



St. Xavier's College Jaipur

Affiliated to the University of Rajasthan Approved under Section 2(f) and 12(B) of UGC Act, 1956
A Christian Minority Educational Institution under Section 2(g) of NCMEI Act, 2004



GREEN AUDIT REPORT

ENVIRONMENTAL INSPECTION


Principal

St. Xavier's College, Jaipur
Nevta-Mahapura Road, Jaipur



Certificate of Inspection

Organization : St. Xavier's College Jaipur

Address : Village Nevta Mahapura Road Jaipur - 302029 India

Inspection Standard : Green Audit / Environmental Audit

Date of Inspection : January 06, 2024

Inspection Report No. : CIL/20232522

CDG Inspection Limited has conducted a green audit & environmental audit on the campus mentioned above, taking into account the relevant norms and best practices for educational institutions. For details on the audit findings, please refer to the detailed inspection report No. CIL/20232522

Managing Director
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Principal
St. Xavier's College, Jaipur
Nevta-Mahapura Road, Jaipur

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CIL Ref. No.:	CIL/20232522
Name of organization:	St. Xavier's College Jaipur
Address of premises:	Village Nevta Mahapura Road Jaipur 302029
Name of Inspector:	Mr. Ashutosh Tiwari
Date of Inspection:	06-01-2024
Type of Inspection:	Green Audit

Organization Details	
Total Campus Area	97124.55 sqm
Total Built-up Area	17111.34 sqm
Covered Parking	2 (With Capacity 72 Four Wheelers)
Total Air-Conditioned Area	1444.05 sqm
Non-Airconditioned Area	Not available
Cross Floor Area	G+4
Forest / Planted Area	15 acres
Age of the building	07 Years

DETAILS OF INFRASTRUCTURE

Classrooms	57
Laboratory	9
Library	1
Seminar hall and auditorium	2
Sports room	1
Gymnasium	1
Staff and student parking area	30-meter x 15 meter
Canteen	1
Playground	1 Football 1 Cricket ,1 Handball , 1 Volleyball 1 Kabaddi 1 Kho-Kho- 1 Badminton 1 Basket Ball

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Green Area / Plantation	15 acre
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LIST OF BUILDINGS

Name of Building	Number of Floors	Area (m2)
IT Block Computer Labs	4 Labs	25 x 36 900 Sq Feet

DEPARTMENTS

1	Department of Business Administration
2	Department of Commerce
3	Department of Computer Science
4	Department of English
5	Department of Economics
6	Department of Political Science
7	Department of Arts
8	Department of Psychology
9	Department of Science

DETAILS OF STUDENTS AND STAFF

Total Number of Students	Total 2264 Male 1450 Female 814
Teaching Staff	43
Technical Staff	11
Non-Technical Staff	29
Outsourced Staff	6

GREEN AUDIT PARTICIPANTS

Name	Designation
Dr Gurneet Kaur Suri	Coordinator
Dr Antony Nitin Raja	Member
Dr Mahak Bhatia	Member
Dr Juniet Maria Jose	Member
Dr Renu Jadon	Member
Ms Nupur Chauhan	Member
Mr Lokesh Kumawat	Member
Ms Blessy Varghese	Member

LEGAL COMPLIANCES

Description	Registration Details
Consent to operate (CTO) from SPCB	Not available
Fire NOC	LSG/JAIPUR GREATER/FIRENOC/2023-24/20830
Water Boring permission	Not available

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About the College

In 2006, the Xavier Vocational Institute (X.V.I.) was set up in Jaipur to give vocational training to the weaker sections of the society. In 2010, the J.X.E.A. in collaboration with the Xavier Alumni/ae and the well-wishers of Jaipur under the leadership of Rev. Fr. Varkey Perekatt, SJ, initiated a Higher Education Programme by establishing St. Xavier's College, Jaipur. Since then the college has grown manifold, serving the educational needs, not only of the people of Jaipur but also across the nation. Over the last 10 years we have grown from a sapling to a huge oak, and every year the college has reached new milestones. In 2014, the college was declared a Christian Minority Jesuit Institution and in the same year, the status of college was elevated to the Postgraduate the level with the initiation of two courses, namely, Masters in English Literature and Human Resource Management. In the year 2017, the college was granted Permanent Affiliation for B.A. Honours in Economics and English Literature from the University of Rajasthan. The following year was a testament to our success as the student strength crossed over 2000, and the number of undergraduate courses rose to six – B.A.(Honors)- English, Economics, Political Science; BBA, BCA and B.Com. and postgraduate programmes turned to 5 – M.A.(English), M.A.(Economics), M.Sc. (IT), M.Com.(EAFM, ABST) and M.H.R.M. another achievement followed in 2019 when the college got recognition under section 2(f) and 12(B) of UGC Act 1956. In addition to this, in the same year, all the undergraduate departments along with M.A. English Literature got permanent affiliation from the University of Rajasthan, Jaipur (Rajasthan). After a magnificent decade, right in the heart of the city, the college shifted to the new campus at Nevta, Jaipur in the session 2021-22 to provide bigger and better infrastructural and academic possibilities to the students. In 2022- 23, the College planned to offer the Professional Programmes – MBA and MCA through its New Technical Institution (Xavier Institute of Management and Informatics (XIMI)) in the same Campus.

Vision

To ignite young minds with transformative education to become global citizens with competence, character, and compassion.

Mission

1. To awaken and lead the youth towards self-actualization.
2. To strive towards excellence by creating individuals with humane values.
3. To reach out to all the sections of society without any discrimination by ushering inclusivity through holistic and quality education to build a just society.
4. To foster a culture of tolerance where students are sensitized towards gender, the marginalized, the excluded and the specially-abled (Divyangjan).
5. To work towards the conservation and protection of the environment for achieving Sustainable Development Goals (SDGs).

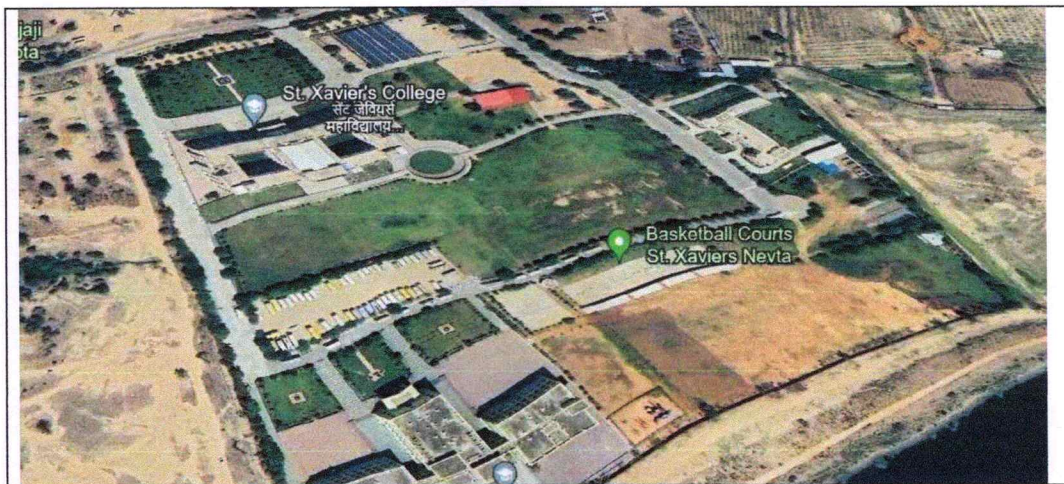
Objectives

1. To embody the essence of Character, Compassion, and Competence by seamlessly integrating the vision, mission, and core values of the College.
2. To instill a sense of integrity, uphold ethical conduct, and reinforce accountability within the student body.

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3. To elevate pedagogical standards through the balanced use of advanced technology, enhancing teaching-learning experience.
4. To create an innovative ecosystem to foster critical thinking, decision making and problem-solving skills amongst the students.
5. To bridge the gap between theory and practice by promoting industrial exposure and collaboration to hone their professional skills.
6. To cultivate robust research-oriented and innovation-based learning practices in academia.
7. To nurture a profound appreciation for art and culture through a plethora of opportunities to exhibit creativity and talent.
8. To create awareness among the students about the environmental concerns and promote a mindful coexistence with nature.
9. To maintain a harmonious and amicable bond between the alumni and the alma mater.
10. To empower students to become men and women for and with others by upholding the idea of Magis and Cura Personalis.

GEOGRAPHICAL LOCATION WITH CAMPUS MAP IN SCALE



LAND USE DATA

Categories of Land Use	Area (M2)
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(Signature)
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PLANTATION AREA	80013.21 sq meter
BUILT UP AREA (INCLUDE ROADS)	17111.34 sq. meter
TOTAL AREA	97124.55 sqm

CLIMATIC PARAMETERS

1. Climate:

Jaipur, the capital of Rajasthan, experiences a semi-arid climate. Summers (March-June) are scorching, with daytime temperatures exceeding 40°C. Monsoons (July-September) bring moderate to heavy rainfall and a slight temperature drop. Post-monsoon months (October-November) offer milder weather, making October an ideal time to visit. Winters (December-February) are cool, with daytime temperatures ranging from 15-25°C and chilly nights (5-10°C). December and January are the coldest months. Jaipur's climate is marked by hot summers, a monsoon season with significant rainfall, and cool winters, making post-monsoon and winter months preferable for a more comfortable visit.

2. Rainfall:

Jaipur receives the majority of its annual rainfall during the monsoon season, which typically spans from July to September. The city experiences moderate to heavy rainfall during this period, contributing significantly to its overall precipitation for the year. However, the total amount of rainfall can vary from year to year due to factors such as the strength of the monsoon and regional weather patterns. On average, Jaipur receives around 600-650 millimeters of rainfall annually, with a significant portion occurring during the monsoon months. It's important to note that while the monsoon brings relief from the summer heat, excessive rainfall can sometimes lead to localized flooding.

3. Temperature:

Jaipur witnesses a varied temperature range throughout the year due to its semi-arid climate. Summers (March-June) bring scorching heat, with daytime temperatures often surpassing 40°C. Monsoons (July-September) offer relief, featuring cooler daytime temperatures ranging from 30-35°C. Post-monsoon months (October-November) see a gradual decline in temperatures. Winters (December-February) are relatively cool, with daytime temperatures spanning 15-25°C, and chilly nights ranging from 5-10°C. The hottest months are May and June, while October is considered pleasant. Jaipur's climate showcases a notable temperature contrast between the intense heat of summer and the milder conditions in other seasons.

