GREEN AUDIT REPORT



SARDAR PATEL MAHAVIDYALAYA, CHANDRAPUR

Located at

Ganj Ward, Chandrapur - 442 401 (M.S.)



Date(s) of Audit: 14/12/2021 Client File No: TQCPL/GA/SPM/20211214 Report Version: 01 Date of Issue: 30/12/2021



ISO 9001:2015 Certified Third Party Certification/Inspection Agency 204, Sairam Plaza, 63, Mangal Nagar, Bhawar Kua, AB Road Indore (MP) INDIA 452001 Ph.: 0731 4248722, +91-9923015727 Email: ritijain@truequalitycert.com, atul.takarkhede@truequalitycert.com website: www.truequalitycert.com

December 2021

Client: SARDAR PATEL MAHAVIDYALAYA, CHANDRAPUR	Audit Date(s): 14/12/2021
Audit Report: Green Audit	File No. TQCPL/GA/SPM/20211214

COLLEGE	INFORMATION					
Name	SARDAR PATEL MAHAVIDYALAYA, CHANDRAPUR					
Contact person	Dr. P.M. Katkar		E-mail	pramodkatkar	pramodkatkar1968@gmail.com	
Position	Principal		Phone	one +91- 9422906289		
Address	Sardar Patel Mahavidyalaya Ganj Ward, Chandrapur - 44	2 401 (M.S.)	(M.S.) Website		http://www.spm.ac.in	
AUDIT DES	SCRIPTION					
Standard	Green Audit under National Assessment & Accreditation Council (NAAC)					
Audit Type	Initial 🗖	Surveillance 🗆	ance Other			
Audited Sites	SARDAR PATEL MAHAVIDYALAYA, CHANDRAPUR, - 442 401 (M.S.)					
Audit team	Team leader	Dr. Atul Takarkhede				
	Auditor(s)	Mr. Jitendra Mohan Singh				
	Technical expert	Dr. Atul Takarkhede				
	Reviewer	Mr. Pankaj Kumar				
Site sampling methodology: Total number sites : Sites sampled : N/ A			\boxtimes			



AUDIT INFORMATION

Statement of Conclusion

SARDAR PATEL MAHAVIDYALAYA, CHANDRAPUR has appointed True Quality Certifications Pvt. Ltd. to carry out the Green Audit according to the compliance to NAAC requirements as required for the NAAC accreditation. The Green Audit is carried out successfully and the CGPA score achieved by the College is 2.98 out of 4.00.

Sr.	Criteria	Weightage (W)	Score ¹	W.x
No.			(x)	
1.	Green Campus	8	5	40
2.	Greenery maintenance	5	2	10
3.	Organic waste composting	3	0	0
4.	Use of plastic	5	3	15
5.	Solid Garbage	4	2	8
6.	Waste paper recycling/reuse	5	4	20
7.	E-waste disposal	5	4	20
8.	Ban on tobacco & smoking	5	4	20
9.	Cleaning of campus	5	2	10
10.	Cross ventilation of rooms	5	2	10
11.	Leakages of electricity and water	5	2	10
12.	Awareness of energy conservation, environment & pollution	5	3	15
13.	Electricity saving practices	5	3	15
14.	Use of CFL/LED lights	5	2	10
15.	Use of low energy consumption appliances	5	2	10
16.	Rain water harvesting	5	4	20
17.	Use of solar & wind energy	5	2	10
18.	Use of energy efficient computers/printers	5	4	20
19.	Management of hazardous waste	5	2	10
20.	Environment/Earth day celebrations	5	4	20
CGPA Score on Environment		100	56	312
Total				
CGPA	A score on Environment is CGPA=(Σw.x)/ Σw	2.98/4.0	(i.e. 73.25%))

Scope:

Phone:

The scope of certification shall be limited to verification of "Implementation of Environmental Initiative by college" as per NAAC requirements.

