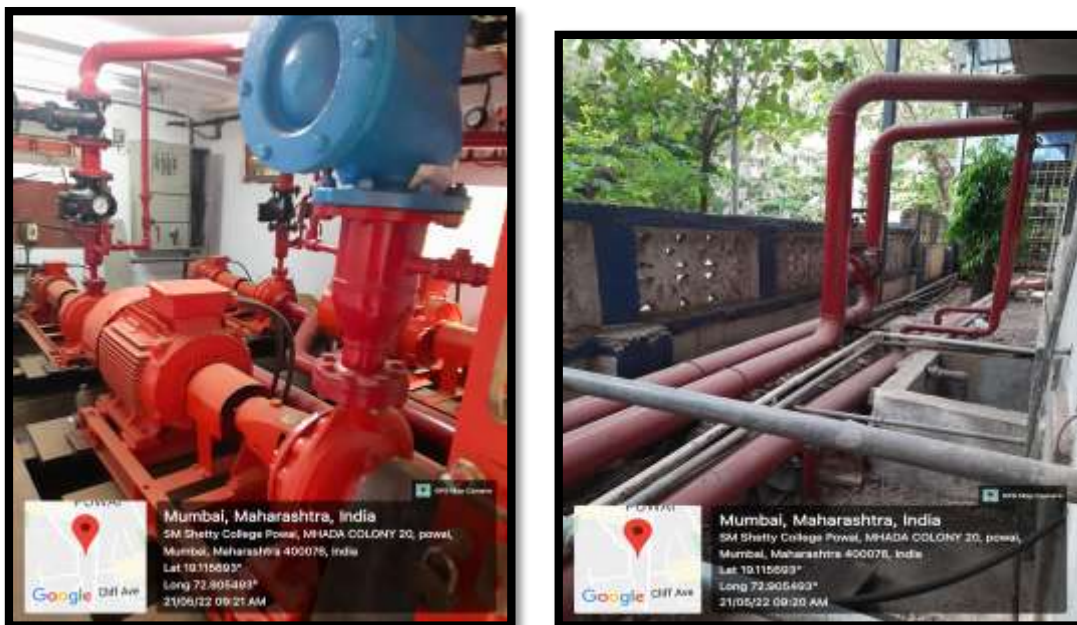


### ***Rain-Water Harvesting and Filtration System to use rain water and waste water***

The Water Management (Collection & Distribution) System is organised in a way that drinking water is stored separately from non potable water used for cleaning, fire extinguisher and such other purposes.



*Collection system from borewell and BMC (for drinking water)*



*Water distribution system : Separate for drinking, non-drinking and fire extinguisher purposes*

5 overhead tanks are used for storing water - 2 for Drinking water, 2 for Water for cleaning, washing etc. and 1 for Fire Extinguisher.



*Five Over head tanks for drinking, non-drinking and fire extinguishing purposes*



*Water distribution System is Managed by full-time security guard and one house-keeping staff*



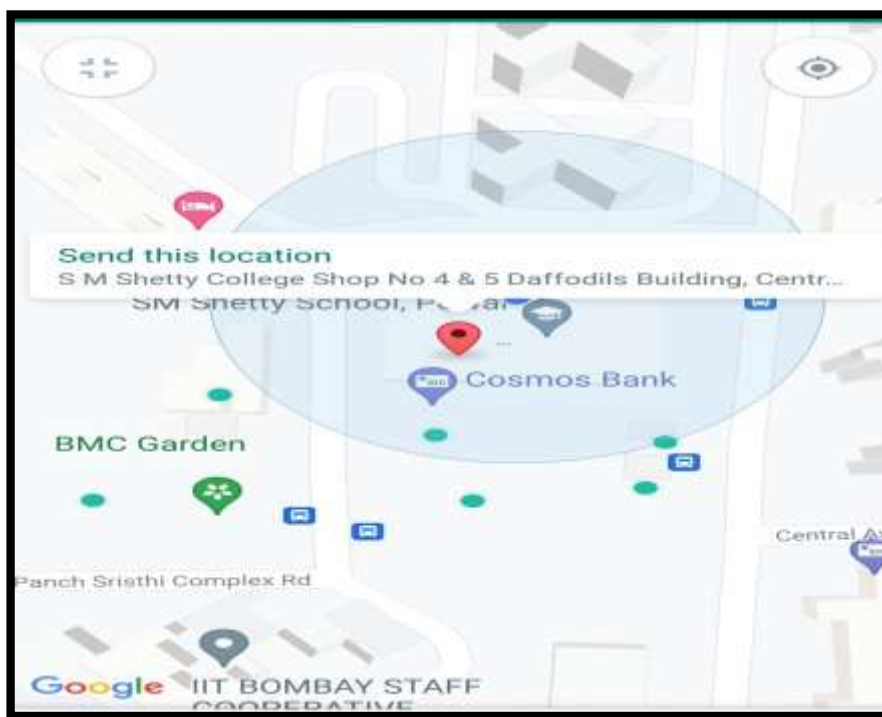
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## **Green Campus Initiatives**

### **INSTITUTIONAL REPORT**

The institution has taken several initiatives to minimize the adverse impact on the environment and to promote green campus.