BIO-DIVERSITY

Physical Count of Flora in Campus

S. No.	Particulars	Units
1	Trees	1000 approx.
2	Plants	2800 approx.
3	Gardens	10 approx.

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List of Tree/Shrubs/Herbs species found in the campus

S.No	Scientific Name	Common Name	Total
1	<i>Polyalthia longifolia</i>	Ashok pendula	107
2	<i>Saraca asoca</i>	Ashoka	54
3	<i>Adenium obesum</i>	Adenium (Desert Rose)	2
4	<i>Emblica officinalis Gaertn. or Phyllanthus emblica Linn</i>	Amla	7
5	<i>Cassia fistula</i>	Amaltas	6
6	<i>Dyopsis lutescens</i>	Areca palm (Yellow palm, Butter fly palm)	70
7	<i>Agave Americana</i>	Agave (American aloe)	1
8	<i>Terminalia arjuna</i>	Arjun	34
9	<i>Punica granatum</i>	Annar	11
10	<i>Aloe vera</i>	Aloe	15
11	<i>Ziziphus mauritiana</i>	Ber	3
12	<i>Bougainvillea glabra</i>	Bougainvillea	88
13	<i>Musa paradisiaca</i>	Banana	8
14	<i>Melia azedarach</i>	Bakayan (Bakan, Chinaberry)	6
15	<i>Callistemon citrinus</i>	Bottle Brush	7
16	<i>Conocarpus erectus</i>	Conocarpus (Button wood)	57
17	<i>Tabernaemontana divaricate</i>	Chandni/Jasmine	11
18	<i>Plumeria obtuse</i>	Champa	60
19	<i>Cocos nucifera</i>	Coconut palm	1
20	<i>Ficus pumila</i>	Chipkali bel	1
21	<i>Casuarina equisetifolia</i>	Casuarina (Horse tail, she oak)	1
22	<i>Cycas revoluta</i>	Cycas	14
23	<i>Murraya koenigii</i>	Curry Plant	7
24	<i>Tamarindus indica</i>	Imli	28
25	<i>Ficus benjamina</i>	Ficus black	87
26	<i>Ficus retusa</i>	Ficus panda	79
27	<i>Ficus benjameana</i>	Fig tree	6
28	<i>Wodyetia bifurcate</i>	Foxtail palm	1
29	<i>Delonix regia</i>	Gulmohar	120
30	<i>Ficus racemose</i>	Gular	22
31	<i>Hibiscus rosa-sinensis</i>	Gudhal	79
32	<i>Psidium guajava</i>	Guava	17
33	<i>Phyllostachys aurea</i>	Golden Bamboo	3

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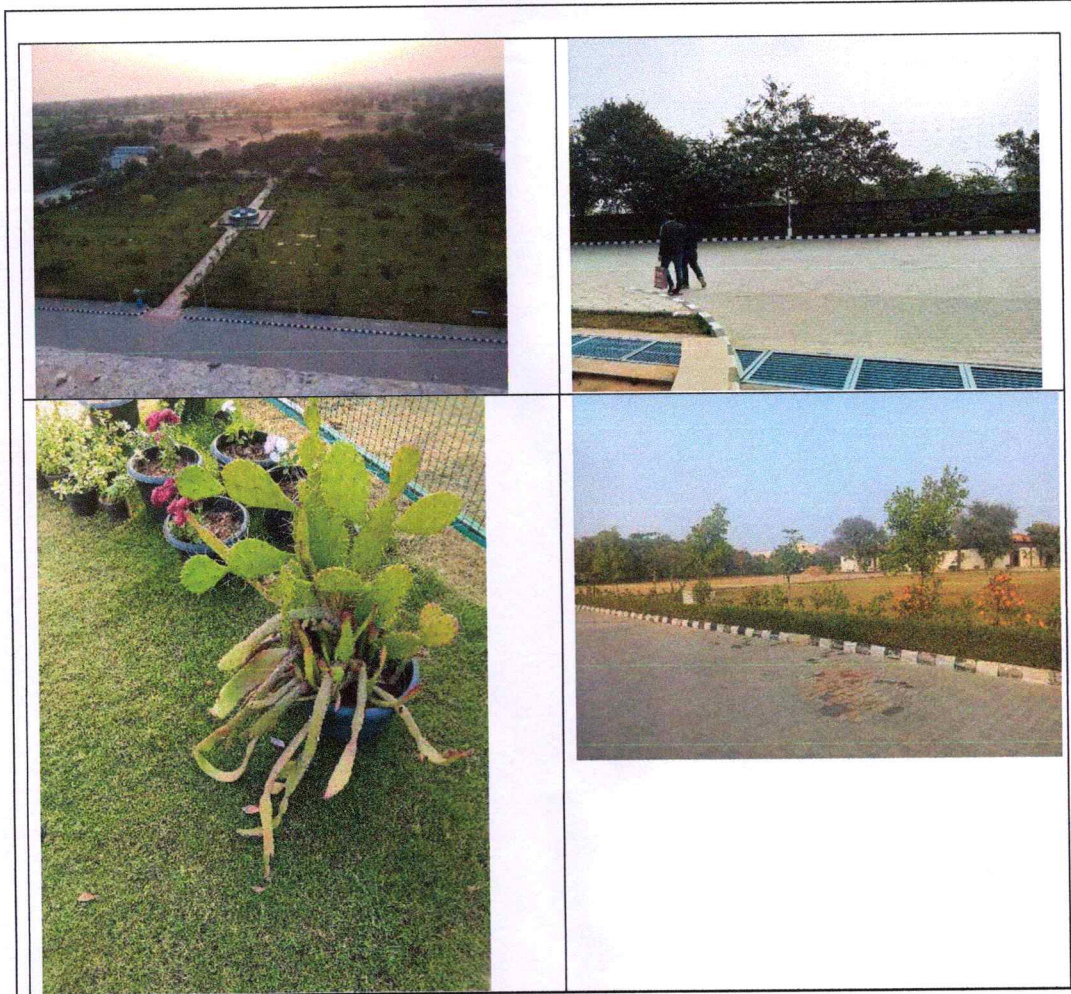
34	<i>Syzygium cumini</i>	Jamun	72
35	<i>Jatropha integerrima</i>	Jatropha	16
36	<i>Tamarix dioicia</i>	Jhag/ Jhau	1
37	<i>Milletia pinnata</i>	Karanj	585
38	<i>Cascabela thevetia</i>	Kaner	103
39	<i>Bauhinia variegata</i>	Kachnar	26
40	<i>Kigelia Africana</i>	Kigelia	9
41	<i>Neolamarckia cadamba</i>	Kadam	4
42	<i>Prosopis cineraria</i>	Khejadi	12
43	<i>Carissa carandas</i>	Karonda	4
44	<i>Ficus microcarpa</i>	Moclame ficus	44
45	<i>Platyclusus orientalis</i>	Morpankhi	17
46	<i>Mimusops elengi</i>	Morchali/ Molshree	95
47	<i>Mangifera indica</i>	Mango	30
48	<i>Swietenia macrophylla</i>	Mahogany	3
49	<i>Lawsonia inermis</i>	Mehandi	1
50	<i>Ficus microcarpa</i>	Micro Ficus	22
51	<i>Azadirachta indica</i>	Neem	376
52	<i>Persea Americana</i>	Palta farm	41
53	<i>Putranjiva roxburghii</i>	Putranjiva	36
54	<i>Ficus virens</i>	Pilkhan ficus	23
55	<i>Pedilanthus tithymaloides</i>	Euphorbia	2
56	<i>Ficus elastica</i>	Rubber Plant	2
57	<i>Latania lontaroides</i>	Latania palm	11
58	<i>Citrus limon</i>	Lemon	7
59	<i>Dracaena trifasciata</i>	Snake plant	12
60	<i>Dalbergia sissoo</i>	Shisham	100
61	<i>Morus alba</i>	Shehtoot	34
62	<i>Cassia acutifolia</i>	Senna	9
63	<i>Manilkara hexandra</i>	Khirmi tree	12
64	<i>Manilkara Zapota</i>	Sapota	15
65	<i>Grevillea</i>	Silk Oak	3
66	<i>Saccharum officinarum</i>	Sugar Cane	2
67	<i>Annona reticulata</i>	Sitaphal	2
68	<i>Moringa oleifera</i>	Senjana/ Drumstick	11
69	<i>Albizia lebbeck</i>	Shirish(Women tounge)	2
70	<i>Ficus benjamina</i>	Topiary ficus	1
71	<i>Terminalia</i>	Terminalia	166
72	<i>Tecoma stans</i>	Tecoma	352

