

# Vivekanand Environment Awareness Brigade



(An initiative of Swami Vivekanand Smruti Sangh Keri)

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Date: 18/05/2022

O/No.: VEAB 2022-23/07

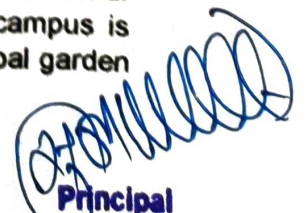
## GREEN AUDIT – HALBE COLLEGE

- **Overall environmental management**
- Founder members of Navnirman Shikshan Sanstha had a great awareness for education which led them to establish College of Arts, Commerce and Science (Computer), later renamed as Laxmibai Sitaram Halbe College of Arts, Commerce and Science, at Dodamarg on 6th August 2001.
- Dodamarg was separated from Sawantwadi tehsil in June 1999 and became the youngest tehsil of Sindhudurg district. Having 56 small villages in its jurisdiction, it is located in the lap of the Sahyadri Mountain range and comes exactly on the borders of Maharashtra, Goa and Karnataka states. Since the establishment, the college has been continuously providing higher education to the youth of Dodamarg tehsil as well as nearby villages of Goa State. Formerly, students had to travel more than 50 kms to reach Sawantwadi and Banda for degree education but this institution has lessened their sufferings and brought higher education at their doorstep.
- The college is relentlessly striving in pursuance of academic excellence and encouraging learners to participate spontaneously in various co-curricular and extracurricular activities. It has well qualified and research oriented teaching staff as well as supportive and efficient non-teaching staff which constantly endeavor for the betterment of the students and ultimately of the institution. Besides academic education, the college finds its responsibility towards community, women's empowerment, socio-economically backward class, environment consciousness, national harmony etc. and constantly addresses them through several co-curricular and extracurricular activities. We are persistently trying to kindle young minds with sublime ideas, accountability, virtuousness, curiosity, and social as well as ethical values.