Staff Numbers:	250 Approx (Including Teaching & Non-teaching)
Student Numbers	7000 Approx

¹ Score 00- 01= Poor; 01- 02 = Fair; 02- 03 = Good; 03- 04 = Excellent

Email <u>atul.takarkhede@truequality.in</u>

+91-9923015727

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EXECUTIVE SUMMARY

Green audit of the SARDAR PATEL MAHAVIDYALAYA, CHANDRAPUR was conducted on the above date by True Quality Certifications Pvt. Ltd. in accordance with the requirements outlined by the NAAC, India. The purpose of the audit was to verify compliance of the implementation of the requirements of the NACC requirements.

Audit Objectives

The purposes of the audit were; to verify compliance of the implementation of the requirements of the NACC requirements for green initiatives.

Summary of Audit Findings

Based on the observations by the audit team during site visit, information gathered during interviews conducted & documents submitted by college:

Audit objectives were met	Yes 🗖	No 🗆	
Non-conformances were identified at this audit:	Yes 🗆	No 🗖	
Number and category of non-conformances:	N/A		
Description of non-conformances: N/A			

Recommendation

Yes 🗆	No 🗆
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INTRODUCTION OF COLLEGE

Sardar Patel Mahavidyalaya was established in 1970 with an aim to provide quality education to students from rural and backward region of Chandrapur district, Maharashtra. The college is managed & run by Sarvodaya Shikshan Mandal. The college is spread over 2.25 acre of land in the middle of city. The college offers number of basic and professional programmes from undergraduate to research level in Arts, Commerce, Science and other faculties. The college have dedicated Center for Higher Learning and Research in Environmental Science under Department of Environmental Science. Around 7000 students are enrolled under all courses with more than 50 university approved faculty members. With the vision & mission of the college management, among enrolled students more than 65% students are girls and about 70-80% students belongs to socially and economically backward class. Sarvodaya Shikshan Mandal was awarded with Best Management award by Government of Maharashtra.



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AUDIT CRITERIA

Clause 1 – The College campus is green with trees, shrubs and potted plants:

Findings/ Observations/ Opportunities for Improvement:

Various types of trees, shrubs and potted plants are present in the college campus. Around 161 trees & shrubs are present in campus.

Plantation Details:

Common name	Scientific name	Total no. of trees
Neem	Azadirachta indica	24
Tarmarind	Leucaena leucocephala	9
Pipal	Ficus religious	3
Umbar	Ficus racemosa	1
Indian Jujube	Ziziphus mauritiana	1
Sappan wood	Caesalpinia sappan	3
Palm tree	Roystonea oleraced regia	36
Areca palm	Dypsis lutescens	24
Gulmoher	Delonix regia	7
Ashoka	Saracea asoca	1
Almond	Terminalia catappa	4
French tamarix	Tamarix gallica	2
Yellow bloodwood	Cucalyptus eximia	1
Saptarani	Alistonia angustifotia	4
Custard apple	Anmona reticulata	2
Weeping fig	Ficus benjamina	2
Champa	Plumeria alba	2
Kanner	Nerium oleanter	2
Guava	Psidium guajava	2
Mango	Mangnefira indica	3
Karanjee	Millettia pinnatia	5
Kasod	Senna siamea	3
Screw pine	Pardanus veitchii	1
Coffeberry	Rhamnus nobilius	1
Bismark palm	Bismarckia nobilius	1
Fern	Polypodiopsida	1
Viscum	Planta pajorita	1
Indian laurel	Fiscus microcarp	1
Carribben	Dorenta crecta	2
Oak tree	Fagus sylnatica	3
Monoon longifolia	Polyalthia longifolia	1
Hibiscus	Hibiscus rosa sinesis	4

Phone: +91-9923015727

Email <u>atul.takarkhede@truequality.in</u>

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Common name	Scientific name	Total no. of trees
Pencil plant	Eulphoria tiracalli	1

Tectona grandis

There are 24 neem trees present in the campus. A neem tree, whose average life is 250 to 300 years, is best pest controller and acts like a natural air conditioner & the temperature under its shade is 10 degrees less than the ambient temperature. The college campus have also other fruit and flower bearing plant/shrubs.