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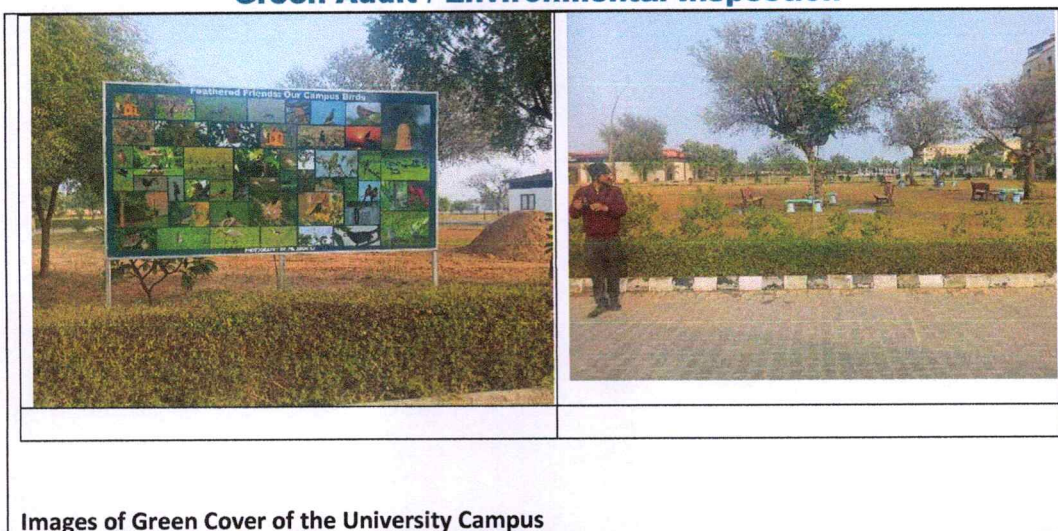
73	<i>Lilium candidum</i>	White Lily	15
74	<i>Nyctanthes arbor-tristis</i>	Harsinghar	2
75	<i>Artocarpus heterophyllus</i>	Kathal	2
76	<i>Citrus sinensis</i>	Orange	2
77	<i>Rosa rubiginosa</i>	Rose	39
78	<i>Furcraea acaulis</i>	Fercaria	4
79	<i>Carica papaya</i>	Papaya	3
80	<i>Asparagus racemosus</i>	Shatavri	16
81	<i>Epiphyllum oxypetalum</i>	Kamal Cactus	5
82	<i>euphorbia trigona</i>	Cactus	3
83	<i>Phoenix roebelenii</i>	Robino Palm	2
84	<i>Jasminum sambac</i>	Mogra	1
85	<i>Ailanthus excelsa Roxb</i>	Ardu	1
86	<i>Ficus carica</i>	Ficus ball	1
87	<i>Olea europaea</i>	Olive tree	12
88	<i>Allamanda cathartica</i>	Almunda Bel	1
89	<i>Hamelia patens</i>	Hemalia	17
90	<i>Crassula ovata</i>	Jade	12
91	<i>Urtica dioica</i>	Bichubutti	15
92	<i>Syngonium podophyllum</i>	Syngonium	6
93	<i>Codiaeum variegatum</i>	Baby Kroton	15
94	<i>Plumeria rubra</i>	Plumaria	2
95	<i>Thaumatococcus Xanadu</i>	Philodendron Rugosum	3
96	<i>Canna x generalis</i>	Keli	5
97	<i>Euphorbia Tithymaloides</i>	Pedilanthus	16
98	<i>Euphorbia Mili</i>	Crown of Thron	2
99	<i>Rhapis excelsa</i>	Raphis Palm	10
100	<i>Chamaedorea elegans</i>	Sapotia Palm	13
101	<i>Codiaeum variegatum</i>	petro Kroton	6
102	<i>Murraya paniculate</i>	Madhukamini	3
103	<i>Phoenix dactylifera</i>	Phonex Palm	9
104	<i>Schefflera arboricola</i>	Saplera	7
105	<i>Beaucarnea recurvata</i>	Lolina Palm	1
106	<i>Crassula ovata</i>	Money Plant	3
107	<i>Phyllanthus Buxifolius</i>	Phyllanthus	6
108	<i>Radermachera sinica</i>	Redmacharia	19
109	<i>Ficus Benjamina</i>	Safari Ficus	7
110	<i>Chrysanthemum indicum</i>	Crysanthimum/ Guldaudi	35
111	<i>Tradescantia spathacea</i>	Rohio	5

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112	<i>Yucca elephantipes</i>	Silver Yucca	4
113	<i>Pandanus amaryllifolius</i>	Pandanus Plant	10
114	<i>Ocimum tenuiflorum</i>	Tulsi	5
115	<i>Dracaena reflexa</i>	Song of India(Drasena)	4
116	<i>Kalanchoe pinnata</i>	Pattarchatta	2
117	<i>Syzygium Australe Roslina</i>	Brush cherry	3
118	<i>Trachyspermum ammi</i>	Ajwain	1
119	<i>Araucaria heterophylla</i>	Christmas Tree	1
120	<i>Trachycarpus fortune</i>	China Palm	6
121	<i>Ficus benghalensis</i>	Banyan (Bargadh)	1
122	<i>Cyperus alternifolius</i>	Cyperus	1
			3640



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Images of Green Cover of the University Campus

List of birds and animals

Sl. No	Name	Scientific Name
1	Eurasian Collared Dove	<i>Streptopelia decaocto</i>
2	Laughing dove	<i>Spilopelia senegalensis</i>
3	Rock Pigeon	<i>Columba livia</i>
4	Red Collared Dove	<i>Streptopelia tranquebarica</i>
5	Gray Francolin	<i>Ortygornis pondicerianus</i>
6	Red vented bulbul	<i>Pycnonotus cafer</i>
7	Intermediate Egret	<i>Ardea intermedia</i>
8	Cattle Egret	<i>Bubulcus ibis</i>
9	Indian pied Starling	<i>Gracupica contra</i>
10	Rose-Ringed Parakeet	<i>Psittacula krameria</i>
11	Black-rumped flamebackwoodpecker	<i>Dinopium benghalense</i>
12	Black winged stilt	<i>Himantopus</i> <i>Himantopus</i>
13	Red-wattled Lapwing	<i>Vanellus indicus</i>
14	White breasted waterhen	<i>Amourornis phoenicurus</i>
15	White browed wagtail	<i>Motacilla alba</i>
16	Brahminy starling	<i>Sturnia pagodarum</i>
17	White throated kingfisher	<i>Halycon smyrnensis</i>
18	Greater Coucal	<i>Centropus sinensis</i>
19	Large Gray Babbler	<i>Argya malcolmi</i>
20	Eurasian Hoopoe	<i>Upupa epops</i>
21	Black drongo	<i>Dicrurus macrocercus</i>
22	Purple sun bird	<i>Cinnyris asiaticus</i>

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23	Sparrow	<i>Passer domesticus</i>
24	Indian Robin	<i>Copsychus fulicatus</i>
25	Indian Pond Heron	<i>Ardeola grayii</i>
26	Grey Heron	<i>Ardea cinerea</i>
27	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>
28	Indian Peafowl	<i>Pavo cristatus</i>
29	Common Kingfisher	<i>Alcedo atthis</i>
30	Spotted owlet	<i>Athena brahma</i>



Common Name: Eurasian Collared Dove
Scientific Name: *Streptopelia decaocto*
Local Name: थोला पण्डुक



Common Name: Laughing dove
Scientific Name: *Spilopelia senegalensis*
Local Name: धूसर पण्डुक



Common Name: Rock Pigeon
Scientific Name: *Columba livia*
Local name: कबूतर



Common Name: Intermediate Egret
Scientific Name: *Ardea intermedia*
Local Name: मध्यवर्ती बगुला



Common Name: Cattle Egret
Scientific Name: *Bubulcus ibis*
Local Name: गाय बगुला



Common Name: Indian pied Starling (Indian pied myna)
Scientific Name: *Gracupica contra*
Local Name: सिराई मैना

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Common name: Brahminy starling
Scientific Name: *Sturnia pagodarum*
Local Name: पवई



Common Name: Indian Pond Heron
Scientific Name: *Ardeola grayii*
Hindi Name: भारतीय तालाब बगुला



Common name: White throated kingfisher
Scientific Name: *Halycon smyrnensis*
Local Name: किलकिला



Common Name: Grey Heron
Scientific Name: *Ardea cinerea*
Hindi Name: खैरा बगुला



Common name: Greater Coucal
Scientific Name: *Centropus sinensis*
Hindi Name: महोखा

List of Butterflies found in and around the campus

S. No.	Zoological Name	Common Name
1	Junonia leionias	Lemon Pansy
2	Danaus Dhrysiippus	Plain tiger butterfly
3	Junonia Orithya	Blue Pansy
4	Catopsiliapyranthe	Mottled emigrant
5	Freyaria Putli	Jewelled grass blue
6	Lxias Marianne	White orange tip

List of Reptiles found in and around the campus

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S. No.	Zoological Name	Common Name
1	Bungarus sindanus	Sind Krait
2	Eryx jphnii	Red Sand boa
3	Ptyas mucosa	Rat Snakes
4	Indotyphlops braminus	Brahmini worm snake
5	Chamaelo zeylanicus	Chameleon
6	Hemidactylus	Lizard

LEGAL REQUIREMENTS

Description	Registration Details
Consent to operate (CTO) from SPCB	Not available
Fire NOC	LSG/JAIPUR GREATER/FIRENOC/2023-24/20830
Water Boring permission	Not available
DG Set Permission	Not available

GENERAL

General Requirements: Environmental Policies / Environmental Objectives, etc	
Is there an environmental policy? Is it publicly communicated?	Yes the St. Xavier college has the environmental policy. It covers the Committed to reducing its carbon footprint, the institution engages students, faculty, and committees such as the Eco-friendly Club and SAP Committee. Initiatives span diverse areas, including waste and water management, energy efficiency, and collaborations with national programs. The policy fosters a green campus, integrates environmental education, and supports community outreach. Reference fig/doc:- A1
Is there a defined waste management policy in the organization?	Yes there is a waste management policy in the organization. The policy focuses on reducing, reusing, and recycling solid waste. Biodegradable waste undergoes segregated collection and composting, supporting sustainable landscaping. Liquid waste is treated according to environmental regulations. E-waste is responsibly managed through collaboration with authorized recycling agencies. We emphasize continuous improvement, innovation, and community engagement.

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	Reference Fig/Doc:- A2
Are there any quantifiable environmental objectives decided by the organization?	No written evidence has been found for any quantifiable objectives decided by the organization.
Is the organization aware of all environmental Laws? pertaining to different aspects of the organization's activities ? Mention laws & compliance status.	No written evidence was found at the time of the audit indicating that the organization is aware of all environmental laws.
Does the organization have any Recognition/certification for the environment friendliness? Provide details.	No written evidence was found during the audit indicating that the organization has any recognition or certification for environmental friendliness.
Has the organization established any committee to decide, implement & monitor environmental initiatives?	Yes, the organization has formed the environmental chart that tell about the environmental initiatives. Reference Fig/Doc: - A4
Has the institution ever received any notice/warning from the pollution control board or any other concerned environmental authorities? If yes, then what corrective & preventive measures have been taken?	No, the institute has not received any notice/warning from the pollution control board or any other concerned environmental authorities. Reference Fig/Doc: - A3
Related images / documents	