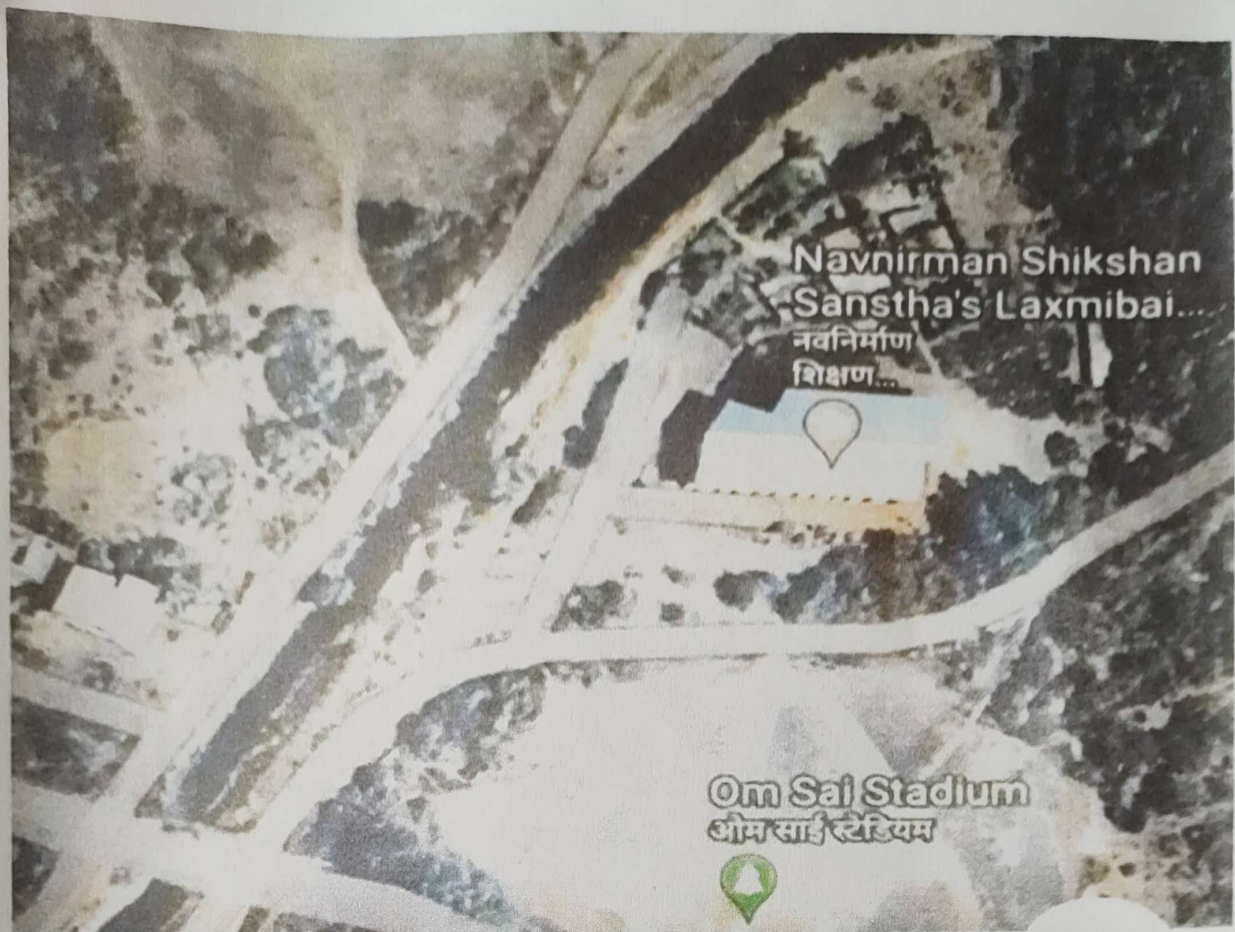
### 1.1 Environmental Setting

The college campus has 1 acer (4031.44 Sq m.) area. In that area of Rectangle of ground floor is 1446.28 Sq.m., area of deduction 646.77 Sq.m. and in the area calculation of first floor, the area of rectangle is 1502.75 Sq.m. and area of deduction is 981.16 Sq.m. Adequate place is made available for the administrative section, classrooms, seminar hall, library, canteen, toilets, auditorium, computer centre etc. College is easily accessible by road and Train; nearest Railway station is Thivim (Goa) which is 15 kms away. Manohar International Airport Mopa (Goa) is 19 km away from the College. Although campus is located in residential area, presence of green belt including gardens and an herbal garden has considerably reduced noise pollution in the campus.