3

161





Recommendations:

Teek

Total

- 1. The tree plantation and landscaping may be improved with the help of professional landscape consultants/developers.
- 2. Students may be motivated for voluntary participation in tree plantation programmes. Schemes like 'Plant & nurture a tree with your name' may be initiated to improve student's interest in tree plantation.



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Clause 2 – The greenery is maintained by watering and pruning of plants:

Findings/ Observations/ Opportunities for Improvement:

The frequency of watering is once in a day is maintained by 01 gardener appointed by the college. Pruning is done as per the requirement.

Recommendations: Nil

Clause 3 – Organic wastes are converted into compost:

Findings/ Observations/ Opportunities for Improvement:

Plantation waste is collected daily but organic waste composting facility is not available in the college. However, during discussion with college authority it was noted that composting facility proposal is under consideration.

Recommendations:

Dry/wet composting facility may be installed to treat all organic waste & same manure may be used for in-house use.

Clause 4 – Use of plastics (polythene, thermocole, PVC etc.) is minimized and waste plastics are recycled:

Findings/ Observations/ Opportunities for Improvement:

Yes. Use of plastic is minimized as far as possible by the college. Dust bins are provided at various places to collect maximum waste from canteen, corridors & staff rooms etc. Solid waste is collected by Chandrapur Municipal Corporation.





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Recommendations:

- Awareness being made through signboards and posters displayed at various places in the 1. college premises.
- 2. Increase in waste collection frequency & bins including separate bin for waste papers & plastic etc.
- 3. Sanitary napkin disposal incinerator may be installed at girl's common room.

Clause 5 – Solid garbage (building debris, unused building materials) is removed from the campus:

Findings/ Observations/ Opportunities for Improvement:

During audit team visit and interview it was noted that the building garbage, whenever generated, is disposed to low line area or given to nearby users for landfilling.

Clause 6 – Waste paper is sold to vendors for recycling:

Findings/ Observations/ Opportunities for Improvement:

During audit team visit and interview it was noted that the waste paper and stationary material is being sold to local venders for recycling. However, record of paper waste generation & sell is not maintained.

Recommendations:

Records of waste paper, copies & stationary material generated & sold to vendor may be recorded & maintained.

Clause 7 – Rejected computers, printers, key-boards etc. In working condition are donated and others sold to vendors for recycling:

Findings/ Observations/ Opportunities for Improvement:

During audit interviews with college authorities it was noted that the E-waste is being handed over to local vendors for recycling. Usable E-waste/plastic/instrument list is maintained in office records.

Recommendations:

Nil

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Clause 8 – Use of tobacco for smoking or chewing/Drugs/Alcohol consumption in the campus is banned:

Findings/ Observations/ Opportunities for Improvement:

Yes. The smoking or chewing of tobacco is prohibited in the college premises. The signboards are displayed in college premises at various places including staircase & corridors. The awareness massage is given through various programs & National Service Scheme (NSS) under which all youth related problems are highlighted and awareness increased. Academic staff keeps close watch on use of tobacco.

There is as committee of teachers formed namely "Gutkha Pratibandh Dakshta Committee" to keep watch and prohibition of tobacco consumption in campus.











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Recommendations:

- 1. Slogans/poster may be displayed on the entrance of campus & corridors for health highlighting health hazards of chewing or smoking tobacco/drug & alcohol consumption.
- 2. "Gutkha Pratibandh Dakshta Committee" may also include non-teaching, outside doctors & student participation to improve working of the committee.

Clause 9 – The College buildings kept clean by sweeping and washing.

Findings/ Observations/ Opportunities for Improvement:

Yes. Class rooms/labs are cleaned daily with the help of & periodically by outsourced agency. Corridors/lobbies are cleaned daily three times. Toilets are cleaned daily and additionally if required. To maintain the premises team a team of inhouse 3 persons, 1 electrician is present. Plumbing work is outsourced. Campaigns were arranged under "Swachha Bharat Abhiyan" frequently.