Green Audit / Environmental Inspection

<p style="text-align: center;">St Xavier's College Jaipur Green Policy</p> <p>Objectives</p> <p>1. About</p> <p>1.1 Introduction</p> <p>We are committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff.</p> <p>St Xavier's College Jaipur is committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff.</p> <p>The Institute's commitment to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff.</p> <p>The Institute's commitment to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff.</p>	<p>St Xavier's College Jaipur is committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff. We are committed to providing a safe and healthy environment for all our students and staff.</p> <ul style="list-style-type: none"> • Management of Biodegradable Waste <ul style="list-style-type: none"> - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. • Waste Management <ul style="list-style-type: none"> - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. • Water Management <ul style="list-style-type: none"> - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. • Energy Management <ul style="list-style-type: none"> - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. • Waste Recycling <ul style="list-style-type: none"> - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. • Waste Disposal <ul style="list-style-type: none"> - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste. - We have a separate bin for biodegradable waste and separate bin for non-biodegradable waste.
A1: Environmental policy	A2: Waste Management policy
<p style="text-align: center;">St Xavier's College - Jaipur</p> <p style="text-align: center;">Approved under Section 17(1) of the MCA Act, 1956 (Affiliated to the University of Rajasthan, Jaipur) (A Graduate Member of the Institution)</p> <p>Ref: SX/ACAD/AUDIT/2023-24/1925 06-01-2024</p> <p style="text-align: center;">To whom it may concern</p> <p>This is to state that our Institution, St. Xavier's College Jaipur has never received any notice/warning from the Pollution Control Board or any other concerned environmental authorities.</p> <p style="text-align: center;"><i>(Signature)</i> Principal St. Xavier's College, Jaipur Nehta-Mahapura Road, Jaipur</p> <p style="text-align: center;"><small>*To create form and return for others*</small> Nehta - Mahapura Road, Jaipur - 302029, Rajasthan, India Tel: +91 9827919185, 9857213088 Email: info@cdginspection.com Website: www.cdginspection.com</p>	<p style="text-align: center;">ENVIRONMENT CHART</p> <div style="text-align: center;"> <p>Governing Body of Trust (JNEA)</p> <p>Rector/Manager Fr. Dr. Aranya Swamy SJ</p> <p>Principal Fr. Dr. S. Xavier SJ</p> <p>Campus Administrator Fr. Pradeep Indiar SJ</p> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 30%;"> <p>Swachhta Action Plan (SAP) Ms. Nigita Chauhan (Coordinator) Dr. Rama Hirawat (Sanitation & Hygiene) Dr. Anil Sarkar (Energy & Water Management) Dr. Shanmugam Marimuthu (Greenery) Dr. James Maria Jose (Waste Management)</p> </div> <div style="width: 30%;"> <p>National Green Corps (NGC) Ms. Rishi Sinha Ms. Pooja Medhwal</p> </div> <div style="width: 30%;"> <p>National Service Scheme (NSS) Dr. Pradeep Soti Mr. Rohan Thomas</p> </div> </div> <div style="text-align: center; margin-top: 10px;"> <p>Internal Quality Assurance Cell (IQAC) Mr. Yashwanth Singh, Coordinator Dr. Shikha Arora Bakhshi (Faculty Member) Dr. Nishita Khatri (Faculty Member) Dr. Ranjit Kaur (Faculty Member) Dr. Vanish Singh (Faculty Member) Sr. Dr. Ligand Louis (Faculty Member) Ms. Lovleen Mathur (Asst. Librarian) Prof. Rashmi Jain (Coordinator, IQAC, University of Rajasthan) Prof. Harsh Parashr (Coordinator, IQAC, Banasthali Vidyapeeth) Mr. Ajay Kochhar (Industrialist) Ms. Ananya Joshi (Alumni Representative)</p> </div>
A3: Notice for not receiving the letter from any pollution control board	A4: Environmental chart showing the team responsibility


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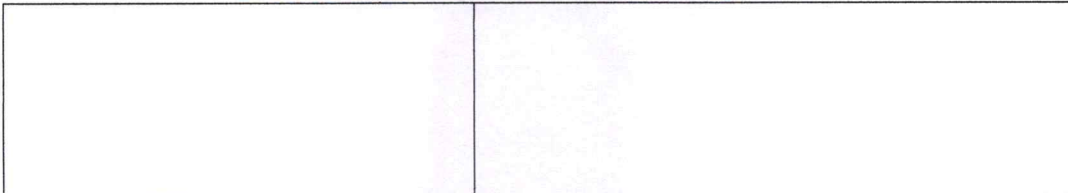
Identified Nonconformities
<ol style="list-style-type: none"> 1. The organization lacks clearly defined and measurable environmental objectives, hindering its ability to effectively track and improve its environmental performance, and demonstrate commitment to sustainable practices in a quantifiable manner. 2. The organization lacks comprehensive awareness of pertinent environmental laws governing its diverse activities, resulting in a deficiency in legal compliance. 3. The organization lacks any recognized certification or formal recognition for its commitment to environmental friendliness.

POLLUTION

Air Pollution Management (objective, practices / methods to minimize air pollution)	
Identify the major sources of air pollution within the organization & the actions taken to either eliminate or minimize the pollution.	The major source of air pollution within the organization is the vehicles. The college has undertaken significant tree plantation and created green spaces around itself. Additionally, it has installed solar panels on the roof of the parking area. Reference fig/doc: - B3
HVAC maintenance and calibration records, testing and balancing reports. When was the duct system tested for leakage last?	Yes, St. Xavier College performs annual maintenance of the air conditioning system, which includes air filter cleaning, inspection of cooling pipes and condensation, checking electric wires, cleaning the blower, and cleaning the compressor. The last maintenance was conducted on "8/5/2023". Furthermore, no written evidence was found indicating that the duct system underwent a leakage test. Reference fig/doc: - B4
DG set stack emission test as per CPCB norms.	The DG sets present in the case of St. Xavier have an Annual Maintenance Contract (AMC) conducted by a third party, wherein only general checks are performed, neglecting parameters related to noise and pollution. The DG set emission test is conducted by the CDG group, revealing the following levels: Air pollution: 056 PM2.5: 142 ug/m ³ Maximum sound level: 84.4 Minimum sound level: 80.4 Reference fig/Doc: - B1, B2


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Related documents / images



B1: Maximum and minimum sound of the DG set



B2: Pollution level meter for the DG set



B3: Photos of the green covers



B4: The AC maintenance checklist

Nonconformity: -

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Additionally, there is uncertainty regarding the last testing for duct system leakage, compromising the effectiveness of the ventilation system and energy efficiency.

In-Door Air Quality (Checks, methods, tests & practices to ensure indoor air quality)	
Does the organization test indoor air quality? Details of last indoor air quality test done.	The organization does not conduct indoor air quality tests. Instead, the Indoor air quality test was performed by CDG Inspection Pvt Ltd at various locations within the college, including the laboratory, lecture room, seminar room, and classroom. The air quality values for the seminar hall, laboratory, and reading room were found to be 56, while in the library, it was measured at 60. Reference fig/doc: C4, C5, C6, C7
Is there a proper system of exhaust of indoor air?	Yes, there is a proper system for indoor air exhaust. Air can be expelled as needed through the windows, and exhaust fans are installed in various locations to facilitate effective air ventilation. Reference fig/doc: - C3
Supplies: <ul style="list-style-type: none"> Are 'Material Safety Data Sheets (MSDS)' available for different types of supplies (Ex: solvent, wax, adhesives, paints, flammables etc.)? Are storage areas separate & ventilated properly? Are less or nonhazardous materials used when possible? Does the organization have a defined system to evaluate & find out safer alternatives? Is there a defined procedure available for disposal of used substances? 	<ul style="list-style-type: none"> Yes, material safety data sheets (MSDS) are available for various types of supplies used in the Chemistry, Biology, and Botany labs. The chemical list includes MSDS information, and an example of the MSDS for ethanol is provided. Reference fig/doc: - C1 Yes, the storage areas are properly separated and ventilated. The chemicals are stored in closed chambers made of wood and glass, secured with a lock and key arrangement. Reference fig/doc: - C10 During the audit, changes to safer alternatives for the chemicals used are not feasible due to constraints imposed by the curriculum. During the audit, changes to safer alternatives for the chemicals used are not feasible due to constraints imposed by the curriculum. However, it's important to note that a disposal policy is in place. Reference fig/doc:- C13 There is a procedure for the disposal of used substances involving methods such as acid and base neutralization. However, it was observed that they are physically collecting substances


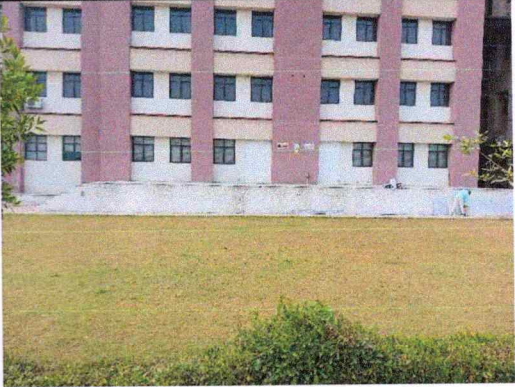



Amen

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	<p>in a separate bucket and subsequently arranging for proper disposal, following the established rules for the process. Reference fig/doc: - C8, C9, C13</p>
<p>General Cleanliness:</p> <ul style="list-style-type: none"> • Are rooms dusted and vacuumed thoroughly and regularly? What are related checks & controls? • Does the organization ensure to use of environment-friendly, non-scented cleaning products? 	<ul style="list-style-type: none"> • Yes, the rooms are thoroughly and regularly dusted and vacuumed. However, the related checks and controls for the rooms are also documented. Reference fig/doc: - C11, C12 • No written evidence was found during the audit to ensure the use of environmentally friendly, non-scented cleaning products.
<p>Pest control methods & products used (check & control).</p>	<p>No written evidence was found during the audit regarding the pest control methods and the products used.</p>
<p>Does the organization ensure use of low emitting paints, coatings, furniture etc.? What are related checks & controls?</p>	<p>The organization is dedicated to using low-emitting paint, coating, and furniture. The institute has provided a policy outlining how they will progress toward achieving this commitment. Reference fig/doc: - C14</p>
<p>Is there any sign of mold infestation?</p>	<p>During the audit, there were no signs of any mold infestation in the organization.</p>
<p>Does the organization eliminate any bird or animal nests or droppings near outdoor air? intakes?</p>	<p>No, the organization does not remove bird or animal nests or droppings near outdoor air intakes.</p>
<p>What are the methods adopted by the organization to control/prevent dust within the buildings?</p>	<p>Yes, the methods adopted by the organization to control/prevent dust within the building include regular dusting and keeping the windows and doors closed whenever the facility is not in use. Reference fig/doc: - C2</p>
<p>Related records / images</p>	

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<p>C1: Material safety data sheet</p>	<p>C2: closed windows and door for the prevention of dust</p>
<p>Exhaust in Students Washroom</p>  <p>Exhaust in Lab Outside</p> 	<p>Exhaust in Staff Room</p> 
<p>C3: exhaust air disposal photo of windows and door</p>	

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<p>C4: Indoor Air quality in the seminar hall</p>	<p>C5: Indoor Air quality in the Laboratory</p>
<p>C8: Indoor Air quality in library</p>	<p>C7: Indoor Air quality in reading room</p>