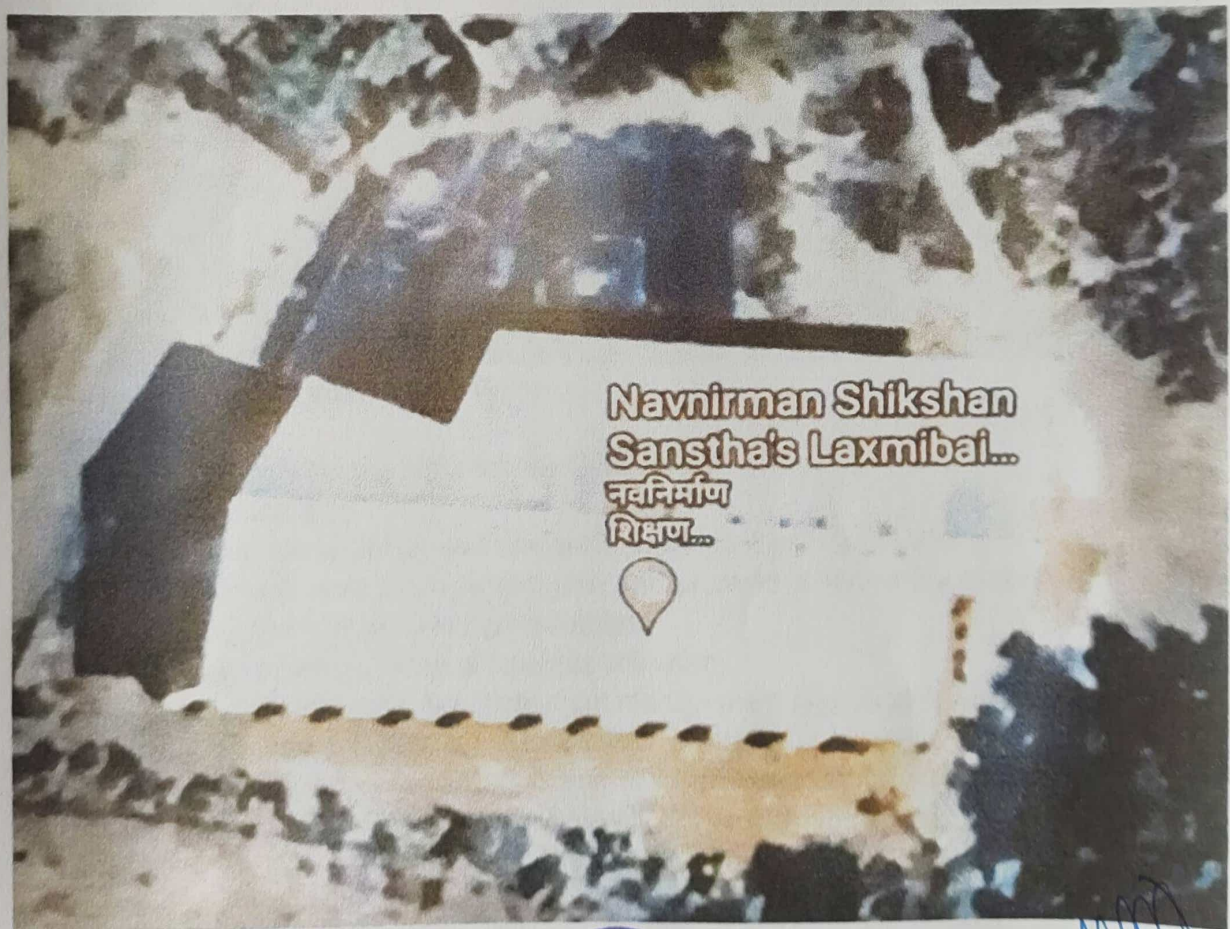


  
**Principal**

Navnirman Shikshan Sanstha's  
Laxmibai Sitaram Halbe  
College of Arts, Commerce & Science, Dodamarg  
Tal. Dodamarg, Dist. Sindhudurg



Google Map Location of the College ( $15^{\circ}40'26''\text{N } 73^{\circ}58'35''\text{E}$ )



( $15^{\circ}40'26''\text{N } 73^{\circ}58'35''\text{E}$ )



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Principal

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### 1.2 Glimpses from the Campus

Kasainath is a hill dedicated to Shiva 3kms away from College campus. The mountain is said to be from the era of Ramayana, during the final stage of the battle in Ramayana when Laxman gets hit with an arrow and falls unconscious. It is said that a part of the mountain fell off while Lord Hanuman was bringing the mount 'Dronagiri' from Himalayas when he was in the pursuit of 'Sanjeevani Booti' to revive Laxman. The part of the mountain that fell off is said to be what is known as the 'kasainath parvat' today.



View of Kasainath hill from College Campus.

### 1.3 Basis of Green Audit and Stakeholders Consultation

Green Audit enables to:

- Enhance awareness levels on environment management and sustainability.
- Prepare an environment management plan and promote sustainability through efficient resource management resulting in cost reduction.
- Benchmarking process in terms of resource utilisation.
- Develop outreach programs in environment management and sustainability in Laxmibai Sitaram Halbe College, Dodamarg. Vivekanand Environment Awareness Brigade Keri-Sattari, Goa (VEAB) team conducted Green Audit of Laxmibai Sitaram Halbe College, Dodamarg in April 2022 through the physical visit. For environmental audit, the documents/ records were reviewed during the visit. The faculty, non-teaching staff and students were interviewed at that moment. Prior to audit, questionnaire and checklists were prepared. Green Audit Report addresses green initiatives taken/ under implementation by management, the outreach of the College, suggestions & recommendations to improve overall environmental sustainability of the campus.



  
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#### 1.4 Campus Information

College campus consists of one building. College building has classrooms, well-equipped laboratories, a library and an auditorium. College Sports ground has indoor and outdoor games facilities. The area details of the College building is presented in Table 1.

**Table 1: Infrastructure Facilities available in the college**

#### Ground Floor

Sr.No.	Designation	Area of the room (carpet) mt.	The Purpose for which it is used proposed to be used
1.	Administration Office G-1	29.64	Admin. works
2.	Staff room G-2	29.00	For Teachers
3.	Principal Cabin G-3	10.63	For Principal
4.	Exam Department G-4	33.21	For exam. works
5.	Class room G-5	33.21	Lectures
6.	Class room + DLLE Dept. G-6	33.21	Lectures
7.	Class room + NSS Dept. G-7	33.21	Lectures
8.	Class room +NCC dept. G-8	33.21	Lectures
9.	Class room G-9	33.21	Lectures
10.	Ladies room, WDC G-10	16.61	Leisure space for Girls
11	Front Office Lab	16.60	Teaching and Reception
12.	F&B service Hotel Management G-11	33.21	Lectures and Practical
13.	Food production Hotel Management G-12	48.40	Practical, kitchen
14.	Class room, Geography Lab G-13	67.50	Lectures and Practical
15.	Class room	67.50	Lectures
16.	Safe Drinking water	3.07	Common uses
17.	Store room	9.29	NSS and Common uses
18.	Toilet Gents		For Boys
19.	Toilet Ladies		For Girls
20	Ramp	7.48 sq.mt.	For physically challenged person
21	Parking Shed	36 sq.mt.	For Parking