The Institution is located near Hiranandani Gardens at Powai. It is a 5 minutes walk from Powai Vihar (Lake). The location is blessed with natural beauty as it is surrounded by the Powai Lake on one side and Mountains on the other side of it. There is less pollution due to the absence of railway stations or manufacturing industry in the vicinity.



Though a large portion of the open area of the institution is turf laid and is used for sports and physical activities of the students, but trees and plants have been planted at convenient locations in the open area especially near all the boundary walls. More than 400 different types of trees and plants are planted across the campus. The institution has developed a small nursery to nurture plants bearing fruits or having medicinal or environmental benefits.



*Turf laid ground surrounded by plants and nursery in the campus*



*Use of Steel and Re-Usable plastic in staffroom and canteen*

The institution has undertaken many green initiatives which has helps in maintain sustainability of green and eco-friendly practices. These practices and initiatives are listed below:

1. The institution has **discouraged the use of non-reusable plastics**. The institution uses re-usable steel cups, glass and steel tumblers for staff.
2. To biodegradable waste is converted into compost by vermi-composters and bio-composters which are used for the plants in the campus.
3. The institution maintains the diversity of plants in the campus with the help of Gardner and housekeeping staff.

4. Vehicles are restricted in the campus to maintain a pollution-free environment.
5. The institution has a tradition of gifting saplings to the guests and invitees instead of bouquets.



*Gifting Sapling*

6. Institution in making the students environmentally sensitive by :
  - University prescribed courses like Environmental Studies in first year BCom, Environmental Management in second year of BMS program and Green Computing in BScIT.
  - Best out of waste competitions/ activities are conducted in the campus
  - Certificate Course on Environment and Sustainability has been started since 2021-22
  - E-Environmentation initiative by BScIT program conducts different competitions on e-waste recycling and awareness.
7. The institution has Nature Club - Tivona which undertakes different activities for making students environmentally conscious.



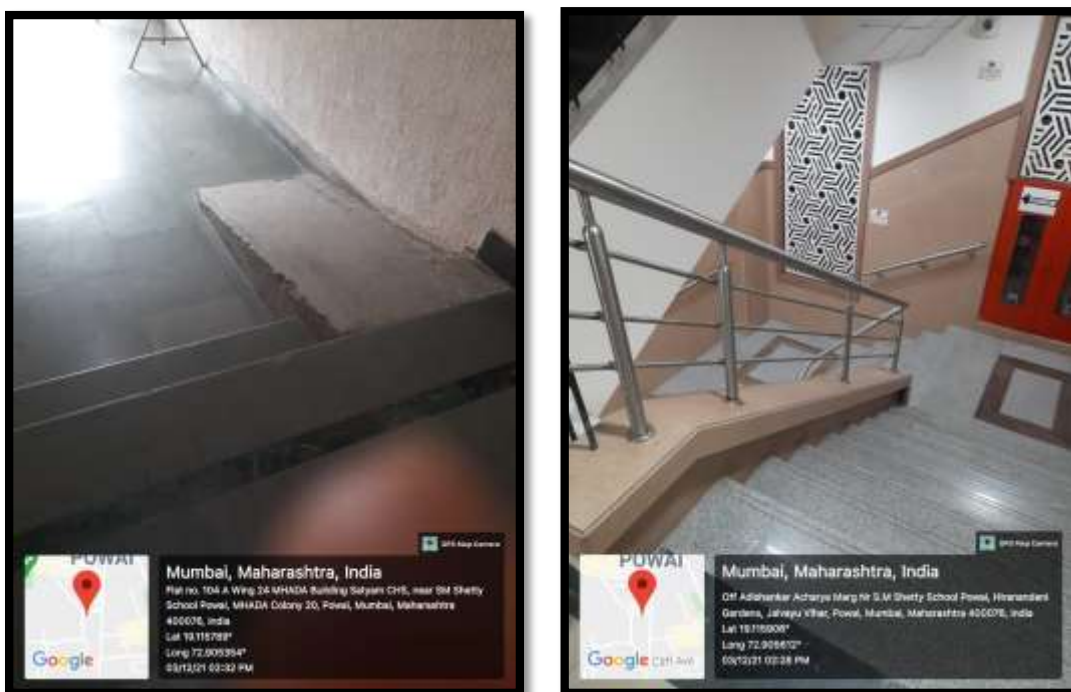
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## **Disabled Friendly Campus**