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 <p>Shot on OnePlus Bhankota - 2024.01.10 15:26</p>	 <p>Shot on OnePlus Bhankota - 2024.01.10 15:36</p>
<p>C8: Wet chemical waste collection system in lab</p>	<p>C9: Solid chemical waste collection system</p>
 <p>Latitude: 24.94861 Longitude: 75.97717 Elevation: 463.793m Accuracy: 20.0m Time: 08:01:2024 13:04 Note: clean</p>	
<p>C10: Chemical storage in the laboratory</p>	<p>C11: Clean classroom photo</p>

	<p align="center">Chemical Waste Disposal Method</p> <p>Acid-Base Neutralization</p> <p>The wastes designated for acid-base neutralization may be handled in lab using the procedures below. Please refer to following instructions:</p> <ul style="list-style-type: none"> • Strong, concentrated acids or bases must be diluted 10 to 1 before being neutralized and discharged to the sewer. • Check for acids including chromic, persulfate and some acids are diluted and disposed through a separate sink outlet or attached to deplorable container. • Acids or bases that contain heavy metals are diluted and disposed through a separate sink outlet or attached to deplorable container. <p>Neutralization Procedures</p> <p>Caution: vapors and heat are generated during neutralization. Note that acid-base neutralization is not required for disposal in separate sink. When in doubt or if neutralization is not feasible, any materials can be placed in deplorable container.</p> <ul style="list-style-type: none"> • Perform all steps slowly and keep containers cool while neutralizing. • Acid neutralization: Make a basic solution using a large volume of water in a beaker and an appropriate amount of base. Stir solution while slowly adding diluted acid. • Base neutralization: First add base to a large vessel containing water. Slowly add an appropriate amount of acid. • Allow the contents to react for 15 minutes to dissipate any heat before testing the pH. The contents should not be hot and the contents should not be smoking. If the contents is still hot after 15 minutes, allow the mixture to continue until the heat has dissipated before continuing to the next step. • Test the neutralized solution to confirm a pH between 6 and 9, and then to be sewer with at least 20 parts water.
--	--

C12: Clean classroom checklist

C13: Written Chemical waste disposal method

(This area is currently blank in the provided image.)

C14: Policy regarding the use of the Zero VOC paints in the organization.

(This area is currently blank in the provided image.)

- Non conformity: -**
1. The organization neglects the use of eco-friendly, non-scented cleaning products, compromising its commitment to a sustainable and healthy environment.
 2. Insufficient checks and controls on pest control methods and products, posing potential environmental risks.

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WATER POLLUTION

Water Pollution Management (objective, practices / methods to minimize water pollution)	
Source of water pollution within the premises.	There is no source of the water pollution within the premises of the college.
Measures taken to prevent / stop water wastage.	Measures taken to prevent/stop water wastage include posters addressing water wastage, organizing seminars on water conservation, and promoting awareness through skit performances. Reference fig/doc: - D4, D5
Does the institute harvest rainwater? Give details.	Yes, the institute harvests rainwater in a tank with a capacity of 1,800,000 liters, situated in the middle of the campus. This harvested water is utilized for irrigation and watering plants. Reference fig/doc: - D3, D2
Is there any water recycling system? Give details.	During the audit, no evidence was found for water recycling practices in the college, except for rainwater harvesting. Reference fig/doc: - D3, D2
Is there any effluent treatment plant in premises? No. of outlets for discharge of effluent?	Not available
What is the quality of effluent in KLD?	Not available
Whether operating STP/ETP satisfactorily?	Not available
Whether provided flow meters on outlet & inlet of ETP/STP?	Not available
Whether provided separate electricity meter on ETP/STP?	Not available
Whether maintained Logbook for consumption of Electricity/ Chemicals/Quantity of effluent?	Not available
	Not Available
Detail of land in case effluent is discharged for percolation/ irrigation purpose with justification for its 100% utilization.	Not Available
Status of ZLD (Zero Liquid Discharge) as per CPCB	Not available
Locate the point of entry of water and point of exit of waste water in the organization.	The point of entry of the water is the bore well and the point of exit of the water is the from the closed sewer system in the organization. Reference fig/doc: - D1

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Related records / images	
	
<p>D1: Point of entry of water in the organization</p>	<p>D2: Rainwater harvesting unit in the college premises</p>
	
<p>D3: Rain water harvesting</p>	<p>D4: Community teaching about the water conservation</p>
	
<p>D5: water conservation poster</p>	

Nonconformity: -
The organization has not established an Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) as required.

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Water Consumption & Water Efficiency Use of water (indoor and outdoor water) & practices related to efficient /reduced use of water.)	
Sources of water supply	The source of the water supply in the St. Xavier college is 5 borewell.
Number of water storage tanks and their storage capacity. Total water storage capacity.	4 storage tank of capacity 25000 liters. The total water storage capacity is 100000litres
Water used in irrigation	180000litres
Water used in cleaning	500 liters

Details	No. of persons	Domestic (liter/ day)	Flushing (liter / day)	Total (liter / day)
Students	2264	1x2264=2264	40x2264=90560	92824 L
Teaching Staff	43	1.5x43=65	40x43=1720	1785 L
Technical Staff	11	1.5x11=17	40x11=440	457 L
Non-technical Staff	37	2x37=74	40x37=1480	1554 L
Outsourced Staff	6	0.5x2=1.0	2x37=74	75L
Total	2361	2421	94274	96695

Description	Requirement*	Actual consumption
Water consumption per head /day	Without boarding facility: 45 liter per head / day With boarding facility: 135 liter per head / day	Without boarding facility: 40.955 liter per head/day
*As per Central Ground Water Authority Guidelines water requirements (Ref. NBC 2016, BIS) of an educational institute for drinking and domestic use.		

SANITARY CONVENIENCE TO BE PROVIDED

Fitments	Educational Institutes (non-Residential)				Educational Institutes (Residential)			
	Boys		Girls		Boys		Girls	
	Req.*	Actual	Req.*	Actual	Req.*	Actual	Req.	Actual
Water closets	1 per 40 pupils or part thereof	38	1 per 25 pupils or part thereof	45	1 for every 8 pupils or part thereof		1 for every 6 pupils or part thereof	
Ablution taps	1 in each water closet	113	1 in each water closet	95	1 in each water closet		1 in each water closet	

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Urinals	1 per 20 pupils	43	-	- 0	1 for every 25 pupils or part thereof	-	-
Wash basins	1 per 60 pupils, Min 2	37	1 per 40 pupils, Min 2	38	1 for every 8 pupils or part thereof	1 for every 6 pupils or part thereof	
Bath	-	-	-	-	1 for every 8 pupils or part thereof	1 for every 6 pupils or part thereof	
Drinking water fountains or taps	1 for every 50 pupils or part thereof	24	1 for every 50 pupils or part thereof	24	1 for every 50 pupils or part thereof	1 for every 50 pupils or part thereof	
Cleaner's sinks	1 per floor, minimum						

*As per IS 1172:1993

NOISE POLLUTION

Noise Pollution Management (objective, practices / methods to minimize noise pollution)		
The noise level testing for St. Xavier College was conducted by CDG Inspection Ltd. The average sound range recorded during daytime was a maximum of 64.75 dB and a minimum of 58.97 db.		
Noise level in dB(A) Leq	Standard Level*	Actual Level
Day Time	50	Max 64.75 and min 58.97
Nighttime	40	
<p>*As per The Noise Pollution (Regulation and Control) Rules, 2000; rule 3(1) and 4(1) Day time from 6:00am to 10:00pm Nighttime from 10:00pm to 6:00am</p>		
Related records / images		



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<p>E1: Minimum and maximum sound in the staffroom</p>	<p>E2: Minimum and maximum sound in the seminar hall</p>
<p>E3: Maximum and minimum sound in the reading room</p>	<p>E4: Maximum and minimum sound in the Library</p>

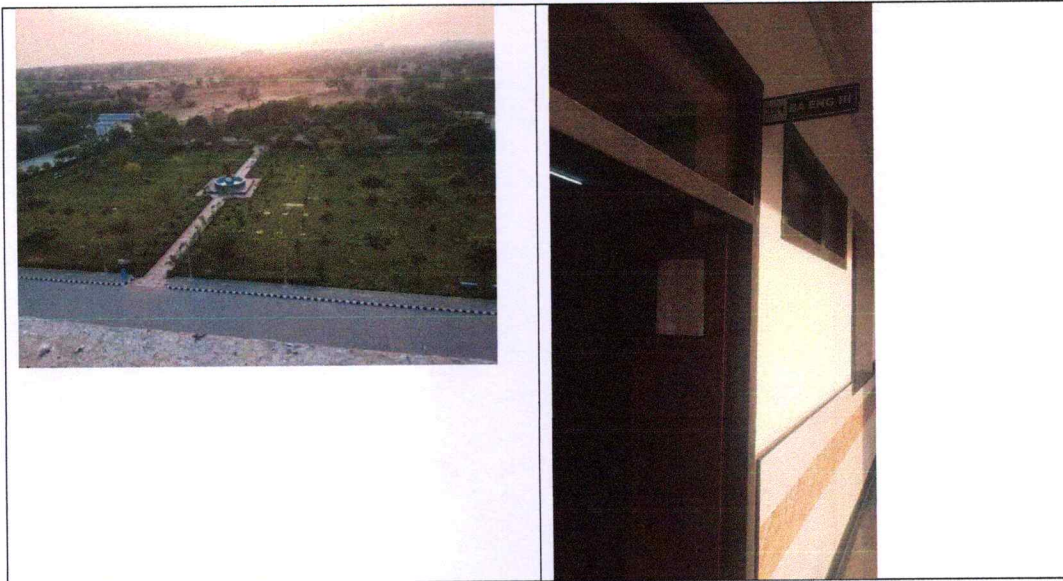
<p>Building Sustainability</p>	
<p>Ensure that walls, floors, roofs, and windows are as energy efficient as possible.</p>	<p>The walls, roof, floor, and windows are designed to be as energy-efficient as possible. The organization strategically located the building in an area with ample sunlight.</p>

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	<p>Additionally, curtains in the rooms are utilized to regulate heat and enhance energy efficiency. Reference fig/doc: - F2, F4</p>
Design for good indoor air quality	<p>Yes, the building is designed to ensure good indoor air quality. Various rooms have doors and windows that can be opened and closed. Additionally, fans and indoor exhaust fans are installed. Furthermore, the college is surrounded by lush greenery, further supporting a healthy environment. Reference fig/doc: - F1, F3</p>
Use of natural daylight in building interiors as a source of ambient light.	<p>Yes, the college utilizes natural daylight as a source of ambient light for its operations. Reference fig/doc: - F1</p>
Use of low emitting materials for building modifications, maintenance, and cleaning.	<p>The organization is committed to the use of low-emitting materials for building modification, maintenance, and cleaning. This commitment is defined through the institute's policy, which they will communicate to individuals involved in purchasing paints known for low emissions. Reference fig/doc: - F5</p>