  
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1.	Library F-1	90.00	Library, E-Library, Journal room and Books issuing room,
2.	Computer Lab F-2	33.21	Lectures and practice
3.	Class room F-3	67.50	Lectures
4.	Teaching Aids and incubation Center F-4	33.21	Lectures
5.	Class room F-5	67.50	Lectures
6.	Class room F-6	43.57	Lectures
7.	Sports Department, F-7	48.40	Sports
8.	Auditorium and Yoga hall	202.50	Cultural programs, yoga

### First Floor:-

#### College Canteen

Sr.No.	Designation	Area of the room (carpet) mt.	The Purpose for which it is used proposed to be used
1.	Canteen area	25.53	Eatery Snacks

#### 2. Green Audit Findings

For Green Audit following major areas (including their sub-sections) were covered and compliance/ initiatives under these areas were verified/ validated,

- Good Daylight Design and Ventilation
- Water Efficiency and Wastewater Management
- Indoor Air Quality
- Energy Management
- Solid Waste Management
- Universal Access and Efficient Operation and Maintenance of Building
- Transportation
- Green Belt
- Green Programs (Green initiatives)

##### 2.1 Good Daylight Design and Ventilation

- Classrooms, offices, library etc. have high ceiling, wide doors and large windows.
- Building is designed in such a way that corridors and classrooms receive ample sunlight. Curtains are provided for library windows to avoid glare. Natural light in the classrooms was about 70-85 lux.



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c) Ventilation in classrooms is facilitated by windows and fans. Cross ventilation is facilitated due to large windows on both sides of some classrooms.

## 2.2 Water Efficiency and Wastewater Management

a) Major water source for College is a well. It is owned by College. The water is used for drinking and gardening. The well has perennial source of water as the canal of Tillari Dam passes very close from College campus. It was observed that the pH value of the well water was 7.5 which makes it safe for drinking purpose. The campus also has sufficient amount of water for sanitation and other domestic uses.

## 2.3 Noble Efforts:

The efforts of college towards conservation of water and waste management shall be appreciated.

## 2.4 Suggestion:

We would like to suggest that the College with having some of the existing infrastructure may initiate the low cost project Rain Water Harvesting and Drift Irrigation Project for gardening which will further strengthen the water conservation efforts.

## 2.5 Indoor Air Quality

Indoor Air Quality (IAQ) refers to the air quality within & around buildings and structures, it relates to the health and comfort of building occupants. The campus lies in the laps of Western Ghats and surrounded by adequate tree cover. The Dodamarg Taluka has negligible number of cashew factories. The town having been engaged in tertiary and quaternary activities has less number of vehicles. Hence, the carbon emission is minimal which makes the place ideal for living.

## 2.6 Energy Efficiency

### Electricity:

Common electricity meter is provided for the entire campus. Electricity is provided by Maharashtra (MSEB) Maharashtra State Electricity Board. Electricity bills of college from April 2022 to March 2022 were available for review. The average consumption of the college was found 241.25 units per month.

It is evident that the state of Maharashtra has the scarcity of electricity, hence most of the regions experiences load shading, which means restricted supply of electricity during a day. The state government has appealed to all the stakeholders to make minimal use of electricity. However, this practice is not followed by everyone. It may be noted that the College has been meticulously following the Mantra of minimal use of power. The classrooms, library, staff room and multi-purpose hall has broader windows which creates sufficient natural lights during a day time. This provision also provides adequate ventilation which reduces the use of fans.

### Suggestion:

It shall be the duty of every stakeholder to help and support state government in minimizing the use of electricity. As such we suggest to enhance the use of solar power by installing appliances which runs on solar lights such as solar bulbs, solar heater, etc.

## 2.7 Solid Waste Management

The Educational Institutions represents the main components of sustainability promotion in our society. Waste Management is one of the challenges that educational institutions have to face in accomplishing sustainability goals. Separating waste is the first step in managing your waste. Solid waste generated from campus includes mainly paper waste, wet (food/ organic)



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waste and E-waste. Dustbins are placed in the premises. Waste bins are provided on each floor, in staff rooms, library, washrooms, and kitchen on campus area.

It may be appreciated that the college strictly follows the segregation of waste into dry and wet before disposal. Every classroom, library, staff room, washrooms, corridors and other common places are provided with two separate dustbins.