Same was also observed during audit team visit and interview conducted. However, poor handling of generated waste observed.







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Recommendations:

Frequency of cleaning & dustbin garbage cleaning shall be increased to maintain cleanliness & hygiene in the corridors.

Clause 10 – Classrooms have cross-ventilation and sufficient natural lighting to minimize use of electricity:

Findings/ Observations/ Opportunities for Improvement:

All rooms are provided with windows for proper ventilation. Some of the classrooms have natural cross ventilation and sufficient natural light by providing glass windows. The college building is surrounded by residential building at one side and thus classrooms have less cross ventilation & natural light. Artificial lighting & ventilation arrangement found insufficient.







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Recommendations:

- 1. It is recommended to conduct study luminance in a classroom and accordingly increase in LED tube lights.
- 2. Increase in exhaust fans for proper ventilations in classrooms & laboratories.

Clause 11 – Electric fittings and plumbing kept in proper condition to prevent electricity leakage and water dripping:

Findings/ Observations/ Opportunities for Improvement:

During visit audit team observed that the electrical fittings and plumbing's were well maintained in some wings & labs. During discussion with concerned person it was noted that the maintenance/faulty part replacements were carried out periodically to prevent leakages. Electrical maintenance is done in-house however plumbing maintenance work is done through outsourced agencies as and when required.

However, poor management of electrical wires & water taps found.







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Recommendations:

- 1. Electrical Safety audit is recommended.
- 2. Electrical maintenance& avoid open electrical wire circuits.
- 3. Plumbing maintenance to avoid water wastage.
- 4. Periodical drinking water quality analysis may conduct for IS 10500 standard.

Clause 12 – College takes steps to sensitize students and staff about energy conservation, environment and pollution hazards:

Findings/ Observations/ Opportunities for Improvement:

Green Thinkers club is incorporated by students of environmental Science department to conduct various environment related activities. The seminars/workshops/awareness programmes were conducted time to time to promote awareness among staff and students about energy & environment. Though signboards are not displayed, human resource are deployed to switch on and off tube lights and fans in classrooms. The switches of tube lights and fans are placed at elevated positions so as to be protected from students. For energy conservation solar lamps are installed in college ground and solar water heaters are installed at girl's hostel.

Hazardous waste created during experiential work is properly disposed off to ensure that it will not cause adverse effects on environment.

However, noise pollution observed in the college premises & parking due to horn blowing by vehicles of staff & students.



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Recommendations:

- 1. Periodic seminars/training sessions may be carried out for college staff and students on energy conservation, maintenance of vehicles to minimize vehicular pollution, noise pollution etc.
- 2. College premises shall be declared "Silent Zone" and horn honking shall be strictly prohibited inside college premises & parking space.
- 3. Signboards shall be displayed for energy conservation in classrooms, corridors and office/staff rooms.
- 4. Rearrangement of girl's hostels solar water heaters & fire water tanks to avoid shadow on solar water heaters to achieve maximum efficiency.

Clause 13 – All electrical appliances (lights, fans, air-conditioners) are switched off when not in use:

Findings/ Observations/ Opportunities for Improvement:

atul.takarkhede@truequality.in

Email

Yes. Though signboards are not displayed, 12 dedicated human resources are deployed to switch on and off tube lights and fans in classrooms. The switches of tube lights and fans are placed at elevated positions so as to be protected from students.



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Recommendations:

Signboards and awareness among college staff for switching off lights, fans & electrical equipment's in staff rooms/offices.

Clause 14 – Incandescent lamps have been replaced by CFL or LED lamps:

Findings/ Observations/ Opportunities for Improvement:

Tube lights/CFL bulbs have been installed in all the places of the college premises during replacements. Till December 2021, 50 Fluorescent tube lights were replaced with LED tube lights & 150-175 replacement are proposed. It was observed that there is opportunity for improvement by replacing tube lights with LED bulbs/tubelights which can be started from office staff rooms and corridor lights for electricity savings.