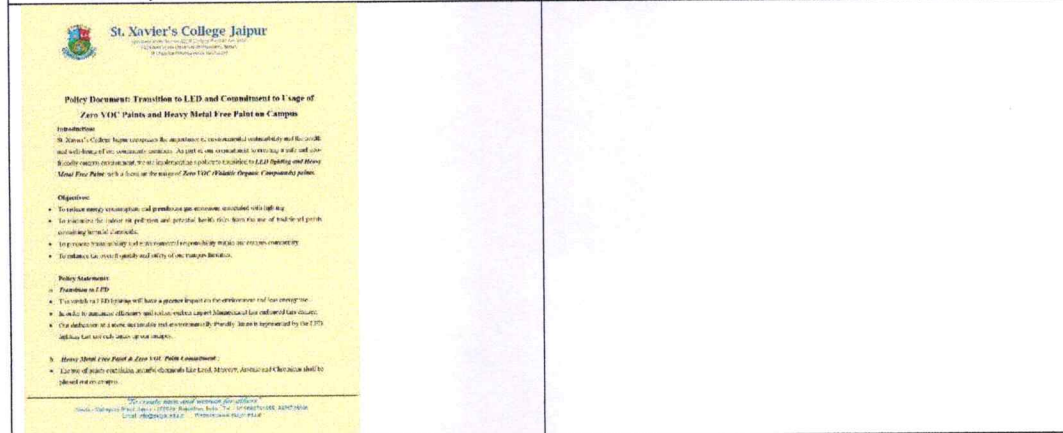
	
F1: Sunlight photos in the classroom	F2: Sensor based lighting system

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F3: Greenery in the campus

F4: The curtains in the classroom



F5: The policy regarding the low emitting paints

Lighting




Use of energy efficient lighting system (bulb & other products)

Yes, St. Xavier College utilizes an energy-efficient lighting system, incorporating LED bulbs and sensor technology for LED operation, as well as fans and HVAC systems.
Reference fig/doc: - G2

Use of natural day light

Yes, the college utilizes natural daylight as the ambient light source for its daily activities.

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Reference fig/doc: - G1	
 	
G1: Day light in the campus area	G2: Sensor based LED light

ILLUMINATION LEVELS AND GLARE INDEX


Sr. No.	Area	Standard Illumination (Lux)*	Standard Glare Index*	Actual Illumination (Lux)	Actual Glare Index
a)	Classrooms	300	16	356	
b)	Lecture rooms (including demonstration areas)	300	16	283	
c)	Reading rooms	150 to 300	19	371	
d)	Laboratories	300	16	237	
e)	Corridors	70	-	143	
f)	Libraries	300	16	238	
g)	Auditorium			229	
	I. Hall	70	-		
	II. Foyer	70	-		
	III. Stage area	300	16		
h)	Gymnasiums	150	-	15000	
j)	Cafeterias	100	-	335	
K)	Staff rooms	150	-	628	

* Recommended illumination Levels and Glare index as per National Lighting Code 2010 [ETD 24: Illumination Engineering and Luminaries] Part 5 Section 3

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<p>H1: Auditorium stage area lighting</p>	<p>H2: Cafeteria lighting in lumens</p>
	
<p>H3: Classroom lightning in lumens</p>	<p>H4: Corridor lighting in lumens</p>

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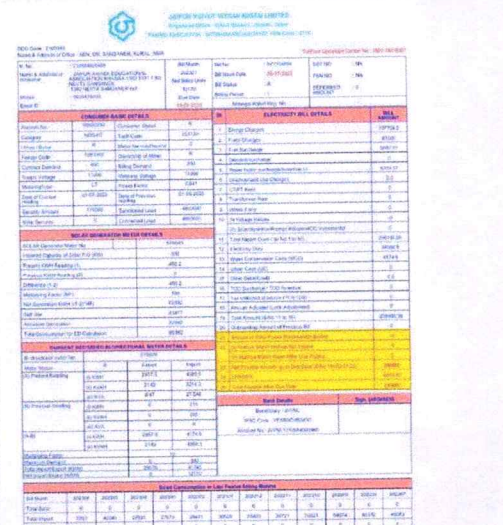
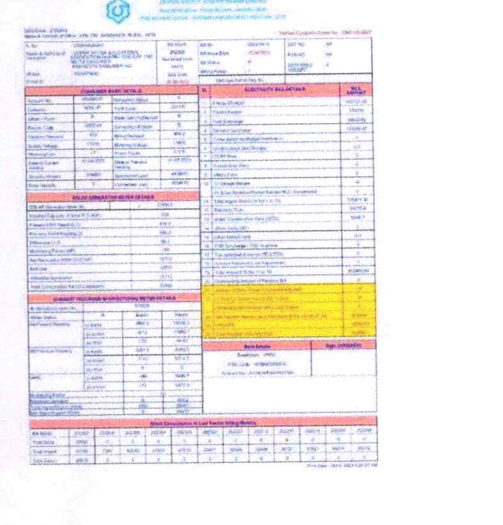
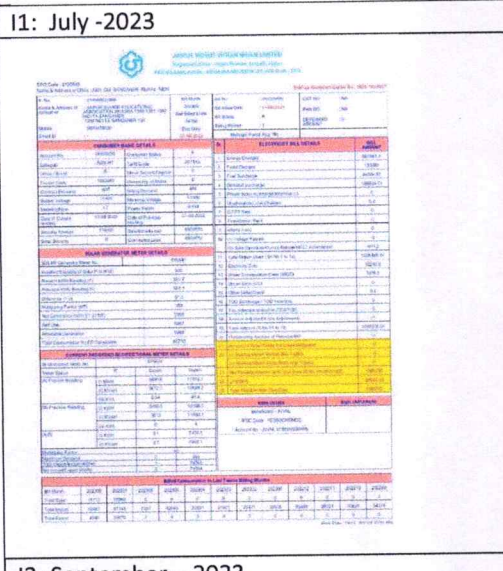
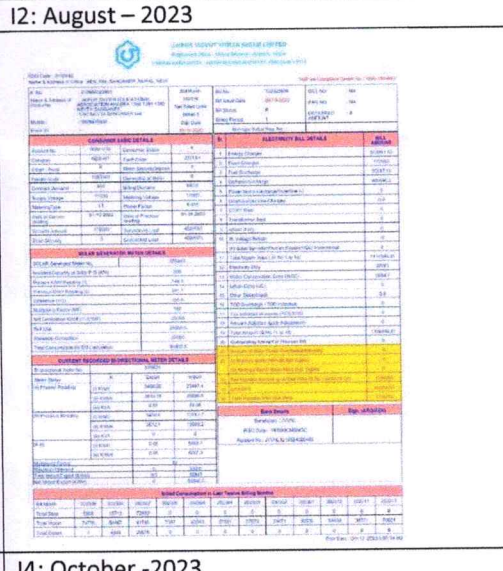
	
<p>H5: Corridor lighting in lumens</p>	

<p>Electrical Equipment's</p>	
<p>Details of electrical equipment, its energy efficiency & practices</p>	<p>The institute employs energy-efficient electrical equipment, including sensor-based LED lights, 3-star rated air conditioners, fans, monitors, CPUs, and other necessary devices connected to the electrical panel. However, the institute cannot ascertain the energy efficiency as no written evidence was found.</p>

ELECTRICITY CONSUMPTION

Month	Electricity Consumption (Last 6 months)
July- 2023	12170
August -2023	54477
September -2023	74764
October -2023	56846.5
November -2023	12272.5
December -2023	10876

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<p>11: July -2023</p> 	<p>12: August - 2023</p> 
<p>13: September - 2023</p> 	<p>14: October -2023</p> 

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<p>15: November -2023</p>	<p>16: December - 2023</p>
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Energy Efficiency (consumption, objective, practices / methods to achieve energy efficiency objectives)							
<p>Current energy uses.</p>	<table border="1"> <thead> <tr> <th>Energy Sources</th> <th>Consumption (Unit)</th> </tr> </thead> <tbody> <tr> <td>Electricity</td> <td>36,901Unit/ month (Average)</td> </tr> <tr> <td>Fuel oil</td> <td>Not available</td> </tr> </tbody> </table>	Energy Sources	Consumption (Unit)	Electricity	36,901Unit/ month (Average)	Fuel oil	Not available
Energy Sources	Consumption (Unit)						
Electricity	36,901Unit/ month (Average)						
Fuel oil	Not available						
<p>Short-term energy efficiency goals & roadmap to achieve those goals.</p>	<p>The short-term energy efficiency goals for St. Xavier College encompass several areas, including the installation of sensor-based LED lights, utilization of 5-star rated equipment, and incorporation of biofertilizers for biodegradable products. The college outlines its approach for assessment, procurement, installation, and monitoring of the implemented goals. Reference Fig/Doc: - J1</p>						
<p>Long-term energy efficiency goals & roadmap to achieve those goals.</p>	<p>The long-term energy efficiency goals that St. Xavier College aims to achieve include net-zero emissions, adoption of renewable energy, electrification of transportation, and deployment of energy storage. To accomplish these goals, the college plans to establish energy baselines, set targets, provide education to</p>						

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	institute students, teachers, staff, and the surrounding community. Reference fig/Doc: - J2, J3