## 2.7 Transportation

a) The location of College is quite enviable with public transport thereby reducing the use of individual vehicles. The teaching and nonteaching staff use their bikes

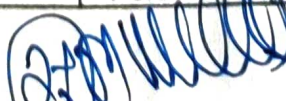
## 2.8 Awareness Initiatives:

Due to minimum consideration for environment & sustainability, the world is facing problems of ozone depletion, climate change, water scarcity and sustainable resource management. College organises guest lectures on various environmental issues like sustainable practices, use of eco-friendly products, biodiversity conservation, etc. every year. Multiple such sessions are organized of which to mention few are Natural heritage and biodiversity conservation by eminent environmentalists Rajendra Kerkar, use of eco-friendly products by Suryakant Gaonkar, activity based learning and wildlife protection by Sanket Naik, afforestation, significance of backyard garden and rescue and release of wild animals by the officials of Maharashtra Forest department. These activities have resulted positively in engaging students in conservation science.

## Plants in the property

1	2	3	4	5	6
Sr. No	Plant	Scientific Name	Local Name	Variety	Landscape/ Habitat
1	Mango	<i>Mangifera indica</i>	Amo	Ghota	Forested
2	Mango			Totapuri	Residential/ Plantation
3	Mango			Manakurat	Residential/ Plantation
4	Hog Plum	<i>Spondias pinnata</i>	Gowti Aamado	Gowti Aamado	Residential/ Forested
5	Jack Fruit	<i>Artocarpus heterophyllus</i>	Panas	Kapa Phanas	Residential/ Plantation
6	Jack Fruit			Rasal Phanas	Residential/ Plantation
7	Cashew Nut	<i>Anacardium occidentale</i>	Gavathi Kajoo	Gavathi Kajoo	Residential/ Plantation
8	Pineapple		Gowti Ananas	Gowti Ananas	Residential/ Plantation
9	Guava	<i>Psidium guajava</i>	Peru	Kaapo Peru	Residential/ Plantation
10	Guava			Rasal Peru	Residential/ Plantation




  
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12	Chikoo	<i>Manilkara zapota</i>	Chikoo	Chikoo	Residential/ Plantation
13	Jambul Tree	<i>Syzygium cumini</i>	Rede Jambul	Rede Jambul	Residential/ Forested
14	Lemon	<i>Citrus* limon</i>	Gavathi Limbu	Gavathi Limbu	Residential/ Plantation
15	Papaya	<i>Carica papaya</i>	Popaay	Rasaal	Residential/

				Papae	Plantation
16	Papaya			Red Lady	Residential/ Plantation
17	Custard Apple	<i>Annona squamosa</i>	Sitafal	Sitafal	Residential/ Plantation
18	Water melon	<i>Cucurbita citrillus</i>	Kalingan	Kalingan	Residential/ Plantation
19	Water Apple	<i>Syzygium samarangense</i>	Jam	Jam	Residential/ Plantation
20	Bilimbi	<i>Averrhoa bilimbi</i>	Bimala	Bimala	Residential/ Forested
21	Musk Melon	<i>Cucumis melo</i>	Chibud	Chibud	Residential/ Plantation
22	Banana	<i>Musa paradisiaca</i>	Keli	Saladatee	Residential/ Plantation
23	Banana	<i>Musa paradisiaca</i>		Savarbonee	Residential/ Plantation
24	Banana	<i>Musa paradisiaca</i>		Velachi	Residential/ Plantation
25	Banana	<i>Musa paradisiaca</i>		Rasabalee	Residential/ Plantation
26	Banana	<i>Musa paradisiaca</i>		Aamatee	Residential/ Plantation
27	Cucumber	<i>Cucumis sativus</i>	Tavshe		Residential/ Plantation