### **INSTITUTIONAL REPORT**

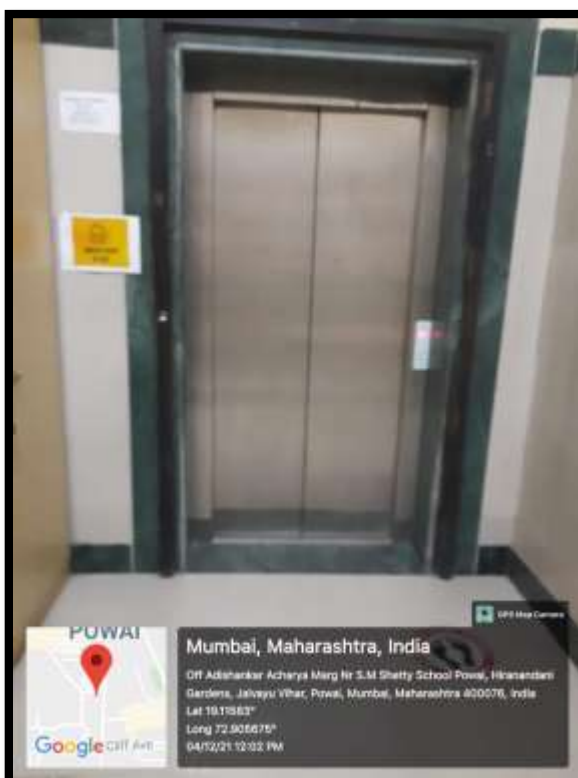
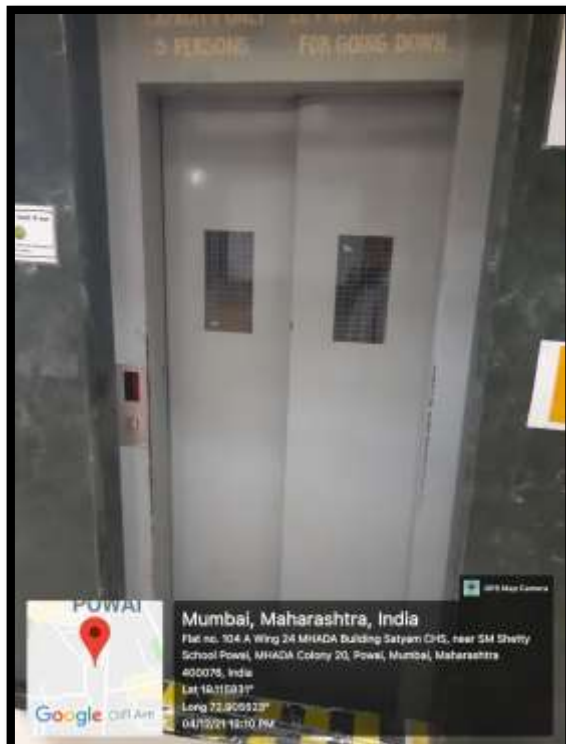
**Built environment with ramps/lifts for easy access to classrooms. :**

All the entries to the institution at ground floor have ramps and railings along with all staircases.



*Ramps and Railings in the campus*

The institution has classrooms on the 5th, 6th, 7th and 8th floor. It has sports facilities on the 7th and 9th floor along with the ground floor open area. The institution has four lifts: 2 with capacity of 5 people till 6th floor and 2 with capacity of 10 people till 9th floor.



*Four Lifts for students and staff*

· **Disabled-friendly washrooms:**

The institution has disabled friendly washroom on the 7th floor, located very close to the lift.



*Washrooms for Divyangjan with signage*

· **Signage including tactile path, lights, display boards and signposts:**

Signboard for the washroom for disabled is on the 7th floor.

Facilities for disabled students are displayed on the college notice board and website

· **Assistive technology and facilities for persons with disabilities (Divyangjan) accessible website, screen-reading software, mechanized equipment:**

- Wheelchairs are available at campus for physically disabled students.



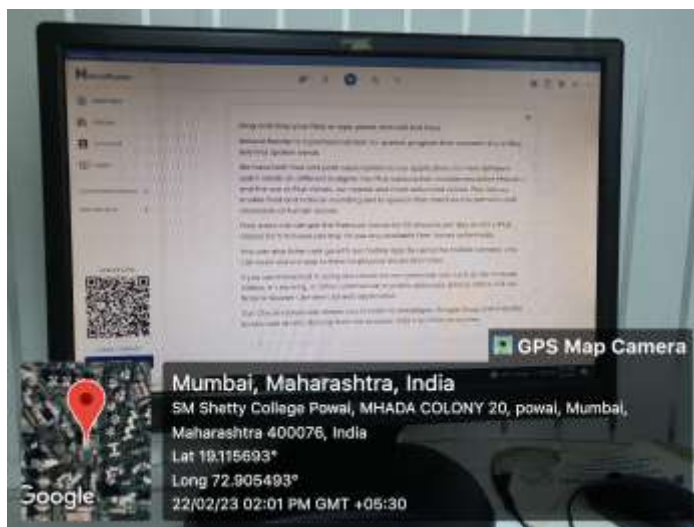
*Wheel Chair in the Campus*

- In case of medical condition, the medical centre is functioning throughout the working hours of the institution.
- Stretcher is available for assistance.



*Stretcher*

- The counselling centre services are available to the students.
- Free Software, Natural Reader, has been installed in the library for students to listen to the text with the help of ear/ head phones.



*Natural Reader, free software installed in library computer for reading text with the help of head phones*

· **Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading:**

- The institution has uploaded information about all the facilities available for disabled students on its website.
- Contact details are given for addressing issues or queries.



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