<p style="text-align: center;">Short-Term Energy Efficiency Goals and Roadmap for St. Xavier's College, Jaipur</p> <p>1. Installation of Sensor-Based LED Lights Objective: Implement sensor-based LED lights in all classrooms to optimize energy usage. Roadmap:</p> <ul style="list-style-type: none"> • Assessment: Conduct a comprehensive assessment of current lighting systems and energy consumption in classrooms. • Procurement: Source and procure sensor-based LED lights that are compatible with the college's infrastructure. • Installation: Deploy the new lighting systems in classrooms, ensuring proper configuration for occupancy and natural light sensing. • Monitoring: Regularly monitor and analyze energy consumption patterns to assess the impact of the new lighting system. <p>2. Installation of 5-Star Rated Appliances Objective: Replace existing appliances across the campus with energy-efficient 5-star rated models. Roadmap:</p> <ul style="list-style-type: none"> • Inventory Assessment: Conduct an inventory of existing appliances and their energy ratings. • Appliance Replacement: Gradually replace air-conditioning units with 5-star rated models, prioritizing high usage areas. • Awareness Campaign: Launch a campus-wide awareness campaign to inform staff and students about the benefits of using energy-efficient appliances. • Monitoring: Continuously monitor energy consumption and utility costs to gauge the effectiveness of the appliance upgrade. <p>3. Utilization of Biodegradable Waste as Bio Fertilizer Objective: Repurpose biodegradable waste as bio fertilizer for the college grounds. Roadmap:</p> <ul style="list-style-type: none"> • Waste Collection System: Establish a proper waste collection system to segregate biodegradable waste from other types of waste. • Composting Facility: Set up a composting facility on campus to convert biodegradable waste into bio fertilizer. • Greening Integration: Integrate the use of bio fertilizer into the college garden's maintenance practices. • Educational Programs: Conduct workshops to educate students and staff on the process and benefits of waste-to-bio fertilizer conversion. <p>4. Promotion of Carpooling among Staff Members and Students Objective: Encourage staff members and to utilize carpooling for commuting to the college. Roadmap:</p>	<p style="text-align: center;">Long-term Energy efficient Goals and Roadmap</p> <p>Setting long-term energy goals is crucial for sustainable development, environmental conservation, and ensuring a reliable and cost-effective energy supply. Long-term energy goals typically span several decades and are aligned with broader societal, economic, and environmental objectives. Here are some concrete long-term energy goals:</p> <p>Carbon Neutrality or Net Zero Emissions:</p> <ul style="list-style-type: none"> • Aim to achieve carbon neutrality by transitioning the energy mix from fossil fuels to renewable energy and improving energy efficiency. • Promote energy-efficient energy sources and technologies to replace fossil fuels. <p>Renewable Energy Adoption:</p> <ul style="list-style-type: none"> • Increase the share of renewable energy in the overall energy mix. • Set targets for the deployment of solar and other clean energy technologies. <p>Energy Efficiency Improvements:</p> <ul style="list-style-type: none"> • Implement measures to improve energy efficiency across sectors, including transportation, and buildings. • Set targets for reducing energy intensity and increasing overall energy productivity. <p>Electrification of Transportation:</p> <ul style="list-style-type: none"> • Promote the electrification of the transportation sector to reduce dependence on fossil fuels. • Set goals for the adoption of electric vehicles and the development of supporting infrastructure. <p>Smart Grid Implementation:</p> <ul style="list-style-type: none"> • Invest in smart grid technologies to enhance the efficiency, reliability, and resilience of the electricity grid. <p>Energy Storage Deployment:</p> <ul style="list-style-type: none"> • Develop and deploy advanced energy storage technologies to address intermittency issues associated with renewable energy sources. • Set targets for the adoption of grid-scale and distributed energy storage solutions. • Foster innovation and the development of breakthrough technologies with the potential to transform the energy landscape. <p>Energy Access and Equity:</p> <p>International Cooperation and Collaboration:</p> <ul style="list-style-type: none"> • Collaborate with other nations and participate in global efforts to address energy challenges. • Contribute to international agreements and initiatives aimed at mitigating climate change and advancing sustainable energy practices. <p>Public Awareness and Education:</p>
J1: Short term energy efficiency Goal	J2: Long term energy efficiency Goal

<ul style="list-style-type: none"> • Increase public awareness about the importance of sustainable energy practices. • Promote energy literacy and encourage behavioral changes that support long-term energy goals. <p>These long-term energy goals are interconnected and often contribute to achieving broader objectives such as environmental sustainability, economic development, and social equity. Regular reviews and adjustments to these goals may be necessary to account for evolving technologies, changing geopolitical landscapes, and emerging challenges.</p> <p>Roadmap to achieve these goals</p> <p>Establish a Baseline and Assess Current State:</p> <ul style="list-style-type: none"> • Conduct a comprehensive assessment of current energy consumption, sources, and emissions. • Identify key sectors contributing to carbon emissions and energy consumption. • Analyze the existing policy landscape, infrastructure, and technological capabilities. <p>Develop a Comprehensive Policy Framework:</p> <ul style="list-style-type: none"> • Formulate and implement policies to promote carbon neutrality and net-zero emissions. • Implement regulations and standards to improve energy efficiency across sectors. <p>Promote Renewable Energy Adoption:</p> <ul style="list-style-type: none"> • Set targets for increasing the share of renewable energy in the overall energy mix. • Develop and implement supportive policies to encourage investment in clean energy technologies. • Facilitate the integration of decentralized renewable energy solutions. <p>Enhance Energy Efficiency:</p> <ul style="list-style-type: none"> • Set specific targets for reducing energy intensity and increasing overall energy productivity. • Invest in research and development to identify and implement cutting-edge energy-efficient technologies. <p>Electrification of Transportation:</p> <ul style="list-style-type: none"> • Develop and implement policies to promote the adoption of electric vehicles (EVs). • Invest in EV infrastructure, including charging stations and smart grids. <p>Implement Smart Grid Technologies:</p> <ul style="list-style-type: none"> • Invest in the development and deployment of smart grid technologies. • Upgrade existing grid infrastructure to enhance efficiency, reliability, and resilience. • Facilitate the integration of renewable energy sources and energy storage systems. <p>Ensure Energy Access and Equity:</p> <ul style="list-style-type: none"> • Implement policies to ensure equitable access to clean and affordable energy. 	<p style="text-align: center;">J3: Road map to achieve the goal</p>
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On-Site Energy Generation

(Details of renewable energy generation projects on organization's property for organization's use)

The college, situated in Jaipur, has successfully implemented a sustainable initiative with a 300 KW solar rooftop power plant. Operating at its maximum capacity, the campus optimally utilizes clean solar energy, emphasizing environmental responsibility and minimizing carbon footprints. In comparison to traditional methods, where 1.0 unit of electricity production consumes 0.69-0.89 kg of coal and emits 2.0 kg of CO₂, this solar facility significantly reduces pollution. With a total of 560 panels, the college's commitment to eco-friendly practices extends to Operations and Maintenance (O & M) services, ensuring the ongoing efficiency and longevity of this green energy solution.

Reference fig/doc: - K1, K2

Related records / images



K1: solar panel above the parking area



K2: display about the solar panel information

DRINKING WATER

Drinking Water Quality

(As per IS 10500: 2012)

The institute conducted a drinking water test through an external lab on 10/01/2024. Various factors, including E. coli levels, sodium, potassium, pH, turbidity, etc., were assessed in the third-party test, and all quantities were found to be within acceptable limits. Additionally, CDG Inspection conducted a pH test, revealing a pH level of 7.52, within the normal range for water.

Reference fig/doc: - L1, L2

Related records / images

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Sl.No	Test Parameters	Test Method	Results	Units	IS:15020:2012 Acceptable Limit	Permissible Limit
1	pH	IS:15020:2012	7.2	-	6.5 to 8.5	No Restriction
2	Hardness	IS:3026:1970 (AS:187)	160.0	MG/L	1	5
3	Total Dissolved Solids (TDS)	IS:3026:1970 (AS:187)	280.0	mg/L	500	500
4	Calcium Ion Ca	IS:3026:1970 (AS:187)	60.0	mg/L	75	200
5	Total Alkalinity (as CaCO3)	IS:3026:1970 (AS:187)	210.0	mg/L	200	500
6	Total Hardness (as CaCO3)	IS:3026:1970 (AS:187)	470.0	mg/L	500	1000
7	Chloride Ion Cl	IS:3026:1970 (AS:187)	15.0	mg/L	100	100
8	Total Phosphate	IS:3026:1970 (AS:187)	0.05	mg/L	0.1	0.1
9	Total Phosphate (as P)	IS:3026:1970 (AS:187)	0.05	mg/L	0.1	0.1
10	Iron as Fe	IS:3026:1970 (AS:187)	0.15	mg/L	0.3	0.3
11	Iron as Fe	IS:3026:1970 (AS:187)	0.15	mg/L	0.3	0.3
12	Iron as Fe	IS:3026:1970 (AS:187)	0.15	mg/L	0.3	0.3
13	Iron as Fe	IS:3026:1970 (AS:187)	0.15	mg/L	0.3	0.3
14	Total Dissolved Solids (TDS)	IS:3026:1970 (AS:187)	280.0	mg/L	500	500
15	Calcium Ion Ca	IS:3026:1970 (AS:187)	60.0	mg/L	75	200
16	Total Alkalinity (as CaCO3)	IS:3026:1970 (AS:187)	210.0	mg/L	200	500
17	Total Hardness (as CaCO3)	IS:3026:1970 (AS:187)	470.0	mg/L	500	1000

L1: The Ph test been carried out by the CDG inspection Ltd

L2: The third-party report been formed by the Vibrant techno lab put ltd

WASTE MANAGEMENT

Type of waste - Plastic waste

Approximate annual quantity- 240Kg

Source of waste – Wrapper from chocolate, plastic pack foods, tetra packs etc.

Handling methods: segregation of waste and then its collected Jaipur municipal collection

Measures to reduce the waste quantity- They have displayed posters advocating the ban on single-use plastic and actively educate people about the initiative.

Type of waste – Paper waste

Approximate annual quantity- 100Kg/year

Source of waste – Paper, tetra pack, collection of the test copy and test paper, files from the practical etc.

Handling methods- the paper waste is collected and segregated and then it is disposed of in accordance with the rules that the institute need to follow.

Measures to reduce the waste quantity- Enhanced governance practices at St. Xavier College involve a shift towards paperless operations. Notices are prominently displayed through electronic means, utilizing emails, ERP, and instant messaging. The option of an e-library is

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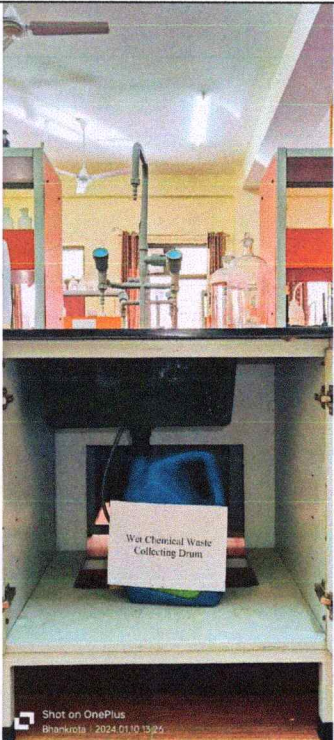

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<p>available, promoting digital resources. Online attendance tracking is implemented as part of initiatives to minimize paper consumption.</p>
<p>Type of waste – Electronic waste</p> <p>Approximate annual quantity- 10 Kg</p> <p>Source of waste – computer, UPS, keyboard mouse, CCTV camera, Hard drive</p> <p>Handling methods- e-waste collection is done through the separate bin then they are kept in a separate area.</p> <p>Measures to reduce the waste quantity- Not available.</p> <p>Type of waste – Hazardous waste</p> <p>Approximate annual quantity- 2kg</p> <p>Source of waste – chemical lab waste,</p> <p>Handling methods- they are stored in the different container</p> <p>Measures to reduce the waste quantity- not available</p>
<p>Type of waste – Garden waste</p> <p>Approximate annual quantity- 600 Kg</p> <p>Source of waste – grasses cut, dead leaf, twigs, branches</p> <p>Handling methods- collect it, reuse, recycle for compost</p> <p>Measures to reduce the waste quantity- Converting garden waste into manure is achieved through the utilization of a compost machine, effectively reducing the overall waste volume.</p>
<p>Type of waste – Food waste</p> <p>Approximate annual quantity- 126kg</p> <p>Source of waste – canteen</p>


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Handling methods- compost, consumption by cows, and the canteen people are responsible for the handling the food waste

Measures to reduce the waste quantity- Implementing measures to minimize waste quantity includes raising awareness, establishing guidelines, and displaying posters specifically addressing food waste.