  
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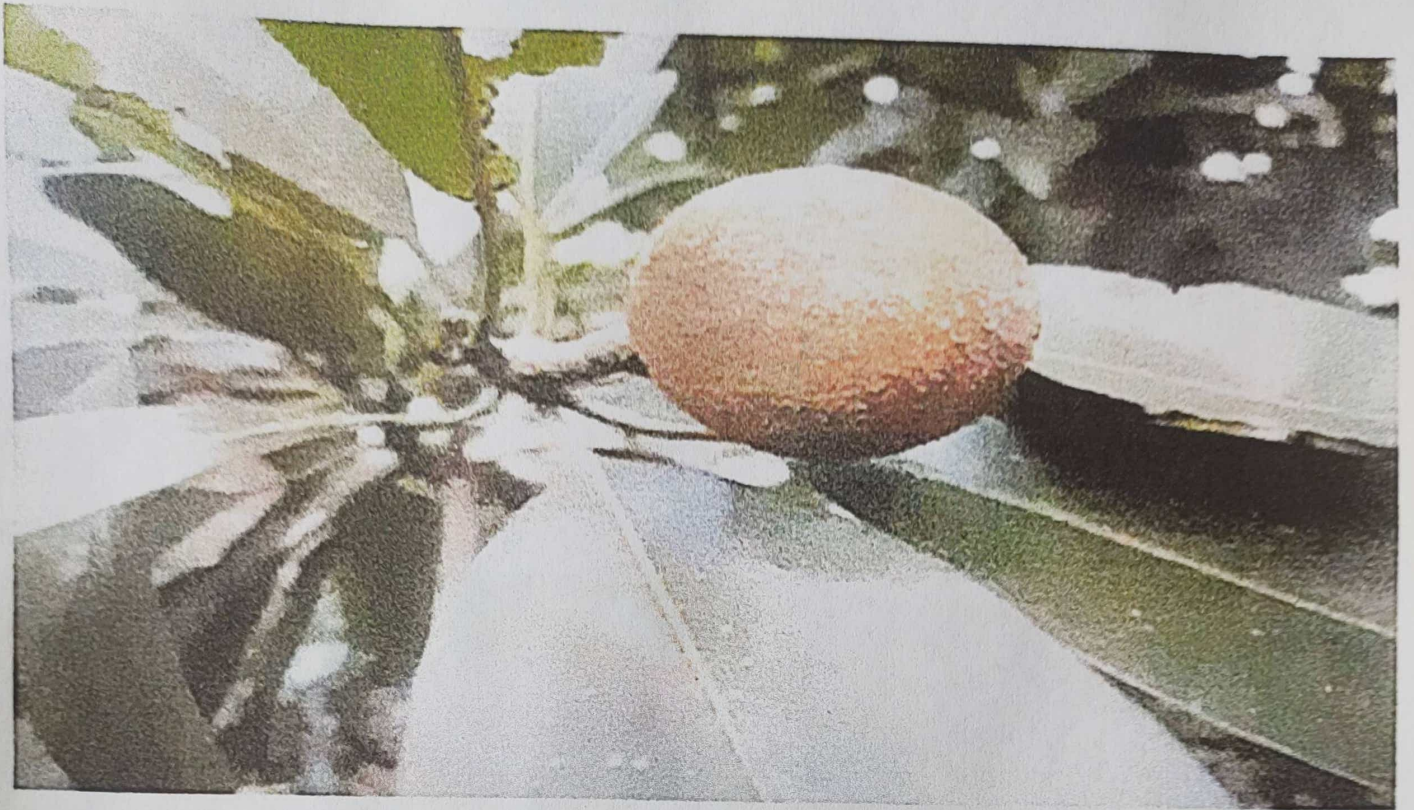
Banana