Recommendations:

The college management shall chalk out a phase-wise plan for replacing the all existing tube lights/CFLs with LED lamps.

Clause 15 – College takes steps to purchase fans, refrigerators and air-conditioners with low energy consumption:

Findings/ Observations/ Opportunities for Improvement:

College authority has already taken steps towards purchasing BEE certified refrigerators/water coolers etc. However, some of ACs & refrigerators found BEE two star rating and old energy consuming fans & window ACs are in use.



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Recommendations:

The college management shall chalk out a phase-wise plan for replacing the all existing energy consuming fans, ACs & refrigerators with BEE certified "Five Star" rating models.

Clause 16 – The College has installed water harvesting system and is making use of stored rainwater:

Findings/ Observations/ Opportunities for Improvement:

As the institute is situated adjacent to "Ramala" lake, water table is high in this area and hence water harvesting is not feasible.



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Clause 17– College makes use of solar energy and wind energy:

Findings/ Observations/ Opportunities for Improvement:

The use of wind energy is not feasible techno-commercially. Solar water heaters are already installed at girl's hostel. Use of solar energy has been planned for electricity generation by installing solar PV power plant for captive use for college.



Recommendations:

- 1. The solar water heaters may be increased at girl's hostel & may be installed for laboratory use.
- 2. All street lights/corridor lights may be replaced phase-wise with solar street lamps.



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Clause 18– College has replaced resistance regulators with electronic regulators, CRT monitors with LCD monitors, and DOT matrix printers with Deskjet printers:

Findings/ Observations/ Opportunities for Improvement:

Electronic regulators are installed with new fans. CRT monitors are already replaced with LCD/LED monitors and desk jet printers are used. Use of LED displays can be increased for energy savings.



Recommendations: Nil

Clause 19– College implements hazardous waste management with soak pits for waste water from Chemistry lab and other labs and uses water based chemical reactions:

Findings/ Observations/ Opportunities for Improvement:

Only chemical wastewater generated from Chemistry/Environmental Science/Microbiology Labs. Same disposed off to nearby Nalla.

Recommendations:

Neutralizing of laboratory wastewater before disposal to nearby nalla.

Clause 20– College observes Environment Day, Earth Day, organizes seminars on environment-related issues:

Findings/ Observations/ Opportunities for Improvement:

For creating environmental awareness among the staff and students, department of Environmental sciences formed "Green Thinkers Club" to carry out various awareness activities. Further, under environmental awareness programs following activities are carried out regularly:

i. Cleanliness drive/week'



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- ii. Swatch Bharat Abhiyan
- iii. Poster competitions/exhibitions on environmental issues



Recommendations:

Formal celebration of Environment day, Forest week, Earth day etc. may be started every year to promote awareness about environmental issues among the staff and students.

Phone:



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ADDITIONAL INFORMATION

Responsibilities of Client/College Authority

Responsibilities of College

College management and staff is responsible for the fulfilling the audit recommendations and actions to be taken. The responsibility of Auditor was to express their opinion with regards to the status of implementation of actions as per onsite visit & documentary review.

Use of Report, Marks and Logos

The college authority has their discretion to submit & share the audit report as per their requirements.

CONFIDENTIALITY STATEMENT

Auditor and Auditing firm, shall keep all information relating to your college, collected during this audit confidential, and shall not disclose any such information to any third party, except that as required by legislation, relevant accreditation bodies or mutually agreed.

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Report by:	Team Leader (name)	Signature	Date
1.	Dr. Atul Takarkhede	Apularlerede	30/12/2021
2.	Auditor	Signature	Date
	Mr. Jitendra Mohan Singh	tend	30/12/2021
3.	Technical Reviewer	Signature	Date
	Mr. Pankaj Kumar	Banenjus.	30/12/2021

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