	
<p>M1: Wet chemical waste collection system</p>	<p>M2: Poster proving the information do not waste the food in the organization</p>

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Say no to plastic poster	

Nonconformity: -
Lack of written documentation for waste collection records, including measurements for liquid and dry waste.

COMPOSTING PLANT

How much organic waste is generated in a day? What type of organic waste is generated?	1 kg/day of organic waste is generated daily, consisting of grass, twigs, paper, and food waste.
Details & capacity of compost plan installed in the organization.	The organization has installed a 400-liter composting machine, and a vermicompost plant is also operational on the premises. Reference fig/doc: - N1, N2
Details of composting method used	It involves pulverizing and breaking down compost into smaller pieces. The vermicomposting method, utilizing earthworms, is employed for efficient decomposition.
Compost facility maintenance & inspection plan	During the audit, no evidence was found for the facility maintenance plan and inspection plan.

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N1: Compost plant in St. Xavier college	N2: Vermicompost pit in the St. Xavier college

Nonconformity: -
 Absence of evidence for the facility maintenance and inspection plan for composting at St. Xavier College.

RAINWATER HARVESTING

<p>Provide details of the rainwater harvesting facility.</p>	<p>Rainwater harvested from sophisticated systems within the building is directed into a 1,800,000-liter unit with a 15-meter radius, serving as a primary reservoir. This capacity enables efficient storage for campus needs, emergency supply during water scarcity, and sustainable usage for irrigation and non-potable purposes, reducing reliance on external sources and promoting environmental sustainability. Reference fig/doc: - O2</p>
<p>Rainwater harvesting system maintenance plan</p>	<p>Rainwater system maintenance is conducted at the college. The last maintenance of the rainwater harvesting unit was performed three times in May 2023, July 2023, and October 2023, representing the start, middle, and end of the rainy season. It also includes a checklist documenting the events carried out. Reference fig/doc: - O1, O3</p>

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<p>O1: Maintenance of the rainwater harvesting tank done in the St. Xavier college</p>	<p>O2: Rainwater harvesting tank in the St. Xavier college</p>
<p>O3: Water maintenance harvesting checklist</p>	

Nonconformity: -
 Absence of a written Rainwater Harvesting System maintenance plan, though maintenance was physically conducted.

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Training	
Has the organization provided waste management/handling training to concerned employees? Give details.	Yes, the organization provided waste management/handling training to the concerned employees. The training covered organic waste. However, during the audit, individuals were observed participating in waste segregation Reference fig/doc: - P1, P3
Has the organization provided training for energy saving?	No written evidence found in the organization for the energy saving training
Has the organization conducted training for solid waste management?	Yes, the organization conducted training for solid waste management, specifically focusing on organic waste. Reference fig/doc: - P1, P3
Has the organization conducted awareness training for water saving?	Yes, the organization conducted awareness training for water conservation through street skits, community education sessions, water-saving training, and display of water conservation posters within the organization. Additionally, sensors are utilized to prevent water overflow in storage tanks. Reference fig/doc: - P2, P4



P1: Organic compost training for the student



P2: Street playing the water saving.



P3: Waste management training given to the employees







P4: Water sensor in the tank.

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Nonconformity: -
The organization lacks documented evidence of training sessions for energy-saving at St. Xavier College.

Environmental Practices	
Waste recycling	Yes, there is a waste recycling system in place with a composting plant. Waste is segregated into different types using designated bins. Reference fig/doc: - R2
Waste Decomposition	Yes, waste decomposition is implemented through a vermicompost pit, and a compost plant is utilized for this purpose. Reference fig/doc: - R4
Rainwater harvesting	Yes, the institution has a rainwater harvesting system with a capacity of 1,800,000 liters, and it undergoes regular maintenance. Reference fig/doc: - R1
Environmentally Preferable Purchasing (EPP) or Green Purchasing	Yes, the institution follows EPP, especially with LED bulbs. The college promotes solar energy, encourages teachers to use electric vehicles, and ensures the use of fans with good certification.
Distinct receptacles for trash and recycling	Yes, the institution has various types of dustbins designated for specific waste categories, including chemicals, plastic waste, and e-waste. Reference fig/doc: - R2
Low-emission transportation	The teacher commutes to the college using an electric vehicle and participates in carpooling. Reference fig/doc: - R3
maximum use of clean energy	Yes, the college harnesses sunlight and utilizes electricity generated from solar energy.
Preference to electronics over the paper	Yes, there is an 80% preference for electronic over paper usage in the college.
Campus garden	Yes, the college has a campus garden featuring various varieties of semi-arid and thorn plants native to the area where the institution is located.

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<p>R1: Rainwater harvesting</p>	<p>R2: E-waste collection</p>
	
<p>R3: Electric vehicle used by college staff</p>	<p>R4: Compost decomposition in the vermicompost.</p>

Environmental Initiatives / Green Initiatives
 The green initiatives undertaken by St. Xavier College include the establishment of a solar power plant, displaying Sustainable Development Goals (SDGs) for environmental initiatives, showcasing library facilities, setting up a vermicompost pit, a compost plant, and an incinerator on campus.


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Plant-related information is accessible through QR codes scanned with a phone. The college practices rainwater harvesting, collecting 1,800,000 liters for later irrigation. Community involvement is emphasized through monitoring of the National Green Corps (NGC) and National Service Scheme (NSS), overseen by the principal, IQAC, and teachers. Regular reports are requested and published in newsletters.

Related records / images




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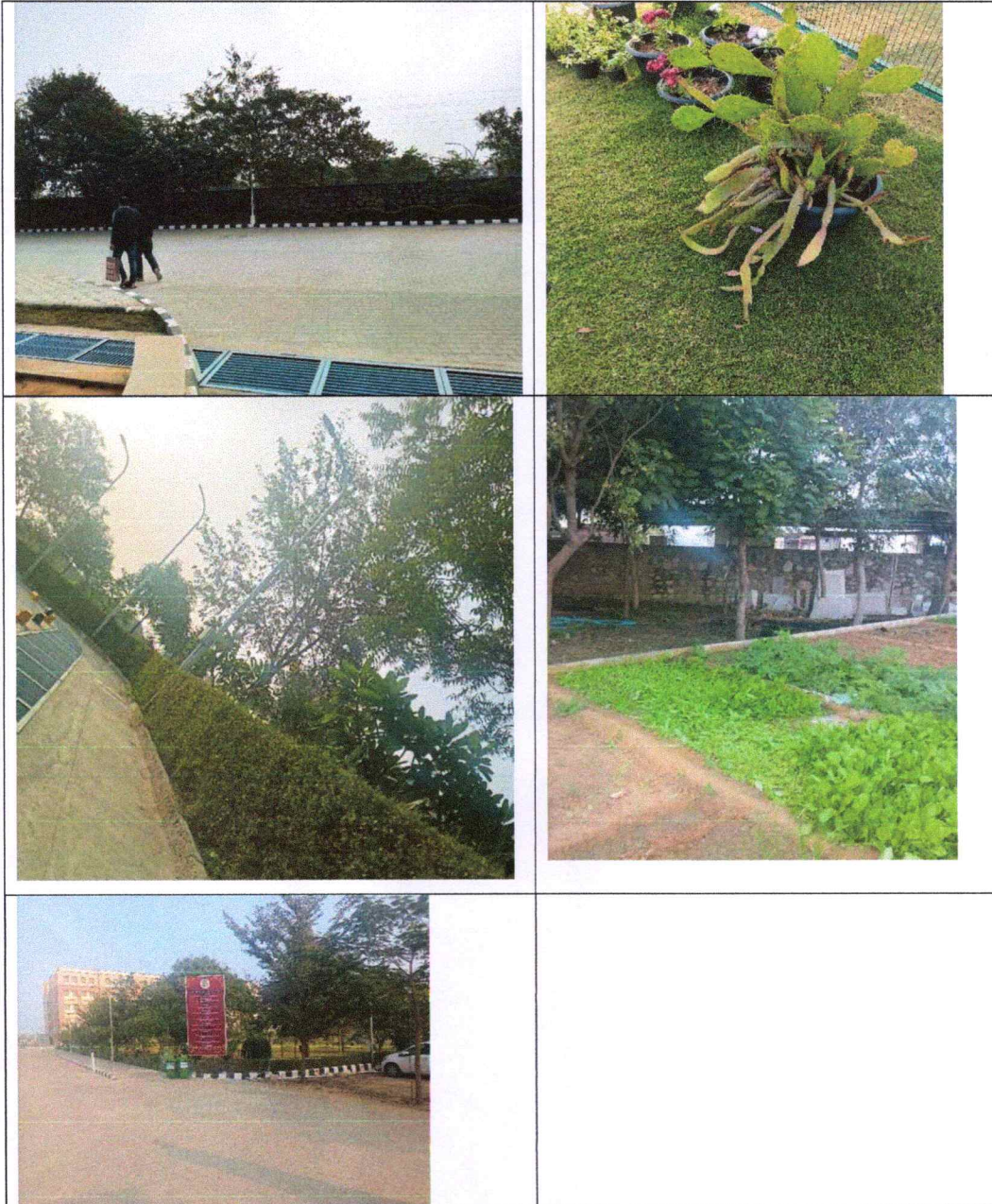
		
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Green Belt/ Landscaping

		
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Ashutosh tiwari

Inspector
CDG Inspection Limited



(Signature)
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