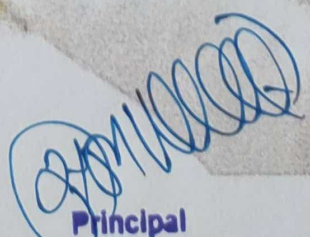


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**Principal**

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**Principal**

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**Principal**

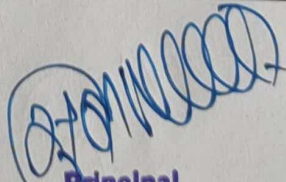
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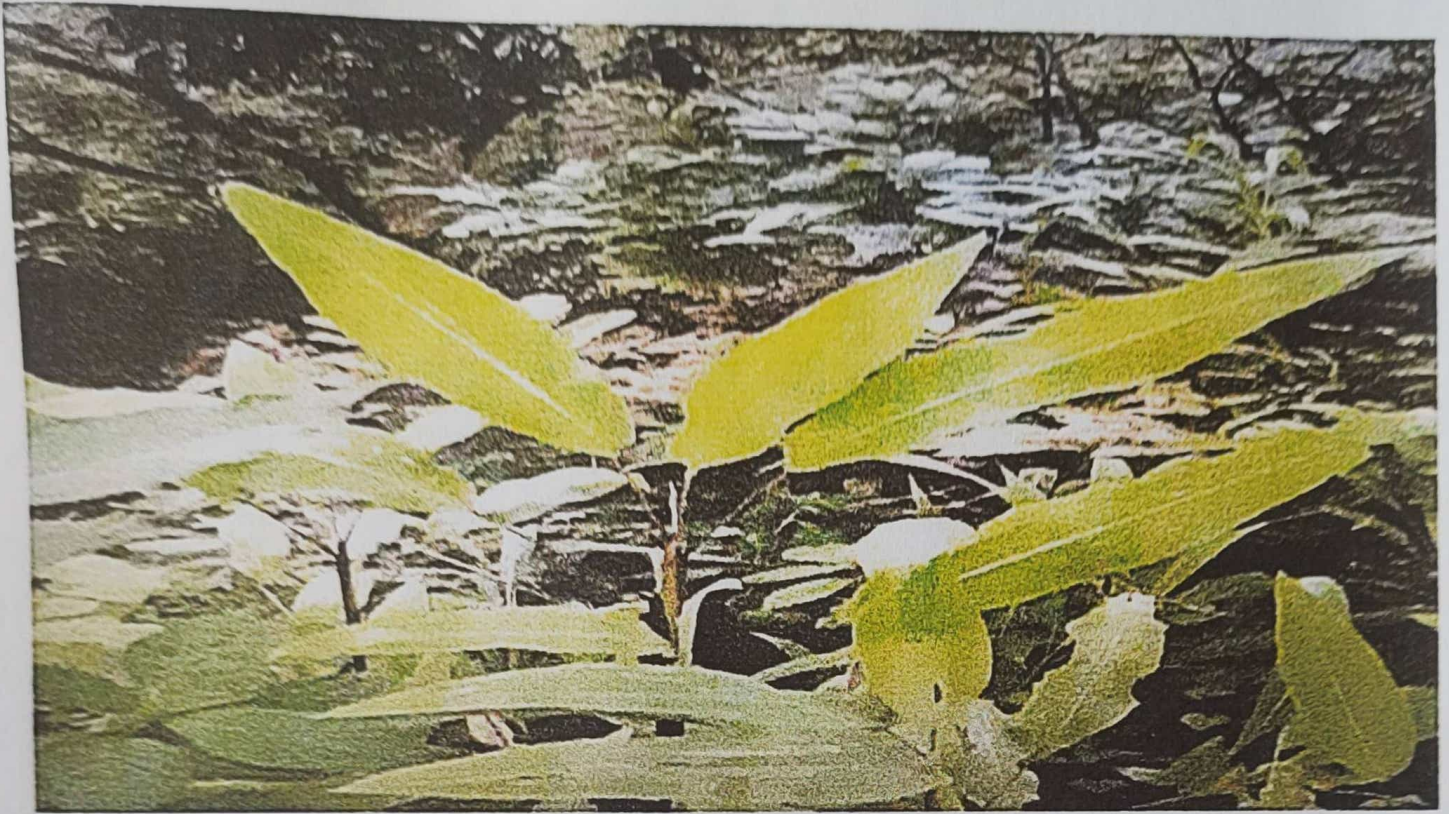


Cucumber

1	2	3	4	5
Sr. No	Plant/ Grass	Scientific Name	Local Name	Landscape/Habitat
1	Karpil		Karpil	Small Grassland/ Fields
2	Nir		Nir	Small Grassland
3	Gondyo		Gondyo	Small Grassland/ Fields
4	Taambit		Taambit	Small Grassland
5	Sulsulo		Sulsulo	Small Grassland



  
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Karpil(Grass)



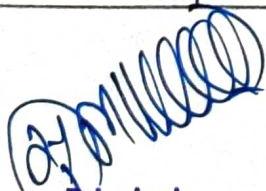
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**Principal**

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Laxmibai Sitaram Halbe  
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Tal. Dodamarg, Dist. Sindhudurg

1	2	3	4	5
Plant Type	Scientific Name	Local Name	Variety	Landscape/ Habitat
Wild Indian Liquoice	<i>Abrus Precatorius</i>	Gunji	Gunji	Residential/ Forested
Tulasi	<i>Ocimum Santum</i>	Tulas	Tulas	Residential
Tulasi		Krushna Tulas	Krushna Tulas	Residential/ Forested
Tulasi		Ran Tulas	RanTulas	Forested
Margosa	<i>Azadirachta Indica</i>	Koduleemb	Koduleemb	Residential
Forest Flame	<i>Butea Monosperma</i>	Palas	Palas	Forested
Belleric Myrobala m	<i>Terminalia Bellirica</i>	Ghotig	Ghotig	Forested
Pennywo rt	<i>Centella Asiatica</i>	Karino	Karino	Residential/ Forested
Lemon Grass	<i>Cymbopogon Citratus</i>	Ganjan	Ganjan	Residential/ Forested
Fault Guava		Gelo	Gelo	Forested
Sandal	<i>Santalum Album</i>	Chandan	Chandan	Residential/ Forested
Mango Ginger	<i>Curcuma Amada</i>	Aambe Hala d	Aambe Halad	Residential/ Forested
Spurge Tree	<i>Euphorbia Nerifolia</i>	Nivadung	Nivadung	Forested
Five Leaved Chaste Tree	<i>Vitex Negundo</i>	Lingad	Ling ad	Forested
Adulso	<i>Adhtoda Vasica</i>	Adulso	Adulso	Residential/ Forested
Ritho	<i>Sapindus laurifoli us</i>	Ritho	Ritho	Residential
Bermuda Grass	<i>Cynodon dactylon</i>	Hariyalee	Hariyalee	Residential



  
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Green Chiretta	<i>Androgr aphis paniculata</i>	Kira yate	Kira yate	Residential/ forested
White Lady	<i>Mussaenda frondosa</i>	Sheravad	Sheravad	Deciduoustree/ Forested
Sacred Datura/ Thorn apple	<i>Datura innoxia</i>	Daturo	Daturo	waste land



  
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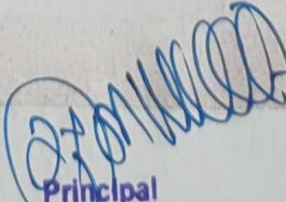


Turmeric plant



Turmeric

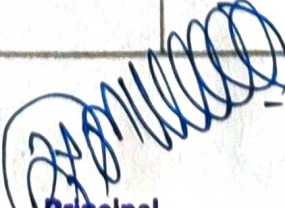


  
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1	2	3	4
Plant Type	Local Name	Scientific Name	Variety
1	Wild Cinchona	<i>Anthocephalus cadamba</i>	Kadambari
2	Yellow Oleander	<i>Thevetia peruviana</i>	Kandori
3	Asteraceae	<i>Chrysanthemum indicum</i>	Shevanti
4	Four O' Clock Plant	<i>Mirabilis jalapa</i>	Ratarani
5	Rose	<i>Rosa centifolia</i>	Gulab
6	Golden Champa	<i>Michelia champaca</i>	Sona Chafa
7	Pagoda Tree	<i>Plumeria rubra</i>	Chafa
8	Crepe Jasmine	<i>Tabernaemontana divaricata</i>	Anant
9	Shoe Flower	<i>Hibiscus rosa sinensis</i>	Jasavanti
10	Arabian Jasmine	<i>Jasminum sambac</i>	Mogara
11	Red Periwinkle	<i>Catharanthus roseus</i>	Sadafuli
12	Night Jasmine	<i>Nyctanthes arbor-tristis</i>	Parijat
13	Jayo		Jayo
14	Mergold	<i>Tagetes erecta</i>	DaandeRoja
15			Gonde Roja



  
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Marigold



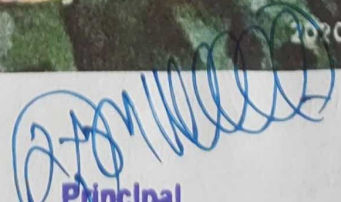
(Roja)



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**Principal**  
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Hawthorn Shikshan Sanstha's  
Laxmibai Sitaram Halbe  
College of Arts, Commerce & Science, Dodamarg  
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Pagoda Flowers



Recommendation by VEAB:

We sincerely appreciate the institution for encouraging and promoting sustainable understanding about eco-friendly practice among students and community as whole. We therefore take this pride to be associated with this great institution in achieving the goal of conservation. We wish and hope that the College will adhere by the suggestions provided and continue to follow the rational practices of environment conservation.

*Shelke*

**Vitthal Shelke**

( Jt. Secretary )

*Shinde*

**Chandrakant Shinde**

( President )



*[Signature]*

**Principal**

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Laxmibai Sitaram Halbe  
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# Vivekanand Environment Awareness Brigade



(An initiative of Swami Vivekanand Smruti Sangh Keri)

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Website: www.veabgoa.org



Date: 18/05/2022

O/NO-VEAB 2022-23/07

## GREEN AUDIT

## CERTIFICATE

This is to certify that a "GREEN AUDIT" for Navnirman Shikshan Sanstha's Laxmibai Sitaram Halbe College of Arts, Commerce and Science Dodamarg has been conducted in May 2022 to assess the green initiatives planning and efforts implemented in the college campus like Green campus management, plantations waste management and rainwater harvesting, conservation of energy. This green audit is also aimed to assess the impact of green initiatives for maintenance of eco -friendly campus.

Place: Keri

Date: 18/05/2022

*Vitthal Shelke*  
Vitthal Shelke

( Jt. Secretary)

*Chandrakant Shinde*  
Chandrakant Shinde

( President )



*[Signature]*  
Principal  
Navnirman Shikshan Sanstha's  
Laxmibai Sitaram Halbe  
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